Public Document Pack

WOKINGHAM
BOROUGH COUNCIL

An extraordinary Meeting of the **COMMUNITY AND CORPORATE OVERVIEW AND SCRUTINY COMMITTEE** will be held in David Hicks 1 - Civic Offices, Shute End, Wokingham RG40 1BN **MONDAY 9 OCTOBER 2023** AT **7.00 PM**

Susan Parsonage
Chief Executive
Published on 29 September 2023

The role of Overview and Scrutiny is to provide independent “critical friend” challenge and to work with the Council’s Executive and other public service providers for the benefit of the public. The Committee considers submissions from a range of sources and reaches conclusions based on the weight of evidence – not on party political grounds.

Note: Non-Committee Members and members of the public are welcome to attend the meeting or participate in the meeting virtually, in line with the Council’s Constitution. If you wish to participate either in person or virtually via Microsoft Teams, please contact Democratic Services. The meeting can also be viewed live using the following link:
https://youtube.com/live/oWEfUltU3IA?feature=share

Please note that other people may film, record, tweet or blog from this meeting. The use of these images or recordings is not under the Council’s control.

Our Vision

A great place to live, learn, work and grow and a great place to do business

Enriching Lives

- Champion excellent education and enable our children and young people to achieve their full potential, regardless of their background.
- Support our residents to lead happy, healthy lives and provide access to good leisure facilities to enable healthy choices for everyone.
- Engage and empower our communities through arts and culture and create a sense of identity for the Borough which people feel part of.
- Support growth in our local economy and help to build business.

Providing Safe and Strong Communities

- Protect and safeguard our children, young and vulnerable people.
- Offer quality care and support, at the right time, to reduce the need for long term care.
- Nurture our communities: enabling them to thrive and families to flourish.
- Ensure our Borough and communities remain safe for all.

Enjoying a Clean and Green Borough

- Play as full a role as possible to achieve a carbon neutral Borough, sustainable for the future.
- Protect our Borough, keep it clean and enhance our green areas for people to enjoy.
- Reduce our waste, promote re-use, increase recycling and improve biodiversity.
- Connect our parks and open spaces with green cycleways.

Delivering the Right Homes in the Right Places

- Offer quality, affordable, sustainable homes fit for the future.
- Ensure the right infrastructure is in place, early, to support and enable our Borough to grow.
- Protect our unique places and preserve our natural environment.
- Help with your housing needs and support people, where it is needed most, to live independently in their own homes.

Keeping the Borough Moving

- Maintain and improve our roads, footpaths and cycleways.
- Tackle traffic congestion and minimise delays and disruptions.
- Enable safe and sustainable travel around the Borough with good transport infrastructure.
- Promote healthy alternative travel options and support our partners in offering affordable, accessible public transport with good transport links.

Changing the Way We Work for You

- Be relentlessly customer focussed.
- Work with our partners to provide efficient, effective, joined up services which are focussed around our customers.
- Communicate better with customers, owning issues, updating on progress and responding appropriately as well as promoting what is happening in our Borough.
- Drive innovative, digital ways of working that will connect our communities, businesses and customers to our services in a way that suits their needs.

Be the Best We Can Be

- Be an organisation that values and invests in all our colleagues and is seen as an employer of choice.
- Embed a culture that supports ambition, promotes empowerment and develops new ways of working.
- Use our governance and scrutiny structures to support a learning and continuous improvement approach to the way we do business.
- Be a commercial council that is innovative, whilst being inclusive, in its approach with a clear focus on being financially resilient.
- Maximise opportunities to secure funding and investment for the Borough.
- Establish a renewed vision for the Borough with clear aspirations.

MEMBERSHIP OF THE COMMUNITY AND CORPORATE OVERVIEW AND SCRUTINY COMMITTEE

Councillors

Chris Johnson (Chair)	Peter Dennis (Vice-Chair)	Laura Blumenthal
David Cornish	Norman Jorgensen	Pauline Jorgensen
Charles Margetts	Alistair Neal	Marie-Louise Weighill

Substitutes

Jane Ainslie	Andy Croy	Phil Cunnington
Catherine Glover	Stuart Munro	Caroline Smith
Rachelle Shepherd-DuBey	Alison Swaddle	Shahid Younis

ITEM NO.	WARD	SUBJECT	PAGE NO.
44.		**APOLOGIES** To receive any apologies for absence.	
45.		**DECLARATION OF INTEREST** To receive any declarations of interest.	
46.		**PUBLIC QUESTION TIME** To answer any public questions. A period of 30 minutes will be allowed for members of the public to ask questions submitted under notice. The Council welcomes questions from members of the public about the work of this Committee. Subject to meeting certain timescales, questions can relate to general issues concerned with the work of the Committee or an item which is on the Agenda for this meeting. For full details of the procedure for submitting questions please contact the Democratic Services Section on the numbers given below or go to www.wokingham.gov.uk/publicquestions	
47.		**MEMBER QUESTION TIME** To answer any Member questions.	
48.	None Specific	**LOCAL TRANSPORT PLAN 4** To scrutinise the draft Local Transport Plan 4, prior to its submission to the Executive in November 2023.	**5 - 622**

Any other items which the Chairman decides are urgent
A Supplementary Agenda will be issued by the Chief Executive if there are any other items to consider under this heading

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TITLE	**Local Transport Plan 4 (LTP4)**
FOR CONSIDERATION BY	Community and Corporate Overview and Scrutiny Committee on 9 October 2023
WARD	None Specific
DIRECTOR	Giorgio Framalicco – Director of Place and Growth

OUTCOME / BENEFITS TO THE COMMUNITY

The planned implementation of transport schemes and promotions as part of a considered strategic plan for transport reflecting changing travel trends and a greater focus on the climate emergency, which the borough council declared in 2019.

RECOMMENDATION

That the Community and Corporate Overview and Scrutiny Committee consider the draft LTP4 and offer comment and recommendations where appropriate.

SUMMARY OF REPORT

The Local Transport Plan is a statutory requirement of the Council deriving from the Transport Act 2000. The current Local Transport Plan (LTP) 2011-2026 has provided many improvements like the Wokingham Greenways, enhancements to Wokingham town centre, the Arborfield Cross Relief Road, the North Wokingham Distributor Road, upgrades to railway stations and more.

Most of the schemes included in the current LTP are complete. With changing travel trends and a greater focus on the climate emergency, which the borough council declared in 2019, the Plan is being refreshed to better reflect the community's needs.

The updated LTP will be an important part of the authority's goal of making Wokingham borough a net-zero carbon producer. With a significant part of the current LTP having been delivered, changing technology and government policy, a better understanding of travel habits and with climate change, there is a need to refresh the transport strategy to address current priorities and the needs of our communities.

The Council is seeking approval to put the draft LTP out to public consultation. The LTP will support our local priorities, including a prosperous economy, improving the quality of life for residents, reducing the environmental impact of transport, and the first stages in the transition of the transport sector towards lower carbon emissions and Net Zero.

Work to understand travel patterns, trends and emerging opportunities, and engagement with local and regional stakeholders has been undertaken in the development of this new LTP. The draft document provides a summary of the evidence informing the Plan, including engagement completed in spring 2023, and details several objectives under three themes: reduce environmental impacts; grow the economy; and create healthy and safe places. The LTP concludes with an action plan.

Background

The Local Transport Plan (LTP) is a statutory requirement of the council deriving from the Transport Act 2000.

Most of the schemes included in the current LTP 2011-2026 are complete. With changing travel trends and a greater focus on the climate emergency, which the borough council declared in 2019, the Plan is being refreshed to better reflect the community's needs.

The last LTP was produced in 2011 and a lot has changed. New transport infrastructure has been delivered and the borough's population has grown. With the growing influence of digital services and further shifts in travel behaviour since the COVID-19 pandemic, the way we access services and amenities has also changed.

Wokingham is one of the fastest growing local authorities in the UK and our population has increased by 15% over the last decade, from 157,000 in 2011 to 177,500 in 2021. Over the next 10-20 years the population of the Borough is expected to increase to 200,000.

A growing population can increase demand on the transport system. However, the way people access services has also been changing, notably through a growing use of digital services. Consequently, the average number of trips made per person has been reducing, with the National Travel Survey showing that each individual now makes 12% fewer trips in 2019 than they did in 2000.

The number of cars owned in the Borough has increased over the last decade and Wokingham has one of the highest levels of car ownership in the country, yet each car is being used less than before and this growing car ownership has not led to additional travel.

Future transport investment will need to deliver on local priorities and development, and be adaptable to changing climate, technology and economy. The impacts of climate change are already starting to be felt. This will impact on future travel and the operation and maintenance of our transport networks. The Council declared a climate emergency in 2019 and has committed to doing as much as possible to achieve carbon neutrality by 2030.

Local transport accounts for a third of the carbon emissions in the borough. In addition, there are similar levels of carbon emissions arising from major transport links through our area, such as the rail network and the M4. To get to Net Zero in line with local or national targets, we will need to make significant changes and at a faster rate of change than that observed to date. Although the transition to zero emission vehicles will help to reduce our emissions, their impact is relatively small in the short term but the benefits will become more noticeable as their use becomes more widespread.

The updated LTP will accommodate changing technology and government policy, our changing travel habits (especially post-pandemic) and include measures to address climate change, current priorities and the needs of our communities.

The LTP sets out a pipeline of schemes to support a changing borough to provide an overarching transport strategy and action plan for Wokingham Borough. It will support our local priorities, including a prosperous economy, improving the quality of life for residents, reducing the environmental impact of transport, and the first stages in the transition of the transport sector towards lower carbon emissions and Net Zero.

Analysis of Issues

Work to understand travel patterns, trends and emerging opportunities in the development of the new LTP has included a review of data specific to Wokingham borough and engagement with local and regional stakeholders. The draft document provides a summary of the evidence informing the Plan, including 'principles' engagement completed in spring 2023.

The LTP lists its objectives under three themes: create healthy and safe places; reduce environmental impacts; and grow the economy. It also brings together complementary transport strategies, such as the Bus Service Improvements Plan (BSIP) and Local Cycling and Walking Infrastructure Plan (LCWIP). The LTP concludes with an action plan.

The LTP aligns with other plans and strategies that the Council has produced, such as the Local Plan and Council Plan, and National and Regional strategies such as the Transport for South East sub-national transport body (STB).

FINANCIAL IMPLICATIONS OF THE RECOMMENDATION

The Council faces unprecedented financial pressures as a result of; the longer term impact of the COVID-19 crisis, Brexit, the war in Ukraine and the general economic climate of rising prices and the increasing cost of debt. It is therefore imperative that Council resources are optimised and are focused on the vulnerable and on its highest priorities.

	How much will it Cost/ (Save)	Is there sufficient funding – if not quantify the Shortfall	Revenue or Capital?
Current Financial Year (Year 1)	See below	Yes	Revenue and Capital
Next Financial Year (Year 2)	See below	Yes	Revenue and Capital
Following Financial Year (Year 3)	See below	Yes	Revenue and Capital

Other financial information relevant to the Recommendation/Decision
The LTP development has been funded using existing revenue budgets. The LTP will be delivered from several funding sources including LTP integrated block, developer/ Community Infrastructure Levy (CIL) contributions and external grant funding. The speed of delivery is dependent on funding, and our only currently guaranteed source of funding is from the LTP integrated block. The Council has a good record in securing external funding and central to this has been developing infrastructure schemes and integrating infrastructure plans with new development. An updated LTP will enable the council to be opportunistic when funding becomes available.

Recent government announcements for bus services and walking and cycling improvements are well aligned with priorities set out in the LTP. Opportunities to align the delivery of the plan with planned maintenance and/or renewals will also be identified. Such integration will ensure better value for money and reduce disruption for users of the transport network.

Proposed annual programmes for LTP promoted measures will be included in the capital programme.

Public Sector Equality Duty
An initial impact assessment has been completed. This identified that draft LTP4 strategy themes were expected to have a neutral or positive impact overall on those with a protected characteristic. When schemes are taken forward, there may be a requirement for full scheme-specific Equalities Impact Assessment to be completed.

Climate Emergency – *This Council has declared a climate emergency and is committed to playing as full a role as possible – leading by example as well as by exhortation – in achieving a carbon neutral Wokingham Borough by 2030*
National guidance on quantifying carbon impacts from transport strategies, that was originally expected in Summer 2022, is still awaited. However, the LTP has been developed mindful of, and in line with, the anticipated guidance and has reducing environmental impacts as one of its three themes supported by several objectives. The LTP acknowledges the importance of the Climate Emergency Action Plan and includes measures throughout to address climate change to help reduce the impact of road transport on carbon emissions.

Reasons for considering the report in Part 2
N/A

List of Background Papers
Enc 1 - LTP4 Draft Strategy and Action Plan The main document which is the subject of the consultation, and schemes which are proposed to be delivered in the plan period. Enc 2 – LTP4 Sustainability Report and EQIA The Sustainability Appraisal Report ensures that sustainability aspects are incorporated into the LTP4. It combines the Strategic Environmental Assessment (SEA), Equalities Impact Assessment (EqIA) and Habitats Regulations Assessment (HRA). This document will form part of the LTP4 consultation in autumn 2023. Enc 3 – Proposed questions for consultation Enc 4 - LTP4 Background paper: Evidence Base Details of evidence used in the development of the strategy. Enc 5 - LTP4 Background Paper: Spring 2023 Engagement Report An overview of the initial engagement exercise carried out in March 2023.

Contact Robert Curtis	**Service** Place
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Annex

TITLE	**Local Transport Plan 4 - draft for consultation**
FOR CONSIDERATION BY	The Executive on Thursday, 30 November 2023
WARD	(All Wards);
LEAD OFFICER	Director, Place and Growth - Giorgio Framalicco
LEAD MEMBER	Executive Member for Active Travel, Transport and Highways - Paul Fishwick

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PURPOSE OF REPORT (INC STRATEGIC OUTCOMES)
The Local Transport Plan 4 (LTP) details the implementation of transport schemes and promotions as part of a considered strategic plan for transport reflecting changing travel trends and a greater focus on the climate emergency, which the Borough Council declared in 2019.

RECOMMENDATION
That the Executive agrees to publish the draft Local Transport Plan 4 for public consultation with the intention, and subject to approval of full Council, for the Council to adopt the plan in summer 2024 as the Council's strategic plan for transport over the next 10-15 years.

EXECUTIVE SUMMARY
The Local Transport Plan (LTP) is a statutory requirement of the council deriving from the Transport Act 2000. The current Local Transport Plan (LTP3) 2011-2026 has provided many improvements including the Wokingham Greenways, enhancements to Wokingham town centre, the Arborfield Cross Relief Road, the North Wokingham Distributor Road, upgrades to railway stations and more.
With a significant part of the current LTP having been delivered, changing technology and government policy, a better understanding of travel habits and with climate change, there is a need to refresh the transport strategy to address current priorities and the needs of our communities. The updated LTP will be an important part of the authority's goal of making Wokingham Borough a net-zero carbon producer.

The draft LTP4 is attached to this report as Appendix 1. It is intended to be a high-level document which will be supported in future by daughter strategies which give further detail on our approach to different elements of transport planning (such as cycling and walking, public transport and future mobility). The draft document includes an action plan, outlining some of the key interventions that we intend to deliver throughout the plan period. In addition to this, a summary of the evidence informing the Plan and information following initial stakeholder engagement (completed in spring 2023) is provided as background papers (Appendices 4 and 5).

The LTP Sustainability Appraisal is included as Appendix 2. This document would be included in the LTP public consultation. Draft public consultation questions are included in Appendix 3. Executive approval is sought to put the draft LTP4 out to public consultation. The LTP4 will support our local priorities, including a prosperous economy, improving the quality of life for residents, reducing the environmental impact of transport, and the first stages in the transition of the transport sector towards lower carbon emissions and Net Zero. It should be noted that for the last three years the Department for Transport has intended to release detailed guidance as to the recommended content of an LTP. This has delayed the completion of this plan to date and although the guidance has still to be released, the current document has been developed using best practice and our best knowledge of the likely content of this guidance. WBC is aware that there will be additional guidance around carbon assessment which will need to follow the plan once this guidance in finalised.

BACKGROUND

The Wokingham Local Transport Plan (LTP) is a strategic document that sets out the approach for all aspects of transport across our borough. The LTP identifies and supports future transport interventions for funding and ensures that we are addressing the priorities of our residents whilst ensuring we meet the requirements of national and local objectives.

The LTP is supported by 'daughter documents' that provide greater detail in the numerous topic areas. Two such documents have already been adopted by the Council, these being the Local Cycling and Walking Infrastructure Plan (LCWIP) and the Local Bus Service Improvement Plan (BSIP).

Our last LTP (termed LTP3) was written in 2011. With a significant part of the strategy having been delivered and changes in technology, policy and demographics, there is a need to produce a new transport strategy.

This draft transport strategy, referred to as LTP4, looks back at what has happened since 2011 and considers the views of our residents and their changing and current travel habits and trends. It also takes account of changes in national and regional policy, and the council's own updated goals and objectives from its various strategies and the emerging Local Plan.

There are two background documents to LTP4 that provide more detail on the data used in developing the new Plan. Appendix 4 is the LTP4 Evidence Base, which includes an overview of empirical data and changes in the borough since the last Plan in 2011.

Appendix 5 is the LTP4 Engagement Report which summarises the results of our early engagement with residents in March 2023.

An analysis of travel patterns and socio-economic data suggests four geographic areas around which LTP4 policies can be determined and directed. These are:

- Earley, Woodley and Shinfield which includes the most urban areas of these towns where travel is largely directed towards Reading;

 North Wokingham, which includes Twyford and is mainly rural with high car dependency;

 South Wokingham, also generally rural and which also has relatively high car dependency; and

 Wokingham and Winnersh, the central area of the Borough which has the highest levels of “self-containment” and active travel.

The characteristics of these four areas have been used to develop place-specific solutions where we know that specific interventions will benefit certain travel types; it also means that, although the Local Plan will have a transport hierarchy and promotes active and sustainable travel, we must accept and support our residents who are dependent on their private car.

The Local Transport Plan supports our local priorities. The LTP Vision has three key themes:

 Create Healthy and Safe Places

The LTP will help to build and maintain healthy communities, attractive environments and work towards reducing negative impacts associated with road transport such as injuries from traffic collisions, noise and emissions. Targets include a 50% reduction in those harmed on our roads which aligns with the national objective for 50% of trips in towns to be made by walking and cycling. For rural areas this theme includes measures to improve the vitality of rural service centres and access to active travel routes, in part with a network of lower traffic routes.

 Reduce Environmental Impacts

Consistent with local, regional and national targets, the LTP will support the transition of the transport sector to carbon neutrality. Achieving this will require improved travel choice and changes in travel behaviour to reduce travel and congestion. This includes promoting low emission vehicles, developing a core network of attractive bus and cycle routes across the Borough, and the removal of all air quality exceedances in the Borough.

 Grow the Economy

We will work with our partners and stakeholders to protect and enhance our strategic road and rail connectivity. We will work with and encourage rail operators to improve services at our railway stations and measures to decarbonise the railway, and complement these with improvements to station interchange and access. Maximising our existing assets is vital in keeping the borough moving, and a well maintained transport system is a priority.

The Draft LTP4 in Appendix 1 is supported by an Action Plan which identifies some of the actions proposed to help deliver the objectives of the Plan. Appendices 4 and 5 are the Evidence Base and spring 2023 Engagement Reports which have been used in the development of the plan and are included here as background papers.

The draft LTP4 is supported with a Sustainability Appraisal included at Appendix 2 which ensures that sustainability aspects are incorporated into the LTP4. It combines the Strategic Environmental Assessment (SEA), Equalities Impact Assessment

(EqIA) and Habitats Regulations Assessment (HRA). This document will form part of the LTP4 consultation in winter 2023/spring 2024.

Draft consultation questions are included in Appendix 3.

Next Steps
Following the public consultation, feedback will be reviewed and the plan amended accordingly in conjunction with the Member Working Group and other stakeholders. This will result in a Final LTP which we would seek approval from full Council to adopt in summer 2024.

FINANCIAL IMPLICATIONS OF THE RECOMMENDATION
The Council faces unprecedented financial pressures as a result of; the longer term impact of the COVID-19 crisis, Brexit, the war in Ukraine and the general economic climate of rising prices and the increasing cost of debt. It is therefore imperative that Council resources are optimised and are focused on the vulnerable and on its highest priorities.

	How much will it Cost/ (Save)	Is there sufficient funding – if not quantify the Shortfall	Revenue or Capital?
Current Financial Year (Year 1)	See below	Yes	Revenue and capital
Next Financial Year (Year 2)	See below	Yes	Revenue and capital
Following Financial Year (Year 3)	See below	Yes	Revenue and capital

Other Financial Information
The LTP development has been funded using existing revenue budgets. The LTP will be delivered from several funding sources including LTP integrated block, developer/Community Infrastructure Levy (CIL) contributions and external grant funding. The speed of delivery is dependent on funding, and our only currently guaranteed source of funding is from the LTP integrated block.

The Council has a good record in securing external funding and central to this has been developing infrastructure schemes and integrating infrastructure plans with new development. An updated LTP will enable the council to be opportunistic when funding becomes available.

Recent Government announcements for bus services and walking and cycling improvements are well aligned with priorities set out in the LTP. Opportunities to align the delivery of the plan with planned maintenance and/or renewals will also be identified. Such integration will ensure better value for money and reduce disruption for users of the transport network.

Proposed annual programmes for LTP promoted measures will be included in the capital programme.

Legal Implications arising from the Recommendation(s)
None

Stakeholder Considerations and Consultation
Managed internal and external consultation has been completed with Member, officer and external stakeholder meetings completed to seek content for the LTP. In addition, a principles engagement was completed in spring 2023 to gauge opinion and understand initial views on transport initiatives. The consultation feedback was used inform the draft LTP Action Plan, themes and objectives. This stage of the LTP programme is seeking approval to consult on the draft LTP in winter 2023/spring 2024. When the plan is adopted, any decision to develop schemes in future will be considered as and when funding becomes available. When schemes are taken forward, there may be a requirement for full public consultation to ensure that the local population can have their say on any proposals.

Public Sector Equality Duty
An initial impact assessment has been completed. This identified that draft LTP4 strategy themes were expected to have a neutral or positive impact overall on those with a protected characteristic. When schemes are taken forward, there may be a requirement for full scheme-specific Equalities Impact Assessment to be completed.

Climate Emergency – ***This Council has declared a climate emergency and is committed to playing as full a role as possible – leading by example as well as by exhortation – in achieving a carbon neutral Wokingham Borough by 2030***
National guidance on quantifying carbon impacts from transport strategies that was originally expected in summer 2022, is still awaited. However, the LTP has been developed mindful of, and in line with, the anticipated guidance and has reducing environmental impacts as one of its three themes supported by several objectives. The LTP acknowledges the importance of the Climate Emergency Action Plan and includes measures throughout to address climate change to help reduce the impact of road transport on carbon emissions.

Reasons for considering the report in Closed Session
N/A

List of Background Papers
Enc 1 - LTP4 Draft Strategy and Action Plan. The main document which is the subject of the consultation, and schemes which are proposed to be delivered in the plan period.
Enc 2 – LTP4 Sustainability Report and EQIA. The Sustainability Appraisal Report ensures that sustainability aspects are incorporated into the LTP4. It combines the Strategic Environmental Assessment (SEA), Equalities Impact Assessment (EqIA) and Habitats Regulations Assessment (HRA). This document will form part of the LTP4 consultation in autumn 2023.
Enc 3 – Proposed questions for consultation.
Enc 4 - LTP4 Background paper: Evidence Base. Details of evidence used in the development of the strategy.
Enc 5 - LTP4 Background Paper: Spring 2023 Engagement Report. An overview of the initial engagement exercise carried out in March 2023.

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Wokingham Borough Council

LOCAL TRANSPORT PLAN 4

Draft Strategy: Scrutiny October 2023

Contents

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Executive summary

The Wokingham Local Transport Plan (LTP) is a strategic document that sets out the approach for all aspects of transport across our borough. The LTP identifies and supports future transport interventions for funding and ensures that we are addressing the priorities of our residents whilst ensuring we meet the requirements of national and local objectives.

The LTP is supported by ‘daughter documents’ that provide greater detail in the numerous topic areas. Two such documents have already been adopted by the Council, these being the Local Cycling and Walking Infrastructure Plan (LCWIP) and the Local Bus Service Improvement Plan (BSIP).

Our last LTP (termed LTP3) was written in 2011. With a significant part of the strategy having been delivered and changes in technology, policy and demographics, there is a need to produce a new transport strategy.

This draft transport strategy, referred to as LTP4, looks back at what has happened since 2011 and considers the views of our residents and their changing and current travel habits and trends.. It also takes account of changes in national and regional policy, and the council’s own updated goals and objectives from its various strategies andthe emerging Local Plan.

There are two background documents to LTP4 that provide more detail on the data used in developing the new Plan. Appendix A is the LTP4 Evidence Base, which includes an overview of empirical data and changes in the borough since the last Plan in 2011. Appendix B is the LTP4 Principles Report which summarises the results of our early engagement with residents in March 2023.

An analysis of travel patterns and socio-economic data suggests four geographic areas around which LTP4 policies can be determined and directed. These are:

- Earley, Woodley and Shinfield which includes the most urban areas of these towns where travel is largely directed towards Reading;
- North Wokingham, which includes Twyford and is mainly rural with high car dependency;
- South Wokingham, also generally rural and which also has relatively high car dependency; and
- Wokingham and Winnersh, the central area of the borough which has the highest levels of “self-containment” and active travel.

The characteristics of these four areas have been used to develop place-specific solutions where we know that specific interventions will benefit certain travel types; it also means that,

although the Local Plan will have a transport hierarchy and promotes active and sustainable travel, we must accept and support our residents who are dependent on their private car.

The Local Transport Plan supports our local priorities. The LTP Vision has three key themes:

- **Create Healthy and Safe Places**

The LTP will help to build and maintain healthy communities, attractive environments and work towards reducing negative impacts associated with road transport such as injuries from traffic collisions, noise and emissions.

Targets include a 50% reduction in those harmed on our roads which aligns with the national objective for 50% of trips in towns to be made by walking and cycling.

For rural areas this theme includes measures to improve the vitality of rural service centres and access to active travel routes, in part with a network of lower traffic routes.

- **Reduce Environmental Impacts**

Consistent with local, regional and national targets, the LTP will support the transition of the transport sector to carbon neutrality. Achieving this will require improved travel choice and changes in travel behaviour to reduce travel and congestion. This includes promoting low emission vehicles, developing a core network of attractive bus and cycle routes across the borough, and the removal of all air quality exceedances in the borough.

- **Grow the Economy**

We will work with our partners and stakeholders to protect and enhance our strategic road and rail connectivity.

We will work with and encourage rail operators to improve services at our railway stations and measures to decarbonise the railway, and complement these with improvements to station interchange and access.

Maximising our existing assets is vital in keeping the borough moving, and a well-maintained transport system is a priority.

Measures to achieve this strategy are set out on the following pages.

The LTP is supported by an Action Plan which identifies some of the actions proposed to help deliver the objectives of the Plan.

1 Background

1.1 Wokingham Borough is a thriving area, with great opportunities and is one of the fastest growing Local Authority areas in the country.

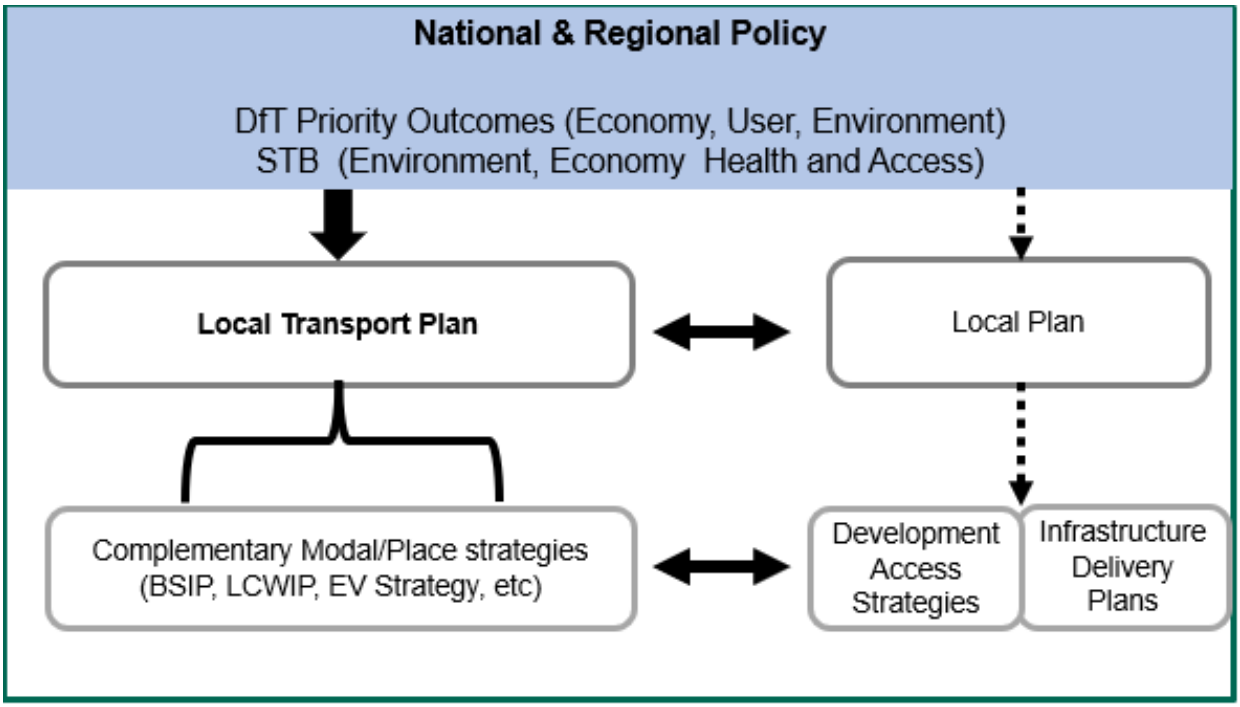
1.2 Transport infrastructure plays a significant role in creating a successful economy whilst also enabling residents to access a range of services and amenities.

1.3 Transport also has an impact on health, wellbeing and quality of life. It provides opportunities to access services and employment, increase physical activity and shape the quality of the places people live in, although there can also be negative impacts such as emissions, noise and road traffic collisions. Changes to the transport system therefore provides an opportunity to improve our resident's health and opportunities.

1.4 The Local Transport Plan (LTP) is a strategic document that sets out the approach for all aspects of transport across the borough.

1.5 The LTP aligns with other plans and strategies that the Council has produced, such as the Local Plan and Council Plan, and national and regional strategies such as the Transport for South East sub-national transport body (STB).

1.6 The LTP is supplemented by a number of more detailed strategies for different travel modes and places, such as the Bus Service Improvements Plan (BSIP), Local Cycling and Walking Infrastructure Plan (LCWIP) and Electric Vehicle Strategy.



1.7 Our last LTP, LTP3, was written in 2011 and good progress has been made delivering its policies. With a significant part of the strategy having been delivered alongside changing technology and government policy, and a better understanding of travel habits and climate change, there is a need to refresh the transport strategy to address current priorities and the needs of our communities.

1.8 The Council declared a climate emergency in 2019 and has committed to doing as much as possible to achieve carbon neutrality by 2030. Significant changes in travel behaviour and vehicle propulsion, and at a faster rate than that observed to date, will be required to get to carbon neutrality.

1.9 Transport policy therefore needs to strike the right balance between improving people's quality of life, supporting the economy and reducing the environmental impacts of transport.

1.10 Work to understand travel patterns, trends and emerging opportunities, and engagement with local and regional stakeholders has been undertaken in the development of this new LTP.

1.11 A Vision for the LTP has been developed from existing national, regional and local policies to support local priorities. This has led to three key themes that deliver local priorities:

- Create Healthy and Safe Places;
- Reduce Environmental Impacts; and
- Grow The Economy.

1.12 We are consulting on this draft LTP to get your views.

2 Looking Back

2.1 The last LTP was produced in 2011 and a lot has changed. New transport infrastructure has been delivered and the borough's population has grown. With the growing influence of digital services and further shifts in travel behaviour since the COVID-19 pandemic in 2020, the way we access services and amenities has also changed.

2.2 The LTP sets out a pipeline of interventions to support a changing borough. We have made good progress to deliver these improvements. This includes:

- New relief roads at Shinfield, Winnersh and Arborfield, the extension to Nine Mile Ride and the North Wokingham Distributor Road.
- Improvements to public transport, including the upgrade of Wokingham Station and park and ride sites, albeit their usage has been impacted by the pandemic.
- Wokingham Town Centre and Peach Place improvements.
- New facilities for walking and cycling, including Greenways, to improve access and leisure opportunities throughout the borough; and
- a 45% reduction in injuries from road traffic collisions since 2008.

2.3 Along with the new infrastructure, we have improved our engagement to promote safer and more sustainable travel with the creation of My Journey. As part of a comprehensive programme and promotion of sustainable travel and behaviour change campaigns, My Journey manages our Modeshift awards scheme with local schools, our Bikeability programme helping to ensure every child can learn how to safely ride a bike, and provides travel information to new developments that help to reduce car travel and promote lower carbon travel choices.

HELPING WOKINGHAM GET AROUND

Having started in 2012, My Journey Wokingham has grown into is a borough-wide active and sustainable travel behaviour change campaign that aims to help and inspire Wokingham residents, employees, and visitors of all ages to walk, cycle and use public transport.

Successes of Myjourney to date include providing travel information packs to encourage sustainable travel from new development sites and a DEFRA funded Air Quality Project, running until October 2023, to increase active travel and encourage behavioural changes to improve air quality in the borough.

My Journey also works with primary and junior schools in the borough, training over 80% of Year 6 students in Bikeability Level 1 and 2. It is providing a range of resources to schools to achieve their national Modeshift STARS award. My Journey is proud to have been awarded Local Authority of the Year in 2020 at the national Bikeability awards.

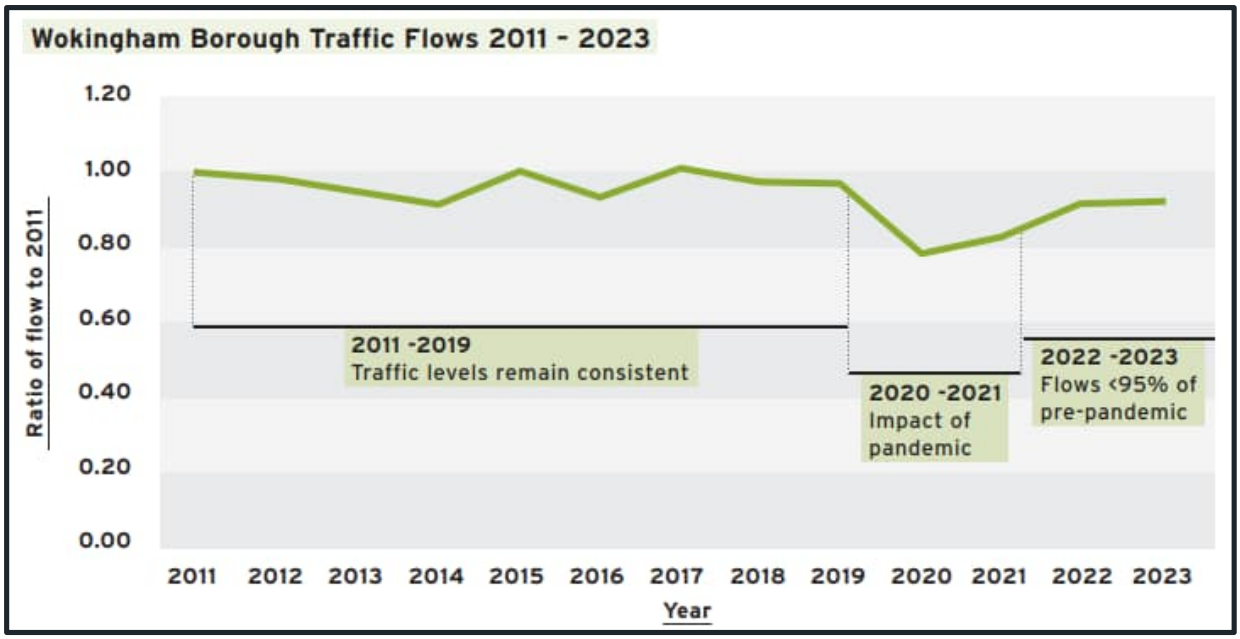
2.4 Wokingham is one of the fastest growing local authorities in the UK. In addition, we are living longer. As a result, our population has increased by 15% over the last decade, from 157,000 in 2011 to 177,500 in 2021. A growing population can increase demand on the transport system.

2.5 The way people access services has also been changing, notably through a growing use of digital services.

2.6 The number of trips made by individuals has been reducing, with the National Travel Survey showing that each person made 12% fewer trips in 2019 than they did in 2000.

2.7 The number of cars owned in the borough has increased over the last decade and Wokingham has one of the highest levels of car ownership in the country. However, each car is being used less than before and this growing car ownership has not led to additional travel.

2.8 Overall, traffic volumes have not increased, instead remaining relatively stable despite the growth in population. There appears to be a reduction in private car use when compared with pre-pandemic use, and the times at which people travel has also changed slightly. However, overall traffic volumes (excepting the pandemic period) have remained relatively steady due to a higher number of goods vehicles and 'white van' trips, such that traffic levels in the borough during summer 2023 were only a few percent below the pre-pandemic traffic levels.



2.9 Many of the changes to why and how often we travel have been accelerated by the pandemic in 2020. For example, home working, made possible by new technology, is a realistic choice for some. While it is too early to tell the long-term impacts of the pandemic on transport, it shows the potential for significant changes in behaviour to take place in a relatively short period of time.

3 Spring 2023 Engagement

3.1 A survey seeking resident's views on transport in Wokingham, how they travelled and potential changes was conducted in early 2023.

3.2 The Spring 2023 consultation survey received feedback from a range of stakeholder organisations and 750 public responses across the borough. A full report of the survey and analysis of the results is provided as part of the draft LTP consultation material.

3.3 Although the responses were spread by location across the borough, engagement varied by age group. For example, 60% of respondents where aged between 25 and 64, comparable with the 53% of borough residents in this age group. However, almost 40% of respondents were over 65 whereas less than 1% were under the age of 24. This is a recurring concern of the council and we will seek to improve the response rate for those below 65 to ensure better representation of views of our residents both for consultation on this LTP and for policies and schemes arising from it during the LTP4 period.

3.4 Responses to the Spring 2023 survey aligned with the evidence base in Appendix A in that car is the most popular mode of transport for travel, accounting for the majority of trips over five miles. Walking, and to a lesser extent cycling, also accounted for a significant proportion of short trips by residents of Wokingham, Winnersh, Woodley, Earley and Shinfield.

3.5 The most commonly raised concerns about current transport facilities were:

- The safety of children walking and cycling to school.
- Maintenance of roads and footpaths in the borough.
- A lack of travel options.
- That current infrastructure is not cycle friendly

3.6 Respondents were asked to rank the importance of several measures in urban centres. The top three themes were:

- Pedestrian Safety
- Clean Air
- Traffic Congestion

3.7 Views on several statements for change listed in the consultation were sought to understand priorities for residents. The findings indicated varying levels of support with 90% agreeing on the need for air quality to be within legal limits, 60% willing to change their travel habits to reduce emissions, but with only 40% agreeing with the concept of parking charges based on vehicle emissions.

Level of Agreement on Potential Transport Changes

Statement	Level of Agreement
Air quality should be within legal limits	Very High
The LTP should help reduce emissions from transport	Very High
Rural lanes be made safer for walking and cycling	High
I would accept slightly longer journeys by car to make it safer to use active travel modes to school	HighHigh
I would be willing to change my travel habits to reduce emissions	HighHigh
I support redesignation of roads in my nearest town to provide more outdoor spaces for businesses, provided access was retained	High
Reducing on street parking in nearest town to provide more outdoor spaces for businesses,	More in favour than against
Would accept slightly longer journeys by car if it meant less traffic on the streets where respondents tend to go.	More in favour than against
Different parking charges based on vehicle emissions	More against than in favour
Access charges for the most polluting vehicles to improve air quality	More against than in favour

3.8 Formal responses were also received from stakeholder groups, including Parish Councils, Reading Buses, Cycling UK, the British Horse Society and the University of Reading. Points raised by these groups included:

- Concerns about traffic speed and safety.
- A need to link bridleways / rights of way with shared use paths.
- The impact of planned and emergency roadworks on public transport.
- Make alternatives to driving as easy and as cheap as possible.

3.9 The consultation feedback provided a guide to local priorities from the borough's residents and stakeholders to help shape and inform the LTP. We have also drawn on findings from other engagement, such as the National Highways and Transportation survey (NHT), to provide a comprehensive picture of residents' views.

3.10 The responses highlighted particular areas of concern around maintenance and safety for active travel and indicated support to improve air quality and reduce carbon emissions.

4 Places and Travel Characteristics

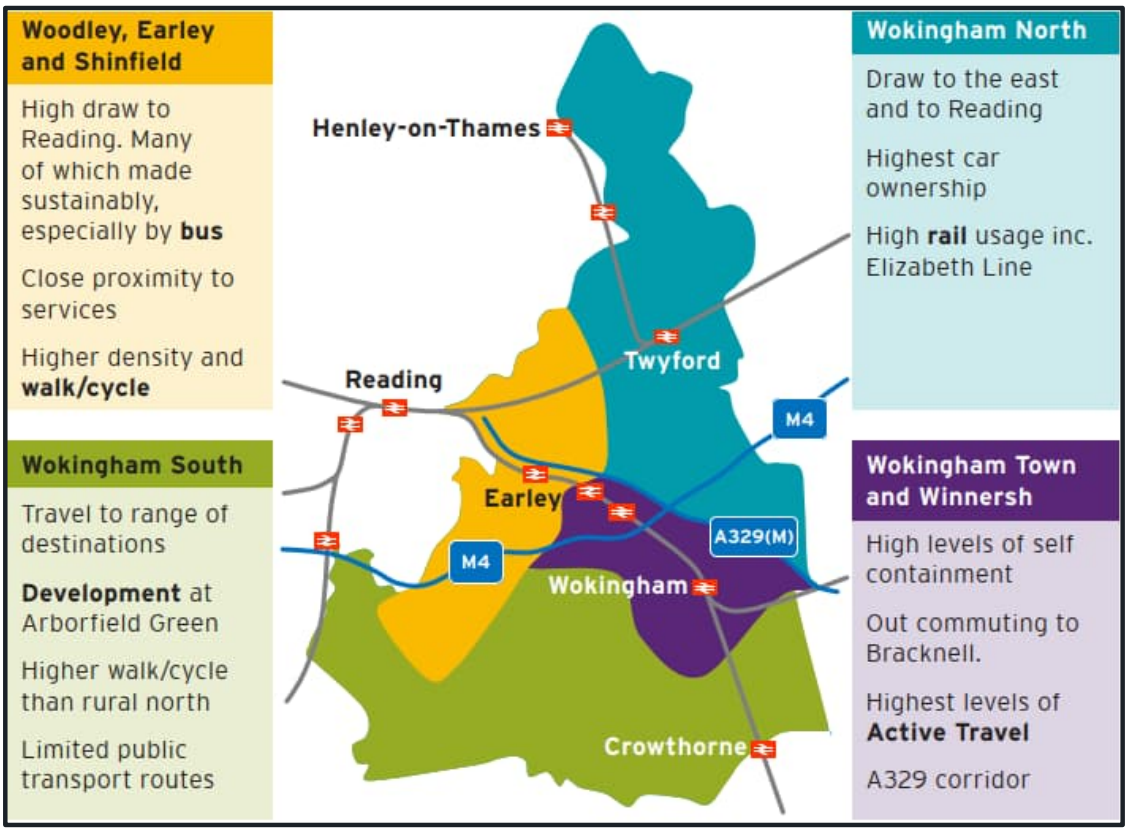
4.1 Travel for work can be broadly summarised as

- **35% of residents work within the borough.** Short distance urban trips are typically made on foot or by cycle, but car use is dominant in more rural areas.
- **35% of residents travel to nearby destinations** including Reading, Bracknell, Slough, Maidenhead and Windsor.
- **30% of residents travel elsewhere** with around 10% of residents working in London and typically travelling by public transport, and 20% to other regional destinations with the private car used for over 90% of these trips.

Place-based approach

4.2 The majority of our population lives in the urban areas in the north and west of the borough and along the A329 corridor. Travel patterns vary across the borough, with travel and socio-economic data analysis suggesting there are four areas, each with distinct travel characteristics. These are:

- Wokingham and Winnersh
- North Wokingham
- Earley, Woodley and Shinfield
- South Wokingham



Wokingham and Winnersh

4.3 Wokingham and Winnersh have the highest levels of self-containment and active travel in the borough. A quarter of residents also work in Wokingham or Winnersh and the proportion of internal commuting trips made by foot/cycle is similar to that made by car. Most residents also live within walking distance of a primary or secondary school and shops and have the have the greatest potential to walk and cycle.

4.4 Bracknell is the most common destination from this area for work outside the borough followed by Reading. Railway stations at Winnersh, Winnersh Triangle and Wokingham, and 15-minute frequency bus services along the A329 provide public transport connections to Reading and Bracknell. There are also hourly bus services between Wokingham and Twyford, Barkham, Finchampstead, Arborfield and Shinfield.

4.5 The A329 can however suffer from traffic congestion, impacting journey times and causing poor air quality. The Winnersh Relief Road has helped to alleviate congestion at Winnersh Crossroads and improvements to Market Square has enhanced the urban realm, but there remains an Air Quality Management Area (AQMA) in Wokingham town that covers Peach Street, Broad Street, Shute End, Denmark Street and London Road, with the greatest levels of pollution at Shute End.

4.6 There is new development located to the north and south of Wokingham. New infrastructure such as the North Wokingham Distributor Road has been completed and includes a new north-south crossing of the railway. In addition, the first section of the South Wokingham Distributor Road (SWDR) has been built connecting the A329 to Waterloo Rd and enabling the closure of Waterloo Road level crossing. The remaining sections of the SWDR will come forward as the South Wokingham SDL is built out over the coming years.

North Wokingham

4.7 The North Wokingham area includes predominantly rural areas to the north of the A329(M) including Remenham and Twyford. Travel from this area is typically along the east-west corridors, such as the A4, M4 and Great Western mainline, these being towards Reading in the west and Slough, Windsor and London to the east.

4.8 Lower population densities in rural areas typically results in fewer local services and facilities, and this is reflected in higher car ownership than in our urban areas. Nevertheless, a smaller proportion of these residents drive to work compared to urban areas. Reasons for this include more rural residents accessing services digitally and a higher proportion of travel by rail, especially from Twyford station

4.9 Twyford railway station has a large catchment area and, despite a drop in use during Covid-19, rail services and car parking continues to be in demand. The station is served by frequent Elizabeth Line services to Reading, Maidenhead and London. Wargrave station is on the Henley Branch Line and connects to the Elizabeth Line at Twyford.

4.10 There are regular bus services on the A4 London Road corridor towards Reading, but services are fewer elsewhere in the area. However, some community transport services operate to provide travel opportunities to residents in these areas.

Earley, Woodley and Shinfield

4.11 Areas in and around Woodley, Earley and Shinfield abut the Reading conurbation. Travel to Reading accounts for nearly a third of trips from these areas.

4.12 The area benefits from high bus frequencies radiating out from Reading and consequently has the greatest levels of bus usage in the borough. Reading Borough Council's BSIP identifies Fast Transit Public Transport Corridors (FTPT) along the A327 and A329 routes into Wokingham, as well as quality public transport corridors connecting Woodley to Twyford, and Reading to Shinfield and Arborfield. If delivered, these routes would enhance the existing bus services and benefit the residents of Wokingham Borough.

4.13 Rail represents a smaller proportion of travel from this area than Wokingham and Winnersh or North Wokingham. Earley railway station is served by trains to Reading, Wokingham, Guildford and London Waterloo, and the new Reading Green Park station by trains to Reading and Basingstoke and is well located for residents of Shinfield.

4.14 There are a number of services, amenities and jobs located in Earley and Woodley and walking and cycling accounts for a third of internal commuting trips. Overall active travel accounts for 10% of all commuting trips in this area, with levels towards Reading low given that many jobs and amenities in Reading are within cycling distance.

South Wokingham

4.15 Residents in the generally rural areas of South Wokingham and including the larger settlements of Arborfield and Finchampstead show a more diverse range of travel destinations when compared to other parts of the borough and a more limited range of public transport options.

4.16 The Leopard bus route connects Arborfield to Wokingham and Reading via Finchampstead and Shinfield. The frequency of this service was reduced to hourly following the COVID-19 pandemic, but a growing population along the route will provide new travel demand to support increased bus service frequency.

4.17 The new community at Arborfield continues to grow. Among the 3,500 allocated dwellings, over 1,000 have been completed along with new primary and secondary schools. The A327 Arborfield Cross Relief Road (Observer Way) was completed in 2020 to support the development and to reduce traffic passing through Arborfield Cross. The Nine Mile Ride extension to and through Arborfield Garrison and connecting to the A327 was completed in 2022.

4.18 The new community has higher levels of walking and cycling than other rural areas, which is a positive travel trend that should be developed further, and benefits from the California Greenway route to Finchampstead.

4.19 There are no railway stations in South Wokingham, although Crowthorne station provides an alternative to Wokingham for residents in Finchampstead and Green Park Station for services to Reading and Basingstoke from areas in the west.

5 Travel and Transport

Strategic Transport Network

5.1 The borough is well connected to major strategic roads. The M4 motorway crosses east to west through Wokingham, and the A329(M) provides a similar role north-south between Reading and Bracknell. These roads are accessed at Coppid Beech, Winnersh Triangle, Thames Valley Park and at M4 Junction 11 near Shinfield. Significant local roads also include the A4, A33, A321, A327 and A329.

5.2 Access to these strategic routes supports our local economy and enables residents and business to access services and amenities regionally and nationally. We will work with our partners and stakeholders to protect and enhance our strategic road and rail connectivity. This will help to effectively transport people, goods and services within the borough and to neighbouring areas.

Local Highway Network

5.3 Maximising our existing assets is vital to keep the borough moving. A well-maintained transport system is a priority for the council and was supported in the Spring 2023 consultation.

5.4 We will trial changes, investigate new approaches using technology to better monitor the network, and align proposed improvements with planned maintenance schedules to reduce disruption. We will also reduce the carbon footprint of highway maintenance and construction activities.

5.5 Continuing the current trends which has seen injuries from traffic collisions reduce over the last 15 years, an objective of the LTP will be to help achieve a further 50% reduction in serious and fatal road traffic collisions. Improvements will include targeted measures at areas with the highest collision rates including the A329, B3349 and A4 corridors.

5.6 Measures to reduce injuries to vulnerable road users will also be progressed. Areas that currently experience a higher number of collisions include Twyford and Remenham in the north, Arborfield and Newland in the south, and in and around the town centres of Woodley and Wokingham.

Health and Wellbeing

5.7 Transport plays a significant role in people's health and wellbeing. This can include enabling access to services, physical activity and the impact of emissions and noise on health.

5.8 Typically, Wokingham has a healthy population. Healthy life expectancy is above the national average and Wokingham is one of the top local authorities for physical activity in adults. However, the borough was in the bottom 20 for physical activity in children and young people. Levels of obesity are double for year 6 children compared to reception aged children, and those in more deprived areas are more likely to be obese than average.

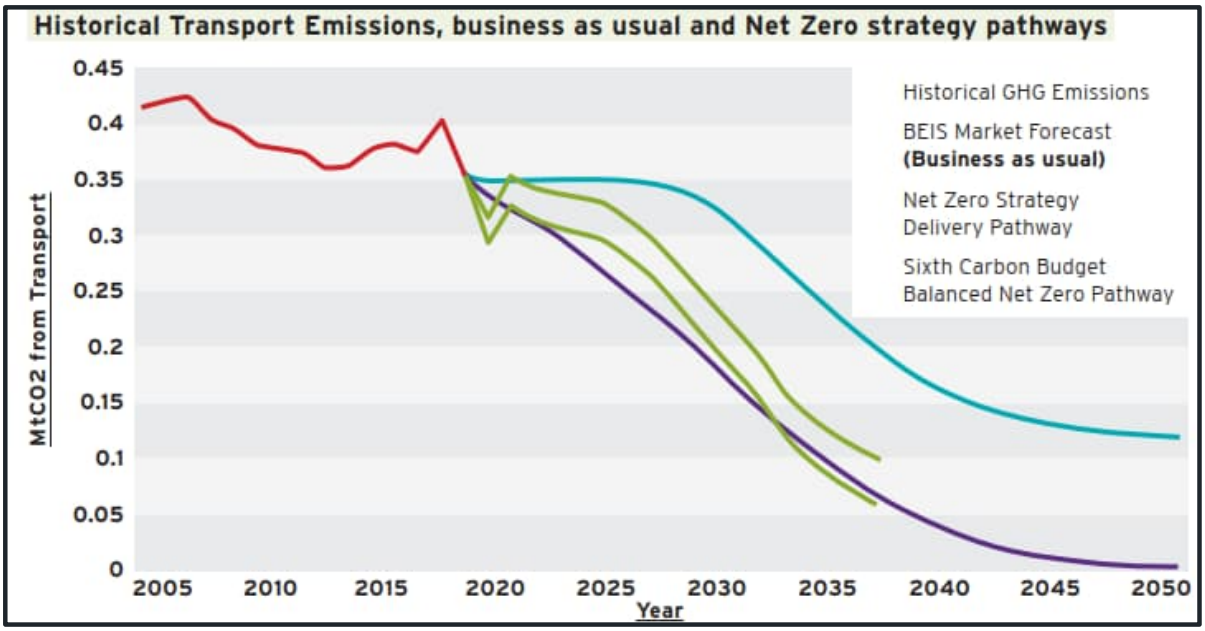
5.9 Improving physical activity levels in children and young people, such as through making active travel an easy and accessible choice, can be a key component in achieving a healthier Wokingham and to reduce preventable difference in health and opportunities.

Environmental Impacts

5.10 Local transport accounts for a third of the carbon emissions in the borough. In addition, there are similar levels of carbon emissions arising from major transport links through the area, such as the rail network and the M4.

5.11 The council declared a climate emergency in 2019 and has committed to doing as much as possible to achieve carbon neutrality by 2030. Achieving this will require significant changes in travel behaviour and vehicle propulsion.

5.12 To be carbon neutral in line with local (2030) or national (2050) targets we will need to make significant changes and at a faster rate of change than that observed to date. In the following diagram, the red line to 2020 indicates our progress to date and the purple line where we would need to go to become carbon neutral by 2050.



Changing Population

5.13 It is expected that the population of the borough will increase to 200,000 over the next 10-20 years. Changing demographic characteristics are likely to change the demand for travel. Older age groups will make different types of trips to those of working age, including higher levels of concessionary bus travel, and families moving into new housing tend to make more trips than more established residential areas, including higher levels of active travel as seen in Arborfield Garrison.

5.14 A new Local Plan to allocate further housing and employment development in the borough is being developed by the council. The 2021 Local Plan consultation proposed continued development at Strategic Development Locations (SDLs) in Arborfield, South Wokingham

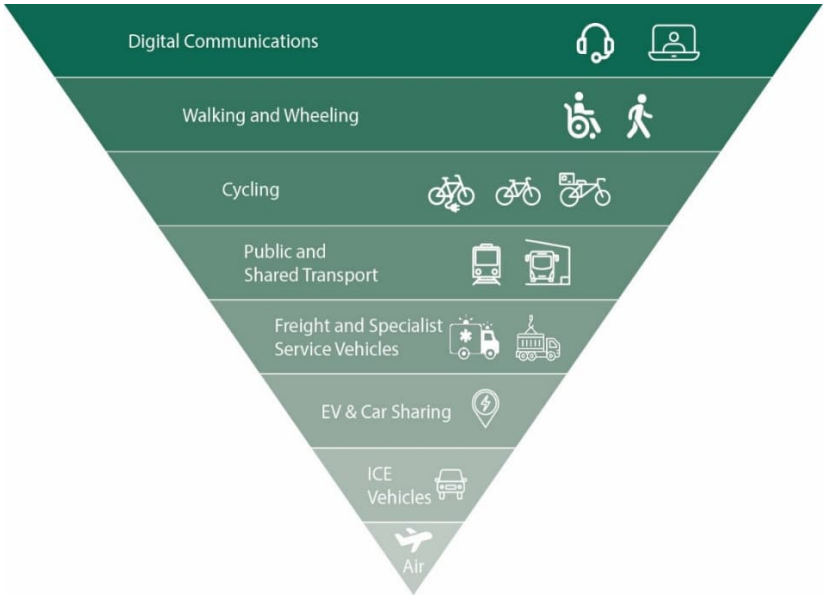
and Shinfield and a new SDL at Hall Farm between Shinfield and Earley. These will provide new homes to thousands of future residents along with new education, retail and employment facilities.

Placeholder for Local Plan related Map

5.15 The LTP will complement and align transport strategy with the emerging Local Plan. Infrastructure delivered in the larger developments will need to provide safe walking, cycling and attractive public transport routes within and from these developments to enable sustainable development and appropriate infrastructure for new and existing residents.

Hierarchy of Transport

5.16 In line with national policy, the following diagram sets out a hierarchy of transport provision for the LTP, clearly placing the most sustainable forms of travel and access first and with less sustainable modes having a lower priority. Although private cars are shown to be our lowest priority, we know that many of us will continue to rely on the private car and simply could not (due to ability or other circumstances) switch to more sustainable modes even if there was appropriate infrastructure and services.



Digital Access

5.17 Technology has already had a significant impact on how we live our lives and the need for and how we travel. Consistent with the aims in the Wokingham Borough Council Plan and Climate Emergency Action Plan (CEAP), the LTP will support growing use of digital technology. This includes improving digital accessibility and promoting remote working where possible and placing it top of the hierarchy for travel.

5.18 We will also expand the role of My Journey to help individuals, schools and businesses develop bespoke travel policies, promote car sharing schemes and active travel opportunities.

Walking, Wheeling and Cycling

5.19 Aligned with national policy, there will be an objective for 50% of trips in our towns to be made by active travel. Those residents living in urban areas are generally closer to services and employment, have more travel choice and the greatest potential to walk, cycle or use public transport.

5.20 This will be achieved by delivering the active travel infrastructure in our Local Cycling and Walking Infrastructure Plan (LCWIP), improving facilities for walking and cycling and reducing the dominance of road traffic. We will also improve cycle parking and access and investigate the potential for an on-street cycle or e-scooter scheme through the production of a Future Mobility Strategy.

5.21 The priorities for active travel are identified in our Local Cycling and Walking Infrastructure Plan. These include but are not limited to

- A329 Reading - Winnersh - Wokingham - Coppid Beech Roundabout.
- Barkham Road.
- Central Wokingham Town.
- Finchampstead Road.
- Lower Earley Way; and
- links to Twyford and Twyford Station.

5.22 Outside of urban areas, rural villages and local towns bring communities together and provide local services and employment that reduce the need to travel. We will support vibrant rural centres by improving access and public realm, providing local parking facilities, and helping to enable local communities to provide events in their area.

5.23 Delivery of the LCWIP and sections of the Greenways network will bolster active travel commuting and leisure opportunities by walking, cycling or wheeling in our rural areas. It will, however, take time to create a network of new off-road routes. Therefore, we will also trial locally supported changes to increase the network of low traffic routes for walking, cycling and horse riding, with priority given to those that improve access to services and amenities such as education and the Greenways.

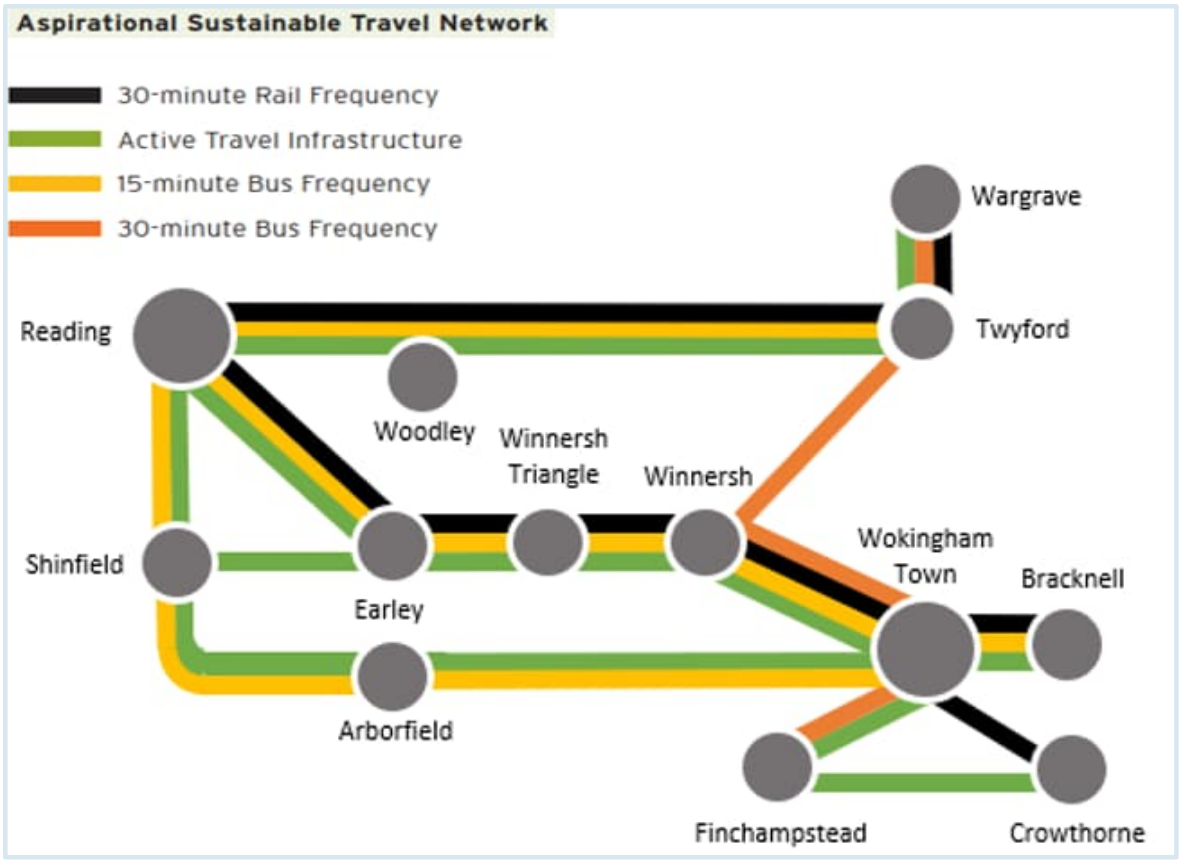
5.24 To enable more walking and cycling to school and to promote increased physical activity in young people, we will develop a sustainable routes to school strategy. This will look at public transport and active travel access to schools and where targeted changes could improve access and safe routes that enable and support independent access to schools, shops and other amenities. We will also investigate locations for and introduce school streets.

Public Transport

5.25 Reading has one of the highest levels of bus use per head in the country and those parts of the borough adjacent to the Reading, including Earley, Woodley and Shinfield, and along the A329 and A4 corridors, benefit from the most regular services. Outside of the urban areas, provision is varied with typically less frequent services between Wokingham, Arborfield and Finchampstead, and between Wokingham and Twyford.

5.26 We will implement proposals in the Bus Service Improvement Plan targeted at those areas serving the greatest number of people and where improved bus services can be viable. This includes increasing service frequencies and reliability on higher frequency routes and expanding the bus network to support our growing population.

5.27 The strategy will seek to improve travel choices and safety by implementing high-quality travel corridors for walking, cycling and public transport to provide a core network of attractive cycle and bus routes.



5.28 We will also investigate and deliver measures to improve access for all. This includes seeking lower fares for bus travel, improvements to the railway crossing at Tan House/Carnival Hub to provide a step free railway crossing, and continuing to fund dial-a-ride services to serve rural communities.

5.29 Park and ride services provide additional capacity into Reading and access to a high-quality bus service that is not always viable in lower density rural areas. The Park and ride sites at Mereoak and Thames Valley Park are linked by a single, high frequency bus service via Reading town centre or the hospital. Coppid Beech and Winnersh Triangle park and rides are not currently operating as demand for park and ride services has not yet recovered after the pandemic, nevertheless Park and Ride are an important part of the transport network and we will seek to further enhance facilities at these, including interchange and electric vehicle charging facilities.

5.30 We will work with and encourage rail operators to increase capacity on the North Downs Line and to introduce a Winnersh Triangle stop on the existing Reading-Guildford-Redhill rail service as well as supporting improved services at our railway stations, interchange and measures to decarbonise the railway.

5.31 Twyford station has also benefitted from the introduction of electrified rail services and the recent start of Elizabeth Line operations providing a direct service into and across central London to Shenfield. To complement the enhanced services, we support improvements to interchange and access at Twyford station.

Electric Vehicles and Car Sharing

5.32 To facilitate the transition to zero emission vehicles, we will deliver electric vehicle charge points in areas with limited off-street parking and the highest density of housing, including Wokingham town centre, Winnersh and Earley. To further increase the range of charging options, we will investigate opportunities to generate energy at our park and ride car parks and promote the sharing of existing private charge points, known as peer-to-peer charging.

5.33 We will produce an electric vehicle strategy setting out priorities. To reflect the growing and changing technology this will be updated periodically throughout the LTP period. There will also need to find innovative ways of increasing access to zero emission vehicles including the development of a Car Sharing Strategy.

5.34 While the transition to zero emission vehicles will help to reduce our emissions, the pathways show that their impact is small in the short term before widespread uptake. As such, changes in our behaviour and travel in the short term will also be required. Achieving this will require a reduction in total traffic across the Borough and changes to speed limits, with the priority being those that improve road safety and/or air quality.

5.35 Wokingham Borough has three Air Quality Management Areas (AQMA), which are where pollution has exceeded legal limits. These are located in Wokingham Town Centre, at Twyford Crosswords and along the M4 motorway running east-west across our borough. Noise pollution is also highest adjacent to the M4 motorway. Clean air in our communities

was identified as a priority from the spring 2023 consultation. The removal of all air quality exceedances in the current AQMAs in Wokingham town centre and Twyford will be a short-term priority for the LTP.

5.36 We will also produce a freight strategy to better manage the growing number of light and heavy good vehicles, with initial focus on Wokingham Town Centre.

5.37 More detail on the measures to achieve these are set out on the following pages.

6 Local Transport Plan Strategy

Create healthy and safe Places

Safer streets for All

Outcome: Safer environment for all road users, with a 50% reduction in serious injuries from road traffic collisions

- Targeted infrastructure and, where appropriate, speed limit changes to improve road safety at identified cluster sites, including Wokingham Town Centre, A4 and B3349.
- Trial and delivery of School Streets and safer routes to school across the borough.
- Increase the network of quieter rural roads and residential streets.
- Boroughwide Cycle Skills Network Audit

50% Active Travel in Towns by 2030

Outcome: Healthier and more active towns that prioritise the movement of people with 50% of trips being made by foot or cycle.

- High quality cycle facilities as identified in the borough's LCWIP.
- Reduce the dominance of vehicles to enable improved pedestrian environment and space for businesses in town centres
- 20mph speed limits to improve safety for walking and cycling in towns.
- Consider E-scooter hire schemes to improve door-to-door transport options.
- Improve access to green space, especially across Lower Earley Way and to the river Loddon.
- Increase engagement through My Journey and expand its support and promotion of road safety, public transport and active travel.
- Secure cycle parking, including adapted cycle parking, at local destinations.

Objective: Thriving Villages and Rural Centres

Outcome: Villages and local centres that support local communities through a transport system that works for them.

- Enhance pedestrian access, safety, EV charging, secure cycle parking and motorcycle parking facilities at local destinations.
- Support opportunities for temporary highway closures for local events to support vitality of rural villages.
- Delivery of Greenways, to create safer and more attractive environment for pedestrians, cyclists and, where appropriate, horse riding.
- Identify local priorities for improving walking, cycling and horse riding and trial changes to increase network of low traffic rural/green lanes.
- Develop a sustainable routes to school strategy
- Update of active travel route web-based mapping and physical activity challenges.

Reduce environmental impacts

High Quality Travel Corridors

Outcome: Increased attractiveness and convenience of walking, cycling and public transport through improved facilities, better frequency and integration.

Boroughwide

- Improve access to public transport, including disabled parking, enhancement of bus stops and level access improvements at stations and Tan House Bridge.
- Work with partners to develop a lower fares structure through the Enhanced Bus Partnership
- Continue to support community dial-a-ride services.

Earley, Woodley and Shinfield:

- Increased bus Frequency and improved bus journey times along priority bus corridors including the A4/A321, A33, A329 and A327.
- High Quality cycle facilities as identified in out LCWIP including
    - A329: Winnersh Triangle – Earley- Royal Berkshire Hospital
    - Woodlands Avenue - Church Road – University
    - Lower Earley Way
- Improved interchange and access facilities at Earley rail station.

Wokingham & Winnersh:

- Delivery of a high-quality sustainable transport corridor along the A329 connecting Reading - Winnersh - Wokingham - Coppid Beech Roundabout and Bracknell.
- Improve access to and facilities at stations along the North Downs Line.

South Wokingham:

- Increase bus service frequency between Wokingham Town, Arborfield and Finchampstead, initially to half hourly with aspiration to develop a 15-minute service.
- Upgrade active travel facilities along the B3349 Barkham Road to create an active travel corridor connecting Arborfield and Wokingham Town Centre.
- Upgrade active travel facilities along the A321 Finchampstead Road.

North Wokingham:

- Improve the forecourt and interchange facilities at Twyford station with consideration of parking issues at the station and surrounding area.
- Reduce bus service journey times and improve reliability along the A4 corridor
- Improve active travel facilities into Twyford including to and from Wargrave.

Net zero carbon emissions

Outcome: Reduced impact on the environment of transport and new innovative measures to support the transition to net zero emissions.

- Reduction of total traffic movements on Wokingham Borough Council roads
- Collaborate with supporting partners and innovators in developing new solutions for decarbonising transport, including proposals from neighbouring Local Authorities.
- Support improved digital accessibility for local residents and business.
- Electric Vehicle charging infrastructure in areas with limited off-street parking.
- Promotion of peer-to-peer electric charging networks to meet growing demand for EV charging.
- Energy generation at park and ride sites.
- Explore potential for a network of shared electric vehicles (car clubs)

Clean air, removal of all air quality exceedances

Outcome: Improved air quality and the removal of all air quality exceedances in the borough.

- Reduction of traffic and/or changes to access and speed limits, to reduce pollution and remove air quality exceedances in Wokingham Town Centre.
- Wokingham Town Centre Freight Strategy
- Twyford Town Centre improvements – improve air quality, safety for cycling and pedestrians, and reliability of public transport services.
- Support the transition to zero emission buses and new vehicles across the borough.
- Support rail industry and train operators to decarbonise the rail network.

Grow the economy

Protect and Enhance Strategic Road and Rail Connectivity

Outcome: Retained and enhanced strategic road and rail network for effective travel and freight movements.

- Maintain safe and efficient access to the A329(M) and M4
- Increase service capacity along the North Downs Line
- Increase local service frequency on the Reading to Waterloo rail line.
- Continue working with neighbouring authorities through the informal freight partnership to effectively manage freight across the region.
- Develop and implement freight management policies.

A Well-Maintained Transport Network

Outcome: A transport network that is well maintained for all modes, and which provides attractive and comfortable transport links for all users.

- Test and trial measures that could reduce maintenance needs, and contribute towards targets for active travel, air quality, biodiversity and/or road safety.
- Identify opportunities to link enhancement schemes with highway maintenance.
- Adaption of network maintenance to increase resilience to a changing climate.
- Work with operators to share operational and real time data to improve transport services and maintenance.
- Increase use of lower carbon, lower maintenance and/or recycled materials in construction, maintenance and highway renewals.
- Higher priority given to footpath and cycle path maintenance and gritting.

- **Support Sustainable Development:**

  Outcome: Attractive transport connections and sustainable communities.

  - Development layouts in accordance with Wokingham 'Living Streets' design guide to provide streets that are attractive to and permeable for pedestrians and cyclists.
  - Continue to promote contributions to My Journey for all new developments as an option instead of Travel Plans.
  - Provide and retain appropriate levels of secure cycle parking, vehicular parking and electric vehicle charging provision.
  - High quality sustainable travel options to/from all strategic development locations.
  - Delivery of off-site infrastructure required to support new strategic development.

7 Action Plan

Vision Themes	Objectives	Category	Measures
Create Healthy and Safe Places	Safer streets for All	Road Safety	Targeted infrastructure and speed limit changes to improve road safety on A4 and B3349.
			20mph speed limit in town centres
			Ongoing Cycle Training Program to schools (Bikeability) and Adult Cycle Training
		School Travel	Promote sustainable and active travel at schools through the school Modeshift Awards scheme
			Deliver infrastructure to enable and support independent travel to schools and colleges
			Develop a Sustainable Routes to School Strategy
			School Street Pilot(s)
			Roll out of School Streets
	50% Active Travel in Towns	Infrastructure	High quality walking and cycling facilities and routes as identified in the boroughwide LCWIP.
			Reduce dominance of vehicles in town centres and residential areas
		Access to Cycling	Provide a range of secure cycle parking options at local destinations
			Investigate feasibility of On-street cycle or escooter hire scheme
		Standards	New Active Travel Design guidance
		Engagement	Increase My Journey engagement to promote sustainable and active travel.
	Thriving Villages & Rural Centres	Rural Centres	New EV charge points and secure cycle facilities at local centres
			Enhance pedestrian access and safety in local service centres.
			Enable and support local events that support vitality of rural villages.
		Active Travel	Continued delivery of the LCWIP and network of Greenways
			Identify local priorities for quiet rural roads/green lanes to improve walking, cycling and horse riding
			Update of active travel route web based mapping
			Improved walking and cycling routes within Twyford and between Twyford and Wargrave
Reduce Environmental Impacts	Net Zero Emissions	Road Traffic	Reduce the impact of traffic movements on Wokingham Borough Council roads
			Promote car sharing and Liftshare for business
		Digitalisation	Improved digital accessibility for local residents and business
			Encourage online service delivery
			Support the development and delivery of Mobility as a Service (MaaS) applications
		Zero Emission Vehicles	Increase the provision of electric vehicle charging infrastructure
			Promote and encourage community electric vehicle charging
			Communication to publicise and promote benefits of electric vehicles
			Energy generation and electric charge points at car parks and park and ride sites
	Clean Air	Access	Twyford Cross Roads environmental improvements
			Wokingham Town Centre traffic and speed limit changes to reduce pollution
		Freight	Wokingham Town Centre Freight Strategy
			Support transition to cargo bikes
		Public Transport	Transition to zero emission buses across the borough.
			Support decarbonisation of rail services in Wokingham
	High Quality Sustainable Travel Corridors	Access for All	Access improvements at Tan House/Carnival Hub Bridge.
			Development of lower fares structure through the Enhanced Bus Partnership
			Continue to fund community Dial a ride services
			Data sharing with operators, partners and innovators to improve performance and customer information
			Implement a high-quality sustainable transport corridor on the A329 between Reading, Winnersh, Wokingham and Bracknell.
		Public Transport	Increased bus Frequency and improved bus journey times along priority bus corridors on A327
			Increased bus Frequency and improved bus journey times along priority bus corridors on A4/A321
			Increased bus Frequency and improved bus journey times along A33 from Mere Oak Park and Ride and south of M4
			Wokingham Town to Arborfield, half hourly bus service with aspiration to develop into 15 minutes.
			Half hourly bus frequency between Wokingham and Twyford
		Cycle Network	High Quality cycle facilities connecting Woodlands Avenue - Church Road- Palmer Park
			Active travel facilities between Arborfield and Wokingham Town Centre along the B3349 Barkham Road
			Active travel facilities between Finchampstead and Wokingham Town Centre
			High quality cycle facilities along Lower Earley Way
Grow the Economy	Protect and Enhance Strategic Connectivity	Strategic Network	Maintain safe and efficient access to the M4 and A329 (M)
			Encourage and support National Highways to reduce noise and air pollution from the M4.
		Public Transport	Improving walk/cycle access to and interchange facilities at stations in the borough
			Increase capacity along the North Downs Line
			Additional services between Reading, Wokingham and Bracknell.
		Freight	Forum to collaborate with neighbouring authorities and freight operators
			Develop and implement domestic and industrial freight management policies
	A Well-Maintained Network	Operational Maintenance	Increase the use of lower carbon materials in construction and highway maintenance.
			Test and trial measures that can support LTP objectives and reduce maintenance
			Align proposed improvement schemes with the maintenance program.
			Work with operators to share data to improve maintenance activities in Wokingham
	Sustainable Development	Development Policy	Update of Wokingham Borough Council Living Streets design guidance
			New Development layouts designed to Living Streets Design principles (or any successor document).
			Promote "My Journey" for Travel Plans and monitoring of travel impacts for all new developments.
		Sustainable Design	Appropriate secure cycle parking, EV charging facilities and identify suitable mobility hub provision for all new development
			Provide high quality sustainable and active travel facilities in and to/from all strategic development locations.
		Public Transport	Provide high quality bus stop infrastructure to serve new developments
			Simplification and enhancement of 'Leopard' bus routes serving new development
		Infrastructure delivery	Complete the Wokingham South Distributor Road and active travel package
			Infrastructure required to support new strategic scale development
			Complete the active travel, Greenways and Loddon Long Distance path in the Loddon Valley

Wokingham Borough Council

Local Transport Plan 4 Sustainability Appraisal

Sustainability Appraisal Report

September 2023

Wokingham Borough Council

Local Transport Plan 4 Sustainability Appraisal

Sustainability Appraisal Report

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Equalities Impact Assessment

1 Introduction

1.1 Overview

1.1.1. Wokingham Borough Council (WBC) are currently preparing their Fourth Local Transport Plan (LTP4). This will replace the existing Wokingham Local Transport Plan 3 (LTP3)[1], which was adopted in 2011.

1.1.2. Wokingham Borough is located in Berkshire in the south of England, covering 179km^2. The Borough has higher car ownership than the national average. The transport network includes the M4, three A-roads and six railway stations which serve a total of five railway routes connecting Wokingham Borough to other parts of the South East, the Midlands, and west to Wales.

1.1.3. The road network in Wokingham Borough experiences high volumes of vehicular traffic. Car travel is the primary means of transport for many local journeys in the Borough. As of 2016, Wokingham Borough had limited electricity charging infrastructure (with 6 publicly accessible charging points), however in 2022 WBC received a grant for new charging infrastructure at 19 locations within the Borough, 12 of which will be located within residential areas[2].

1.1.4. The rail routes within the Borough provide services to Reading, London Waterloo, and Gatwick Airport, as well as stations throughout the Borough. The railways reach capacity during peak times, causing issues with congestion and unreliable journey times.

1.1.5. The Borough is rural in nature and the public transport network is dispersed, disconnected and unreliable, limiting accessibility to areas and services. Bus services are particularly limited in the evenings and at weekends.

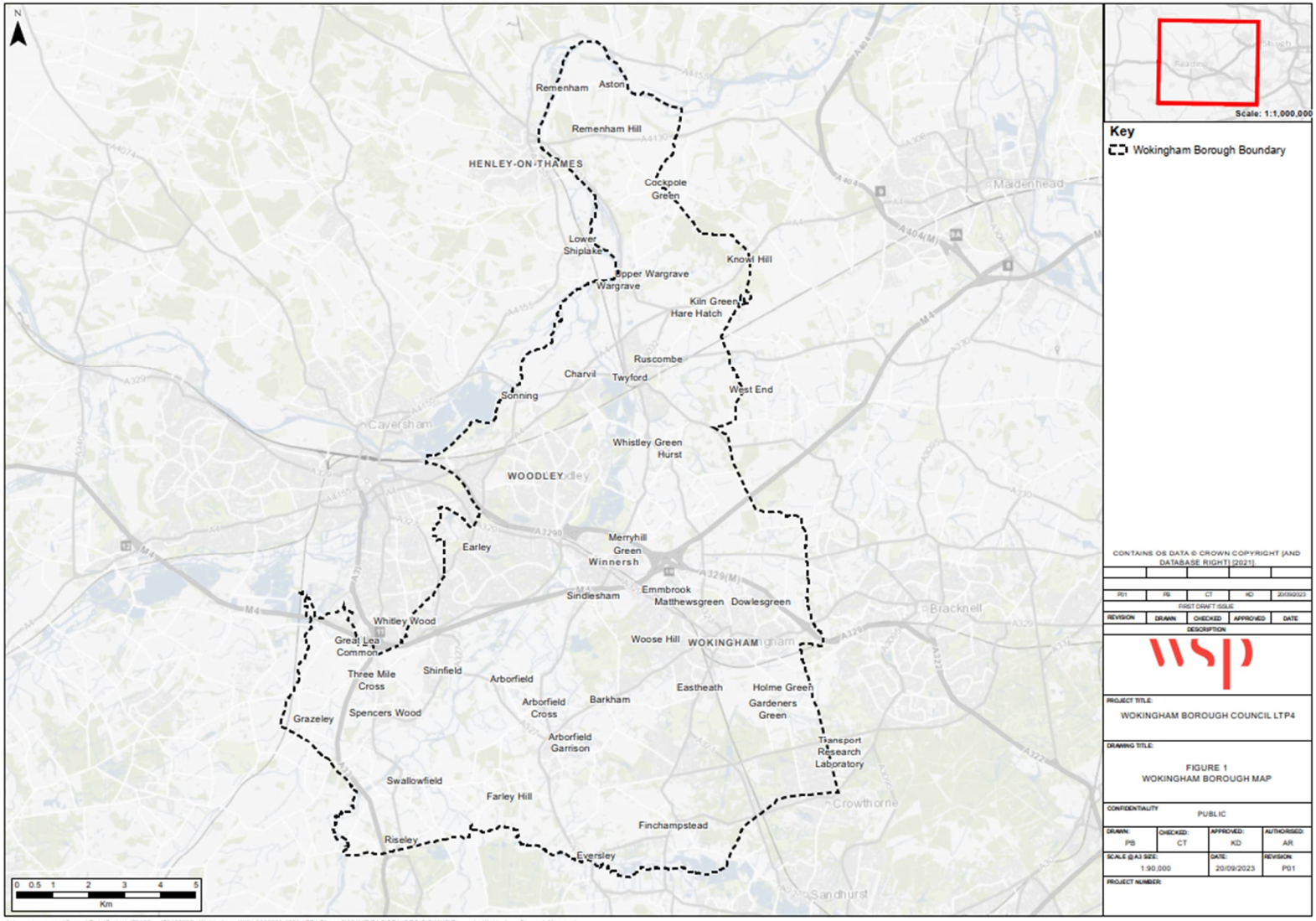
1.1.6. Within the Wokingham Borough in 2020, 18% of the total highway network was made up of Public Rights of Way (PRoW), bridleways, and the cycle network[3][4]. The routes are well used throughout the Borough. Issues with the routes include limited information,

[1] Wokingham Borough Council, Local Transport Plan 2011-2026 [online] Available at: https://www.wokingham.gov.uk/council-and-meetings/open-data/plans-policies-and-strategies/?assetdet91f252ff-550d-4cfa-a838-92ef2cb5f83c=210332&categoryesctl91f252ff-550d-4cfa-a838-92ef2cb5f83c=7749
[2] Wokingham Borough Council (2022) Locations Confirmed for new Electric Vehicle Chargers. Available at: https://news.wokingham.gov.uk/news/locations-confirmed-new-electric-vehicle-chargers/
[3] Wokingham Borough Council (2020). 'Rights of Way Improvement Plan 2020 – 2030'. Available at: https://www.wokingham.gov.uk/countryside-parks-and-conservation/footpaths-and-bridleways/public-rights-of-way-improvement-plan/
[4] Wokingham Borough Council (2020). 'Strategic Roads and Highways Map.' Available at: https://wokingham.maps.arcgis.com/apps/MapJournal/index.html?appid=b0a1cb1052f74527b89ed96d9e2145f6

accessibility for wheelchairs and pushchairs, seasonal restrictions, maintenance, and personal safety concerns.

1.1.7. The LTP4 will apply to transport systems, assets and resources within WBC's administrative boundary, shown in **Figure 1-1**, incorporating the towns and parishes of Arborfield, Barkham, Charvil, Earley, Finchampstead, Hurst, Sonning, Remenham, Ruscombe, Shinfield, Twyford, Wargrave, Three Mile Cross, Winnersh, Spencers Wood, and Woodley.

Figure 1-1 - Wokingham Borough Council Boundary



1.2 Local Transport Plans

1.2.1. The Government's 1998 White Paper on transport, 'A New Deal for Transport: Better for Everyone'[5], introduced the concept of Local Transport Plans (LTPs) to steer the development of national transport policies at the local level. The Transport Act 2000[6] (now amended by the Local Transport Act 2008[7]) then made it a statutory requirement for local transport authorities outside of London to produce LTPs having regard to Government guidance and policies on the environment.

1.2.2. The more recent Local Transport Act 2008[7] gave local authorities the freedom to decide for themselves how many years future LTPs should cover, including the option to set different time spans for the Strategy and implementation plan elements of the LTP.

1.2.3. The Local Transport Act 2008[7] makes particular reference to climate change mitigation and adaptation, but states that authorities should consider how their strategies and implementation plans relate to all relevant environmental issues, including air quality, noise, landscape and biodiversity.

1.2.4. The Department for Transport (DfT) are currently updating LTP guidance along with additional standalone quantifiable carbon reductions (QCR) guidance. When used as a part of the LTP development process, the QCR guidance will help local authorities make evidence-based decisions on the carbon impacts of their LTP at a strategic planning stage[8]. There is however no date confirmed for when this will be consulted upon.

1.3 Purpose of the Report

1.3.1. WBC has commissioned WSP to undertake a Sustainability Appraisal (SA) (this report) which will ensure that sustainability aspects are incorporated into the Local Transport Plan 4. The SEA (set out in **Figure 1-2** below) combines the following assessment processes:

- Strategic Environmental Assessment (SEA);
- Equalities Impact Assessment (EqIA); and
- Habitats Regulations Assessment (HRA).

1.3.2. This approach enables synergies and cross-cutting impacts to be identified and avoids the need to undertake and report on separate assessments. It also reduces duplication of assessment work. A single process can improve efficiencies in the assessment itself, as

[5] Department for Transport, A new deal for transport: better for everyone - White Paper, 1998 [online] available at:https://webarchive.nationalarchives.gov.uk/+/http://www.dft.gov.uk/about/strategy/whitepapers/previous/anewdealfortransportbetterfo5695
[6] Transport Act 2000 [online] available at: https://www.legislation.gov.uk/ukpga/2000/38/introduction
[7] Local Transport Act 2008 [online] available at: https://www.legislation.gov.uk/ukpga/2008/26/contents
[8] Department for Transport, Transport decarbonisation: local authority toolkit [online] available at: https://www.gov.uk/government/collections/transport-decarbonisation-local-authority-toolkit

many of the issues covered in the different forms of assessment overlap. This process also helps to simplify outcomes and recommendations for policymakers.

1.3.3. More detail on the SEA methodology is provided in **Section 3**.

1.3.4. This report sets out the second stage of the SEA/ local planning process, which is the assessment of the draft local plan and preparation of the Draft SA Report (SEA Stage B). The first stage of the SEA process (Stage A), Scoping, was completed in July 2023. This stage includes the following:

- Assessment of draft visions, objectives, and outcomes;
- Assessment of reasonable alternatives;
- Assessment of cumulative effects;
- Outlining initial mitigation and enhancement measures;
- Outlining recommendations; and
- Setting out next steps.

1.3.5. See **Section 3.2** for the full description of SEA stages.

2 WBC Local Transport Plan 4

2.1 Background

2.1.1. The current WBC LTP3 and associated SEA were approved in 2011. WBC's LTP3 is applicable between 2011-2026 and requires a refresh to ensure that the overarching Strategy and policy statements remain consistent with the emerging Local Plan and to reflect a changed policy, funding and transport scheme delivery environment since 2011.

2.1.2. The emerging LTP4 provides the key mechanism for expressing how transport interventions will help WBC will achieve its vision and Strategic Objectives. The LTP4 will provide a strategy for the development of implementation plans; the first will be a short-term action plan (3 years), with further revisions of specific policies within the implementation plans during the life of the LTP4.

2.1.3. The LTP4 will comprise two elements, the Long Term 'Strategy' and the 'Action Plan'.

2.2 Elements of the Local Transport Plan

The Strategy

2.2.1. The LTP4 will take a place-based approach to addressing local problems and opportunities. Four different 'Place' types have been identified:

- Wokingham and Winnersh
  - 60,000 population;
  - Largest urban centre in Wokingham Borough;
  - Highest levels of self-containment and active travel in the Borough;
  - One quarter of residents work within Wokingham or Winnersh;
  - Larger employment draw to Bracknell than Reading;
  - The area is well connected to Reading and Bracknell through rail and bus services; and
  - The A329 serves as the primary corridor for travel between the two towns and suffers from congestion and poor air quality.
- North Wokingham
  - High levels of rail travel from Twyford to Reading, Maidenhead and London;
  - Low levels of active transport use;
  - Areas of rural, dispersed populations; and
  - Regular bus services on the A4 towards Reading and Maidenhead, but fewer services elsewhere in the area.
- Earley, Woodley and Shinfield
  - 90,000 population;
  - 1 in 3 people work in Reading;

- A329 main artery into Reading, Wokingham and A329(M) onto the M4;
- A33 links to the south and M4 from Shinfield;
- Mix of household types, reflective of a larger population;
- Travel to Reading accounts for nearly a third of trips from these areas;
- High frequencies of buses, and the highest levels of bus usage in the Borough;
- Low levels of walking and cycling for commuting trips; and
- Earley station provides services to Reading, Wokingham, Guildford and London, however this is not well utilised.

- South Wokingham
  - A more diverse range of travel destinations when compared to other parts of the Borough;
  - The Arborfield community is continuing to grow, with up to 3,500 new dwellings, primary and secondary schools;
  - Arborfield has higher levels of walking and cycling than other rural areas; and
  - Hourly bus services run between Arborfield, Wokingham and Reading, via Finchampstead and Shinfield.

2.2.1. The LTP4 describes how these individual places function and considers appropriate themes for these distinct areas.

2.2.2. Draft vision themes for the LTP4 have been formulated. These include:

- Create healthy and safe places;
- Reduce environmental impacts; and
- Grow the economy.

2.2.3. As part of the development of the LTP4, a number of objectives and outcomes have been developed for each vision theme from evidence, principles consultation and national/regional targets. **Tables 2-1, 2-2, and 2-3** outline the objectives and outcomes for the LTP4.

Table 2-1 - LTP4 Objectives and Outcomes – Create Healthy and Safe Places

Objective	Outcome and supporting text
Safer Streets for All	**Outcome:** Safer environment for all road users, with a 50% reduction in serious injuries from road traffic collisions. ■ Targeted infrastructure and, where appropriate, speed limit changes to improve road safety at identified cluster sites, including Wokingham Town Centre, A4, and B3349. ■ Trial and delivery of School Streets and safer routes to school across the Borough. ■ Increase the network of quieter rural roads and residential streets. ■ Boroughwide Cycle Skills Network Audit.
50% Active Travel in Towns	**Outcome:** Healthier and more active towns that prioritise the movement of people, with 50% of trips being made by foot or bicycle. ■ High quality cycle facilities as identified in the Borough's LCWIP. ■ Reduce the dominance of vehicles to enable improved pedestrian environment and space for businesses in town centers. ■ 20mph speed limits to improve safety for walking and cycling in towns. ■ Consider E-scooter hire schemes to improve door-to-door transport options. ■ Improve access to green space, especially across Lower Earley Way and to the River Loddon. ■ Increase engagement through My Journey and expand its support and promotion of road safety, public transport and active travel. ■ Secure cycle parking, including adapted cycle parking, at local destinations.
Thriving Villages and Rural Centers	**Outcome:** Villages and local centers that support local communities through a transport system that works for them. ■ Enhance pedestrian access, safety, EV charging, secure cycle parking and motorcycle parking facilities at local destinations.

Objective	Outcome and supporting text
	■ Support opportunities for temporary highway closures for local events to support vitality of rural villages. ■ Continued expansion of Greenways network, to create safer and more attractive environment for pedestrians, cyclists and, where appropriate, horse riding. ■ Identify local priorities for improving walking, cycling and horse riding and trial changes to increase network of low traffic rural/green lanes. ■ Update of active travel route web-based mapping and physical activity challenges.

Table 2-2 - LTP4 Objectives and Outcomes – Reduce Environmental Impacts

Objective	Outcome and supporting text
Net Zero Carbon Emissions	**Outcome:** Reduced impact on the environment of transport, and new innovative measures to support the transition to net zero emissions. ■ Reduction of total traffic movements on Wokingham Borough Council roads. ■ Collaborate with supporting partners and innovators in developing new solutions for decarbonising transport, including proposals from neighboring Local Authorities. ■ Support improved digital accessibility for local residents and businesses. ■ Electric Vehicle charging infrastructure in areas with limited off-street parking. ■ Promotion of peer-to-peer electric charging networks to meet growing demand for EV charging. ■ Energy generation at park and ride sites. ■ Explore potential for a network of shared electric vehicles (car clubs).

Objective	Outcome and supporting text
Clean Air, Removal of all Air Quality Exceedances	**Outcome:** Improved air quality and removal of all air quality exceedances in the Borough. ■ Reduction of traffic and/or changes to access and speed limits, to reduce pollution and remove air quality exceedances in Wokingham Town Centre. ■ Wokingham Town Centre Freight Strategy. ■ Twyford Town Centre improvements – improve air quality, safety for cycling and pedestrians, and reliability of public transport services. ■ Support the transition to zero emission buses and new vehicles across the Borough. ■ Support rail industry and train operators to decarbonize the rail network.
High Quality Travel Corridors	**Outcome:** Increased attractiveness and convenience of walking, cycling and public transport through improved facilities, better frequency and integration. Boroughwide: ■ Improve access to public transport, including disabled parking, enhancement of bus stops and level access improvements at stations and Tan House Bridge. ■ Work with partners to develop a lower fares structure through the Enhanced Bus Partnership. ■ Continue to support community dial-a-ride services. Earley, Woodley and Shinfield: ■ Increased bus frequency and improved bus journey times along priority bus corridors including the A4/A321, A33, A329 and A327. ■ High quality cycle facilities as identified in LCWIP including – A329: Winnersh Triangle – Earley – Royal Berkshire Hospital – Woodlands Avenue – Church Road – University – Lower Earley Way ■ Improved interchange and access facilities at Earley rail station.

Objective	Outcome and supporting text
	Wokingham & Winnersh: ■ Delivery of a high-quality sustainable transport corridor along the A329 connecting Reading – Winnersh – Wokingham – Coppid Beech Roundabout and Bracknell. ■ Improve access to and facilities at stations along the North Downs Line. South Wokingham: ■ Increase bus service frequency between Wokingham Town, Arborfield and Finchampstead, initially to half hourly with aspiration to develop a 15-minute service. ■ Upgrade active travel facilities along the B3349 Barkham Road to create an active travel corridor connecting Arborfield and Wokingham Town Centre. ■ Upgrade active travel facilities along the A321 Finchampstead Road. North Wokingham: ■ Improving the forecourt and interchange facilities at Twyford station with consideration of parking issues at the station and surrounding area. ■ Reduce bus service journey times and improve reliability along the A4 corridor. ■ Improve active travel facilities into Twyford including to and from Wargrave.

Table 2-3 - LTP4 Objectives and Outcomes – Grow the Economy

Objective	Outcome and supporting text
Protect and Enhance Strategic Road and Rail Connectivity	**Outcome:** Retained and enhanced strategic road and rail network for effective travel and freight movements. ■ Maintain safe and efficient access to the A329 (M) and M4.

Objective	Outcome and supporting text
	■ Increase service capacity along the North Downs Line. ■ Increase local service frequency on the Reading to Waterloo rail line. ■ Continue working with neighbouring authorities through the informal freight partnership to effectively manage freight across the region. ■ Develop and implement freight management policies.
A Well-Maintained Transport Network	**Outcome:** A transport network that is well maintained for all modes, and which provides attractive and comfortable transport links for all users. ■ Test and trial measures that could reduce maintenance needs, and contribute towards targets for active travel, air quality, biodiversity and/or road safety. ■ Identify opportunities to link enhancement schemes with highway maintenance. ■ Adaption of network maintenance to increase resilience to a changing climate. ■ Work with operators to share operational and real time data to improve transport services and maintenance. ■ Increase use of lower carbon, lower maintenance and/or recycled materials in construction, maintenance and highway renewals. ■ Higher priority given to footpath and cycle path maintenance and gritting.
Support Sustainable Development	**Outcome:** Attractive transport connections and sustainable communities. ■ Development layouts in accordance with Wokingham 'Living Streets' design guide to provide streets that are attractive to and permeable for pedestrians and cyclists. ■ Continue to promote contributions to My Journey for all new developments as an option instead of Travel Plans. ■ Provide and retain appropriate levels of secure cycle parking, vehicular parking and electric vehicle charging provision. ■ High quality sustainable travel options to/from all strategic development locations. ■ Delivery of off-site infrastructure required to support new strategic development.

The Action Plan

2.2.4. An Action Plan has also been developed alongside the LTP4. The Action Plan includes interventions, that are grouped under the nine objectives within the LTP4, and three vision themes. The interventions within the Action Plan have also been outlined by Place type, in line with the LTP.

2.2.5. For full details of the interventions included within the Action Plan, see **Appendix A**.

3 Methodology

3.1 Introduction

3.1.1. Sustainability Appraisal is an iterative process that is undertaken during the preparation of a plan. Its role is to promote sustainable development by assessing environmental, social and economic impacts, as well as mitigating any potential adverse effects that the plan might otherwise have.

3.1.2. The SA combines the following assessment processes:

- Strategic Environmental Assessment (SEA);
- Equalities Impact Assessment (EqIA); and
- Habitats Regulations Assessment (HRA).

3.1.3. The SEA/SA process is carried out during the preparation of certain plans and strategies including local transport plans, local plans and spatial development strategies. Its role is to promote sustainable development by assessing the extent to which emerging plans will help to achieve relevant environmental, economic and social objectives.

3.1.4. SEA is used to describe the application of environmental assessment to plans and programmes in accordance with the 'Environmental Assessment of Plans and Programmes Regulations' (SI 2004/1633, known as the SEA Regulations)[9].

3.1.5. SEA is mandatory for plans and programmes which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste or water management, telecommunications, tourism, town and country planning or land use, and which set the framework for future development consent of projects listed in the Town and Country Planning (Environmental Impact Assessment) Regulations[10].

3.1.6. SEA only considers the environmental effects of a plan whilst SA also considers a plan's wider economic and social effects in addition to its environmental impacts. It is obligatory that SAs meet all of the requirements of the SEA Regulations.

3.1.7. The approach adopted for the SA element of the LTP4 follows that set out in the Practical Guide to SEA[11] and the Planning Practice Guidance to SEA[12]. SAs do however need to

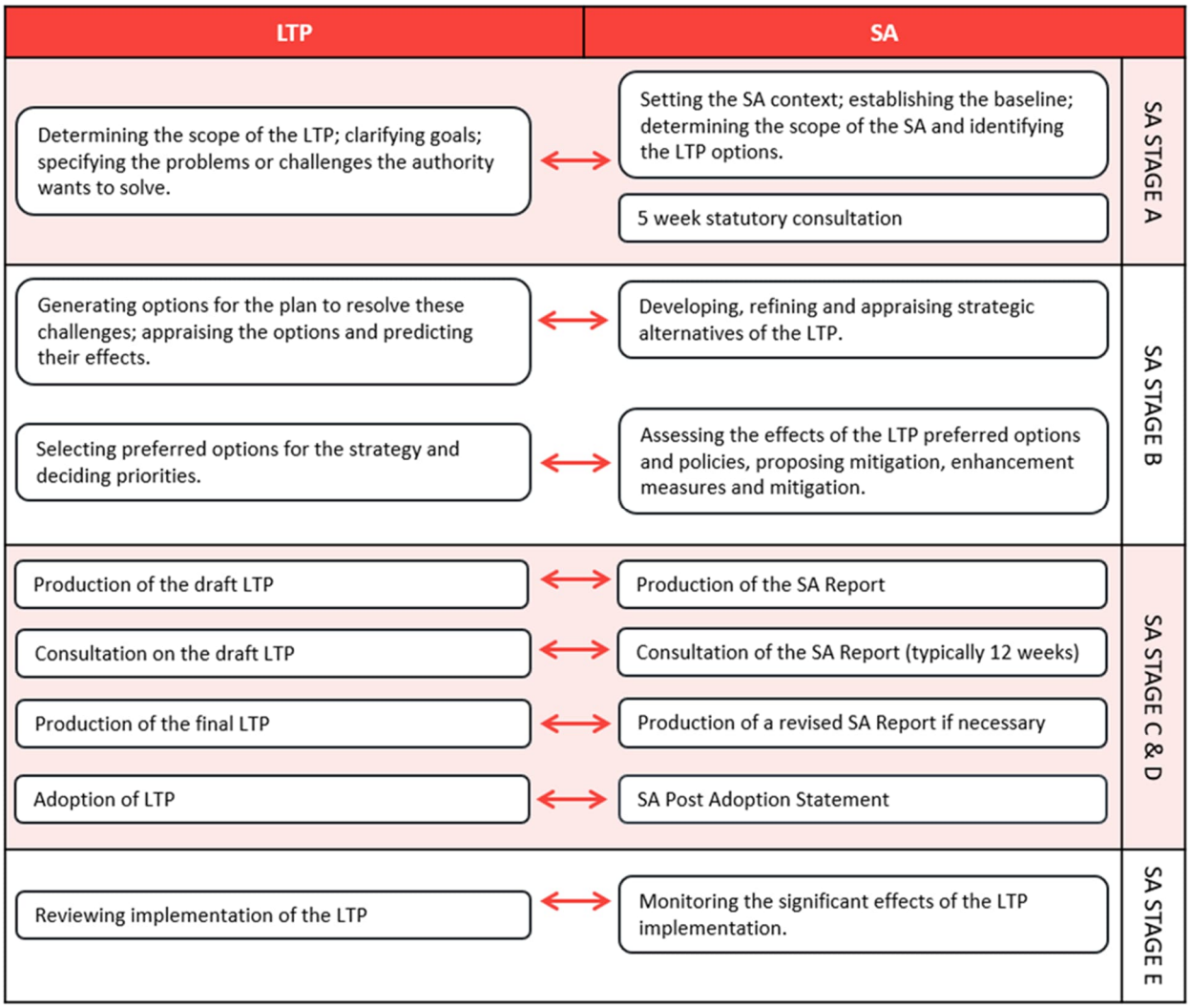
[9] SI 2004 No. 1633, The Environmental Assessment of Plans and Programmes Regulations 2004 [online] Available at: http://www.legislation.gov.uk/uksi/2004/1633/pdfs/uksi_20041633_en.pdf
[10] The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 [online] Available at: http://www.legislation.gov.uk/uksi/2017/571/introduction/made
[11] Office of the Deputy Prime Minister (2005) A Practical Guide to the Strategic Environmental Assessment Directive. available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf
[12] Department for Communities and Local Government (2015) Strategic environmental assessment and sustainability appraisal. Available at: http://planningguidance.communities.gov.uk/blog/guidance/strategic-environmental-assessment-and-sustainability-appraisal/

meet all of the requirements of the SEA Regulations, so a separate strategic environmental assessment should not be required.

3.2 SEA/SA Process and Requirements

3.2.1. The integration of the SA with the LTP process is shown in **Figure 3-1**. This Report represents Stages B and C of the SEA process up to the 12 week consultation of the SA.

Figure 3-1 - SA and LTP Stages



Stage A: Scoping

3.2.2. As part of SEA/SA Stage A, a Scoping Report was completed in July 2023, which provided baseline information, highlighted key issues and opportunities for the LTP and set out the SEA Framework. Consultation on the Scoping Report took place in July 2023, which allowed the statutory consultees to provide comments on the scope of the SA, baseline information, the proposed methodology and the SA framework.

3.2.3. Comments were received from Natural England and Historic England on the SA Scoping Report and are outlined in **Table B-1** in **Appendix B**. **Table B-1** also provides our responses and actions taken in light of these comments. The Environment Agency were also consulted on the Scoping Report but failed to give a response.

3.2.4. The baseline information collected for the Scoping Report can be found in **Appendix C**.

Stage B: SA Assessment

3.2.5. Stage B comprises the assessment of the Draft LTP4 and Action Plan, against the SA Appraisal Framework objectives identified within the Scoping Report. This will aid the development of LTP4 and its policies.

3.2.6. The SEA Regulations also require consideration of reasonable alternatives. It is common practice for a SEA to consider what environmental effects would occur without the implementation of the plan (in this case the continuation of LTP3, and Action Plan Alternatives). This is done to allow the assessment of the likely effects that the implementation of the plan would have compared to any alternative plans (see **Section 8**).

3.2.7. The assessment of objectives, outcomes and alternatives is has been presented in matrix format and accompanied by explanatory text for each policy and strategy overall. The assessment criteria used are detailed in **Section 3.3**.

Stage C and D: Reporting and Consultation

3.2.8. The results, recommendations, mitigation and monitoring measures have been summarised in the SA Report (this report, Stage C).

3.2.9. In accordance with the SEA Regulations, the SA Report must be made available at the same time as the draft plan or programme, as an integral part of the consultation process, and the relationship between the documents clearly indicated (Stage D).

Stage E: Monitoring

3.2.10. This report sets out recommendations for monitoring the social, environmental and economic effects of implementing the Draft LTP4 (**Section 10**).

3.2.11. The purpose of monitoring is to measure the environmental outcome of a plan and the performance of a plan against pre-defined environmental objectives, targets, or inputs. If monitoring is carried out effectively it will contribute to managing uncertainty; improving knowledge; enhancing transparency, accountability and managing environmental information.

3.3 Report Methodology

3.3.1. Stage B and Stage C (stages included within this report) comprise the assessment of the draft LTP4, against the SEA Appraisal Framework objectives identified within the Scoping Report. This will aid the development of draft LTP4 and its objectives and outcomes.

3.3.2. This SA Draft Report will therefore cover the assessment of:

- Assessment of the LTP4 Vision, Strategic Objectives, and Outcomes;
- Assessment of Action Plan interventions; and
- Alternative policy scenarios and interventions.

Assessment of Effects

3.3.3. The assessment of vision, objectives and outcomes has considered the following:

- Overall effect significance (negative, positive, uncertain, potential for both negative and positive effect or negligible)
- Nature of effect (direct, indirect)
- Spatial Extent (local, regional, national)
- Reversibility of effect:
  - Reversible: The receptor can return to baseline condition without significant intervention
  - Irreversible: The receptor would require significant intervention to return to baseline condition
- Duration (short, medium or long term) – Short term: 0-5 years, Medium term: 5-10 years (up to the end of the plan period) Long term: 10+ years (beyond the plan period).

3.3.4. **Table 3-1** sets out the key to the assessment.

Table 3-1 – Key to Assessment

Effect Significance	Key
Potential for significant positive effects	++
Potential for minor positive effects	+
Potential for minor negative effects	-
Potential for significant negative effects	--
Uncertain effects – Uncertain or insufficient information on which to determine the appraisal at this stage	?
Potential for both positive and negative effects	+/-
Negligible / No effect	0
Magnitude (High / Medium / Low)	H / M / L
Nature of effect (direct / indirect).	D / I
Spatial Extent (local / regional / national)	L / R / N
Reversibility of effect (reversible / irreversible)	R / I
Permanence (Permanent / Temporary)	P / T
Duration (short / medium / long term).	ST / MT / LT

3.3.5. It should be noted that where uncertain and negligible effects have been identified, it has not been possible to determine the nature of effect, the spatial extent, the reversibility or the duration of effect. In this instance, the effect criteria cells have been left blank and a score of '0' given.

Assessment of Alternatives

3.3.6. The SEA Regulations require that an assessment of reasonable alternatives is undertaken.

3.3.7. For the LTP4, the assessment of alternatives will assess the continuation of the current LTP (LTP3). The assessment won't assess individual policies within these documents but will look at the application as a whole.

3.3.8. For the Action Plan, alternative interventions will be assessed. These have been taken from the long list of interventions.

3.3.9. A high-level summary of effects on each of the SEA objectives will be provided and each will be scored using the Key to Assessment set out in **Table 3-1** above. See **Section 7** for further details.

Cumulative Effects

3.3.10. The SEA Regulations require that cumulative effects are considered when identifying likely significant effects. Therefore, a number of plans and policies (local, regional and national) have been reviewed for potential cumulative effects, in addition to potential cumulative effects that could occur as a result of the implementation of the draft LTP4.

3.3.11. In addition, the assessment has considered the cumulative effects of neighbouring transport developments, including those beyond the borough boundary.

3.3.12. The assessment of cumulative effects has been undertaken in **Section 9** of this report.

Mitigation, Enhancement, and Monitoring Measures

3.3.13. The SEA Regulations require that mitigation measures are considered to prevent, reduce or offset any significant adverse effects on the environment as a result of implementing the plan.

3.3.14. Mitigation measures have been identified in relation to the assessment of visions, objectives and outcomes. These include both proactive avoidance of adverse effects and actions taken after potential effects have been identified. These are set out in **Section 10** of this report.

3.3.15. **Section 8** also includes enhancement measures, which aim to optimise positive impacts and enhance sustainability. The mechanism for delivery of mitigation and enhancement will ensure the prevention, reduction and offset of any significant adverse effects and promotion of enhancement opportunities on the environment.

3.3.16. The SEA Regulations require that monitoring is undertaken on a plan so that the significant effects of implementation can be identified and remedial action imposed, as well as measuring the benefits of enhancement. The purpose of the monitoring is to provide an important measure of the sustainability outcome of the final plan, and to measure the performance of the plan against sustainability objectives and targets. Monitoring is also used to manage uncertainty, improve knowledge, enhance transparency and accountability, and to manage sustainability information.

3.4 Assumptions and Limitations

3.4.1. The following assumptions and limitations have been identified:

- The preparation of the LTP4 alongside the SA has allowed for an iterative process of assessment and refinement in the narrative and policies within the Plan. Therefore, some

of the recommendations set out in this report may already have been addressed in the LTP4 and the SA will be updated to reflect this.

- The assessment of policies, and alternatives, has been undertaken as a desk-based exercise using the baseline information from the Scoping Report. No site visits have been undertaken specifically for the purposes of the SEA.
- The LTP4 does not propose other specific development sites with defined boundaries above those mentioned. As such, the main focus of the assessment for the SEA is of the strategic objectives (policy alternatives)..
- This SEA/SA has endeavoured to ensure that effects are predicted accurately; however, this can be challenging given limited understanding of precisely how the plan will be implemented. Given uncertainties there is inevitably a need to make some assumptions, however, these are made carefully and explained in detail within the assessment text.
- In some instances, given reasonable assumptions, it is not possible to predict 'significant effects'. However, it is possible to comment on the potential positive and negative effects of the draft plan and its alternatives in more general terms, therefore informing any likely developments of the LTP4 policy. This does mean that, at implementation phase, significant effects may still occur depending on the nature and location context of specific interventions.

3.5 Relationship with Other Processes

Equalities Impact Assessment

3.5.1. The Equality Act 2010 includes a public-sector equality duty that requires public organisations and those delivering public functions to: show due regard to the need to eliminate unlawful discrimination, harassment and victimisation; advance equality of opportunity; and foster good relations between communities.

3.5.2. The EqIA process focuses on assessing and recording the likely equalities effects as a result of a policy, project or plan. It seeks to ensure that the policy, project or plan does not discriminate or disadvantage people and enables consideration of how equality can be improved or promoted. The equality duty came into force in April 2011 and covers the following nine Personal Protected Characteristics:

- Age;
- Disability;
- Gender;
- Gender reassignment;
- Marriage and civil partnership;
- Pregnancy and maternity;
- Race;
- Religion or belief; and
- Sexual orientation.

Habitats Regulations Assessment

3.5.3. Under Article 6(3) of the EU Habitats Directive as transposed into the UK law by the Habitats Regulations[13], an assessment (referred to as an HRA) needs to be undertaken in respect of any plan or project which:

"Either alone or in combination with other plans or projects would be likely to have a significant effect on a site designated within the Natura 2000 network – these are Special Areas of Conservation (SACs), candidate SACs (cSACs), and Special Protection Areas (SPAs). In addition, Ramsar sites (wetlands of international importance), potential SPAs (pSPA) and in England possible SACs (pSACs), are considered in this process as a matter of law or UK Government policy. These sites are collectively termed 'European sites' in Habitats Regulations Assessment (HRA); and is not directly connected with, or necessary to, the management of the site".

3.5.4. Guidance on the Habitats Directive sets out four distinct stages for assessment under the Directive:

- Stage 1: Screening: the process which initially identifies the likely impacts upon a Natura 2000 site of a plan or project, either alone or in combination with other plans or projects, and considers whether these impacts are likely to be significant;
- Stage 2: Appropriate Assessment: the detailed consideration of the impact on the integrity of the Natura 2000 sites of the plan or project, either alone or in combination with other plans or projects, with respect to the site's conservation objectives and its structure and function. This is to determine whether there will be adverse effects on the integrity of the site;
- Stage 3: Assessment of alternative solutions: the process which examines alternative ways of achieving the objectives of the plans or projects that avoid adverse impacts on the integrity of the Natura 2000 site; and
- Stage 4: Assessment where no alternative solutions exist and where adverse impacts remain: an assessment of whether the development is necessary for imperative reasons of overriding public interest (IROPI) and, if so, of the compensatory measures needed to maintain the overall coherence of the Natura 2000 network.

3.5.5. The first stage of the Habitats Regulations Assessment (screening) will be undertaken alongside this Draft SA Report, to support Regulation 18 consultation.

[13] The Conservation of Habitats and Species Regulations 2017, [online] Available at: http://www.legislation.gov.uk/uksi/2017/1012/contents/made

3.5.6. The HRA is driven by separate legislation to the SA and other forms of assessment. This means the HRA Report will be published separately to the SA Report and not included as an appendix to the SA Report.

4 Identifying Sustainability Issues

4.1 Sustainability Context

4.1.1. The SA Scoping Report was produced by WSP in 2021 and updated in July 2023, in support of the LTP4 SA. The SA Scoping Report presented the sustainability context of Wokingham Borough. The report presented baseline information across 14 SA topics and identified key sustainability issues and opportunities, which helped to form the SEA Framework.

4.1.2. **Table 4-1** below summarises the sustainability context of Wokingham Borough which was identified as part of the scoping process. The plans, policies and programmes identified in the Scoping Report, as well as the baseline can be found in **Appendix B** to the SA Report.

Table 4-1 - Sustainability Issues and Opportunities

SA Topic	Summary of Sustainability Issues and Opportunities
Natural Capital and Ecosystem Services	▪ New transport routes will need to be carefully planned so that they do not cause adverse effects on ecosystems with high (potential) ecosystem service provision. Given that ecosystem services are the benefits that nature provides to people, areas of high (potential) provision are often the green and blue spaces close to centres of population, as well as connecting habitats that link these with more remote designated habitats and landscapes. ▪ As transport corridors are typically linear, ensuring the connectivity of ecosystems is both an issue and an opportunity for the Transport Strategy. There is scope to focus on redevelopment of existing assets rather than build new, to focus development away from areas of high biodiversity and ecosystem service provision, and to enhance the quality of the transport 'soft estate' alongside existing and new transport corridors to improve habitat connectivity. ▪ Human health and quality of life can be improved by taking a natural capital approach to the Transport Strategy. For example, improving the quality of habitats (including tree planting, sowing wildflower mix rather than amenity grassland to improve biodiversity) alongside walking and cycling routes can help encourage more active lifestyles with benefits for people's physical and mental health and wellbeing. Views of vegetation from other modes of transport (e.g. along roads and railways) can also enhance mental wellbeing, for example by reducing stress levels. ▪ Enhancing the quality of transport 'soft estate' can also help improve the resilience of the transport network to future climate change, for example by reducing flood risk and providing shading and cooling benefits. ▪ Enhancing the quality of transport 'soft estate' can also help improve the resilience of the transport network to future climate change, for example by reducing flood risk and providing shading and cooling benefits. ▪ Human health and quality of life can be improved by taking a natural capital approach to the Transport Plan. ▪ Views of vegetation from other modes of transport (e.g. along roads and railways) can also enhance mental wellbeing, for example by reducing stress levels. ▪ There is scope to encourage the redevelopment of existing assets as well as build new, to focus development away from areas of high biodiversity and ecosystem service provision, and to enhance the quality of the transport 'soft estate' alongside existing and new transport corridors or to improve habitat connectivity.
Materials and Waste	▪ New transport infrastructure can lead to use of minerals and other materials, in addition to generating waste. The transport of waste and materials can lead to indirect effects from traffic such as congestion, air pollution and noise. ▪ There is a reliance upon the road network to transport materials, and it is unlikely that this will change. ▪ Increasing population of the County is likely to generate more waste which requires transportation. Construction of new transport infrastructure also has the potential to generate waste. ▪ Resource efficiency is important in the reduction of waste and conservation of resources. ▪ The LTP4 could promote opportunities to support a circular economy. ▪ Materials, including minerals, will be required in any new transport infrastructure schemes. The application of resource efficiency including use of recycled materials is important for reducing waste. There is also significant capacity for increasing the levels of recycled and secondary aggregate production used for transport infrastructure.
Soils	▪ Soil is an important natural resource for agriculture, food production, biodiversity and archaeological and geological purposes. Acknowledgement should be given to the detrimental impacts arising from soil compaction, erosion and cumulative pollution. ▪ It is important that any future development of the transport network in WBC does not have adverse impacts or lead to the degradation of Best and Most Versatile (BMV) (grades 1 to 3) agricultural land. ▪ Improvements to transport infrastructure will likely require land take. ▪ Land should be used in the most efficient manner. ▪ There's an opportunity to avoid development on some of the Borough's best and most versatile land and support the repurposing of existing infrastructure.
Biodiversity, Flora and Fauna	▪ Due consideration should be given to protecting and conserving WBC's biodiversity, particularly in light of the disturbance and habitat degradation that may arise from the construction of transport infrastructure and projected population increase. ▪ There are a number of statutory local, national and international sites designated for nature conservation within the country which may be affected by development, including transport infrastructure.

	▪ Habitats, particularly those designated as HPI and Ancient Woodland are at risk of being lost, damage or fragmented by development, including transport infrastructure. ▪ Species, including Species of Principal Importance and protected species, may also be affected by construction and operation of new infrastructure, both directly and indirectly. ▪ Biodiversity may be lost as the end result of development of new infrastructure resulting from the LTP4. ▪ LTP4 presents opportunities to be strategic in the enhancement of biodiversity at the landscape scale. ▪ The LTP4 presents opportunities to achieve biodiversity net gain (BNG) through the development of its policies and schemes. ▪ There is scope to encourage the redevelopment of existing assets as well as build new, to focus development away from areas of high biodiversity and ecosystem service provision, and to enhance the quality of the transport 'soft estate' alongside existing and new transport corridors to improve habitat connectivity. ▪ Enhancing biodiversity can also help improve the resilience of the transport network to future climate change, for example by reducing flood risk and providing shading and cooling benefits. ▪ Human health and quality of life can be improved by improving biodiversity. ▪ Views of vegetation during travel (e.g. along roads and railways) can also enhance mental wellbeing, for example by reducing stress levels. ▪ The LTP4 presents opportunities to be strategic in the landscape scale across the corridors (and, once the interventions are defined, also in relation to any necessary offsets beyond the boundary of specific developments). Existing biodiversity Opportunity Areas (Natural England) can be combined with priorities for wider ecosystem services benefits to deliver landscape wide environment gain for biodiversity and people.
Air Quality	▪ Within WBC, AQMA's are predominantly associated with transport sources and emissions. Potential adverse impacts affecting human health and the wider surrounding environment arising from transport sources will need to be given appropriate consideration. ▪ Where AQMAs are declared, due consideration of transport associated measures should be given to address their declaration. ▪ Addressing local problems associated with PM_{10}, $PM_{2.5}$, NO_x and NO_2 emissions to reduce air pollution. ▪ Although changes in technology mean that vehicles are producing fewer emissions, the number of vehicles on roads is expected to increase. This has the potential to affect air quality and as a consequence, human health, natural capital, and ecological sites. ▪ Ensuring that air quality continues to improve across WBC. ▪ There is the potential that improved transport links will facilitate traffic flows, reduce idling times and thus improving air quality locally. However, an improved highway network could also result in increased usage, thus increasing emissions. ▪ The UK Government's plan to end the sale of all new conventional petrol and diesel cars and vans by 2030 and support for work and home-based electric charging facilities, will promote use of hybrid and electric vehicles, with positive effects for air quality. ▪ The UK Government's commitment to end diesel haulage on the rail network by 2040 and introduce at least 4,000 more zero emission buses. ▪ Uptake of technological advances such as autonomous vehicles. These have the potential to further reduce emissions through reduction in the stop start nature of traffic, opening up the possibility of vehicle platooning[14]. ▪ Air quality issues across Wokingham Borough can be addressed by promoting a modal shift towards less polluting methods of transport (low carbon transport initiatives) and inclusive of active transport (e.g. cycling, walking etc.) into the LTP4 thereby leading to a higher standard of air quality.
Climate Change	▪ WBC has committed to reducing the Borough's carbon footprint to net zero carbon by 2030. Transport infrastructure is one of the largest contributors to greenhouse gas emissions and must be considered accordingly before progressing future schemes. ▪ Climate change is anticipated to exacerbate flood issues across WBC putting livelihoods, dwellings, businesses and lives at risk. ▪ The RAIN project[15] has been investigating the impact of severe meteorological occurrence on critical infrastructure across Europe. Conclusions highlighted that rail and road infrastructure were more vulnerable than power or telecommunications infrastructure since structural damage is not required for the system to fail.

[14] Platooning is a newly developed technology referring to referring to linking up the driving of vehicles, by maintaining a distance between vehicles to increase road capacities and decrease distances between vehicles.

[15] RAIN Project (2017). 'Risk Analysis of Infrastructure Networks in Response to Extreme Weather'. Available at: http://rain-project.eu/wp-content/uploads/2015/11/D2.2-Past-Cases-final.compressed.pdf

	▪ There is a need to plan for and implement/ facilitate climate change adaptation, in respect of rising temperatures, water scarcity and extreme weather events, particularly heavy rainfall/ flooding. ▪ There is a need to support the continued increase in infrastructure to support the demand in electric cars. ▪ Supporting climate change mitigation via promoting alternative methods of sustainable transport, and thereby limiting the contribution of transport to greenhouse gas emissions. ▪ Increasing the resilience of the local transport network to the effects of climate change. ▪ Supporting low emission fuels, infrastructure and associated technologies. ▪ Supporting green infrastructure enhancements. ▪ The continuation of the reduction in carbon dioxide (CO_2) emissions, where appropriate, alongside limiting emissions of other greenhouse gases.
Noise	▪ Transport noise may adversely impact sleep, health and wellbeing as well as disturb wildlife and there is potential for an increase in noise levels in the NIAs in Wokingham Borough. ▪ The natural environment, particularly tranquil areas, may experience an increase in transport-related noise pollution. ▪ There exists an opportunity to reforecast the understanding of transport noise profiles and exposure. This could account for the benefits from low-noise electrified road vehicles and reactions to climate change. A plan could be developed from this that accounts for the future and realises benefits for Wokingham Borough.
Landscape and Townscape	▪ The character and quality of Wokingham Borough's landscapes and townscapes can be eroded by the construction and operation of transport infrastructure, which may impact upon the distinctive historic character of settlements. ▪ Green Infrastructure (GI) describes the multifunctional network of green and blue spaces, landscapes, and natural elements within and between our cities, towns and villages. By connecting the centres of settlement into the surrounding landscape, GI can facilitate prosperous, active, healthy and happy communities. This network may be severed or reduced due to new transport infrastructure. ▪ Transport infrastructure has the potential to erode and adversely affect local character and distinctiveness. ▪ The design of transport infrastructure requires a landscape-led approach to design, to ensure the best placement and integration of the proposed development into the existing landscape, especially in sensitive locations. Landscape-led designs can help contribute to the climate change agenda, health and wellbeing, and tackling pollution in all its forms (such as air, light and noise). ▪ There is potential for transport to improve access to the countryside, to promote sustainable tourism and to provide greater awareness for the UK's AONBs and other designated areas. ▪ Increasing access to the countryside, whilst increasing pressure on those resources, can bring new audiences to tourist attractions and enable better appreciation of landscapes and townscapes through creating new views and vistas, providing information and enhancing access. ▪ The incorporation of 'Future Ready' Landscape principles into landscape-led designs would help ensure transport infrastructure is designed for longevity in the 21st century, for both its people and its natural environment.
Historic Environment	▪ Conserving the character of the Borough is key, particularly in light of government policy and the extent of development and pressure for continued development in the area. Transport infrastructure has the potential to erode and adversely affect local character and distinctiveness. ▪ Adverse impacts upon the setting of components of the historic environment. ▪ The impact of vehicular damage to historic structures, buildings and the fabric of the public realm in town and village centres. ▪ The impacts of vehicular pollution on historic buildings. ▪ The impacts of ancillary features, inclusive of marked parking bays, yellow lines etc. on the historic environment. ▪ The LTP4 presents opportunities for enhancing the understanding and appreciation of the significance of above ground heritage assets. This might be achieved for example, by reducing traffic volume, visibility and noise in the vicinity of a designated heritage asset and reducing existing detrimental effects on setting. ▪ Asset enhancement has the potential to lead to an increase in tourism and associated revenue, and education opportunities associated with Wokingham's cultural heritage. ▪ Protecting and enhancing the cultural and heritage identity of Wokingham Borough.
Water and Flood Risk	▪ Climate change is likely to increase the occurrence of flooding from all sources and hence raise the flood risk in Wokingham Borough, including to transport infrastructure.

	■ Pollution of the water environment can occur from run-off from roads and pavements after rainfall. ■ Increase in flood risk can occur through the loss of permeable surfaces due to new road construction. ■ Upgrading existing infrastructure also provides the opportunity to improve pollution control on older drainage systems. ■ New transport infrastructure could result in improved drainage, reducing surface water flooding.
Population	■ An ageing population for WBC is likely to place increased strain and demand on access to services, particularly healthcare, and public transport. Proposed sites for strategic development will need to be accounted for when choosing potential locations for new transport infrastructure. ■ The population in Wokingham Borough is increasing there will be additional movement associated with this growth. ■ The ageing population structure is likely to increase demand for access to services. ■ There are opportunities to improve access to rural areas through transport services, digital services and bring services to people. ■ There will be a need for adequate support and greater access to services and facilities for the elderly population, families with young children and single parent families. ■ There were 3.5 million disabled people in work in 2017, with the Government aiming to increase this to 4.5 million by 2027. By helping more disabled people into work, this will enable people to reach their potential and to achieve economic independence. ■ Transport networks should promote a range of sustainable transport modes to limit the effects of congestion, economic vitality, and residents' quality of life.
Health and Wellbeing	■ The population of Wokingham Borough is an ageing population, transport and future mobility will need to reflect their needs. ■ There may be inequalities in access to healthcare, jobs and other services associated with transport provision. ■ Active travel can play a role in reducing obesity and increasing health and wellbeing. ■ The transport plan could present opportunities to enhance walking and cycling routes and encourage the use of non-motorised forms of transport. ■ There will be opportunities to provide inclusive services to meet the needs of older residents. ■ There will be opportunities to improve public transport users' confidence in returning to public transport post-Covid.
Economy and Employment	■ Economic issues linked to transport include barriers to growth, enabling greater access to well-paid and satisfying employment within a flexible labour market characterised by diversity in activity and transferable and complementary knowledge solutions. Supporting sustainable economic development which mitigates or combats the effects of climate change is a key issue. ■ Good access to customers is important, transport infrastructure is noted as an area of improvement to enable this. ■ Sustaining and supporting economic growth across the country in light of the withdrawal from the EU and economic issues brought about by the Covid-19 pandemic. ■ The impact of factors such as Brexit, Covid-19, new vehicle and energy technologies, disruptive digital technologies, changing working patterns and preferences and extreme climactic events will play a part in determining the types of transport investment which will most benefit the economy. ■ Improved connectivity between business clusters and housing markets (both planned and existing) in the county will improve access to the skills pool as well supporting improvements in productivity.

4.2 Future Evolution of the Baseline

4.2.1. The declining trend in the provision of many ecosystem services and biodiversity is expected to continue, with projected population growth and industrial development anticipated to place increasing pressure on sensitive wildlife sites within WBC[16], as well contribute to the deterioration, loss and fragmentation of habitats.

4.2.2. The population of WBC is anticipated to increase by increase by 1% a year and reach 180,900 by 2037[16]. This is likely to increase the number of private vehicles on the roads, resulting in associated increases in noise pollution, air pollution, and contamination of surface water run-off and could restrict the ability of existing roadside habitats (including trees) to reduce these impacts.

4.2.3. The number of people aged 65 and over is also anticipated to increase to 60% of WBC's population by 2020[16], increasing pressure on health and community facilities. In addition, the growing population is likely to place pressure on public transport methods such as rail and buses.

4.2.4. With a growing population and increased development the potential for generating waste is increasing. Additionally, economic growth and rising population within the Borough will place additional pressures upon agricultural land. It is likely that land available for development will become more of a premium and intensify competition for land amongst developers. This is likely to also increase the demand for development on greenfield land.

4.2.5. Another issue facing Wokingham Borough is climate change. Key challenges include flooding from a variety of sources, extreme weather events, increases in hotter, drier summers, and increases in annual precipitation in the Borough. Climate change also has the potential to further fragment and deteriorate the region's ecosystems and biodiversity.

4.2.6. WBC has committed to reducing the Borough's carbon footprint to net zero carbon by 2030. However, projected population increase and development within the Borough is anticipated to increase carbon dioxide emissions.

4.2.7. The historic environment is increasingly under threat from development pressures. In addition to loss of green infrastructure and heritage assets, new infrastructure to provide for a growing population affects visual amenity and heritage setting.

4.2.8. Increasing population and development within the Borough is anticipated to place strain on water resources and may lead to a decrease in water quality. Increased development and population will also increase the number and likelihood of properties being at risk of flooding.

[16] RSPB (2019). 'State of Nature' Available at: https://nbn.org.uk/stateofnature2019/reports/

4.3 Sustainability Appraisal Framework

4.3.1. A Sustainability Appraisal Framework has been produced to guide the assessment process of the LTP4. The framework (set out in **Table 4-2** below) summarises the main sustainability issues in Wokingham Borough across each environmental topic, and the subsequent sustainability objectives and appraisal questions to be used to assess emerging strategy objectives and action plans.

Table 4-2 - Sustainability Appraisal Framework

SA Topic	SA Objective	SA Supporting Appraisal Questions
Natural Capital and Ecosystem Services	**SA1:** To maintain and enhance the provision of ecosystem services from the Borough's natural capital and contribute to environmental net gain.	Will the policy or proposal: ■ Protect the Borough's natural capital? ■ Enhance or increase provision of ecosystem services from the county's natural capital?
Materials and Waste	**SA2:** To conserve natural resources, increase resource efficiency and reduce generation and disposal of waste.	Will the policy or proposal: ■ Result in substantial use of resource and generation of waste? ■ Encourage the sustainable use of material assets and minimise waste? ■ Promote a circular economy? ■ Reduce impacts from infrastructure development and maintenance on mineral resources?
Soils	**SA3:** To protect soils and minimise the loss of Best and Most Versatile Land.	Will the policy or proposal: ■ Reduce impacts from infrastructure development and maintenance on soil and mineral resources? ■ Result in the loss of agriculturally important land?
Biodiversity, Flora and Fauna	**SA4:** To protect and enhance the Borough's biodiversity, fauna and flora, including designated sites for nature conservation notable and protected species. **SA5:** Enhance the connectivity between habitats through the creation of green corridors and preservation / enhancement of the Green Infrastructure Network.	Will the policy or proposal: ■ Cause damage to locally and nationally designated sites or protected species though infrastructure provision, traffic or maintenance? ■ Maintain and enhance biodiversity? ■ Seek opportunities for biodiversity net gain? ■ Enhance the Green Infrastructure network? ■ Enhance habitat connectivity?
Air Quality	**SA6:** To reduce traffic related air pollution in AQMAs where possible and enhance air quality elsewhere in Wokingham Borough.	Will the policy or proposal: ■ Support measures to reduce levels of air pollution? ■ Help to improve air quality? ■ Support measures for the reduction of congestion and traffic levels particularly in AQMAs and congestion hot-spots?
Climate Change and Greenhouse Gases	**SA7:** To reduce emissions of greenhouse gases in line with WBC's net zero commitment by 2030. **SA8:** Ensure that the local transport network builds resilience to climate change.	Will the policy or proposal: ■ Plan a transport system which is more resilient to cope with the impacts of climate change? ■ Increase the resilience of people, infrastructure and the natural environment to the impacts of climate change (including flood risk, extreme weather, heat and cold?) ■ Support the transition to net zero greenhouse gas emissions? ■ Reduce embodied carbon within developments? ■ Alleviate risk of flooding and support natural flood management? ■ Promote a reduction in private vehicle use?

Noise	**SA9:** To reduce noise from transport related sources in particular, Noise Important Areas and to protect tranquil areas.	Will the policy or proposal: ▪ Increase/ decrease levels of noise? ▪ Maintain levels of noise in NIAs?
Landscape and Townscape	**SA10:** To protect and where possible, enhance the quality, character and diversity of the existing landscape.	Will the policy or proposal: ▪ Improve the quality and condition of the landscape and townscape? ▪ Respect, maintain and strengthen local character and distinctiveness? ▪ Promote high quality design?
Historic Environment	**SA11:** To conserve and enhance the Borough's historic environment, including heritage resources, historic buildings, historic landscapes and archaeological features.	Will the policy or proposal: ▪ Conserve and or enhance heritage assets, their setting and the wider historic environment? ▪ Contribute to the better management of heritage assets and tackle heritage at risk? ▪ Improve the quality and condition of the historic environment? ▪ Respect, maintain and strengthen local character and distinctiveness? ▪ Promote high quality design? ▪ Impact the historic environment through issues such as contamination, changes to the preservation conditions on a site etc? ▪ Impact the preservation of archaeological assets? ▪ Improve access and accessibility to heritage assets?
Water and Flood Risk	**SA12:** To protect and where possible, enhance water quality of the county's rivers, groundwater and coast. **SA13:** To reduce vulnerability to flooding of transport infrastructure and ensure that the risk of surface water flooding is not increased.	Will the policy or proposal: ▪ Support the protection and enhancement of water bodies? ▪ Improve water quality? ▪ Increase or decrease the risk of surface water flooding?
Population	**SA14:** To increase the capacity and efficiency of the transportation network to support demographic changes, including increasing travel and sustainable modes of transport.	Will the policy or proposal: ▪ Help to reduce inequalities, particularly for those people and communities most vulnerable? ▪ Improve access to transport for all inclusively? ▪ Provide better connectivity (particularly in rural areas) to facilities and services?
Health and Wellbeing	**SA15:** To improve the health and well-being of the population through access to transport, active travel and reductions in pollution.	Will the policy or proposal: ▪ Promote healthier lifestyles? ▪ Increase walking and cycling? ▪ Improve quality, quantity and equality of access to green and blue space and increase opportunities for recreation? ▪ Promote health enhancing environments, behaviours and activities for local communities?
Economy and Employment	**SA16:** To sustain economic growth, enable well paid employment and competitiveness across Wokingham Borough through provision of reliable and accessible transport networks.	Will the policy or proposal: ▪ Improve access to employment centres? ▪ Improve connectivity between business clusters and housing markets? ▪ Increase connectivity and help alleviate congestion, reducing journey times? ▪ Support flexible working patterns?

5 Assessment of LTP4 Visions and Objectives

5.1 Introduction

5.1.1. This assessment of the Draft LTP4 Visions and Objectives is summarised below and presented in full in **Appendix D**.

5.1.2. The three vision themes assessed are:

- Create Liveable, Healthy and Safe Places;
- Reduce Environmental Impacts; and
- Grow the Economy.

5.1.3. Within these vision themes, the 9 individual objectives assessed are:

- Safer Streets for All;
- 50% Active Travel in Towns by 2030
- Thriving Villages and Rural Centres.
- Net Zero Emissions;
- Clean Air;
- High Quality Sustainable Travel Corridors;
- Access for Everyone;
- Protect and Enhance Strategic Road and Rail Connectivity;
- A Well-Maintained Transport Network; and
- Support Sustainable Development;

5.1.4. A matrix approach has been used for the assessment which has used the significance criteria identified in **Table 3-1**. **Table 5-1** overleaf provides an overview on the performance of the LTP objectives against each SEA objective and **Table 5-2** shows the summary of effects based on each SEA objective.

5.2 Summary of Vision and Objective Assessment Findings

Table 5-1 - Assessment of Vision Themes and Objectives

Vision Theme	Objective	SA1: Natural Capital	SA2: Materials and Waste	SA3: Soils	SA4: Biodiversity	SA5: Green Infrastructure	SA6: Air Quality	SA7: Greenhouse Gases	SA8: Climate Resilience	SA9: Noise	SA10: Landscape and Townscape	SA11: Historic Environment	SA12: Water Quality	SA13: Flooding	SA14: Population	SA15: Health	SA16: Economy and Employment
Create Healthy and Safe Places	Safer Streets for All, 50% Reduction in KSIs	+	?	?	+	?	+/-	+/-	?	+	++	+	0	?	++	++	+/-
Create Healthy and Safe Places	50% Active Travel in Towns by 2030	0	0	0	+	0	+	+	0	+	+	+	0	0	+	++	+
Create Healthy and Safe Places	Thriving Villages and Rural Centres	0	0	0	0	?	+	+	0	+	+	+	0	0	++	++	+
Reduce Environmental Impacts	Net Zero Carbon Emissions	+/-	0	0	+	0	++	++	?	+	+	+	0	0	+/-	+	+
Reduce Environmental Impacts Reduce Environmental Impacts	Clean Air, Removal of All Air Quality Exceedances	0	0	0	+	0	++	++	0	0	+	+	0	0	+	+	+/-
Reduce Environmental Impacts	High Quality Sustainable Travel Corridors - Boroughwide	0	?	?	+/-	0	+	+	0	0	0	0	0	0	++	+	+
Reduce Environmental Impacts	High Quality Sustainable Travel Corridors – Earley, Woodley and Shinfield	0	?	?	+	+	+	+	?	+/-	+	+	0	0	++	+	+
Reduce Environmental Impacts	High Quality Sustainable Travel Corridors – Wokingham and Winnersh	?	?	?	+/-	+	+	+/-	?	+/-	+/-	+/-	0	?	+	0	+
Reduce Environmental Impacts	High Quality Sustainable Travel Corridors – South Wokingham	?	?	?	+/-	-	++	+/-	?	+/-	+/-	-	0	?	++	+	+

Reduce Environmental Impacts	**High Quality Sustainable Travel Corridors – North Wokingham**	?	?	?	+/-	-	++	+/-	?	+/-	+/-	-	0	?	++	+	+
Grow the Economy	**Protect and Enhance Strategic Connectivity and Freight**	0	?	?	-	0	+/-	+/-	0	0	0	0	0	?	+	+	+
Grow the Economy	**A Well-Maintained Transport Network**	0	+	0	0	+	+	0	++	0	+	0	0	0	0	?	0
Grow the Economy	**Enable Sustainable Development**	0	0	0	?	0	+	+/-	?	0	++	+	0	0	+	+	+

Table 5-2 - Summary of Significant Effects

SA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
SA1: Natural Capital	0	0	3	Three of the objectives have resulted in uncertain effects (High Quality Sustainable Travel Corridors – Wokingham and Winnersh, High Quality Sustainable Travel Corridors - South Wokingham, and High Quality Sustainable Travel Corridors – North Wokingham). This is generally where objectives may result in developments which could give rise to a loss of natural capital, but the overall design of proposals is known yet known. There may be opportunities to provide natural capital enhancements as part of design.
SA2: Materials and Waste	0	0	7	Developments that may arise from High Quality Sustainable Travel Corridors (Boroughwide, Earley, Woodley and Shinfield, Wokingham and Winnersh, South Wokingham, and North Wokingham), Protect and Enhance Strategic Connectivity and Freight, and Safer Streets for All, 50% Reduction in KSIs have the potential to be resource intensive and could generate significant amounts of construction waste. As the location and design of developments is currently not yet known, uncertain effects have been identified.
SA3: Soils	0	0	7	Uncertain effects have been identified for High Quality Sustainable Travel Corridors, Protect and Enhance Strategic Connectivity and Freight, and Safer Streets for All, 50% Reduction in KSIs as a result of developments that may arise. There is potential that development may result in land take surrounding existing highways and active travel routes. If brownfield land is utilised to develop existing routes, there is potential for positive effects. However, development locations are currently now known.
SA4: Biodiversity	0	0	1	The Enable Sustainable Development objective has resulted in uncertain effects on biodiversity. The objective includes the use of Wokingham Living Streets guidance; this guidance has not yet been published. It is therefore not known if biodiversity net gain measures will be included within development and therefore whether biodiversity will benefit significantly.
SA5: Green Infrastructure	0	0	2	Uncertain effects have been identified as a result of Safer Streets for All, 50% reduction in KSIs, and Thriving Villages and Rural Centres objectives. There is potential that development may result in green infrastructure measures to be included within development, improving green infrastructure, however the nature of developments is currently unknown.
SA6: Air Quality	4	0	0	Four objectives have resulted in significant positive effects upon air quality; Net Zero Carbon Emissions, Clean Air, Removal of All Air Quality Exceedances, High Quality Sustainable Travel Corridors – South Wokingham, and High-Quality Sustainable Travel Corridors – North Wokingham. Generally, these objectives encourage a modal shift away from private transport, towards public and active travel options. They also result in a reduction of private vehicles on Wokingham Borough's roads, and encouraging the use of sustainable vehicles, such as EV's. This results in a reduction in vehicle related emissions, improving air quality.
SA7: Greenhouse Gases	2	0	0	Significant positive effects have been identified for Net Zero Carbon Emissions and Clean Air, Removal of All Air Quality Exceedances. These objectives result in fewer traffic movements, and increased use of low emission vehicles such as EVs and zero emission buses. This contributes to decarbonising the transport network, reducing GHG emissions on the Borough's roads.

SA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
SA8: Climate Resilience	1	0	7	One significant positive effect has been identified for climate resilience as a result of Well Maintained Transport Network. The objective includes climate resilience measures, and is likely to include heat and rainfall resilience measures to protect the transport network against the chronic and acute effects of climate change. Uncertain effects have been identified whereby developments, and their individual climate resilience measures, are currently not clear. There is potential that these developments could include climate resilience measures, for example SuDS, however this has not yet been determined.
SA9: Noise	0	0	0	No significant or uncertain effects have been identified for noise as a result of LTP4 objectives. However, a number of minor positive effects and mixed positive and negative effects have been identified. These have been explored in **Appendix D**.
SA10: Landscape and Townscape	2	0	0	Both Enable Sustainable Development and Safer Streets for All, 50% Reduction in KSIs have resulted in significant positive effects. These objectives result in the improvement of the public realm and Borough's streetscapes, as well as improving the setting of the landscape and townscapes. Generally, this is through positive development, reducing vehicles, and through the development of attractive streets and active travel routes.
SA11: Historic Environment	0	0	0	No significant or uncertain effects have been identified for noise as a result of LTP4 objectives. However, a number of minor positive effects have been identified, and two minor negative effects. For full details of these, see **Appendix D**.
SA12: Water Quality	0	0	0	No significant or uncertain effects have been identified for water quality as a result of LTP4 objectives. Equally, no other effects have been identified, with negligible scores for all objectives. None of the objectives target water quality measures; effects on water quality are likely to be determined by the location and nature of developments arising from the LTP4.
SA13: Flooding	0	0	5	Uncertain effects have been identified for five objectives. These objectives have the potential to result in development that may be located within flood zones and increase flood risk through increased hard standing. As the location of these developments is currently not known, increases in flood risk cannot currently be determined. There is potential that developments located close to flood zones may include flood resilience measures, resulting in reduced flood risk.
SA14: Population	6	0	0	Six objectives have resulted in significant positive effects upon population. Generally, these objectives target improved transport infrastructure and services for current and future generations. They also provide inclusive access to public and active travel modes, providing for a diverse range of groups within the community.
SA15: Health	3	0	1	The three objectives within the Create Healthy and Safe Places theme (Safer Streets for All, 50% Reduction in KSIs, 50% Active Travel in Towns by 2030, and Thriving Villages and Rural Centres) have resulted in significant positive effects on health. Safer Streets for All and 50% Active Travel in Towns by 2030 result in improved safety along transport routes within the Borough, reducing the number of KSI on the Borough's roads. Additionally, these objectives improve physical activity amongst the population, and provide improved access to community facilities. A Well Maintained Transport Network has resulted in uncertain effects on health. This objective includes trial measures to improve road safety – it is currently unclear what measures will be trialled, and if any measures will be carried forward.

SA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
SA16: Economy and Employment	0	0	0	No significant or uncertain effects have been identified for economy and employment as a result of LTP4 objectives. However, a number of minor positive effects and mixed positive and negative effects have been identified. These have been explored in **Appendix D**.

6 Findings from other Assessments

6.1 EqIA Assessment Summary

6.1.1. Overall, the policies will likely result in positive impacts on protected characteristic group members in the Borough. The policies aim to address a wide range of issues, identified by the key themes within the EqIA baseline.

6.1.2. The main protected characteristic groups that will particularly benefit include:

- Age – A range of age groups will experience benefits as a result of the proposed policies. Older people who are typically inhibited from accessing public transport services as a result of digital barriers to viewing travel times and cost will benefit from the LTP4's support of improvements to digital accessibility. Equally, young people who find themselves reliant on public transport due to the cost of purchasing a private vehicle will benefit from the policies intended expansion of the Electric Vehicle network (car clubs). Attractive and permeable streets for pedestrians under this policy will benefit all age groups by encouraging the uptake of active travel and the subsequent experience of its associated health benefits.
- Disability – Exposure to poor air quality can impact pre-existing respiratory conditions for those individuals whose disability involves long-term respiratory health conditions. The LTP4 aims to reduce traffic movement to remove air quality exceedances in Wokingham Town Centre. The associated health benefits of this policy will be particularly beneficial to this group. Additionally, improvements to infrastructure at rail and bus terminals will make boarding and alighting a much easier process for those with mobility issues, creating a more accessible environment in which to utilise public transport.; and
- Pregnancy and Maternity– Pregnant women or those who are travelling with small children may require the use of adapted cycles such as bike seats. The LTP4 intends to improve the provision of cycle parking throughout the borough, including the provision of adapted cycle parking. This will make travel an easier, more accessible option for pregnant women and mothers. Moreover, the presence of uneven surfaces and lack of dropped kerbs can all also limit the mobility of mothers using pushchairs. Improvements to the public realm will tackle this issue, making pedestrian routes more accessible to these users.

6.1.3. There is potential for low negative impacts upon:

- Gender reassignment;
- Sex; and
- Sexual Orientation.

6.1.4. The assessment concludes that there will likely be a neutral impact for the following protected characteristic groups, assuming no unforeseen barriers emerge:

- Religion or belief;

- Armed forces communities; and
- Marriage and civil partnerships.

6.2 HRA Assessment Summary

6.2.1. The HRA provides guidance on the likely data sources, information requirements and the process of HRA Screening, recommending further stages of assessment (Appropriate Assessment) if necessary. It also provides an indication of where the ecological implications of the LTP4 will lie and which Habitats sites are vulnerable to known pressures, threats and existing air quality impacts.

6.2.2. There are no Habitats sites within WBC's administrative area, however there are a four that fall within 10km (i.e. the identified Zone of Influence) of the WBC boundary and as such there will be implications for some of these Habitats sites from the measures within the LTP4.

6.2.3. The majority of measures have been screened out due to their nugatory or beneficial effects on Habitats sites, but a number remain, where they will require development of additional infrastructure, may result in a redistribution of traffic on the local road network leading to changes in traffic flows/speed/composition on roads which fall within 200m of the identified Habitats sites and/or increase public access to Habitats sites. Due to the high-level nature of the measures, some are screened in for further assessment at this stage following the precautionary principle embedded within the HRA process as the location, scale and extent of effects is currently unknown.

6.2.4. These measures, therefore, have potential for Likely Significant Effects (LSE) on nearby Habitats sites relating to increased traffic and further, detailed assessment is considered necessary to satisfy the requirements of the Habitats Regulations.

6.2.5. There is the potential for additional effects, or severity of effects, arising 'in-combination' where the Habitats sites lie within neighbouring authority areas and are crossed by strategic highway routes. This is informed by the precautionary approach and high-level assessment of effects from the LTP4.

7 Assessment of Action Plan

7.1 Introduction

7.1.1. The assessment of the Action Plan has been summarised below. Full assessment of the action plan can be found in **Appendix A**.

7.1.2. The Action Plan includes 69 interventions that have been developed based on Vision Themes, Objectives, and Place type. The interventions have been grouped by theme and objective into the following categories:

- Create Healthy and Safe Places
  - Safer Streets for All
    - Road Safety
    - School Travel
  - 50% Active Travel in Towns
    - Infrastructure
    - Access to Cycling
    - Standards
    - Engagement
  - Thriving Villages and Rural Centres
    - Rural Centres
    - Active Travel
- Reduce Environmental Impacts
  - Net Zero Emissions
    - Road Traffic
    - Digitalisation
    - Zero Emission Vehicles
  - Clean Air
    - Access
    - Freight
    - Public Transport
  - High Quality Sustainable Travel Corridors
    - Access for All
    - Public Transport
    - Cycle Network
- Grow the Economy

- Protect and Enhance Strategic Connectivity
  - Strategic Network
  - Public Transport
  - Freight
- A Well-Maintained Network
  - Operational Maintenance
- Sustainable Development
  - Development Policy
  - Sustainable Design
  - Public Transport
  - Infrastructure Delivery

7.1.3. A matrix approach has been used for the assessment which has used the significance criteria identified in **Table 3-1**. **Table 7-1** overleaf provides an overview on the performance of the Action Plan Interventions against each SA objective and **Table 7-2** show the summary of significant and uncertain effects based on each SA objective.

7.2 Summary of Action Plan Assessment

Table 7-1 - Assessment of Action Plan

Vision Theme	Objective	Category	SA1: Natural Capital	SA2: Materials and Waste	SA3: Soils	SA4: Biodiversity	SA5: Green Infrastructure	SA6: Air Quality	SA7: Greenhouse Gases	SA8: Climate Resilience	SA9: Noise	SA10: Landscape and Townscape	SA11: Historic Environment	SA12: Water Quality	SA13: Flooding	SA14: Population	SA15: Health	SA16: Economy and Employment
Create Healthy and Safe Places	**Safer Streets for All**	Road Safety	0	0	0	+	0	+	+	0	+	+	+	0	0	++	+	0
Create Healthy and Safe Places	**Safer Streets for All**	School Travel	0	0	0	+	0	+	+	0	+	+	+	0	0	0	++	0
Create Healthy and Safe Places	**50% Active Travel in Towns**	Infrastructure	?	-	-	+/-	?	+/-	+	?	+/-	+	+	0	0	+	+	++
Create Healthy and Safe Places	**50% Active Travel in Towns**	Access to Cycling	0	0	0	+/-	0	+/-	+	0	+/-	+	+	0	0	+	+	+
Create Healthy and Safe Places	**50% Active Travel in Towns**	Standards	0	0	0	?	?	+	+	?	+	+	+	0	0	+	+	0
Create Healthy and Safe Places	**50% Active Travel in Towns**	Engagement	0	0	0	+	0	+	+	0	+	+	+	0	0	+	++	0
Create Healthy and Safe Places	**Thriving Villages and Rural Centres**	Rural Centres	0	0	0	+	+	+	+	0	+	+	+	0	0	+	++	+
Create Healthy and Safe Places	**Thriving Villages and Rural Centres**	Active Travel	0	0	0	+/-	+/-	+	+	0	+	+	+	0	0	+	++	+

Reduce Environmental Impacts	**Net Zero Carbon Emissions**	Road Traffic	0	-	0	+/-	0	+	+	0	+	+	+	0	0	++	+	+
Reduce Environmental Impacts	**Net Zero Carbon Emissions**	Digitalisation	0	0	0	0	0	+	+	0	+	+	+	0	0	+/-	0	+
Reduce Environmental Impacts	**Net Zero Carbon Emissions**	Zero Emission Vehicles	0	?	+	+	0	++	+/-	0	+	+/-	+/-	0	0	+	+	0
Reduce Environmental Impacts	**Clean Air**	Access	?	0	0	+	?	+	+	0	0	?	+	0	0	0	+	0
Reduce Environmental Impacts	**Clean Air**	Freight	0	0	0	?	0	+	+	0	?	+	+	0	0	0	+	?
Reduce Environmental Impacts	**Clean Air**	Public Transport	0	0	0	+	0	++	++	+	+	0	+	0	0	0	+	0
Reduce Environmental Impacts	**High Quality Sustainable Travel Corridors**	Access for All	0	?	?	+/-	0	++	?	0	+	+	+	0	0	++	+	++
Reduce Environmental Impacts	**High Quality Sustainable Travel Corridors**	Public Transport	0	0	0	+	0	++	?	0	+/-	+/-	+/-	0	0	++	+	++
Reduce Environmental Impacts	**High Quality Sustainable Travel Corridors**	Cycle Network	0	-	-	+/-	0	+	+	0	+	+	+	0	0	+	++	+
Grow the Economy	**Protect and Enhance Strategic Connectivity**	Strategic Network	0	?	?	?	0	+	0	0	+	?	?	0	0	+	+	+
Grow the Economy	**Protect and Enhance Strategic Connectivity**	Public Transport	0	?	?	+/-	0	+	+/-	0	+/-	+	+	0	0	+	+	+
Grow the Economy	**Protect and Enhance Strategic Connectivity**	Freight	0	0	0	0	0	?	?	0	?	?	?	0	0	0	?	?

Grow the Economy	**A Well-Maintained Transport Network**	Operational Maintenance	0	+	0	0	0	+	+	+	?	0	0	0	0	?	0	?
Grow the Economy	**Sustainable Development**	Development Policy	+	0	0	+	?	+	+	0	+	+	+	?	?	++	++	+
Grow the Economy	**Sustainable Development**	Sustainable Design	+	?	?	+	?	+	++	+	+	+	+	0	0	++	++	+
Grow the Economy	**Sustainable Development**	Public Transport	0	0	0	+	0	+	?	0	+	+	+	0	0	+	+	+
Grow the Economy	**Sustainable Development**	Infrastructure Delivery	-	-	-	+/-	?	+/-	+	?	+/-	+/-	+/-	?	?	++	+	+

Table 7-2 - Summary of Action Plan Significant Effects

SA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
SA1: Natural Capital	0	0	2	The Access category, within Clean Air, has resulted in uncertain effects on natural capital. There is potential for the enhancement of habitats and green and blue spaces within developments arising from this category. However, the design of these improvements is currently unclear. Similarly, the Infrastructure category within 50% Active Travel in Towns has the potential to enhance natural capital, or result in loss of natural capital, depending on development design.
SA2: Materials and Waste	0	0	5	Four categories of interventions have resulted in uncertain effects upon materials and waste: Net Zero Emissions - zero emission vehicles; High Quality Sustainable Travel Corridors - access for all; Protect and Enhance Strategic Connectivity - public transport; Protect and Enhance Strategic Connectivity – strategic network; and Sustainable Development - sustainable design. These categories have the potential for resource intensive development, however, the exact nature of development arising from these interventions and the level of resources required are currently unclear.
SA3: Soils	0	0	4	High Quality Sustainable Travel Corridors - access for all, Protect and Enhance Strategic Connectivity - public transport; Protect and Enhance Strategic Connectivity – strategic network, and Sustainable Development - sustainable design interventions, have resulted in uncertain effects on soils. These categories include interventions that are likely to result in construction, and the potential for land take. However, the scale and location of land take will be determined by scheme design, which is currently unclear.
SA4: Biodiversity	0	0	3	A number of categories result in minor positive effects on biodiversity, detailed in full within **Appendix A**. Uncertain effects have been identified as a result of 50% Active Travel in Towns – standards category. This category includes new active travel design guidance, which has the potential to include biodiversity net gain measures and reduce impacts on biodiversity. However, the measures included within the design guidance is currently unclear, therefore these effects cannot be established. Protect and Enhance Strategic Connectivity – strategic network, and Clean Air – freight have the potential to result in disturbance or loss of habitats if constriction works are required. However, individual scheme design is currently unclear.
SA5: Green Infrastructure	0	0	6	Six categories have resulted in uncertain effects on green infrastructure. There is potential for the enhancement of habitat connectivity and green infrastructure improvements within developments arising from these categories. However, the design of these improvements is currently unclear.
SA6: Air Quality	4	0	1	Four categories have resulted in significant positive effects on air quality. Generally, these categories result in the encouragement of a modal shift away from private vehicles, encouraging not only active and public transport but also sustainable fuelled vehicles such as EVs. Reducing the number of private vehicles and petrol and diesel fuelled vehicles on the Borough's roads improves air quality throughout the Borough. Uncertain effects have been identified for the freight category within Protect and Enhance Strategic Connectivity. The interventions in this category include the development of freight management policies. However, the nature of these policies is

SA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
				currently unclear. There is potential for these interventions to improve air quality if a reduction in road freight and increase in sustainable freight vehicles is implemented.
SA7: Greenhouse Gases	2	0	4	Two categories have resulted in significant positive effects upon greenhouse gases (Clean Air – public transport and Sustainable Development – sustainable design). Generally, these interventions have resulted as a result of encouraging a modal shift away from private vehicles and encouraging sustainable fuelled vehicles and active or public transport. This results in a reduction in vehicle related GHGs on within Wokingham Borough. Uncertain effects have also been identified for four categories where there is potential for a reduction, or increase, in greenhouse gases. Generally, this is attributed as a result of reductions in private vehicle use but increases in public transport and other vehicle movements.
SA8: Climate Resilience	0	0	3	Uncertain effects have been identified for 50% Active Travel in Town – standards, 50% Active Travel in Towns – infrastructure, and Sustainable Development – infrastructure delivery as there are potential for these interventions to include improved climate resilience measures, including heat resilience and flood risk mitigation measures.
SA9: Noise	0	0	3	The majority of categories have resulted in minor positive effects on noise, through vehicle reductions on Borough roads. This is detailed in full in **Appendix A**. Uncertain effects have been identified for Clean Air – freight, Protect and Enhance Strategic Connectivity – freight, and A Well-Maintained Network – operational maintenance. It is uncertain if interventions within these categories will result in increases in noise within the Borough, including increases within NIAs. With regards to freight, it is possible that a well managed freight network could result in reductions in noise levels, however these management methods are currently unclear.
SA10: Landscape and Townscape	0	0	3	The majority of categories within the Action Plan have resulted in minor positive effects on landscape and townscape, improving the landscape setting and public realm. Three categories have resulted in mixed positive and negative effects. These effects are detailed within **Appendix A**. Clean air – access, Protect and Enhance Strategic Connectivity – strategic network, and Protect and Enhance Strategic Connectivity – freight have resulted in uncertain effects on landscape and townscape. These categories include interventions that are not yet detailed. These interventions have the potential to enhance the local landscape and townscape if there are reductions in the number of freight vehicles, or design improving the public realm.
SA11: Historic Environment	0	0	2	The Protect and Enhance Strategic Connectivity – freight category has resulted in uncertain effects on the historic environment. The interventions within this category have the potential to enhance the setting of heritage assets through a reduction in road freight, improving air quality and noise, reducing the degradation of assets. However, the interventions within this category are currently unclear. Protect and Enhance Strategic Connectivity – strategic network has also resulted in uncertain effects as construction works may arise, degrading the setting of local heritage assets.

SA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
				The majority of options have resulted in minor positive effects on the historic environment. These effects are detailed within **Appendix A**.
SA12: Water Quality	0	0	2	Sustainable Development – development policy and Sustainable Development – infrastructure delivery have resulted in uncertain effects as there is potential for these interventions to include water quality mitigation methods within development.
SA13: Flooding	0	0	2	Sustainable Development – development policy and Sustainable Development – infrastructure delivery have resulted in uncertain effects as there is potential for these interventions to include flood risk mitigation methods, such as SuDS, within development.
SA14: Population	7	0	1	Seven categories have resulted in significant positive effects on population. Generally, these interventions provide improved infrastructure for current and future populations. Additionally, these interventions also improve accessibility to public transport and active travel for communities inclusively. The interventions also include improving the connectivity of rural areas. A Well-Maintained Transport Network – Operational Maintenance has resulted in uncertain effects as there is potential for works associated with this category to reduce disturbance on local populations. However, this is likely to be determined by the developments arising from these interventions.
SA15: Health	7	0	1	Significant positive effects have been identified for seven categories within the Action Plan. Generally, categories have resulted in improved physical health as a result of encouraging physical activity through active travel and improving air quality within the Borough. Additionally, there are improvements to health as the proposed interventions improve the safety of the transport network and reducing the number of KSI and accidents on the Borough's roads. Uncertain effects have been identified as a result of the Protect and Enhance Strategic Connectivity – freight interventions. It is currently unclear if the interventions within this category will reduce road freight and to what extent and improve health through air quality improvements.
SA16: Economy and Employment	3	0	3	Three categories have resulted in significant positive effects upon economy and employment. These categories have resulted in improved connectivity across the Borough, including rural areas, and improving the access to employment opportunities and town centres. There is also potential for the improvement of local economies through these interventions. Uncertain effects have been identified for categories and interventions that have the potential to alter employment opportunities within the Borough, particularly through changes in freight and maintenance activities.

8 Assessment of Alternatives

8.1 Introduction

8.1.1. The SEA Regulations require an assessment of the plan and its “reasonable alternatives”, in addition to those proposed within the draft plan. Without this, there cannot be a proper environmental evaluation of the preferred plan.

8.1.2. The assessment of reasonable alternatives does not need include all possible alternatives, but only those that are realistic. The assessment of alternatives has looked at both alternative strategy scenarios as well as alternative Action Plan interventions.

8.2 Assessment of Alternative LTP4 Objectives

8.2.1. The development of the LTP4 Strategy has not at this stage identified any key Strategy alternatives, so the assessment of policy alternatives has assessed the ‘do nothing’ scenario – the continuation of the existing LTP3.

8.2.2. **Table 8-1** below provides a summary of the application of these scenarios. It uses the same key to effects outline in **Table 3-1**.

Table 8-1 – Assessment of Policy Alternative Scenarios

SA Objective	Summary of Existing LTP3 Effects	Significance.
SA1: Natural Capital	Natural capital is under threat from climate change, with changing temperatures and extreme weather events resulting in the loss, degradation and movement of species and habitats. The absence of a climate change policy within LTP3 means that climate change could continue to present a risk to biodiversity and natural capital. Whilst the LTP3 acknowledges the need to protect the natural environment, it does not include a policy to protect the natural environment or consider this within policies. Since the publication of the LTP3, the 25 Year Environment Plan (2018) has been published, which outlines the Government's ambition to leave our environment in a better state than we found it and the steps proposed to take to achieve that ambition. It is clear that the LTP3 is outdated and may not support the national agenda of environmental net gain.	--
SA2: Materials and Waste	Developments to the transport network which may come forward as a result of LPT3 such as new roads, rail stations and interchanges all have the potential to be resource intensive and result in large amounts of land take and waste. Since the adoption of LTP3, there has been more of a drive towards efficient use of resources and supporting a circular economy, as encouraged through the publication of the Clean Growth Strategy and the 25 Year Environment Plan. This may mean that the potential for intensive land use as a result of LTP3 may no longer be up to date with current standards surrounding the use of environmental resources.	--
SA3: Soils	The LTP3 does state intentions for any new land use to be efficient and better integrated with transport options. However, developments to the transport network which may come forward as a result of LPT3 such as new roads, rail stations and interchanges all have the potential to negatively impact Wokingham's agriculturally and geologically important land through land take, sterilisation, contamination and disturbance during both construction and operational phases. These developments could result in the loss of the Borough's best and most versatile land. There are no specific objectives targeting the protection of geological and agriculturally important land to mitigate this. This could ultimately lead to their degradation should the proposed developments go ahead.	-
SA4: Biodiversity **SA5: Green Infrastructure**	Any new developments that may come forward have the potential to negatively impact habitats, species and biodiversity. This could be through land take and both construction disturbance, particularly through noise and air quality changes. Potential development may occur in areas of high ecological value, where current levels of noise pollution are low and air quality is good. Upon analysis of current and future trends, it is clear that the LTP3 has failed to combat declining biodiversity in Wokingham, as has been the national trend. This is particularly apparent by the net increase in private fossil fuel vehicles throughout Wokingham. Whilst the LTP3 acknowledges the need to protect biodiversity, the plan does not include measures to protect biodiversity or contribute to biodiversity net gain. Since the publication of the LTP3, the 25 Year Environment Plan (2018) has been published, which outlines the Government's ambition to leave our environment in a better state than we found it and the steps proposed to take to achieve that ambition. It is clear that the LTP3 is outdated and may not support the national agenda of environmental and biodiversity net gain.	--
SA6: Air Quality	Air quality is identified as a key issue within LTP3, effecting both the environment and human health. In Wokingham the air quality is generally good, with localised hot spots for air quality problems being caused by road transport, namely along the M4, A329 (M) and within Wokingham Borough's urban centres. In these locations, measures to ease congestion such as the improvement of junctions will mitigate some of the negative effects on air quality. The LTP3 includes policy HW10, to implement an air quality action plan. Additionally, a number of policies within the LTP3 contribute to improving public and active travel services (AT1, AT2, AT3, PT1, PT2, PT3, PT4, PT5, PT6, PT7, PT8, PT9, PT10, PT11, PT12, PT13). The increased use of public transport, walking and cycling will help to reduce the number of vehicles on the road, in particular the number of private cars, resulting in a reduction in emissions and therefore, an improvement on the air quality.	+

SA7: Greenhouse Gases	The LTP3 supports the transition to a low carbon economy, supporting the reduction in GHGs in line with Government targets. The plan seeks to reduce GHGs from transportation, including from congestion, private vehicles, and public transportation (HW1, PT13). The plan also considers the reduction of emissions from street lighting (HW9), seeking to reduce emissions from this source. Additionally, the LTP3 also contributes to encouraging the use of active travel, reducing private vehicle use and therefore reducing emissions (AT1, AT2, AT3).The continuation of these policies is likely to result in further reductions in GHGs across Wokingham Borough. Since the development of the LTP3, the Government has updated the legislation regarding GHG emissions, outlining the target of 100% reduction in greenhouse gases on 1990 levels by 2050. The LTP3 is therefore outdated in its measures to tackle levels of GHGs. The LTP3 also supports the use of electric vehicles and electric vehicle charging. However, since the development of the plan there has been an increased uptake in the use of electric and low carbon fuelled vehicles. The plan is considered outdated in this area and does not outline improvements to infrastructure at a scale to support the increase in use of these vehicles. Climate change presents a growing risk to weather in Wokingham, with increased rainfall events, higher temperatures, and increased extreme weather events including flooding. The LTP3 includes policy HW8 which aims to create a transport network resilient to extreme weather events including snow and ice. However, this policy does not include measures for climate change weather events. This policy may no longer be suitable to the changing climatic risks within the Borough	**-**
SA8: Climate Resilience		
SA9: Noise	LTP3 relates challenges facing quality of life with the intrusive effects of transport, such as noise from high volumes of traffic. The policies within LTP3 that encourage or improve sustainable and active transport modes will in turn help to reduce noise pollution. The LTP3 includes policy HW11, which seeks to reduce noise pollution and ensure that mitigation measures are integrated within new development to minimise noise for those living close to key noise sources within the Borough. The LTP3 does, however, support a number of schemes to increase the number and frequency of public transport vehicles like buses and trains, which will contribute to reducing private vehicle noise. However, there is potential that increased services could ultimately contribute to noise pollution through both construction and operational phases. Additionally, LTP3 does not address the current and future changes in to the transport network in Wokingham Borough, for example through increasing numbers of private vehicles. The future changes to Wokingham's population are likely to contribute to increases in noise pollution, which the LTP3 does not address.	**+/-**
SA10: Landscape and Townscape	As part of the LTP3's goals for transport, the plan aims to protect and enhance the landscape and townscape of Wokingham. Policies within the Active Travel Policy Options and Public Transport Policy Options encourage the use of alternative transport modes, aiding in reducing traffic and therefore reducing the effects of noise and vibration on landscapes. Policy HW12 also includes measures to improve the public realm through reducing street clutter. However, new development and improving connectivity to rural areas may affect the tranquillity and setting. This could be due to the increased traffic, construction and operation phase disturbance (light, noise, and air pollution), and visitor pressure. Development may also require land take which could result in negative effects on the Borough's landscape. The LTP3 does not include a policy on the protection of the Borough's valuable townscapes and landscapes, therefore, it is unlikely that development will take potential negative effects into consideration. Without the support of the LTP, development could be insensitively designed, and a large amount of land could be taken leading to the degradation of landscape and townscape.	**+/-**
SA11: Historic Environment	Wokingham Borough has a number of heritage assets, including conservation areas, listed buildings and scheduled monuments. The LTP3 acknowledges the need to conserve and enhance the historic environment of Wokingham Borough. The LTP also acknowledges the impacts that poor air quality has upon heritage assets. The transition to sustainable transport modes as part of LTP3 will help to reduce emissions and the number of vehicles on the road which will result in improving the air quality and noise pollution. As air pollution is a key factor in the degradation of surfaces of historical buildings and monuments, action to improve air quality has the potential to indirectly benefit the historic environment. The reduction in noise pollution will also help to improve tranquillity and unique setting of the heritage assets.	**+/-**

	However, the LTP3 does not include a specific policy, or acknowledgment within policy, to conserving heritage assets and their settings. Without this, there is potential that development may result in degradation of the setting of heritage assets through insensitive design, therefore reducing their significance.	
SA12: Water Quality	While the LTP3 includes policy objectives to consider improvements to the water environment and water quality, the plan does not include any policy measures to address water quality within Wokingham Borough. There are a number of key water bodies within Wokingham, including the River Lodden, the River Thames, and a number of large water bodies, that are subject to WFD targets. The exclusion of water quality considerations within the LTP3 therefore has the potential to reduce water quality within the Borough if not considered within development.	**--**
SA13: Flooding	There have been multiple instances of flooding within Wokingham Borough, with significant flooding occurring in recent years; 1993, 2000, 2003, 2007, 2013, 2015, 2016, 2017, and 2020. Policy HW8 addresses the need for a resilient highway network during extreme weather events. However, this does not include flood risk measures. Whilst the LTP3 acknowledges flood risk within the Borough, and the likely increases in flood events as a result of climate change, the plan does not include a specific measure to address flood risk within the Borough. As climate change is likely to exacerbate both the chronic and acute effects of climate change, including flooding, the LTP3 is therefore outdated and unfit for purpose under our changing climate.	
SA14: Population	Wokingham's LTP3 policies will continue to address current and future population connectivity and efficiency issues of the transport network. A key part of LTP3 is to improve connectivity to rural destinations through improving buses (including new buses and increased service frequency) and improved integration between bus and rail services. Accessibility and inclusion are well addressed within LTP3, with policies to improve ticketing, and improvements in access to public transport for all citizens. This promotes a fairer, more inclusive society. However, policy HW12, outlines reductions in street clutter, including reductions in signage. Reducing signage may reduce wayfinding through the Borough, limiting the movements of those with disabilities, the elderly, or visitors who may not know their way around. Despite LTP3's recognition of a growing population, policies regarding capacity do not reflect this, and will likely not be robust enough as a result to support the projected population growth in Wokingham of 1% growth by 2037. The population in Wokingham is ageing, with an estimated 20% predicted to be over 65 by 2027. This is likely to place increased demand on public transport services and the LTP does not acknowledge it.	**+/-**
SA15: Health	The LTP3 ensures a focus on improving health and healthy communities within Wokingham Borough. The LTP3 recognises the challenges of modern-day life (sedentary lifestyles, car use) and the problems incurred (increased prevalence of medical conditions such as obesity and heart disease). This allows the LTP to encourage active travel as an easy and beneficial mode for people to incorporate into their everyday lives in order to pursue healthier lifestyles. The LTP sets out to achieve this by making active travel easier and more attractive through infrastructural improvement, as well as addressing perceptions of key barriers to active travel like safety and convenience. Equally, LTP3's mission to transition to more sustainable modes of transport (including public transport) will also work to improve the overall health of the population by reducing noise pollution and improving air quality. Both of these will have beneficial effects on the health and wellbeing of the population in Wokingham Borough. The LTP3 also places emphasis on improving the physical safety of its residents, including school children, through highways improvements, speed limit changes and reducing the fear or crime. While there is a recognition that active travel can improve mental wellbeing, there is no specific action to actively uphold this, and more could be done within the LTP3 to allow for the beneficial effects of active travel on mental health. Especially in the wake of the Covid-19 pandemic, more people are finding comfort in connecting with outdoor spaces, and so greater emphasis should be placed on the importance of maintaining and enhancing this link. Additionally, LTP3 does not address post Covid-19 perceptions, whereby some members of the public no longer feel comfortable or safe using public transport. This is especially reflected within vulnerable groups who may be unable to access public transport due to health concerns. The current LTP3 is therefore insufficient to meet the needs of Wokingham Borough's changing behaviours when it comes to active travel, d public transport and mental health awareness.	**+/-**

SA16: Economy and Employment	LTP3 is still relevant to the improvement of connectivity across Wokingham to support greater access to employment. The continued connectivity improvements through better buses (including new buses and increased service frequency), reduced car use, improved ticketing, and improved rail services will increase Wokingham Borough residents' access to employment, including those in rural communities. Improved connectivity will also provide greater access to education in the Borough, resulting in a higher proportion of skilled workers in high wage industries, supporting the growth of their already present and diverse knowledge sectors. Additionally, the LTP recognises, and provides, improved connectivity to Reading. This provides improved economic opportunities for employment in the Borough. The Plan also includes measures to improve active travel connectivity to employment opportunities (policy AT1). This, alongside improvements to public transport services provides improved journey reliability to employment areas. LTP3 does not tackle any degree of investment to improve broadband infrastructure across the county, meaning it is not fit to account for the new shift towards working from home brought about by the Covid-19 pandemic. A lack of digital inclusion will disadvantage peoples access to employment under current circumstances, as well as opportunities for businesses to grow. However this is not significant enough to negate improvements made by LTP3.	+

8.3 Assessment of Alternative Action Plan Interventions

8.3.1. As per the SEA regulations, the SA needs to consider and compare all reasonable alternatives as the plan evolves and assess these against the baseline environmental, economic and social characteristics of the Borough. Reasonable alternatives are the different realistic options considered by the plan-maker in developing the policies in the plan. The SA has therefore assessed reasonable alternative Action Plan Interventions. Action Plan Alternative Interventions have been derived from the long-list of interventions proposed during the development of the Action Plan. In total, 19 alternative schemes were assessed. The details of the assessment have been detailed below – Table 8-2 presents an overview of the alternative sites performance whilst the findings of the assessments have been detailed in Table 8-2.

8.3.2. The assessment of alternative action plan interventions has resulted in a higher number of negative effects compared to the proposed site action plan interventions. These have generally been identified for Biodiversity (SA4) and Noise (SA9) due to the land take and therefore habitat loss required for the interventions, and the increase in traffic in the Noise Important Areas (NIA) along the M4.

8.3.3. A number of these interventions are likely to result in rerouting of freight and private vehicles within the Borough, leading to location specific positive and negative effects on Air Quality (SA6), Greenhouse Gases (SA7), and Noise (SA9). These are especially going to impact the NIAs and Air Quality Management Areas (AQMAs) located throughout the Borough. Similarly, traffic shifts within the Borough will lead to location specific positive and negative effects on Landscape and Townscape (SA10) and Historic Environment (SA11) through changes to setting and damage from air pollution,3especially within the Conservation Areas within the Borough.

8.3.4. Uncertain effects have been identified for Greenhouse Gases (SA7) where it is unclear whether the interventions will introduce low carbon public transport methods including green buses and decarbonised rail services.

8.3.5. Uncertain effects have also been identified for Flooding (SA13), as the exact locations and works proposed are unclear at this stage, and there are areas within Flood Zone 3 within the vicinity of these sites.

Table 8-2 - Assessment of Action Plan Alternatives

Scheme	SA1: Natural Capital	SA2: Materials and Waste	SA3: Soils	SA4: Biodiversity	SA5: Green Infrastructure	SA6: Air Quality	SA7: Greenhouse Gases	SA8: Climate Resilience	SA9: Noise	SA10: Landscape and Townscape	SA11: Historic Environment	SA12: Water Quality	SA13: Flooding	SA14: Population	SA15: Health	SA16: Economy and Employment
Free travel to school review	0	0	0	0	0	?	?	0	?	0	0	0	0	++	?	+
Digital Kerbside Management	0	0	0	0	0	+	+	?	+	+	+	0	0	0	?	?
Demand Responsive Transport north	0	0	0	0	0	?	?	0	?	?	?	0	0	+	+	+
Parish Gateways	0	0	0	-	?	0	0	0	0	?	0	0	0	0	+	0
Ped/cycle access to Green Park Station	0	0	0	+	?	+	+	?	+	+	+	0	0	+	+	+
Twyford Gardens Rail station	0	?	?	-	?	+/-	?	?	+/-	+/-	+/-	0	?	+	0	+
Demand Responsive Transport south	0	0	0	0	0	?	?	0	?	?	?	0	0	+	+	+
Mereoak Park and Ride, increased capacity	?	-	-	?	?	+/-	+/-	?	+/-	+/-	+/-	0	0	+	+	+
Wokingham Station Bus access	0	?	0	0	0	+	+	0	+	?	+	0	0	0	0	+
Wokingham Level Crossing	0	0	0	0	0	+/-	+/-	0	+/-	+/-	+/-	0	0	0	+	+
Vehicle size/routing review and signage strategy	0	0	0	0	0	+/-	+/-	0	+/-	+/-	+/-	0	0	0	0	0
Wokingham Level Crossing- Bus	0	0	0	0	0	+/-	+/-	0	+/-	+/-	+/-	0	0	+	0	+
New Motorway junction between M4 J10 and J11	-	--	--	--	?	+/-	+/-	?	-	+/-	+/-	0	?	0	-	+
A329 (M)(Smart Corridor	0	?	?	?	0	+	+	0	0	0	0	0	?	0	-	+
A329 Coppid Beach Junction improvements	0	-	-	0	?	?	?	0	?	0	0	0	0	0	0	+

Table 8-3 - Summary of Action Plan Alternative Effects

SA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
SA1: Natural Capital	0	0	1	Uncertain effects have been identified for the Mereoak Park and Ride, increased capacity. There is potential for increased development at this site, which may result in loss of natural capital. However, this is currently uncertain.
SA2: Materials and Waste	0	1	3	Uncertain effects have been identified for four interventions. At this stage it is uncertain if significant quantities of materials will be required for the construction of some of the schemes, and how much of this material will be reused or recycled, or if these schemes will incorporate sustainable design measures. There is potential for these developments to be resource intensive. Significant negative effects have been identified for the New Motorway Junction Between M4 J10 and J11. This measure is likely to result in resource intensive development.
SA3: Soils	0	1	2	There is potential for significant negative effects have been identified for the New Motorway Junction Between M4 J10 and J11 as this development is likely to result in large scales of land take, and loss of agricultural land. There is potential for land take as a result of development of these interventions. However, at this stage it is uncertain if these interventions will result in significant loss of agricultural land.
SA4: Biodiversity	0	1	2	There is potential for significant negative effects have been identified for the New Motorway Junction Between M4 J10 and J11. This measure is likely to result in large scale land take, and has the potential for a loss of habitats and species as a result of this, particularly those residing in hedgerows in the area. There is potential for some interventions to result in habitat loss, however the significance of this is uncertain at this stage as the location of development and its proximity to designated sites is unclear.
SA5: Green Infrastructure	0	0	6	There is potential for a number of interventions to result in the loss of, or improvement to green infrastructure. Schemes have the potential to include green infrastructure measures, however this is not known at this stage and is likely to be determined by individual design.
SA6: Air Quality	0	0	4	A number of the schemes promote a modal shift away from the use of private vehicles, reducing the air quality impacts from private vehicles within the Borough however the levels of these are not significant. Uncertain effects have been identified where an increase in public transport is anticipated, as it is unclear if low emissions vehicles will be used as part of these interventions.
SA7: Greenhouse Gases	0	0	5	A number of the schemes promote a modal shift away from the use of private vehicles, reducing GHG emissions from private vehicles within the Borough however the levels of these are not significant. Uncertain effects have been identified where an increase in public transport is anticipated, as it is unclear if low emissions vehicles will be used as part of these interventions.
SA8: Climate Resilience	0	0	5	Uncertain effects have been identified for climate resilience as the interventions have the potential to include climate resilience measures, such as heat resilience and SuDS, within the development design. However, this is currently unknown.

SA Objective	Number of Significant Effects			Summary of Significant Effects
	++	--	?	
SA9: Noise	0	0	4	A number of the schemes promote a modal shift away from the use of private vehicles, reducing the traffic noise from private vehicle, however the levels of these are not significant. Schemes also result in the rerouting of vehicles, reducing noise impacts in some locations but increasing them in others. Uncertain effects are anticipated where it is unclear if increasing public transport provision would result in an overall decrease in traffic noise.
SA10: Landscape and Townscape	0	0	4	A number of schemes aim to reroute private and freight vehicles throughout the Borough, reducing the impacts of these vehicles on the landscape and townscape in some locations but increasing them in others. These effects are not anticipated to be significant. Uncertain effects are anticipated where the traffic will shift to increased public transport, as it is unknown if these interventions will increase the overall number of vehicles on the road.
SA11: Historic Environment	0	0	2	A number of schemes aim to reroute private and freight vehicles throughout the Borough, reducing the impacts on the historic environment in some locations through damage from air pollution and setting impacts but increasing them in others. Uncertain effects are anticipated where the traffic will shift to increased public transport, as it is unknown if these interventions will increase the overall number of vehicles on the road.
SA12: Water Quality	0	0	0	The action plan alternatives are not anticipated to impact water quality.
SA13: Flooding	0	0	3	Uncertain effects have also been identified for Flooding as the exact locations and works proposed are unclear at this stage, and there are areas within Flood Zone 3 within the vicinity of these sites.
SA14: Population	1	0	0	A number of schemes aim ensure that transport modes and infrastructure will meet both current and future population growth, however only Free Travel to School Review has the potential to increase social interaction and community cohesion between families, and therefore has significant effects. The majority of Action Plan alternative interventions result in minor positive effects.
SA15: Health	0	0	1	A number of schemes encourage a modal shift from private vehicles to public transport, increasing physical activity rates and reducing air pollution which impacts health. These effects are not anticipated to be significant. Uncertain effects are anticipated where it is not known if improving free travel to school provision will increase physical activity rates.
SA16: Economy and Employment	0	0	1	A number of schemes increase the connectivity of those without private vehicles to job opportunities through provision of public transport and road improvement schemes. These effects are not anticipated to be significant. Uncertain effects are anticipated where the economic impacts of digital kerbside management are not yet known.

9 Cumulative Effects

9.1 Introduction

9.1.1. The SEA Regulations require that cumulative effects are considered when identifying likely significant effects. Cumulative effects arise, for instance:

- Where several individual policies and sites have a combined effect on an objective; or
- Where several policies and sites each have insignificant effects but together have a significant effect.

9.1.2. The significance of cumulative effects resulting from a range of activities, or multiple incidences of one activity, may vary based on factors such as the nature of the proposed sites and policies and the sensitivity of the receiving communities and environment.

9.1.3. This section therefore presents the findings of the following:

- Consideration of how different proposed visions and objectives within WBC LTP4 may interact and cause cumulative effects on a receptor (Intra-project effects); and
- How the proposed visions and objectives within WBC LTP4 could cause cumulative effects in association with other plans, policies and projects in the surrounding area (Inter-project effects).

9.2 Intra Project Effects

9.2.1. The SEA assessment of visions and objectives drew out potential intra-project cumulative effects. These have been identified in Table 9-2.

Table 9-1 below outlines the key to effects for intra-project cumulative effects.

Table 9-1 – Key to Cumulative Effects

Effect	Key
Positive cumulative effect	+
Negative cumulative effects	-
Mixed cumulative effects	+/-
No overall cumulative effects	0

Table 9-2 – Intra-Project Cumulative Effects Summary

SA Objective	Net Zero Carbon Emissions	Clean Air, Removal of All Air Quality Exceedances	High Quality Sustainable Travel Corridors	Well-Maintained Transport Network	Enable Sustainable Development	Protect and Enhance Strategic Connectivity and Freight	50% Active Travel in Towns by 2030	Safer Streets for All, 50% Reduction in KSIs	Thriving Villages and Town Centres	Action Plan	Summary
SA1: Natural Capital	+/-	+	-	0	+	0	0	+	0	+/-	There is potential for negative effects upon natural capital as a result of developments that may come forward. Developments could result in land take, resulting in loss of natural capital. Additionally, construction work has the potential to disturb these areas through noise, dust spoiling and air quality reductions. However, positive cumulative effects may occur as there is potential that improvements to air quality across the Borough as a result of options and objectives may reduce degradation of natural capital and preserve this asset.
SA2: Materials and Waste	0	0	-	+	0	-	0	-	0	-	There is potential for negative cumulative effects arising from developments that may come forward. If a number of developments were to arise at the same time that require additional materials, there is potential for negative effects. However, Well Maintained Transport Network contributes to potential positive cumulative effects through its use of recycled materials in construction and contributing to a circular economy. Therefore if this objective is considered within development, there is potential for positive cumulative effects.
SA3: Soils	0	0	-	0	0	-	0	-	0	-	Potential negative cumulative effects have been identified for soils due to the potential for multiple developments that may come forward, requiring additional land take. Land take may result in loss of BMV or agricultural land, depending on the location of development.
SA4: Biodiversity	+	+	-	0	+	-	+	+	0	+/-	There is the potential for negative cumulative effects on biodiversity if multiple large scale developments were to come forward. Depending upon the number and type of options selected and their proposed location, there is potential for a cumulative loss of land, which could lead to damaged and segregated habitats. However, there is the potential for positive cumulative effects. These developments may provide biodiversity enhancements through reductions in habitat disturbance, as well as preserving habitats and species through improved air quality.

SA Objective	Net Zero Carbon Emissions	Clean Air, Removal of All Air Quality Exceedances	High Quality Sustainable Travel Corridors	Well-Maintained Transport Network	Enable Sustainable Development	Protect and Enhance Strategic Connectivity and Freight	50% Active Travel in Towns by 2030	Safer Streets for All, 50% Reduction in KSIs	Thriving Villages and Town Centres	Action Plan	Summary
SA5: Green Infrastructure	0	0	+/-	+	0	0	0	+	+	+/-	There are potential positive effects on green infrastructure if multiple developments were to come forward, including additional measures to connect and enhance green infrastructure linking population centres which may otherwise be lost of severed through a lack of maintenance or through other development. However, there is potential that during development and construction of developments arising from the LTP4, green infrastructure may be lost or disturbed, resulting in potential negative cumulative effects.
SA6: Air Quality	+	+	+	+	+	+/-	+	+	+	+/-	Temporary negative cumulative effects have the potential to result during the construction phase, if multiple developments, with overlapping construction periods, were to come forward. Construction of these developments may reduce the air quality through an increase in particulate matter and dust. However, the development of new public transport infrastructure and active travel infrastructure will enable more people to use public transport modes instead of the use of a private car, helping to improve air quality. Therefore, there is also the potential for positive cumulative effects to result if multiple developments were to come forward. Additionally, the Clean Air policy which is the removal of all air quality exceedances, contributes to improving air quality within the AQMAs in the Borough.
SA7: Greenhouse Gases	+	+	+/-	0	+/-	+/-	+	+/-	+	+/-	If multiple developments were to come forward there is the potential for negative cumulative effects on GHGs, due to the construction required for new developments. In the longer term, there is potential that if multiple developments were to arise, positive cumulative effects on GHGs may arise due to the improvement in infrastructure reducing the number of private vehicles on roads, as well as reducing congestion on the Borough's roads.

SA Objective	Net Zero Carbon Emissions	Clean Air, Removal of All Air Quality Exceedances	High Quality Sustainable Travel Corridors	Well-Maintained Transport Network	Enable Sustainable Development	Protect and Enhance Strategic Connectivity and Freight	50% Active Travel in Towns by 2030	Safer Streets for All, 50% Reduction in KSIs	Thriving Villages and Town Centres	Action Plan	Summary
SA8: Climate Resilience	++	0	-	+	+/-	0	0	0	0	+/-	The addition of increased use of hard standing surfaces as part of the proposed developments will increase surface water runoff. Therefore, a number of new developments could result in potential negative cumulative effects on flooding, particularly for those sites located within flood zone 2 or 3. However, the incorporation of sustainable urban drainage systems (SUDs) which will help to reduce overall flood risk within the Borough, and climate resilience measures is likely to be development specific. If SUDs are included within multiple developments there is potential for positive cumulative effects.
SA9: Noise	+	0	+/-	0	0	0	+	+	+	+/-	The development of transport interventions may result in potential positive cumulative effects on noise. The improvement of public transport and active travel corridors is likely to reduce the number of private vehicles and congestion on the Borough's roads, reducing noise. However, there is potential for negative cumulative effects on noise if multiple developments were to arise at the same time as during construction there are likely to be cumulative increases in noise. Additionally, there is potential for cumulative increases in traffic noise during construction as a result of delays and increased congestion.
SA10: Landscape and Townscape	+	+	+/-	+	+	0	+/-	+/-	+/-	+/-	There is the potential for negative cumulative effects on townscapes and landscapes if multiple developments were to come forward in close proximity to greenbelt land, parks and open spaces and areas with high townscape values. During construction of these new developments there is the potential for disturbance to the setting and tranquillity of these areas. However, positive cumulative effects may arise due to good design of the proposed developments and improvements to the public realm, parks and open spaces and the natural environment.

SA Objective	Net Zero Carbon Emissions	Clean Air, Removal of All Air Quality Exceedances	High Quality Sustainable Travel Corridors	Well-Maintained Transport Network	Enable Sustainable Development	Protect and Enhance Strategic Connectivity and Freight	50% Active Travel in Towns by 2030	Safer Streets for All, 50% Reduction in KSIs	Thriving Villages and Town Centres	Action Plan	Summary
SA11: Historic Environment	+	+	+/-	+	+	0	+	+/-	+/-	+/-	There is the potential for negative cumulative effects on the historic environment if multiple developments were to come forward in close proximity to heritage assets. During construction of these new developments there is the potential for disturbance to the historic environment due to noise, vibration and temporary reductions in air pollution (dust soiling). However, positive cumulative effects may arise due to the historically sensitive design of proposed developments to fit in with the setting of any surrounding designated heritage assets. The LTP4 may also result in a cumulative increase in protection and preservation of heritage assets in the Borough, particularly through improved air quality. This could result in better understanding and appreciation of the historic environment.
SA12: Water Quality	0	0	+/-	0	0	0	0	0	0	+/-	There is potential for negative cumulative effects if multiple developments were to come forward. There is potential for cumulative increase in surface water runoff, and impacts on surface water and groundwater, particularly from physical alteration as a result of development from the action plan as well as developments associated with high quality sustainable travel corridors. Water quality measures are likely to be specific to each development, but there may be cumulative benefits as a result of traffic reductions, reducing pollution load in runoff, or the inclusion of SuDS, if implemented across multiple developments.
SA13: Flooding	0	0	+/-	0	0	+/-	0	+/-	0	+/-	There are potential negative cumulative effects on flooding if multiple developments were to arise within flood zone areas. Developments could result in an increase in impermeable surfaces, increasing flood risk. Flood risk measures are likely to be development specific, but there may be cumulative benefits if implemented across multiple developments.
SA14: Population	+	+	+	+/-	+	+	+	+	+	+	Positive cumulative effects are anticipated for population as the LTP4 objectives and action plan develop WBC's transport infrastructure for current and future generations. Objectives including high quality sustainable travel corridors, enable sustainable development, and 50% active travel in towns by 2030 also include measures to inclusively improve transport and active travel facilities across the Borough. The LTP4 also provides improved transport accessibility to communities across the Borough, including rural areas. However, the development of freight within the Borough may result in negative cumulative effects.

SA Objective	Net Zero Carbon Emissions	Clean Air, Removal of All Air Quality Exceedances	High Quality Sustainable Travel Corridors	Well-Maintained Transport Network	Enable Sustainable Development	Protect and Enhance Strategic Connectivity and Freight	50% Active Travel in Towns by 2030	Safer Streets for All, 50% Reduction in KSIs	Thriving Villages and Town Centres	Action Plan	Summary
SA15: Health	+	+	+	+	+	+	+	+	+	+	There are potential positive cumulative effects on health as a result of all LTP4 objectives and the Action Plan. The strategy and action plan contribute to improving healthy lifestyles due to increased physical activity through active travel and air quality improvements, as well as improving mental wellbeing through improved access to services, leisure and transport.
SA16: Economy and Employment	+	+	+	+	+	+	+	+	+	+	Positive cumulative effects are anticipated for economy and employment. The LTP4 improves transport and active travel connectivity across the Borough, improving access to employment locations and town centres. The objectives and Action Plan also improve connectivity to the wider region, including Reading and London, improving access to employment. There are also positive cumulative effects anticipated as a result of improvements to journey time reliabilities. The development of improved transport links is also likely to improve town centre economies.

9.3 Inter-Project Effects

9.3.1. **Table 9-3** below outlines the sources of potential inter-cumulative effects, whilst **Table 9-4** details the cumulative effects identified for each of the SA Topics in relation to these policies and plans. This uses the same key to effects as set out in **Table 9-1** above.

Table 9-3 - Sources of Inter-Cumulative Effects

Policy or Plan	Plan Details
Transport for the South East's (TfSE) Regional Transport Strategy, 2020	Wokingham Borough is located within the TfSE Region. The Transport Strategy sets out how the TfSE aims to achieve its vision across the region. This includes ensuring the delivery of a high quality, sustainable and integrated transport system that supports increased productivity to grow the South East and UK economy and compete in the global marketplace. It aims to facilitate the development of a high quality, sustainable and integrated transport system that works to improve safety, quality of life and access to opportunities for all. The Strategy acknowledges the key relationship London has with the South East and how it is reliant upon strong transport links with towns, cities and international gateways outside of London, which is reflected strongly in commuting patterns between both regions.
Neighbouring Local Transport Plans	Local transport plans in neighbouring Boroughs (Reading, Bracknell Forest, West Berkshire, Royal Borough of Windsor and Maidenhead), counties (Hampshire, Buckinghamshire, and Oxfordshire), and local authorities (Hart District, South Oxfordshire District, and Basingstoke and Deane District) enable Local Authorities to plan for transport in their areas. They can identify both strategic policy and implementation plans for delivering this policy. Therefore, they identify policy options for implementing transport improvements, including different modes of transport. They also prioritise a number of areas and schemes for development over the plan period. The plans include: ■ Reading Transport Strategy 2040; ■ Bracknell Forest Local Transport Plan 3; ■ Royal Borough of Windsor and Maidenhead Local Transport Plan 4 (not yet adopted); ■ West Berkshire Local Transport Plan 3; ■ Hampshire County Council, Draft Local Transport Plan 4; ■ Oxfordshire County Council, Local Transport and Connectivity Plan 2022-2050;

Policy or Plan	Plan Details
	■ Buckinghamshire Council, Local Transport Plan 5 (not yet adopted); and ■ Basingstoke Transport Strategy.
Neighbouring Local Plans and Strategies	Local Plans in neighbouring Boroughs (Reading, Bracknell Forest, West Berkshire, Royal Borough of Windsor and Maidenhead), counties (Hampshire, Buckinghamshire, and Oxfordshire), and local authorities (Hart District, South Oxfordshire District, and Basingstoke and Deane District)influence cross-boundary development improvements. ■ Reading Borough Local Plan; ■ Bracknell Forest Local Plan (not yet adopted); ■ Royal Borough of Windsor and Maidenhead, Borough Local Plan 2013-2033; ■ West Berkshire Local Plan; ■ Hart Local Plan 2032; ■ South Oxfordshire Local Plan 2011-2035; ■ Buckinghamshire Local Plan (not yet adopted); ■ Basingstoke and Deane Local Plan (not yet adopted); ■ West Berkshire Active Travel Strategy; and ■ Oxfordshire Active Travel Strategy.
Nationally Significant Infrastructure Projects (NSIPs)	There are 18 NSIPs located within the South East Region, including decided, and pre application developments: ■ East West Rail; ■ Southampton to London Pipeline Project; ■ Cleve Hill Solar Park; ■ Rampion Offshore Wind Farm; ■ Lower Thames Crossing; ■ M3 Junction 9 Improvement; ■ Hampshire Water Transfer and Water Recycling Project; ■ Rampion 2 Offshore Wind Farm; ■ A27 Arundel Bypass; ■ Stonestreet Green Solar; ■ Botley West Solar Farm; ■ Cory Decarbonisation Project; ■ Sea Link; ■ Oxfordshire Strategic Rail Freight Interchange; ■ Western Rail Link to Heathrow; ■ Perrys Farm Hazardous Waste Management Facility; ■ River Thames Scheme; and ■ Slough Multifuel Extension Project.

Table 9-4 - Intra-Project Cumulative Effects Summary

SA Objective	Transport for the South East	Neighbouring Local Transport Plans	Neighbouring Local Plans and Strategies	Nationally Significant Infrastructure Projects	Summary
SA1: Natural Capital	**+/-**	**+/-**	**+/-**	**+/-**	There is potential for cumulative loss of natural capital if multiple developments, across similar timeframes were to come forward. Although it is assumed that any protected species or sites would be mitigated at a project level, there are wider impacts on natural capital. There is potential for positive effects through the incorporation of natural capital approaches (TfSE, Local Transport Plans, Local Plans) and the enhancement of existing sites providing natural capital.
SA2: Materials and Waste	**+/-**	**+/-**	**+/-**	**-**	There is potential for negative cumulative effects upon materials and waste as a result of large-scale projects (NSIPs). Additionally, if developments across similar timeframes were to come forward, this has potential to negatively affect materials and waste. However, strategies and plans (TfSE, Local Transport Plans, Local Plans) include circular economy principles that may contribute to potential positive effects on waste.
SA3: Soils	**0**	**+/-**	**+/-**	**+/-**	Potential negative cumulative effects on soils may arise as a result of a number of large scale projects, such as NSIPs, coupled with other development in the Borough and surrounding area. This could lead to a cumulative loss of land, some of which may be BMV land and not brownfield land. However, positive cumulative effects could arise if the majority of the of proposed developments are situated on brownfield sites.
SA4: Biodiversity	**+/-**	**+/-**	**+/-**	**+/-**	There is potential for cumulative loss, damage or fragmentation of statutory and non-statutory sites and habitats if multiple developments, across similar timeframes were to come forward. Although it is assumed that protected species would be mitigated at a project level, there are wider impacts on biodiversity. There is potential positive effects through the incorporation of biodiversity net gain (TfSE, East West Rail) and green infrastructure (TfSE, Local Transport Plans, Local Plans).
SA5: Green Infrastructure	**+/-**	**+/-**	**+/-**	**0**	There is potential for the cumulative loss of green infrastructure if multiple developments, across similar timeframes were to come forward. However, there is potential positive effects through the incorporation of green infrastructure incorporations within developments (TfSE, Local Transport Plans, Local Plans).
SA6: Air Quality	**+**	**+/-**	**+/-**	**+/-**	Temporary negative cumulative effects have the potential to result during the construction phase, if multiple developments were to come forward. Construction of these developments may reduce the air quality through an increase in particulate matter and dust. Positive cumulative effects will result through the development of sustainable transport schemes. In combination with the Local Transport Plan's objectives, this will increase access to public transport modes, reducing the use of a private car, and therefore improving air quality. Further positive cumulative effects will result from the reduction in journey times and congestion on the highway network.

SA Objective	Transport for the South East	Neighbouring Local Transport Plans	Neighbouring Local Plans and Strategies	Nationally Significant Infrastructure Projects	Summary
SA7: Greenhouse Gases	**+/-**	**+/-**	**+/-**	**+/-**	There is potential for increased development to increase transport related greenhouse gas emissions, particularly where this leads to increases in vehicular traffic as well as embodied carbon due to development. However, there may be cumulative benefits from transport initiatives (including East West Rail, TfSE and neighbouring transport plans) and low carbon developments (as set out in neighbouring local plans) in reducing greenhouse gases.
SA8: Climate Resilience	**0**	**0**	**+**	**0**	Climate change adaptation measures are likely to be specific to each development, but there may be cumulative benefits if implemented across multiple plans (as set out in neighbouring Local Plans).
SA9: Noise	**+/-**	**+/-**	**-**	**-**	There may be cumulative reductions in noise from transport initiatives (TfSE, neighbouring local transport plans) encouraging a move towards sustainable transport modes, reducing road traffic noise. However, temporary negative cumulative effects have the potential to result during the construction phase, if multiple developments were to come forward during the same timeframe.
SA10: Landscape and Townscape	**+/-**	**+/-**	**+/-**	**-**	The provision of public realm improvements through neighbouring local plans and strategies, neighbouring transport plans, and TfSE could help to increase and improve the open space offering as well as the setting of the borough's townscape and landscape. This will result in positive cumulative effects. However, multiple developments (in particular tall buildings in neighbouring boroughs) could result in a cumulative loss of open spaces.
SA11: Historic Environment	**+/-**	**+/-**	**+/-**	**-**	There is potential for both positive and negative, direct and indirect cumulative effects on nationally and locally designated heritage assets, and their unique settings. This is in addition to cumulative effects on undesignated and unknown assets, which are also important. However, well-designed developments and infrastructure could present opportunities to enhance the quality of visual amenity of heritage assets by managing public access to or from the historic features. This could have additional cumulative benefits for identity, health and wellbeing and placemaking.
SA12: Water Quality	**+/-**	**+/-**	**+/-**	**+/-**	There is potential for cumulative impacts on surface water and groundwater quality, particularly from physical alteration as a result of development. Water quality measures are likely to be specific to each development, but there may be cumulative benefits if implemented Borough-wide.
SA13: Flooding	**+/-**	**+/-**	**+/-**	**+/-**	There is potential for cumulative increase in surface water runoff and flood risk, particularly from physical alteration as a result of development and increases in impermeable surfaces. Drainage

SA Objective	Transport for the South East	Neighbouring Local Transport Plans	Neighbouring Local Plans and Strategies	Nationally Significant Infrastructure Projects	Summary
					measures are likely to be specific to each development, but there may be cumulative benefits if implemented Borough-wide
SA14: Population	+	+	+/-	+	There is a potential for negative cumulative effects to result if multiple developments were to come forward as a result of neighbouring local plans due to the increased strain on existing community facilities due to the increased demand from new populations. Positive effects would result from the provision of new infrastructure and transport schemes, improving access and connectivity to community facilities and services, especially for the people who cannot drive or do not have access to a private car. Further positive cumulative effects would result following the introduction of the new public transport schemes (TfSE, neighbouring local transport plans). This will enable people who cannot drive or own a private car to have greater access to education, jobs, and community facilities.
SA15: Health	0	+	+/-	+/-	There is a potential for negative cumulative effects to result if multiple housing developments as part of neighbouring local plans were to come forward, due to the increased strain on existing community health facilities resulting from the increased demand from new populations. The provision and improvements to the active travel, public realm and open spaces, as part of developments arising from neighbouring local transport plans and neighbouring plans, will result in positive effects on the health and wellbeing of the population in the region. This is because access to greenspace can provide better mental health and wellbeing outcomes including reduced levels of depression, anxiety and enhanced quality of life, as well as helping to- bind communities together, reduce loneliness, and mitigate the negative effects of air pollution and excessive noise.
SA16: Economy and Employment	+	+	+	+	There are likely to be positive cumulative economic benefits across the borough following the developments of neighbouring Local Plans, neighbouring local transport plans, TfSE and NSIPs, alongside the Local Plan. These developments are likely to result in increased connectivity across London and the wider south east region, an increase in employment opportunities, and improved access to employment.

10 Mitigation, Enhancement and Monitoring

10.1 Mitigation and Enhancement Measures

10.1.1. Mitigation of significant negative effects of the plan and enhancement of positive effects are a key purpose of SA. The SEA Regulations require that mitigation measures are considered to prevent, reduce or offset any significant adverse effects on the environment of implementing the plan. The measures are known as ‘mitigation’ measures. Mitigation measures include both proactive avoidance of adverse effects and actions taken after potential effects are identified.

10.1.2. The mitigation measures proposed in **Table 10-1** are designed to avoid or reduce the effects identified as potentially negative through the policy assessments on the SA Objectives. The table also includes enhancement measures, that aim to optimise positive impacts and enhance sustainability.

10.1.3. As this is the SA draft reporting stage, these measures are subject to change as the preferred policies and sites are refined and updated. Vision and Objective specific mitigation measures have been included within **Appendix D**, with Action Plan specific mitigation included within **Appendix A**.

10.1.4. The SA Assessment has identified recommendations identified throughout the assessment of the LTP4 and Action Plan. These have been taken from the SA Report, EqIA and HRA. It should be noted that these are different from the mitigation measures, as they focus on potential changes to the LTP, rather than measures identified in response significant effects. These recommendations have been put forward to WBC and changes will be considered by WBC during the preparation of the LTP4.

Table 10-1 - Proposed Mitigation and Enhancement Measures

SA Objective	Mitigation/Enhancement	Mechanism
SA4: Biodiversity	Consideration needs to be given to the potential effects of construction and operation of developments (noise, vibration and air pollution) on international, national and locally designated sites of importance for biodiversity. Sites should be surveyed prior to development to establish all habitats and species in the area. In order to maximise sustainability benefits and compliance with national biodiversity policy, transport interventions must commit to at least 10% biodiversity net gain. Infrastructure schemes should incorporate design measures that lessen the impact on biodiversity and include enhancements through the application of the Mitigation Hierarchy. Where a transport project is likely to have a significant effect on the natural environment the avoidance-mitigation-compensation hierarchy applies, for example, less damaging alternatives should be sought with regards impacts to high value ecological and landscape receptors.	Project level design and assessment (including noise assessments/ surveys) Inclusion within preferred Local Plan policies
SA6: Air Quality SA9: Noise	Consideration needs to be given to the potential effects of construction and operation of the interventions on local noise and air quality receptors including schools and residential buildings. Measures to discourage individual car trips over other alternative transport modes (active, shared and public transport) should be implemented.	Inclusion within preferred Local Plan policies
SA7: Greenhouse Gases	Any form of construction and operation should be undertaken as sustainably as possible, making use of tools and processes, such as circular economy, waste hierarchy and should consider BREEAM and BREEAM Infrastructure. Measures to discourage individual car trips over other alternative transport modes (active, shared and public transport) should be implemented.	Project level design and assessment Inclusion within preferred Local Plan policies
SA10: Landscape and Townscape	Sensitive design should be considered within the action plans to ensure positive effects on local townscapes and landscapes. Measures to discourage individual car trips over other alternative transport modes (active, shared and public transport) should be implemented, to improve the landscape and townscape setting.	Project level design and assessment Project level landscape and visual impacts assessments Inclusion within preferred Local Plan policies
SA11: Historic Environment	Sensitive design should be considered within the action plans to ensure positive effects on local historic assets. Measures to discourage individual car trips over other alternative transport modes (active, shared and public transport) should be implemented, to reduce the air quality related damage to historic assets. Development should consider impacts on designated areas including the Conservation Areas within Wokingham. Where development is located within designated areas, a process of trial trenching should be undertaken to record and register what buried archaeological assets. Where action plan interventions are located within, or 500m outside of a designated historic assets, visual effects assessment should be undertaken to determine magnitude of impact and possible mitigation.	Historic Landscape Characterisation Project level design and assessment Inclusion within preferred Local Plan policies

SA Objective	Mitigation/Enhancement	Mechanism
SA13: Flooding	Where developments are located within flood zones or flood risk areas, SuDS should be included with scheme design. If located within a flood zone, the Environment Agency would need to permit any work to ensure there is no increase in flood risk, taking into account climate uplifts.	Project level design and assessment
SA14: Population	Ensure that the action plan interventions are accessible for all, including low income groups. Consideration needs to be given to those who may not have the same understanding of or access to technology (for example the elderly, those with learning difficulties or in low income groups). Where public transport developments are proposed, consideration should be given to the accessibility of vulnerable groups, to ensure they are able to access public transport and services are inclusive.	Inclusion within preferred Local Plan policies Project level design and assessment
SA15: Health	Active travel provision should be accessible for all, including those using hand cycles.	Inclusion within preferred Local Plan policies Project level design and assessment
SA16: Economy and Employment	Action plan interventions should remain accessible for all to ensure connectivity with employment opportunities. Where possible, developments should work with local businesses and employers to source materials and workforces.	Project level design and assessment

10.2 Monitoring Measures

10.2.1. The SEA Regulations require that monitoring is undertaken on a plan so that the significant effects of implementation can be identified, and remedial action imposed. The purpose of the monitoring is to provide an important measure of the sustainability outcome of the final plan, and to measure the performance of the plan against sustainability objectives and targets. Monitoring is also used to manage uncertainty, improve knowledge, enhance transparency and accountability, and to manage sustainability information.

10.2.2. The aim of monitoring is to check whether the plan is having the significant effects that were predicted in the SA, and to deal with any unforeseen problems.

10.2.3. **Table 10-2** below sets out some of those monitoring measures which would be suitable in monitoring those uncertain residual effects outlined above.

Table 10-2 – Potential Monitoring Measures

Potential Effects	Key Performance Indicators	Targets
SA4: Potential negative effects on Biodiversity	Biodiversity net gain achieved through the interventions.	For all relevant developments to deliver a minimum of 10% Biodiversity Net Gain
SA6: Potential negative effects on Air Quality	To monitor air quality levels within existing AQMAs and ensure they don't exceed existing baseline levels.	Improvements in air quality within AQMAs in line with air quality targets.
SA9: Potential negative effects on noise	Monitor the number of noise important areas. Develop Noise Action Plans to tackle specific arising issues if required.	No increase in the number of noise important areas.
SA10: Potential negative effects on Landscape and Townscape	Landscapes benefiting from conservation and enhancement measure as a result of the action plan interventions.	No greenfield land lost as a result of the interventions.
SA11: Potential negative effects on the Historic Environment	The number of historic assets (statutory and non-statutory) negatively affected by the interventions. The number of historic assets (statutory and non-statutory) benefiting from conservation and enhancement measure as a result of the interventions.	No historic assets negatively affected by the interventions.

Potential Effects	Key Performance Indicators	Targets
SA13: The number of potential interventions located in Flood Zone 3	Number of interventions supported by a flood risk assessment.	For all relevant interventions to incorporate suitable flood resilience and mitigation measures

11 Next Steps

11.1.1. In accordance with the SEA Regulations, the SA Report must be made available at the same time as the draft plan or programme, as an integral part of the consultation process, and the relationship between the documents clearly indicated.

11.1.2. WBC is seeking the views of statutory consultees (Environment Agency, Historic England, and Natural England) on the results of the SEA. This SA Report will be consulted upon alongside the draft LTP4.

11.1.3. The general public will also be encouraged to comment on the SA Report and guided by the following questions:

- To what extent do you agree with the assessment outcomes of the Integrated Sustainability Appraisal report?
- Do you think the proposed measures are sufficient to address the outcomes in the Integrated Sustainability Appraisal?

11.1.4. Following consultation on this report, any necessary amendments will be made in responses to consultation comments and a finalised version of the report will be issued, alongside a post-adoption statement. The post-adoption statement will document how environmental, health, and socio-economic considerations, the views of consultees, and the outcomes of the SA have been taken into account in the adopted LTP4.

11.1.5. It should be noted that the HRA undertaken for the LTP4, will be consulted on separately with just Natural England.

11.1.6. An indicative timetable of the remaining stages of the SA and LTP4 have been included in **Table 11-1** below.

Table 11-1 – Indicative Local Transport Plan 4 and SA Timetable

SA/ LTP Stages	Timescales
SA Report and LTP4 Consultation	tbc
Post-consultation SA and LTP4 updates	tbc
Publication of LTP4 and final SA	tbc
Post Adoption Statement (as above)	tbc

Appendix A

Assessment of Action Plan

Appendix B

Scoping Report Consultation Comments

Appendix C

Scoping Report, SEA Policy Review and Baseline Information

Appendix D

Assessment of LTP4 Vision and Objectives

Appendix E

Equalities Impact Assessment

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Wokingham Borough Council

Local Transport Plan 4 Sustainability Appraisal

Appendix A – Assessment of Action Plan

September 2023

Wokingham Borough Council

Local Transport Plan 4 Sustainability Appraisal

Appendix A – Assessment of Action Plan

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Introduction

Tables A-1 to **A-27** below report the assessment of the LTP4 Action Plan's interventions as grouped under the following vision themes, objectives and categories:

Table A-1: LTP4 Action Plan Vision Themes, Objectives and Categories

Vision Theme	Objective	Category
Reduce Environmental Impacts	Net Zero Carbon Emissions	Road Traffic Digitalisation Zero emission vehicles
	Clean Air, Removal of all Air Quality Exceedances	Access Freight Public Transport
	High Quality Travel Corridors	Access for all Public Transport Cycle Network
Grow the Economy	Protect and Enhance Strategic Road and Rail Connectivity	Strategic Network Public Transport Freight
	A Well-Maintained Transport Network	Operational Maintenance
	Support Sustainable Development	Development Policy Sustainable Design Public Transport Infrastructure Delivery
Create Healthy and Safe Places	Safer Streets for All	Road Safety School Travel
	50% Active Travel in Towns	Infrastructure

		Access to Cycling Standards Engagement
	Thriving Villages and Rural Centres	Rural Centres Active Travel

The assessment of the interventions will predict the following:

- Overall effect significance (negative, positive, uncertain, both positive and negative or negligible);
- Nature of effect (direct, indirect);
- Spatial extent (local, regional, national, international);
- Reversibility of effect:
  - Reversible: The receptor can return to baseline condition without significant intervention;
  - Irreversible: The receptor would require significant intervention to return to baseline condition.
- Duration (short, medium or long term) – Short term: 0-5 years, Medium term: 5-10 years (up to the end of the plan period) Long term: 10+ years (beyond the plan period).

Table A-2 below shows the key to effects that have been used within the assessments below. It should be noted that where uncertain and neutral effects have been identified, it has not been possible to determine the nature of effect, the spatial extent, the reversibility or the duration of effect. In this instance, these cells have been left blank.

Table A-2: Key to Effects

Effect Significance	Key
Potential for significant positive effects	++
Potential for minor positive effects	+
Potential for minor negative effects	-
Potential for significant negative effects	--
Potential for both positive and negative effects	+/-
Uncertain effects	?
Negligible / No effect	0
Magnitude (High / Medium / Low)	H / M / L
Nature of effect (direct / indirect)	D / I
Spatial extent (local / regional / national)	L / R / N
Reversibility of effect (reversible / irreversible)	R / I
Permanence (Permanent / Temporary)	P / T
Duration (short / medium / long term)	ST / MT / LT

Vision Theme: Create Healthy and Safe Places

OBJECTIVE: SAFER STREETS FOR ALL

Category: Road Safety

The interventions included are:

- Targeted infrastructure and speed limit changes to improve road safety on A4 and B3349 (Boroughwide)
- 20mph speed limit in town centres (Wokingham & Winnersh / Edge of Reading)
- Ongoing Cycle Training Program to schools (Bikeability) and Adult Cycle Training (Boroughwide)

Table A-3: Assessment of effects associated with – Safer Streets for All – Road Safety interventions

Vision Theme	Create Healthy and Safe Places							
Objective	Safer streets for All							
Category	Road Safety							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	+	L	I	R	R	P	LT	There are anticipated minor positive effects on biodiversity through speed limit changes which are likely to reduce pollution, minimising disturbance and degradation on local habitats and species in treeline borders in the town centres within Wokingham and Winnersh and the Edge of Reading.
SA5: Green Infrastructure	0							
SA6: Air Quality	+	L	D	R	R	P	LT	Minor positive effects are anticipated through speed limit changes in town centres within Wokingham and Winnersh and the Edge of Reading which will reduce emissions and therefore improve air quality, including within Wokingham Town Centre AQMA. Cycle training programmes also encourage a modal shift away from the use of private vehicles, reducing the resultant pollution across the Borough.
SA7: Greenhouse Gases	+	L	D	R	R	P	LT	Minor positive effects are anticipated as speed limit changes will reduce GHG emissions in the Borough. Cycle training programmes also encourage a modal shift away from the use of private vehicles, reducing the resultant GHG emissions across the Borough.
SA8: Climate Resilience	0							

SA9: Noise	+	L	I	R	R	P	LT	Cycle training programmes encourages a modal shift way from the use of private vehicles, reducing traffic noise across the Borough. Speed limit changes may also result in reduced road traffic noise.
SA10: Landscape and Townscape	+	L	I	L	R	P	LT	Cycle training programmes encourages a modal shift away from the use of private vehicles. Along with reduced speed limits, this will improve the setting of the local landscape and townscape.
SA11: Historic Environment	+	L	I	L	I	P	LT	Poor air quality contributes to the increased degradation of heritage assets. Indirectly, positive effects are anticipated for the historic environment through improvements to air quality from the speed limit changes and a shift from use of private vehicles. This is particularly likely to occur for heritage assets within Wokingham Town Centre Conservation Area.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	++	M	I	R	I	P	LT	A cycling training programme and improvements to road safety through speed limit changes encourage more people to utilise active travel, which promotes community cohesion through the cycling training programme and the provision for more to undertake social cycling trips
SA15: Health	+	L	D	L	R	P	LT	Minor positive effects are anticipated through speed limit changes in town centres within Wokingham and Winnersh and the Edge of Reading which is anticipated to improve local air quality, and therefore the health of local populations. Speed limit changes throughout the Borough are also anticipated to result in improved road safety. A cycling training programme is likely to encourage those without experience to cycle, resulting in health benefits.
SA16: Economy and Employment	0							
Potential Cumulative / Synergistic Effects	There is potential for positive cumulative effects upon air quality, greenhouse gases, health, population, historic environment, landscape and townscape, biodiversity, and noise.							
Mitigation and Enhancement Measures	No mitigation or enhancement measures have been identified for this category.							
Recommendations	It is recommended that cycle training is accessible for all abilities and requirements, including hand cycles.							

Category: School Travel

The interventions included are:

- Promote sustainable and active travel at schools through the school Modeshift Awards Scheme (Boroughwide)
- School Street Pilot(s) (Wokingham & Winnersh / Edge of Reading
- Roll out of School Streets (Boroughwide)

Table A-4: Assessment of effects associated with – Safer Streets for All – School Travel interventions

Vision Theme	Create Healthy and Safe Places							
Objective	Safer Streets for All							
Category	School Travel							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	+	L	I	L	R	P/T	LT	There are minor positive anticipated effects to biodiversity as encouraging active travel at a young age can have lasting impressions and has the potential to encourage long term change, reducing private vehicle use on the roads, improving air quality and noise levels near habitats. Short term, it is anticipated to reduce the number of private vehicles around school streets, improving air quality and noise in smaller localised areas resulting in minor positive effects for biodiversity.
SA5: Green Infrastructure	0							
SA6: Air Quality	+	L	D	L	R	P/T	LT	There are minor positive anticipated effects to air quality, as encouraging active travel and regulating speeds in school streets will both result in reductions to emissions, improving air quality around school areas.
SA7: Greenhouse Gases	+	L	D	L	R	P/T	LT	There are minor positive anticipated effects on Greenhouse gases, as encouraging active travel and regulating speeds around school streets would either reduce private vehicle use around school streets, or reduce emissions through reducing vehicles speeds.
SA8: Climate Resilience	0							
SA9: Noise	+	L	D	L	R	P/T	LT	There are minor positive anticipated effects on noise, as encouraging active travel and regulating speeds around school areas would either encourage the shift from private vehicle use or reduce speeds around these areas, both of which are anticipated to reduce vehicle noise around schools.

SA10: Landscape and Townscape	+	L	D	L	R	P/T	LT	There are minor positive anticipated effects on landscape and townscape, as encouraging a shift to active travel can result in reduced private vehicles in the area, reducing noise and improving the town setting.
SA11: Historic Environment	+	L	D	L	R	P/T	LT	There are minor positive anticipated positive effects on Historic environment, as encouraging active travel and regulating speeds in school streets would improve air quality, reducing degradation of historic assets within close proximity.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	0							
SA15: Health	++	M	D	L	R	P/T	LT	Ther are moderate positive anticipated effects on health, as encouraging active travel at schools is predicted to improve physical health in the younger population. Regulating speeds in school streets will also have a positive impact on health as active travellers are at less risk if vehicles are driving slower. Slower vehicles will also reduce emissions, resulting in improved air quality and reducing risk of respiratory disease.
SA16: Economy and Employment	0							
Potential Cumulative / Synergistic Effects	There is potential for positive cumulative effects upon air quality, greenhouse gases, health, historic environment, landscape and townscape, biodiversity, and noise through an increased use of active travel and speed regulations.							
Mitigation and Enhancement Measures	There are no category specific recommendations identified.							
Recommendations	More accessible active travel routes are recommended, development should be developed in line with DfT's Cycle Infrastructure Design Local Transport Note 1/20[1] to ensure minimum widths to allow all bikes, including adapted bicycles, to utilise routes safely.							

OBJECTIVE: 50% ACTIVE TRAVEL IN TOWNS

Category: Infrastructure

The interventions included are:

- High quality walking and cycling facilities and routes as identified in the Boroughwide LCWIP (Boroughwide)
- Reduce dominance of vehicles in town centres and residential areas (Wokingham & Winnersh, Edge of Reading)

Table A-5: Assessment of effects associated with – 50% Active Travel in Towns – Infrastructure interventions

Vision Theme	Create Healthy and Safe Places							
Objective	50% active travel in towns							
Category	Infrastructure							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	?							Uncertain effects have been identified as there is potential for construction works arising from the development of walking and cycling facilities to result in loss of natural capital. However, there is also potential for improvements in natural capital depending on scheme design.
SA2: Materials and Waste	-	M	D	L	I	P	ST	Negative effects have been identified as there is potential for construction works arising from the development of walking and cycling facilities to be resource intensive and result in high levels of waste.
SA3: Soils	-	M	D	L	I	P	ST	Negative effects have been identified as there is potential for construction works arising from the development of walking and cycling facilities to result in land take.
SA4: Biodiversity	+/-	M	D	L	R	P/T	ST/LT	Creation of high quality active travel routes is anticipated to have minor positive effects to biodiversity, as more active travel options would encourage the transition from private vehicle use which would reduce vehicle emissions and improve air quality and reduce noise around local habitats. However, there is potential for construction works to result in loss of biodiversity, and disturbance through noise and dust spoiling.
SA5: Green Infrastructure	?							Uncertain effects have been identified as there is potential for construction works arising from the development of walking and cycling facilities to result in loss of green infrastructure. However, there is also potential for improvements to green infrastructure depending on scheme design.
SA6: Air Quality	+/-	M	D	L	R	P/T	ST/LT	Creation of high quality active travel routes is anticipated to have minor positive effects to air quality, as more active travel options would encourage the transition from private vehicle use which would reduce vehicle emissions and improve air quality in Wokingham. Additionally, reducing vehicle dominance in town centres will improve air quality within the town centre. There is, however, potential for construction works resulting in dust spoiling and plant emissions, temporarily reducing air quality.

SA7: Greenhouse Gases	+	L	D	L	R	P/T	LT	Creation of high quality active travel routes is anticipated to have minor positive effects on greenhouse gases, as more active travel options would encourage the transition from private vehicle use which would reduce vehicle emissions Boroughwide.
SA8: Climate Resilience	?							Uncertain effects have been identified as there is potential for scheme design to include climate resilience and adaptation measures. However, this is currently unknown.
SA9: Noise	+/-	M	D	L	R	P/T	ST/LT	Creation of high quality active travel routes is anticipated to have minor positive effects upon noise, as more active travel options would encourage the transition from private vehicle use which would reduce vehicle noise. This particularly likely to reduce vehicle noise within town centres. However, there is also potential for construction works, temporarily increasing noise levels.
SA10: Landscape and Townscape	+	M	I	L	R	P/T	LT	Creation of high quality active travel routes is anticipated to have minor positive effects to landscape and townscape, as more active travel options would encourage the transition from private vehicle use which would reduce vehicle presence, noise, and improve the area setting. It is also likely to result in enhancements to the townscape of town centres.
SA11: Historic Environment	+	L	I	L	R	P/T	LT	Creation of high quality active travel routes is anticipated to have minor positive effects to the historic environment, as the interventions are likely to reduce vehicle emissions, improving the air quality and therefore reducing degradation of historic assets in the area.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	+	L	D	L	R	P/T	LT	Creation of high quality active travel routes is anticipated to have minor positive effects to population as more active travel could encourage social trips, as well as commuting trips, improving the general health of the population.
SA15: Health	+	M	D	L	R	P/T	LT	Creation of high quality active travel encourages more physical activities amongst the population. Active travel promotes the shift from private vehicle use, which not only improves general health of the population, improvements in air quality would result from reduced vehicle use, which would in turn reduce respiratory health risks.
SA16: Economy and Employment	++	M	D	L	R	P/T	LT	Not only would creation of high quality active travel facilities create more work opportunities for the local construction industry, but the routes would also create better links between communities for people who don't have access to private vehicle use. Enabling and supporting local events that support vitality of rural villages would also have a moderate positive effect on local economy and employment.
Potential Cumulative / Synergistic Effects	There are potential for positive cumulative effects upon air quality, greenhouse gases, health, population, landscape and townscape, historic environment, economy and employment, and noise through an increased use of active travel within the Borough. There are potential negative cumulative effects upon noise, air quality, materials and soils as a result of construction works and potential land take.							
Mitigation and Enhancement Measures	SA2: Circular economy principles should be implemented where possible to minimise waste. SA2/SA3: Developments should utilise existing sites and infrastructure where possible to minimise land take. SA10/SA11: Sensitive design should be implemented within development to ensure that the setting of local assets is preserved and enhanced.							

Recommendations	More accessible active travel routes are recommended. Development should be developed in line with DfT's Cycle Infrastructure Design Local Transport Note 1/20[1] to ensure minimum widths to allow all bikes, including adapted bicycles, to utilise routes safely. It is recommended that the inclusion of green infrastructure is implemented within developments, providing benefits across green infrastructure, water quality, and flood risk.

Category: Access to Cycling

The interventions included are:

- Provide a range of secure cycle parking options at local destinations (Boroughwide)
- Investigate feasibility of on-street cycle or e-scooter hire scheme (Wokingham & Winnersh, Edge of Reading)

Table A-6: Assessment of effects associated with – 50% Active Travel in Towns – Access to Cycling interventions

Vision Theme	Create Healthy and Safe Places							
Objective	50% active travel in towns							
Category	Access to cycling							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	+/-	L	I	L	R	P/T	ST/LT	There are minor indirect anticipated positive effects to biodiversity, as increased cycle and e-scooter facilities is likely to reduce the number of private vehicles on roads, by encouraging the shift to active travel this would improve local air quality in Wokingham. This would also result in a reduction in noise disturbance to local habitats. However, there is potential for small scale construction arising from these interventions to disturb local biodiversity through noise and dust spoiling.
SA5: Green Infrastructure	0							
SA6: Air Quality	+/-	L	I	L	R	P/T	ST/LT	There are minor indirect anticipated positive effects to air quality, as increased cycle and e-scooter facilities is likely to reduce the number of private vehicles on roads, improving local air quality in Wokingham. However, there is potential for small scale construction arising from these interventions to decrease air quality through dust spoiling.
SA7: Greenhouse Gases	+	L	I	L	R	P/T	LT	There are minor indirect anticipated positive effects to greenhouse gasses, as increased cycle and e-scooter facilities is likely to reduce the number of private vehicles on roads, improving local emissions levels in Wokingham.
SA8: Climate Resilience	0							
SA9: Noise	+/-	L	I	L	R	P/T	ST/LT	There are minor indirect anticipated positive effects to noise, as increased cycle and e-scooter facilities is likely to reduce the number of private vehicles on roads, by encouraging the shift to active travel, this would improve noise levels in Wokingham.

								However, there is potential for small scale construction arising from these interventions to temporarily increase noise.
SA10: Landscape and Townscape	+	L	I	L	R	P/T	LT	There are minor indirect anticipated positive effects to landscape and townscape, as increased cycle and e-scooter facilities would encourage the switch to active travel options instead of private vehicles which would reduce noise in the area and improve the setting of existing assets.
SA11: Historic Environment	+	L	I	L	R	P/T	LT	There are minor indirect anticipated positive effects to landscape and townscape, as increased cycle and e-scooter facilities would encourage the switch to active travel options instead of private vehicles, which would reduce air quality in the area and reduce degradation of historical assets.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	+	L	I	L	R	P/T	LT	Improved cycle and e-scooter facilities encourage social trips, as well as commuting trips, improving the general health of the population.
SA15: Health	+	L	I	L	R	P/T	LT	Improved cycle storage would encourage more active travel activities amongst the population. It could also encourage the transition from private vehicle use; improvements in air quality would result from reduced vehicle use, which would in turn reduce respiratory health risk.
SA16: Economy and Employment	+	L	D	L	R	P/T	LT	Improved cycle storage and e-scooter facilities could create opportunities for the population without access to private vehicle use to commute to employment further afield.
Potential Cumulative / Synergistic Effects	There are potential for positive cumulative effects upon air quality, greenhouse gases, economy, health, population, historic environment, landscape and townscape and noise through an increase in cycling and e-scooter usage . There are potential negative cumulative effects on noise, air quality and biodiversity from construction works.							
Mitigation and Enhancement Measures	SA2: Circular economy principles should be implemented where possible to minimise waste. SA9/SA6/SA4: A CEMP should be developed to minimise construction effects resulting from development.							
Recommendations	Appropriate active travel route signage at e-scooter or cycle storage is recommended to enable place finding and improve the use of e-scooters and bikes.							

Category: Standards

The interventions included are:

- New active travel design guidance (Boroughwide)

Table A-7: Assessment of effects associated with – 50% Active Travel in Towns – Standards interventions

Vision Theme	Create Healthy and Safe Places							
Objective	50% active travel in towns							
Category	Standards							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	?	L	I	L	R	P/T	LT	There are uncertain effects identified for biodiversity, as new active travel design guidance could result in more environmentally friendly /sustainable designs to reduce impacts on biodiversity during the construction and operational phases. However, design guidance is currently unknown.
SA5: Green Infrastructure	?							There are opportunities for new design guidance to include green infrastructure requirements. However, the design guidance is currently uncertain.
SA6: Air Quality	+	L	I	L	R	P/T	LT	There are minor anticipated positive effects predicted to air quality, as new active travel design guidance could result in more applications for active travel schemes. This could then result in more of the population switching from private vehicle use to active travel, which would reduce emissions and improve local air quality.
SA7: Greenhouse Gases	+	L	I	L	R	P/T	LT	There are minor anticipated positive effects predicted to greenhouse gases, as new active travel design guidance could result in more applications for active travel schemes. This could then result in more of the population switching from private vehicle use to active travel, which would reduce greenhouse gases emissions .
SA8: Climate Resilience	?							There is potential that new design guidance may include measures to improve climate resilience along routes, through the inclusion of heat resilience and flood resilience measures. However, this is likely to be determined by individual scheme design.
SA9: Noise	+	L	I	L	R	P/T	LT	There are minor anticipated positive effects predicted to noise, as new active travel design guidance could result in more applications for active travel schemes. This could then result in more of the population switching from private vehicle use to active travel, which would reduce noise levels boroughwide.

SA10: Landscape and Townscape	+	L	I	L	R	P/T	LT	There are minor anticipated positive effects predicted to landscape and townscape, as new active travel design guidance could result in more applications for active travel schemes. The design guidance is also likely to include measures for high quality design, improving the public realm.
SA11: Historic Environment	+	L	I	L	R	P/T	LT	There are minor anticipated positive effects predicted to landscape and townscape, as new active travel design guidance could result in more applications for active travel schemes. This could then result in more of the population switching from private vehicle use to active travel, which would improve air quality boroughwide and reduce degradation of historic assets. There is also potential that the development of design guidance is likely to include high quality, sensitive design, improving the setting of heritage assets.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	+	L	I	L	R	P/T	LT	New active travel design guidance could result in more active travel schemes, which once operational, could provide improved connectivity for the local population. Additionally, this is likely to result in inclusive design to allow access for all population groups.
SA15: Health	+	L	I	L	R	P/T	LT	New active travel design guidance could result in more active travel schemes, which once operational, could encourage social trips, as well as commuting trips, improving the general health of the population. If successful, more active travel routes would also encourage the shift from private vehicle use and improve air quality, this would reduce the risk of respiratory disease.
SA16: Economy and Employment	0							
Potential Cumulative / Synergistic Effects	Provided new design guidance results in increased active travel scheme applications, there is potential for cumulative positive effects upon air quality, health, population, historic environment, landscape and townscape, greenhouse gases, and noise through an increased use of active travel within the Borough.							
Mitigation and Enhancement Measures	There are no category specific recommendations identified.							
Recommendations	Design guidance should be developed in line with DfT's Cycle Infrastructure Design Local Transport Note 1/20[1] to ensure minimum widths to allow all bikes, including adapted bicycles, to utilise routes safely.							

Category: Engagement

The interventions included are:

- Increase My Journey engagement to promote sustainable and active travel (Boroughwide)

Table A-8: Assessment of effects associated with – 50% Active Travel in Towns – Engagement interventions

Vision Theme	Create Healthy and Safe Places							
Objective	50% active travel in towns							
Category	Engagement							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	+	L	D	L	I	P/T	LT	There are anticipated minor positive effects on biodiversity as promoting active travel is likely to reduce the number of private vehicles on roads, improving local air quality in Wokingham. This would also result in a reduction in noise disturbance to local habitats.
SA5: Green Infrastructure	0							
SA6: Air Quality	+	M	D	L	R/I	P/T	LT	There are anticipated positive effects on air quality as promoting active travel could result in a reduction in private vehicle use in towns therefore improving air quality in more heavily populated areas.
SA7: Greenhouse Gases	+	M	D	L	R/I	P/T	LT	There are anticipated positive effects on greenhouse gas emissions as promoting active travel could result in a reduction in private vehicle use in towns therefore, significantly reducing greenhouse gas emissions in towns around Wokingham
SA8: Climate Resilience	0							
SA9: Noise	+	M	D	L	R/I	P/T	LT	There are anticipated positive effects on noise levels as promoting active travel result in a reduction in private vehicle use in towns therefore, significantly reducing noise levels in towns Boroughwide.
SA10: Landscape and Townscape	+	L	D	L	I	P/T	LT	There are anticipated minor positive effects on landscape and townscape as promoting active travel could contribute to encouraging a modal shift away from private car use, reducing the number of vehicles on the Borough's roads, reducing noise and improving the landscape and townscape setting.
SA11: Historic Environment	+	L	I	L	R	P/T	LT	An increased awareness of active travel facilities are anticipated to have minor positive effect on the historic environment. This would be a result of the shift from private

								vehicle use to active travel options. This shift would improve air quality reducing degradation of heritage assets. Reduced vehicles in the area would also improve the assets setting.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	+	L	I	L	R	P	LT	Raised awareness of active travel facilities encourage social trips, as well as commuting trips, improving the opportunities for the local population to access active travel.
SA15: Health	++	M	D	L	R	P	LT	Raised awareness of active travel encourages more physical activities amongst the population. Active travel promotes the shift from private vehicle use, which not only improves general health of the population, but also improves air quality, which would in turn reduce respiratory health risks.
SA16: Economy and Employment	0							
Potential Cumulative / Synergistic Effects	There is potential for positive cumulative effects upon health, population, historic environment, landscape and townscape, biodiversity, air quality, greenhouse gases, and noise through an increased use of active travel within the Borough.							
Mitigation and Enhancement Measures	There are no category specific recommendations identified.							
Recommendations	Support should be provided to individuals without the means or knowledge to access digital services, to ensure they can maintain access to the information they require.							

OBJECTIVE: THRIVING VILLAGES AND RURAL CENTRES

Category: Rural Centres

The interventions included are:

- New EV charge points and secure cycle facilities at local centres (Boroughwide)
- Enhance pedestrian access and safety in local service centres (South Wokingham/ North Wokingham)
- Enable and support local events that support vitality of rural villages (South Wokingham/ North Wokingham)

Table A-9: Assessment of effects associated with – 50% Active Travel in Towns – Engagement interventions

Vision Theme	Thriving Villages & Rural Centres							
Objective	Create Healthy and Safe Places							
Category	Rural Centres							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	+	L	I	L	R	P/T	LT	There are anticipated minor positive effects on biodiversity as improved pedestrian access and cycle storage facilities are likely to reduce the number of private vehicles on roads, improving local air quality and reducing noise disturbance affecting local habitats and species.
SA5: Green Infrastructure	+	L	D	L	R	P/T	LT	There are anticipated minor positive effects on green infrastructure as improved EV charging facilities would encourage the transition to electric vehicles therefore reducing GHG emissions and improving air quality boroughwide.
SA6: Air Quality	+	L	D	L	R	P/T	LT	There are anticipated positive effects on air quality as improved EV charging facilities, cycle storage and pedestrian access all encourage the transition away from either combustion engines, or private vehicle use, resulting in a reduction in polluting road traffic emissions boroughwide.
SA7: Greenhouse Gases	+	L	D	L	R	P/T	LT	There are anticipated positive effects on air quality as improved EV charging facilities, cycle storage and pedestrian access all encourage the transition away from either combustion engines, or private vehicle use, resulting in a reduction in GHG emissions boroughwide.
SA8: Climate Resilience	0							

SA9: Noise	+	L	D	L	R	P/T	LT	There are anticipated positive effects on noise as improved EV charging facilities, cycle storage and pedestrian access all encourage the transition away from either combustion engines, or private vehicle use, resulting in a reduction in noise from vehicles Boroughwide.
SA10: Landscape and Townscape	+	L	D	L	R	P/T	LT	Positive effects have been identified for landscape and townscape as improved cycle storage and pedestrian access contributes to encouraging a modal shift away from private car use, reducing the number of vehicles on the Borough's roads, reducing noise and improving the landscape setting.
SA11: Historic Environment	+	L	I	L	R	P/T	LT	Active travel facilities are anticipated to have minor positive effect on the historic environment. This would be a result of the shift from private vehicle use to active travel options. This shift would improve air quality reducing degradation of heritage assets. Reduced vehicles in the area would also improve the assets setting.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	+	L	I	L	R	P	LT	Improved cycle storage and pedestrian access encourage social trips, as well as commuting trips, improving the general health of the population. The interventions also contribute to connecting rural communities for those without access to private vehicles.
SA15: Health	++	M	D	L	R	P	LT	Improved cycle storage and pedestrian access encourage more physical activities amongst the population. Pedestrian access would also encourage the transition from private vehicle use; improvements in air quality would result from reduced vehicle use, which would in turn reduce respiratory health risks.
SA16: Economy and Employment	+	L	D	L	R	P	LT	Improving pedestrian access is anticipated to allow cross-community employment for people without access to private vehicles. Enabling and supporting local events that support vitality of rural villages would also have a positive effect on local economy and employment through encouraging visitors and investment in rural communities.
Potential Cumulative / Synergistic Effects	There is potential for positive cumulative effects upon economy, health, population, historic environment, landscape and townscape, green infrastructure, biodiversity, air quality, greenhouse gases, and noise through an increased use of active travel and EV usage within the Borough.							
Mitigation and Enhancement Measures	There are no category specific recommendations identified.							
Recommendations	It is recommended that pedestrian routes and EV charging facilities are made accessible. Footways should be designed in line with DfT's Cycle Infrastructure Design Local Transport Note 1/20[1] to ensure minimum widths to utilise routes safely.							

Category: Active Travel

The interventions included are:

- Continued delivery of the network of Greenways (Boroughwide)
- Identify local priorities for quiet rural roads/green lanes to improve waking, cycling and horse riding (Boroughwide)
- Update of active travel route web based mapping (Boroughwide)
- Improved walking and cycling routes within Twyford and between Twyford and Wargrave (North Wokingham)

Table A-10: Assessment of effects associated with – 50% Active Travel in Towns – Engagement interventions

Vision Theme	Thriving Villages & Rural Centres							
Objective	Create Healthy and Safe Places							
Category	Active Travel							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	+/-	M	D	L	R	P/T	LT	There are anticipated minor positive effects on biodiversity as improved cycle and active travel facilities are likely to reduce the number of private vehicles on roads, improving local air quality in north and south Wokingham. This would also result in a reduction in noise disturbance to local habitats. Greenways could also protect sensitive or priority habitats. However, there is the potential for land take as a result of the expansion of Greenways and the improvement of walking and cycling routes, resulting in loss of habitats.
SA5: Green Infrastructure	+/-	M	D	L	R	P/T	LT	There are anticipated moderate positive effects on green infrastructure resulting from continued delivery of the network of Greenways. However, improvement of cycleways and footpaths may result in vegetation removal or habitat degradation if enhancements involve land take.
SA6: Air Quality	+	L	D	L	R	P/T	LT	Minor positive effect is anticipated to local air quality as active travel facilities are likely to reduce the number of private vehicles on the roads. Minor improvement to Twyford crossroads AQMA is also anticipated as a result of improved cycle routes and footpaths in North Wokingham.
SA7: Greenhouse Gases	+	L	D	L	R	P/T	LT	Minor positive effect is anticipated as more active travel options would likely result in less private vehicle usage, reducing greenhouse gasses produced in north and south Wokingham.
SA8: Climate Resilience	0							

SA9: Noise	+	L	D	L	R	P/T	LT	Minor positive effect is anticipated as a result of improved active travel facilities. The shift from private vehicle usage could result in improved noise levels within various NIAs between Twyford and Wargrave.
SA10: Landscape and Townscape	+	L	I	L	R	P/T	LT	Positive effects have been identified for landscape and townscape as improved cycle and active travel facilities contributes to encouraging a modal shift away from private car use, reducing the number of vehicles on the Borough's roads, reducing noise and improving the landscape setting.
SA11: Historic Environment	+	L	I	L	R	P/T	LT	Active travel facilities are anticipated to have minor positive effect on the historic environment. This would be a result of the shift from private vehicle use to active travel options. This shift would improve air quality reducing degradation of heritage assets. reduced vehicles in the area would also improve the assets setting.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	+	L	I	L	R	P	LT	Improved active travel facilities encourage social trips, as well as commuting trips, improving the general health of the population. The interventions also contribute to connecting rural communities for those without access to private vehicles.
SA15: Health	++	M	D	L	R	P	LT	Improved active travel facilities encourage more physical activities amongst the population. Active travel facilities would also encourage the transition from private vehicle use; improvements in air quality would result from reduced vehicle use, which would in turn reduce respiratory health risks.
SA16: Economy and Employment	+	M	D	L	R	P	LT	The development of routes would create better links between communities for people who don't have access to private vehicle use. Improving the connectivity between communities provides improved access to employment opportunities, services, and facilities.
Potential Cumulative / Synergistic Effects	There is potential for positive long term cumulative effects upon economy, health, population, historic environment, landscape and townscape, air quality, greenhouse gases, and noise through an increased use of active travel within the Borough. There are potential for negative cumulative effects on biodiversity and green infrastructure through the loss of these areas during land take.							
Mitigation and Enhancement Measures	SA14: Design should be inclusive to ensure accessibility to all social groups. SA4/SA5: Where possible the loss of biodiversity and green infrastructure should be resisted.							
Recommendations	It is recommended that active travel facilities are made accessible. Development should be in line with DfT's Cycle Infrastructure Design Local Transport Note 1/20[1] to ensure minimum widths to allow all bikes, including adapted bicycles, to utilise routes safely.							

Vision Theme: Reduce Environmental Impacts

OBJECTIVE: NET ZERO EMISSIONS

Category: Road Traffic

The interventions included are:

- Reduce the impact of traffic movements on Wokingham Borough Council Roads (Boroughwide)
- Promote car sharing and Liftshare for businesses (Boroughwide)

Table A-11: Assessment of effects associated with Net Zero Emissions - Road Traffic related interventions

Vision Theme	Reduce Environmental Impacts							
Objective	Net Zero Emissions							
Category	Road Traffic							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	-	M	D	L	I	P	ST/LT	There is potential for interventions under this category to result in construction works. Construction is likely to utilise new materials and result in the production of waste.
SA3: Soils	0							
SA4: Biodiversity	+/-	M	D/I	L	R/I	P	LT	There are anticipated minor positive effects on biodiversity as the reduction in the impact of traffic movements and encouraging lift sharing, is likely to contribute to reduced traffic noise and air quality impacts, minimising disturbance and degradation on local habitats and species. This is particularly likely to affect small mammals living in hedgerow and habitats bordering heavily used routes. However, there are potential for negative effects arising from construction works, which could result in the disturbance of habitats and species in local habitats.
SA5: Green Infrastructure	0							
SA6: Air Quality	+	M	D/I	L/R	R	P	MT/LT	Minor positive effects are anticipated as reducing the impact of traffic movements and encouraging lift sharing is likely to reduce the number of vehicles on roads, improving air quality. This is particularly likely to occur within heavily congested areas of the Borough where there are high levels of traffic and poor air quality. There is potential that this may also improve air quality within AQMAs, however as the details of interventions are not currently known, this cannot currently be quantified.
SA7: Greenhouse Gases	+	M	D	R	R	P	LT	Minor positive effects are anticipated as a reduction in vehicle numbers through lift sharing contributes to reducing GHGs attributed to private vehicles. Additionally,

Vision Theme	Reduce Environmental Impacts							
Objective	Net Zero Emissions							
Category	Road Traffic							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
								encouraging lift contributes to reducing congestion, minimising vehicle idling time and additional emissions.
SA8: Climate Resilience	0							
SA9: Noise	+	L	D	L	R	P	LT	Encouraging residents to car share and reducing the impact of traffic movements is likely to result in improvements to noise levels on the Borough's roads through a reduction in vehicle numbers. However, this is not likely to result in a high level of noise reduction, particularly on heavily used routes.
SA10: Landscape and Townscape	+	L	I	L	R	P	LT	Reducing the impact of vehicles, and reducing the number of vehicles through lift sharing, is likely to result in indirect positive effects upon the landscape of the Borough due to a reduction in noise pollution and congestion, improving landscape and townscape setting.
SA11: Historic Environment	+	L	I	L	I	P	LT	Poor air quality contributes to the increased degradation of heritage assets. Indirectly, positive effects are anticipated for the historic environment through improvements to air quality. This is particularly likely to occur for heritage assets located close to heavily used roads within the Borough such as listed buildings. Additionally, reduction in car numbers is likely to positively affect the setting of these heritage assets.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	++	M	D	L	R	P	LT	Encouraging car share between residents could result in minor positive effects upon population, as this encourages social cohesion and social interactions between residents. Additionally, this may provide access to private vehicles for those who do not own their own vehicles or are not able to drive. However, there is potential for barriers to some groups in accessing car share services (for example, the elderly, low-income, or neurodiverse groups). Additionally, there may be safety concerns for some social groups in using these services, for example, women.
SA15: Health	+	M	D/I	L	R	P	LT	Minor positive effects on health are identified as these interventions are anticipated to improve local air quality, and therefore the health of local populations, particularly those living close to heavily used routes. Poor air quality is a known factor exacerbating respiratory illnesses, therefore any improvements to air quality reduce this health risk. Additionally, encouraging car sharing and providing social interactions is likely to improve mental wellbeing amongst those sharing vehicles.

Vision Theme	Reduce Environmental Impacts							
Objective	Net Zero Emissions							
Category	Road Traffic							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA16: Economy and Employment	+	M	D	R	R	P	LT	Encouraging lift sharing provides increased access to employment opportunities, particularly for those who may not have access to their own private vehicle. This access to employment also extends further than the Borough's boundary, with the potential for improved access to employment areas in Reading. Additionally, encouraging lift sharing and reducing the impact of vehicles on the Borough's roads has the potential to improve journey times, through reductions in congestion.
Potential Cumulative / Synergistic Effects	There is potential for positive cumulative effects upon air quality, greenhouse gases, and noise through a reduction in vehicle numbers on the Borough's roads.							
Mitigation and Enhancement Measures	No mitigation or enhancement measures have been identified for this category.							
Recommendations	There are no category specific recommendations identified.							

Category: Digitalisation

The interventions included are:

- Improved digital accessibility for local residents and businesses (Boroughwide)
- Encourage online service delivery (Boroughwide)
- Support Development of Mobility as a service (MaaS) applications (Boroughwide)

Table A-12: Assessment of effects associated with Net Zero Emissions - Digitalisation related interventions

Vision Theme	Reduce Environmental Impacts							
Objective	Net Zero Emissions							
Category	Digitalisation							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	0							
SA5: Green Infrastructure	0							
SA6: Air Quality	+	L	I	R	L/R	P	LT	Minor positive effects are anticipated due to a reduction in traffic movements through encouraging the use of online services rather than in-person or postal exchanges. Development of Mobility as a Service applications should encourage increased use of public transport, reducing private traffic movements in the area. This is particularly likely to occur within heavily congested areas of the Borough where there are high levels of traffic and poor air quality. There is potential that this may also improve air quality within AQMAs, however as the details of interventions are not currently known, this cannot currently be quantified.
SA7: Greenhouse Gases	+	L	I	R	R	P	LT	Minor positive effects are anticipated due to a reduction in GHG emissions from private vehicle as a result of increased use of online services and encouraged use of public transport.
SA8: Climate Resilience	0							
SA9: Noise	+	L	I	L	R	P	LT	Minor positive effects are anticipated due to a reduction in noise pollution from private vehicle as a result of increased use of online services and encouraged use of public transport.
SA10: Landscape and Townscape	+	L	I	L	R	P	LT	Positive effects have been identified for landscape and townscape as encouraging use of public transport and a reduction in private car use will reduce local traffic noise and improving the landscape setting. There is potential for small scale infrastructure developments, such as masts or fibre optic cables, to improve digital connectivity. These have the potential to alter the visual landscape of the Borough.

Vision Theme	Reduce Environmental Impacts							
Objective	Net Zero Emissions							
Category	Digitalisation							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA11: Historic Environment	+	L	I	L	I	P	LT	Poor air quality contributes to the increased degradation of heritage assets. Indirectly, positive effects are anticipated for the historic environment through improvements to air quality due to a reduction of private vehicle use and encouraged use of public transport. There is potential for small scale infrastructure developments, such as masts or fibre optic cables, to improve digital connectivity. These have the potential to alter the setting of local heritage assets.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	+/-	M	I	R	R	P	LT	Improving digital accessibility will have positive effects on the population due to an increase in efficiency and accessibility of information. Improving digital accessibility also has the potential for negative impacts on the population for individuals without the means to access digital services, who may be left without the required information. Provisions need to be in place to ensure those without the means or knowledge to access digital services are supported.
SA15: Health	0							
SA16: Economy and Employment	+	L	I	R	R	P	LT	Minor positive effects are anticipated through the potential increase in employment required for the development of Mobility as a Service applications and the resulting encouraged use of public transport, which has the potential to increase local employment in this sector.
Potential Cumulative / Synergistic Effects	There is potential for positive cumulative effects upon air quality, greenhouse gases, and noise through a reduction in vehicle numbers on the Borough's roads.							
Mitigation and Enhancement Measures	SA14: Support should be provided to individuals without the means or knowledge to access digital services, to ensure they can maintain access to the information they require.							
Recommendations	There are no category specific recommendations identified.							
Assumptions	It is assumed that the improved digital accessibility and online service delivery will be for services which are often accessed by other means (post or in-person meetings). It is assumed that supporting the development of Mobility as a Service applications will result in the use of these applications in the borough. It is assumed that small scale infrastructure will be required to facilitate these interventions.							

Category: Zero Emission Vehicles

The interventions included are:

- Increase the provision of electric vehicle charging infrastructure (Boroughwide)
- Promote and encourage community electric vehicle charging (Boroughwide)
- Communication to publicise and promote benefits of electric vehicles (Boroughwide)
- Energy generation and electric charge points at Park and Ride sites (Boroughwide)

Table A-13: Assessment of effects associated with Net Zero Emissions - Zero Emission Vehicles interventions

Vision Theme	Reduce Environmental Impacts							
Objective	Net Zero Emissions							
Category	Zero Emission Vehicles							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	?							Uncertain effects have been identified for materials and waste as there is potential for the construction of new electric charging and energy generation infrastructure. This is likely to require additional materials, however this will be determined by individual scheme design.
SA3: Soils	+	M	D	L	I	P	LT	Minor positive effects have been identified as the use of park and ride sites contributes to making good use of existing land within the Borough, preserving soils.
SA4: Biodiversity	+/-	M	I	R	R	P	LT	There are anticipated minor positive effects on biodiversity through encouraging the use of electric vehicles, likely to reduce the number of petrol and diesel vehicles on the roads and therefore improving air quality and reducing noise emissions, minimising disturbance and degradation on local habitats and species. This is particularly likely to affect small mammals living in hedgerow and habitats bordering priority corridors. However, there is potential for small scale loss of habitats if land take is required to facilitate new charging infrastructure.
SA5: Green Infrastructure	0							
SA6: Air Quality	++	M	I	L/R	R	P	LT	Significant positive effects are anticipated through the provision of new renewable vehicle infrastructure encouraging the use of electric vehicles, likely to reduce the number of petrol and diesel vehicles on the roads and therefore improving air quality. Increased provision of electric charging points at Park and Ride sites may also encourage the use of public transport, reducing the number of private vehicle journeys and therefore improving air quality in the Borough.
SA7: Greenhouse Gases	+/-	M	D/I	R	R	P	LT	Positive effects are anticipated through the provision of new renewable vehicle infrastructure encouraging the use of electric vehicles likely to reduce the use of petrol and diesel in the Borough, reducing the production of GHGs. Renewable energy generation at Park and Ride sites will also reduce the production of GHGs

Vision Theme	Reduce Environmental Impacts							
Objective	Net Zero Emissions							
Category	Zero Emission Vehicles							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
								compared to non-renewable sources. However, there is potential for some embodied carbon associated with the construction of developments resulting from these interventions.
SA8: Climate Resilience	0							
SA9: Noise	+	L	I	R	R	P	LT	Minor positive effects are anticipated through encouraging the use of electric vehicles, which is likely to reduce the number of petrol and diesel vehicles on the roads, therefore reducing traffic noise. Increased provision of electric charging points at Park and Ride sites may also encourage the use of public transport, reducing the number of private vehicle journeys and therefore reducing traffic noise in the Borough.
SA10: Landscape and Townscape	+/-	L	I	L	R	P	LT	Encouraging the use of electric vehicles is likely to reduce the number of petrol and diesel vehicles on the roads, likely to result in indirect positive effects upon the landscape of the Borough due to a reduction in noise pollution. Increased provision of electric charging points at Park and Ride sites may also encourage the use of public transport, reducing the number of private vehicle journeys and therefore congestion, improving landscape and townscape setting. However, the scale of infrastructure required to support these interventions is not known. There is potential for adverse effects on the landscape and townscape as a result of alterations in views, and changes to landscape through development.
SA11: Historic Environment	+/-	L	I	L	I	P	LT	Poor air quality contributes to the increased degradation of heritage assets. Indirectly, positive effects are anticipated for the historic environment through improvements to air quality. Negative effects are also anticipated, especially within Conservation Areas, where the inclusion of electric charging infrastructure may impact the setting of local historic assets.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	+	M	I	R	R	P	LT	Minor positive effects have been identified as these interventions provide improved infrastructure, making it easier for residents with areas of on street parking to own an electric vehicle, and therefore reduce their personal GHG, air and noise emissions. However, this might not benefit all social groups as many, particularly low-income groups, cannot afford electric vehicles and will therefore be excluded from this provision.

Vision Theme	Reduce Environmental Impacts							
Objective	Net Zero Emissions							
Category	Zero Emission Vehicles							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA15: Health	+	M	D/I	L	R	P	LT	Minor positive effects on health are identified as encouraging the use of electric vehicles is anticipated to improve local air quality, and therefore the health of local populations, particularly those living close to heavily used routes. Poor air quality is a known factor exacerbating respiratory illnesses, therefore any improvements to air quality reduce this health risk.
SA16: Economy and Employment	0							
Potential Cumulative / Synergistic Effects	There is potential for positive cumulative effects upon air quality, greenhouse gases, and noise through an increased use of electric vehicles within the Borough. There is potential for negative cumulative effects on landscape and the historic environment as a result of the development of multiple schemes, altering the setting of the landscape and heritage assets.							
Mitigation and Enhancement Measures	SA2: Circular economy principles should be incorporated where possible to minimise waste. SA10/SA11: Sensitive design should be implemented within the development of infrastructure to minimise negative effects on the landscape and heritage assets and enhance settings where possible. Interventions should avoid conservation areas where possible.							
Recommendations	Developments could consider including discounts for low-income groups to improve their accessibility to services.							
Assumptions	It is assumed that energy generation at Park and Ride sites refers to renewable energy sources, e.g. solar. It is assumed that new infrastructure is required to support these interventions.							

OBJECTIVE: CLEAN AIR

Category: Access

The interventions included are:

- Twyford Cross Roads environmental improvements (North Wokingham)
- Wokingham Town Centre and speed limit changes to reduce pollution (Wokingham & Winnersh)

Table A-14: Assessment of effects associated with Clean Air - Access interventions

Vision Theme	Reduce Environmental Impacts							
Objective	Clean Air							
Category	Access							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	?							Uncertain effects have been identified for natural capital as a result of Twyford Cross Roads environmental improvements. It is assumed that these improvements would result in an enhancement on the quality of habitats and green and blue spaces, however this depends on the nature of the improvements to be proposed.
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	+	L	I	L	R	P	LT	There are anticipated minor positive effects on biodiversity through access and/or speed limit changes to reduce pollution, minimising disturbance and degradation on local habitats and species in treeline borders in Wokingham Town Centre. It is also assumed that the Twyford Cross Roads environmental improvements will result in minor positive effects on biodiversity, dependant on the nature of the improvements to be proposed.
SA5: Green Infrastructure	?							Uncertain effects have been identified for green infrastructure as a result of Twyford Cross Roads environmental improvements. It is assumed that these improvements would result in increased habitat connectivity, however this depends on the nature of the improvements to be proposed.
SA6: Air Quality	+	L	D	L/R	R	P	LT	Minor positive effects are anticipated through access and/or speed limit changes in Wokingham Town Centre which will reduce emissions and therefore improve air quality within Wokingham Town Centre AQMA. There is also the potential that Twyford Cross Roads environmental improvements will improve the air quality within Twyford Crossroads AQMA dependant on the nature of the improvements to be proposed.
SA7: Greenhouse Gases	+	L	D	L	R	P	LT	Minor positive effects are anticipated through access and/or speed limit changes in Wokingham Town Centre which will reduce GHG emissions. There is also the potential that Twyford Cross Roads environmental improvements will reduce GHG emissions within the local area, dependant on the nature of the improvements to be proposed.

Vision Theme	Reduce Environmental Impacts							
Objective	Clean Air							
Category	Access							
SA8: Climate Resilience	0							
SA9: Noise	0							
SA10: Landscape and Townscape	?							Uncertain effects have been identified for landscape and townscape as a result of Twyford Cross Roads environmental improvements. It is assumed that these improvements would result in an enhancement on the local landscape and townscape, however this depends on the nature of the improvements to be proposed.
SA11: Historic Environment	+	L	I	L	I	P	LT	Poor air quality contributes to the increased degradation of heritage assets. Indirectly, positive effects are anticipated for the historic environment through improvements to air quality from the access and/or speed limit changes within Wokingham Town Centre. This is particularly likely to occur for heritage assets within Wokingham Town Centre Conservation Area.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	0							
SA15: Health	+	L	D	L	R	P	LT	Minor positive effects are anticipated through access and/or speed limit changes in Wokingham Town Centre, which is anticipated to improve local air quality, and therefore the health of local populations. Poor air quality is a known factor exacerbating respiratory illnesses, therefore any improvements to air quality reduce this health risk.
SA16: Economy and Employment	0							
Potential Cumulative / Synergistic Effects	There is potential for positive cumulative effects upon air quality, greenhouse gases, and human health through access and/or speed limit changes reducing pollution in Wokingham Town Centre.							
Mitigation and Enhancement Measures	SA1/SA4: Natural capital and green infrastructure enhancement measures should be included within development to mitigate any loss of natural capital, biodiversity and green infrastructure. SA10: High quality design should be included within development to improve the public realm.							
Recommendations	There are no measure specific recommendations identified.							

Category: Freight

The interventions included are:

- Wokingham Town Centre Freight Strategy (Wokingham & Winnersh)
- Support Transition to Cargo Bikes (Boroughwide)

Table A-15: Assessment of effects associated with Clean Air - Freight interventions

Vision Theme	Reduce Environmental Impacts							
Objective	Clean Air							
Category	Freight							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	?							An increase in use of cargo bikes will have minor positive effects on biodiversity due to a reduction in traditional freight transportation methods therefore improving air quality and reducing noise emissions, minimising disturbance and degradation on local habitats and species. This is particularly likely to affect small mammals living in hedgerow and habitats bordering heavily used routes. It is assumed Wokingham Town Centre Freight Strategy will have positive effects on biodiversity, however, these interventions are currently unclear and therefore the effects cannot be established at this time.
SA5: Green Infrastructure	0							
SA6: Air Quality	+	L	D	R	R	P	LT	An increase in use of cargo bikes will likely lead to a reduction in traditional fossil fuel powered freight transportation methods, therefore improving air quality. There is potential that this may also improve air quality within AQMAs, however as the details of interventions are not currently known, this cannot currently be quantified. It is assumed Wokingham Town Centre Freight Strategy will reduce the negative environmental effects of freight, however, these interventions are currently unclear and therefore the contribution to air quality improvements cannot be established at this time.
SA7: Greenhouse Gases	+	L	D	R	R	P	LT	An increase in use of cargo bikes will likely lead to a reduction in traditional fossil fuel powered freight transportation methods, therefore reducing GHG emissions within the Borough. It is assumed Wokingham Town Centre Freight Strategy will reduce the negative environmental effects of freight, however, these interventions are currently unclear and therefore the contribution to GHG emissions cannot be established at this time.
SA8: Climate Resilience	0							

SA9: Noise	?							An increase in use of cargo bikes will likely lead to a reduction in traditional fossil fuel powered freight transportation methods, and therefore may reduce the number of vehicles on the road. There is potential for the Wokingham Town Centre Freight Strategy will reduce the negative noise effects of freight, however, these interventions are currently unclear and therefore the magnitude of effects cannot be established at this time.
SA10: Landscape and Townscape	+	L	I	L	R	P	LT	An increase in use of cargo bikes will likely lead to a reduction in traditional fossil fuel powered freight transportation methods, and therefore may reduce the number of vehicles on the road. Indirect positive effects upon the landscape of the Borough are anticipated due to a reduction in noise pollution and congestion, improving landscape and townscape setting. It is assumed Wokingham Town Centre Freight Strategy will have a positive effect on landscape and townscape, however, these interventions are currently unclear and therefore the magnitude of effects cannot be established at this time.
SA11: Historic Environment	+	L	I	L	I	P	LT	Poor air quality contributes to the increased degradation of heritage assets. An increase in use of cargo bikes will likely lead to a reduction in traditional fossil fuel powered freight transportation methods, and therefore an improvement in air quality. It is assumed Wokingham Town Centre Freight Strategy will similarly have a positive effect on air quality, however, these interventions are currently unclear and therefore the magnitude of effects cannot be established at this time.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	0							
SA15: Health	+	L	I	L	R	P	LT	Minor positive effects on health are identified as these interventions are anticipated to improve local air quality, and therefore the health of local populations, particularly those living close to heavily used routes. Poor air quality is a known factor exacerbating respiratory illnesses, therefore any improvements to air quality through use of cargo bikes instead of traditional fossil fuel powered freight transportation methods reduce this health risk. It is assumed Wokingham Town Centre Freight Strategy will have a positive effect on air quality and therefore human health, however, these interventions are currently unclear and therefore the magnitude of effects cannot be established at this time.
SA16: Economy and Employment	?							Uncertain effects on economy and employment have been identified as a transition to cargo bikes will provide new job opportunities, but also impact the traditional freight industry. The measures within the Wokingham Town Centre Freight Strategy are currently unclear and therefore the magnitude and nature of effects cannot be established at this time.
Potential Cumulative / Synergistic Effects	There are potential for positive cumulative effects upon air quality, greenhouse gases, and noise through a transition to cargo bikes and the resulting reduction in traditional fossil fuel powered freight transportation methods.							
Mitigation and Enhancement Measures	SA6: Measures should be taken to improve cycle infrastructure within the town centre to allow for cargo bike accessibility.							
Recommendations	The Wokingham Town Centre Freight Strategy should identify measures of reducing road freight and implement sustainable fuelled road freight within the town centre. It is recommended that active travel route provisions are made to segregate cargo bikes from vehicular traffic.							

Category: Public Transport

The interventions included are:

- Transition to zero emission buses across the Borough (Wokingham & Winnersh)
- Support decarbonisation of rail services in Wokingham (Boroughwide)

Table A-16: Assessment of effects associated with Clean Air – Public Transport interventions

Vision Theme	Reduce Environmental Impacts							
Objective	Clean Air							
Category	Public Transport							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	+	M	I	L	R	P	LT	There are anticipated minor positive effects on biodiversity through the decarbonisation of the rail services and the transition to zero emissions buses, improving local air quality in the Borough and minimising disturbance and degradation on local habitats and species. This is particularly likely to affect small mammals living in hedgerow and habitats bordering priority bus corridors and rail routes.
SA5: Green Infrastructure	0							
SA6: Air Quality	++	M	D	R	R	P	LT	Significant positive effects are anticipated through the decarbonisation of the rail services and the transition to zero emissions buses, improving air quality across the Borough, including within the AQMAs. This is particularly likely to occur within heavily congested areas of the Borough where there are high levels of traffic and poor air quality.
SA7: Greenhouse Gases	++	M	D	R	R	P	LT	Significant positive effects are anticipated through the decarbonisation of the rail services and the transition to zero emissions buses, reducing GHG emissions across the Borough.
SA8: Climate Resilience	+	M	I	R	R	P	LT	Decarbonisation of the rail services and the transition to zero emissions buses increases the climate resilience of the transport network by reducing dependence of fossil fuels.
SA9: Noise	+	L	D	L	R	P	LT	Zero emissions buses produce less noise than diesel buses, having a minor positive impact on traffic noise in the local area. This is particularly likely to occur within heavily congested areas of the Borough where there are high levels of traffic, and within the NIAs within the Borough.

Vision Theme	Reduce Environmental Impacts							
Objective	Clean Air							
Category	Public Transport							
SA10: Landscape and Townscape	0							
SA11: Historic Environment	+	L	I	L	I	P	LT	Poor air quality contributes to the increased degradation of heritage assets. Indirectly, positive effects are anticipated for the historic environment through improvements to air quality due to decarbonisation of the rail services and the transition to zero emissions buses.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	0							
SA15: Health	+	L	D	L	R	P	LT	Minor positive effects are anticipated through decarbonisation of the rail services and the transition to zero emissions buses which is anticipated to improve local air quality, and therefore the health of local populations. Poor air quality is a known factor exacerbating respiratory illnesses, therefore any improvements to air quality reduce this health risk.
SA16: Economy and Employment	0							
Potential Cumulative / Synergistic Effects	There is potential for positive cumulative effects upon air quality, greenhouse gases, and human health through decarbonisation of the rail services and the transition to zero emissions buses reducing pollution in the Borough.							
Mitigation and Enhancement Measures	No mitigation or enhancement measures have been identified for this category.							
Recommendations	It is recommended that active travel route provisions are made to segregate cargo bikes from vehicular traffic.							
Assumptions	It is assumed that interventions will support the decarbonisation of rail services in Wokingham through encouraging renewable fuelled powered services.							

OBJECTIVE: HIGH QUALITY SUSTAINABLE TRAVEL CORRIDORS

Category: Access for All

The interventions included are:

- Access Improvements at Tan House/Carnival Hub Bridge (Wokingham & Winnersh)
- Development of lower fares structure through Enhanced Bus Partnership (Boroughwide)
- Continue to fund community dial a ride services (Boroughwide)
- Data sharing with operators, partners and innovators to improve performance and customer information (Boroughwide)
- Implement a high-quality sustainable transport corridor on the A329 Reading, Winnersh, Wokingham and Bracknell (Edge of Reading, Wokingham and Winnersh)

Table A-17: Assessment of effects associated with –High Quality Sustainable Travel Corridors – Access for All interventions

Vision Theme	Reduce Environmental Impacts of Transport							
Objective	High Quality Sustainable Travel Corridors							
Category	Access for All							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	?							There is potential that the development of high quality sustainable travel corridors along the A329 may result in additional construction, and the use of additional resources. This is likely to be determined by the design of the corridor and is currently unknown.
SA3: Soils	?							Uncertain effects have been identified for soils as there is potential for construction from the high quality sustainable transport corridor on the A329. This has the potential to include additional land take, on a permanent or temporary basis, however this is likely to be determined by the design of the corridor which is currently unknown.
SA4: Biodiversity	+/-	M	I	L	R	P	LT	There are anticipated positive effects on biodiversity through encouraging the use of public transport through developing a lower fare structure throughout the Borough and implementing a sustainable transport corridor on the A329 Reading, Winnersh, Wokingham and Bracknell. Encouraged use of public transport will likely lead to a reduction in private vehicles on the roads, likely to contribute to reduced traffic noise and air quality impacts, minimising disturbance and degradation on local habitats and species. This is particularly likely to affect small mammals living in hedgerow and habitats bordering heavily used routes. However, there are potential negative effects associated with the construction and operation of the A329. During construction, there is potential for increased noise and dust spoiling and land take, disturbing habitats or resulting in habitat loss. During operation, noise may increase habitat disturbance.

SA5: Green Infrastructure	0							
SA6: Air Quality	++	M	D	L	R	P	LT	Significant positive effects have been identified for air quality as the interventions outlined contribute to encouraging a modal shift away from private transport throughout all areas of the Borough. This is likely to reduce the number of vehicles on the Borough's roads, especially A329 Reading, Winnersh, Wokingham and Bracknell as a result of the implementation of high-quality sustainable transport corridor, and therefore reduce congestion, improving air quality.
SA7: Greenhouse Gases	?							Uncertain effects have been identified for greenhouse gases as a result of these interventions. Whilst there will likely be a reduction in private vehicle related greenhouse gases in the Borough due to the development of a lower fares structure and encouraged use of public transport, there is potential that increased bus services may contribute to an increase in greenhouse gases. Whilst it is likely that the sustainable transport corridor will result in reduced GHG emissions, the details of this are uncertain and it is currently uncertain if green buses will be used within these interventions.
SA8: Climate Resilience	0							
SA9: Noise	+	M	D	L	R	P	LT	Minor positive effects on noise have been identified as the interventions outlined contribute to encouraging a modal shift away from private transport throughout all areas of the Borough. This is likely to reduce the number of vehicles on the Borough's roads, especially A329 Reading, Winnersh, Wokingham and Bracknell as a result of the implementation of high-quality sustainable transport corridor. This is likely to reduce traffic noise, especially within the NIAs located along the A3290.
SA10: Landscape and Townscape	+	L	I	L	R	P	LT	Minor positive effects are anticipated as these interventions contribute to encouraging a modal shift away from private car use, reducing traffic noise and congestion in the Borough, especially A329 Reading, Winnersh, Wokingham and Bracknell, improving landscape and townscape setting.
SA11: Historic Environment	+	L	I	L	I	P	LT	Minor positive effects are anticipated as these interventions contribute to encouraging a modal shift away from private car use, improving air quality, and therefore reducing degradation of heritage assets. Additionally, this modal shift is likely to reduce the number of vehicles on the Borough's roads, improving the setting of heritage assets. There is the potential for these interventions to positively impact the Conservation Areas within the Borough, however location of the sustainable transport corridor is unknown at this stage.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	++	M	D	R	R	P	LT	Significant positive effects on the population are anticipated as Community Dial a Ride services and lower fares structure increase the accessibility of public transport to enable increase mobility for those without the access to private vehicles throughout the Borough. The implementation of high-quality sustainable transport corridor increases the connectivity of the A329 Reading, Winnersh, Wokingham and Bracknell and allow greater access to public services.
SA15: Health	+	L	I	L	R	P	LT	Minor positive effects on health are identified as encouraging a modal shift away from private transport is anticipated to improve local air quality, and therefore the health of local populations, particularly those living close to heavily used routes. Poor air quality is a known factor exacerbating respiratory illnesses, therefore any improvements to air quality reduce this health risk. Additionally, there may be

								improvements to physical activity through the development of sustainable travel corridors.
SA16: Economy and Employment	++	M	D	R	R	P	LT	Significant positive effects on economy and employment are anticipated as these interventions increase the connectivity of communities to employment opportunities. Improving bus journey times also contributes to positive effects.
Potential Cumulative / Synergistic Effects	There is potential for positive cumulative effects upon air quality, greenhouse gases, and noise through a reduction in vehicle numbers on the Borough's roads.							
Mitigation and Enhancement Measures	SA14/SA15: During construction, measures should be taken to maintain existing active travel connectivity on the A329. SA4/SA14/SA15: The mitigation hierarchy should be applied during design and construction to minimise the likelihood of negative effects. Circular economy principles should be included where possible in design to minimise waste. Where possible, developments should occur on brownfield land to minimise the loss of greenfield land.							
Recommendations	Green buses, using electric or biofuels should be utilised wherever possible to minimise increased greenhouse gases from transport. The development of the sustainable travel corridor should be developed in line with DfT's Cycle Infrastructure Design Local Transport Note 1/20[1] to ensure minimum widths to allow all bikes, including adapted bicycles, to utilise routes safely. Access improvements should be inclusive to all social groups, including disabled and elderly users. The lower fares structure should be developed in line with community affordability studies, and accessible for those on low incomes.							

[1] Department for Transport (2020) Cycle Infrastructure Design – Local Transport Note 1/20. [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/951074/cycle-infrastructure-design-ltn-1-20.pdf

Category: Public Transport

The interventions included are:

- Increased bus frequency and improved bus journey times along priority bus corridors on A327 (Edge of Reading)
- Increased bus frequency and improved bus journey times along priority bus corridors on A4/A321 (Edge or Reading)
- Increased bus frequency and improved bus journey times along A33 from Mere Oak Park and Ride south of M4 (Edge of Reading)
- Wokingham Town to Arborfield, half hourly bus service with aspiration to develop into 15 minutes (South of Wokingham)
- Half hourly bus frequency between Wokingham and Twyford (Edge of Reading / North Wokingham)

Table A-18: Assessment of effects associated with –High Quality Sustainable Travel Corridors – Public Transport interventions

Vision Theme	Reduce Emissions from Transport							
Objective	High Quality Sustainable Travel Corridors							
Category	Public Transport							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	+	M	I	L	R	P	LT	There are anticipated minor positive effects on biodiversity as the modal shift is likely to reduce the number of private vehicles on roads, improving local air quality in the Borough. Additionally, this is likely to result in reductions in traffic noise, minimising disturbance and degradation on local habitats and species. This is particularly likely to affect small mammals living in hedgerow and habitats bordering priority bus corridors.
SA5: Green Infrastructure	0							
SA6: Air Quality	++	M	D	L	R	P	LT	Significant positive effects have been identified for air quality as the interventions outlined contribute to encouraging a modal shift away from private transport throughout all areas of the Borough. This is likely to reduce the number of vehicles on the Borough's roads, and reduce congestion, improving air quality.
SA7: Greenhouse Gases	?							Uncertain effects have been identified for greenhouse gases as a result of these interventions. Whilst there will be a reduction in private vehicle related greenhouse gases in Wokingham due to a modal shift away from private vehicles, there is potential that increased bus services may contribute to an increase in greenhouse gases. It is currently uncertain if green buses will be used within these interventions.
SA8: Climate Resilience	0							

SA9: Noise	+/-	L	D	L	R	P	LT	Mixed positive and negative effects have been identified for noise as a result of these interventions. Interventions encourage a modal shift away from private car use, therefore reducing noise on heavily used routes in the Edge of Reading. However, increasing bus services within South Wokingham may result in increased noise levels as this area currently experiences low levels of road noise.
SA10: Landscape and Townscape	+/-	L	I	L	R	P	LT	Positive effects have been identified for landscape and townscape as increasing bus services contributes to encouraging a modal shift away from private car use, reducing the number of vehicles on the Borough's roads, reducing noise and improving the landscape setting. However, in rural areas such as South Wokingham, increasing bus services and noise may have a negative effect on the local landscape setting.
SA11: Historic Environment	+/-	L	I	L	R	P	LT	Positive and negative effects have been identified for the historic environment. Increasing bus services contributes to encouraging a modal shift away from private car use, improving air quality, and therefore reducing degradation of heritage assets. Additionally, this modal shift is likely to reduce the number of vehicles on the Borough's roads, improving the setting of heritage assets. However, there is potential that increased bus services may result in increases in noise in close proximity to heritage assets as there are a number of assets located along the bus corridors within these interventions, resulting in potential negative effects on the setting of assets.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	++	M	D	R	R	P	LT	Significant positive effects have been identified as these interventions provide improved infrastructure for current and future populations. The interventions, particularly those located in North Wokingham and South Wokingham, contribute to connecting rural communities. South Wokingham has existing poor levels of public transport connectivity, therefore increasing services provides greater opportunities for this population. Bus services also provide largely inclusive access to all social groups.
SA15: Health	+	L	I	L	R	P	LT	Minor positive effects are identified as increasing bus services provides improved public transport infrastructure for current and future populations. Increasing bus services encourages a modal shift towards public transport, improving air quality. Additionally, encouraging users to take bus services is likely to increase physical activity linked to accessing bus services.
SA16: Economy and Employment	++	M	D	R	R	P	LT	Increasing the frequency of bus journeys throughout all areas of the Borough, including rural areas, results in significant positive effects on economy and employment. This increases the connectivity of communities to employment opportunities, particularly those in South Wokingham who have previously had poor connectivity. Improving bus journey times also contributes to positive effects.
Potential Cumulative / Synergistic Effects	There are potential positive cumulative effects anticipated for air quality, population and economy. The interventions encourage a modal shift away from private transport, improving air quality, and provide improved infrastructure, benefitting the population and improving connectivity.							
Mitigation and Enhancement Measures	SA7: Green buses, using electric or biofuels should be utilised wherever possible to minimise increased greenhouse gases from transport.							
Recommendations	interventions for South Wokingham should outline the route, or key roads utilised within these routes in order to establish effects on rural receptors.							

Category: Cycle Network

The interventions included are:

- High quality cycle facilities connecting to Woodlands Avenue – Church Road – University (Edge of Reading)
- Active travel facilities between Arborfield and Wokingham Town Centre along the B3349 Barkham Road (Wokingham & Winnersh, Wokingham South)
- Active travel facilities between Finchampstead and Wokingham Town Centre (Wokingham & Winnersh, Wokingham South)
- High quality cycle facilities along Lower Earley Way (Edge of Reading)

Table A-19: Assessment of effects associated with –High Quality Sustainable Travel Corridors – Cycle Network interventions

Vision Theme	Reduce Emissions from Transport							
Objective	High Quality Sustainable Travel Corridors							
Category	Cycle Network							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	-	L	D	L	I	P	ST/LT	Minor negative effects have been identified as these interventions are likely to result in development of active travel routes. This is likely to require additional materials and may result in waste from existing routes.
SA3: Soils	-	L	D	L	I	P	ST/LT	Minor negative effects have been identified for soils as the development of active travel facilities is likely to require additional land take as current footpaths along these routes are narrow and not of high quality.
SA4: Biodiversity	+/-	L	I	L	R	P	LT	There are anticipated minor positive effects on biodiversity as improved cycle and active travel facilities are likely to reduce the number of private vehicles on roads, improving local air quality in the Edge of Reading, Wokingham & Winnersh, Wokingham South. Additionally, this is likely to result in reductions in traffic noise, minimising disturbance and degradation on local habitats and species. This is particularly likely to affect small mammals living in hedgerow and habitats bordering priority bus corridors. However, there is potential that construction may result in habitat disturbance through noise and air quality. Additionally, if land take occurs, this could result in loss of biodiversity from hedgerows and land located around existing infrastructure.
SA5: Green Infrastructure	0							
SA6: Air Quality	+	M	D	L	R	P	LT	Minor positive effects have been identified for air quality as the improved cycle and active travel facilities contribute to encouraging a modal shift away from private transport in the Edge of Reading, Wokingham & Winnersh, Wokingham South, improving air quality.
SA7: Greenhouse Gases	+	M	D	R	R	P	LT	Improved cycle and active travel facilities contribute to encouraging a modal shift away from private transport in the Edge of Reading, Wokingham & Winnersh, Wokingham South, reducing GHG emissions in this area. Additionally, encouraging

								cycling contributes to reducing congestion, minimising vehicle idling time and additional emissions.
SA8: Climate Resilience	0							
SA9: Noise	+	M	D	L	R	P	LT	Improved cycle and active travel facilities contribute to encouraging a modal shift away from private transport in the Edge of Reading, Wokingham & Winnersh, Wokingham South, reducing traffic noise in this area. The interventions may lead to a reduction in traffic noise within the NIAs along Finchampstead Road, however the details of the interventions in this location are uncertain.
SA10: Landscape and Townscape	+	L	I	L	R	P	LT	Positive effects have been identified for landscape and townscape as improved cycle and active travel facilities contributes to encouraging a modal shift away from private car use, reducing the number of vehicles on the Borough's roads, reducing noise and improving the landscape setting.
SA11: Historic Environment	+	L	I	L	I	P	LT	Minor positive effects are anticipated as these interventions contribute to encouraging a modal shift away from private car use, improving air quality, and therefore reducing degradation of heritage assets. Additionally, this modal shift is likely to reduce the number of vehicles on the roads in Edge of Reading, Wokingham & Winnersh, Wokingham South, improving the setting of heritage assets.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	+	L	I	L	R	P	LT	Improved cycle and active travel facilities encourage social cycling trips, as well as commuting trips. The interventions also contribute to connecting rural communities for those without access to private vehicles.
SA15: Health	++	M	D	L	R	P	LT	Improved cycle and active travel facilities has the potential to increase physical activity rates amongst the population. These interventions contribute to encouraging a modal shift away from private car use, anticipated to improve local air quality, and therefore the health of local populations, particularly those living close to heavily used routes. Poor air quality is a known factor exacerbating respiratory illnesses, therefore any improvements to air quality reduce this health risk.
SA16: Economy and Employment	+	L	I	L	R	P	LT	Minor positive effects on economy and employment are anticipated as these interventions increase the connectivity of communities without access to private vehicles to employment and leisure spending opportunities within the Borough.
Potential Cumulative / Synergistic Effects	There is potential for positive cumulative effects upon health, air quality, population, and employment as a result of the development of high quality active travel routes providing additional connectivity and encouraging a modal shift away from private vehicles, as well as physical activity rates. There are potential for negative cumulative effects on materials and waste, soils, and biodiversity as a result of active travel works.							
Mitigation and Enhancement Measures	SA2/SA3: Where possible, development of active travel routes should utilise existing brownfield land from current cycle ways. SA2: Where possible, circular economy principles should be utilised to avoid waste from upgraded active travel developments.							
Recommendations	It is recommended that cycle and active travel facilities are made accessible, including for the use of hand cycles. The development of active travel facilities should be developed in line with DfT's Cycle Infrastructure Design Local Transport Note 1/20[1] to ensure minimum widths to allow all bikes, including adapted bicycles, to utilise routes safely.							

Vision Theme: Grow the Economy

OBJECTIVE: PROTECT AND ENHANCE STRATEGIC CONNECTIVITY

Category: Strategic Network

The interventions included are:

- Maintain safe and efficient access to the M4 and A329 (M) (Boroughwide)
- Encourage and support National Highways to reduce noise and air pollution from the M4 (Boroughwide)

Table A-20: Assessment of effects associated with – Protect and Enhance Strategic Connectivity – Strategic Network interventions

Vision Theme	Grow the Economy							
Objective	Protect and Enhance Strategic Connectivity							
Category	Strategic Network							
SA Objective 181	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	?							Uncertain effects have been identified as there is potential for construction works associated with maintaining safe and efficient access to the M4 and A329(M). This has the potential to be resource intensive and produce waste.
SA3: Soils	?							Uncertain effects have been identified as there is potential for construction works associated with maintaining safe and efficient access to the M4 and A329(M). This has the potential to require land take.
SA4: Biodiversity	?							It is likely that improving air quality and reducing noise emissions will have a positive effect on biodiversity, through minimising disturbance and degradation on local habitats and species. However, it is currently uncertain if construction will be required, resulting in disturbance to habitats and species.
SA5: Green Infrastructure	0							
SA6: Air Quality	+	M	D	R	R	P	LT	It is likely that these interventions will reduce air pollution from the M4 and other key highways through the Borough, and therefore improve air quality in the Borough. This also has the potential to improve air quality within AQMAs, however the extent to which air quality will be improved is currently unclear as interventions are not known.
SA7: Greenhouse Gases	0							
SA8: Climate Resilience	0							
SA9: Noise	+	M	D	R	R	P	LT	It is likely that these interventions will reduce noise pollution from the M4 and other key highways within the Borough through the support of National Highways initiatives.

SA10: Landscape and Townscape	?							Uncertain effects have been identified as there is potential for construction works associated with maintaining safe and efficient access to the M4 and A329(M). Construction work has the potential to degrade the landscape setting.
SA11: Historic Environment	?							Uncertain effects have been identified as there is potential for construction works associated with maintaining safe and efficient access to the M4 and A329(M). Construction work has the potential to degrade the setting of local heritage assets.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	+	L	D	R	R	P	LT	Maintenance of access to M4 and A329 (M) will allow connectivity through the Borough and provides infrastructure maintenance for current and future populations.
SA15: Health	+	M	D	R	R	P	LT	Improving the safety of access to the M4 and A329 (M) is likely to reduce the number of accidents and those Killed Seriously Injured (KSI) on these routes, improving user safety. Additionally, improvements to air quality are likely to improve health for those living close to these routes.
SA16: Economy and Employment	+	L	D	R	R	P	LT	Maintenance of access to M4 and A329 (M) will allow maintenance of connectivity of communities to employment opportunities within the Borough.
Potential Cumulative / Synergistic Effects	There is potential for positive cumulative effects upon air quality and noise as a result of supporting improvements to the highway network. Subsequently, there are potential positive cumulative effects on health.							
Mitigation and Enhancement Measures	SA2/SA3: Where possible, development should utilise existing brownfield land. SA2: Where possible, circular economy principles should be utilised to avoid waste from upgraded active travel developments. SA10/SA11: Any construction works should outline mitigation measures to minimise effects on the landscape and heritage assets through a CEMP,							
Recommendations	Noise improvements and air quality improvements should be initially targeted to those areas with poor air quality and high noise levels, including AQMAs and NIAs.							

Category: Public Transport

The interventions included are:

- Improving walk/cycle access to and interchange facilities at stations in the Borough (North Wokingham)
- Increased capacity along the North Downs Line (Wokingham & Winnersh, Edge of Reading)
- Additional services between Reading – Wokingham and Bracknell and Reading to Waterloo Rail Line (Wokingham & Winnersh, Edge of Reading)

Table A-21: Assessment of effects associated with – Protect and Enhance Strategic Connectivity – Public Transport interventions

Vision Theme	Grow the Economy							
Objective	Protect and Enhance Strategic Connectivity							
Category	Public Transport							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	?							Uncertain effects have been identified for materials and waste as it is currently unclear if construction works will be required to increase the capacity of the North Downs Line and upgrade interchange facilities. It is assumed that increases in capacity will require construction works, therefore resulting in the potential for additional materials use and generation of waste.
SA3: Soils	?							Uncertain effects have been identified as it is currently unclear if construction works will be required to increase the capacity of the North Downs Line and upgrade interchange facilities. It is assumed that increases in capacity will require construction works, therefore resulting in the potential for land take.
SA4: Biodiversity	+/-	M	I	L	R	P	LT	There are anticipated minor positive effects on biodiversity as improvements to active travel and rail is likely to reduce the number of private vehicles on roads, improving local air quality in the Borough. Additionally, this is likely to result in reductions in traffic noise, minimising disturbance and degradation on local habitats and species. This is particularly likely to affect small mammals living in hedgerow and habitats bordering priority bus corridors. However, there are potential negative effects that may arise if construction works are required. Biodiversity may be lost or disturbed through land take, noise, or dust spoiling.
SA5: Green Infrastructure	0							
SA6: Air Quality	+	M	D	L	R	P	LT	Minor positive effects have been identified for air quality as the interventions outlined contribute to encouraging a modal shift away from private transport throughout North Wokingham, Wokingham & Winnersh, and Edge of Reading. This is likely to reduce the number of vehicles on the Borough's roads, and reduce congestion, improving air quality within these areas.
SA7: Greenhouse Gases	+/-	M	D	R	R	P	LT	Mixed positive and negative effects have been identified for greenhouse gases as a result of these interventions. Whilst a reduction in private vehicle related greenhouse gases in North Wokingham, Wokingham & Winnersh, and Edge of

								Reading due to a modal shift away from private vehicles is expected, there is potential that increased rail services may contribute to an increase in greenhouse gases. It is currently uncertain if decarbonised rail services will be part of these interventions.
SA8: Climate Resilience	0							
SA9: Noise	+/-	L	D	L	R	P	LT	Mixed positive and negative effects have been identified for noise as a result of these interventions. Interventions encourage a modal shift away from private car use, therefore reducing noise on heavily used routes. However, increasing capacity on the North Downs Line and providing additional services between Reading - Wokingham and Bracknell and Reading to Waterloo rail line may result in increased noise levels locally.
SA10: Landscape and Townscape	+	L	I	L	R	P	LT	Minor positive effects are anticipated as these interventions contribute to encouraging a modal shift away from private car use, reducing traffic noise and congestion in North Wokingham, Wokingham & Winnersh, and Edge of Reading, improving landscape and townscape setting.
SA11: Historic Environment	+	L	I	L	I	P	LT	Poor air quality contributes to the increased degradation of heritage assets. Indirectly, positive effects are anticipated for the historic environment through improvements to air quality due to a reduction of private vehicle use and encouraged use of active travel and rail services.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	+	L	D	L	R	T	LT	Minor positive effects have been identified as these increase connectivity for those in North Wokingham, Wokingham & Winnersh, and Edge of Reading with Reading and the Waterloo Rail Line. These improvements increase the potential for the infrastructure to meet both current and future population growth.
SA15: Health	+	L	I	L	R	P	LT	Minor positive effects on health are identified as encouraging a modal shift away from private transport is anticipated to improve local air quality, and therefore the health of local populations, particularly those living close to heavily used routes in North Wokingham, Wokingham & Winnersh, and Edge of Reading. Poor air quality is a known factor exacerbating respiratory illnesses, therefore any improvements to air quality reduce this health risk.
SA16: Economy and Employment	+	L	D	R	R	P	LT	Increasing the capacity on the North Downs Line and providing additional services between Reading - Wokingham and Bracknell and Reading to Waterloo rail line results in minor positive effects on economy and employment. This increases the connectivity of communities to employment opportunities, however North Wokingham, Wokingham & Winnersh, and Edge of Reading already have good rail connectivity, hence why these effects are not significant.
Potential Cumulative / Synergistic Effects	There are potential positive cumulative effects anticipated for air quality as a result of encouraging a modal shift away from private car use. Additionally, positive cumulative effects are anticipated for population and economy through increased service connectivity. There are potential negative cumulative effects anticipated for biodiversity, greenhouse gases and noise as a result of increased services and construction work.							
Mitigation and Enhancement Measures	SA2: Where possible, circular economy principles should be utilised to avoid waste from developments.							
Recommendations	It is recommended that decarbonisation of the rail services is considered and that increased services should be provided by sustainable fuelled trains							

Category: Freight

The interventions included are:

- Forum to collaborate with neighbouring authorities and freight operators (Boroughwide)
- Develop and implement domestic and industrial freight management policies (Boroughwide)

Table A-22: Assessment of effects associated with – Protect and Enhance Strategic Connectivity – Freight interventions

Vision Theme	Grow the Economy							
Objective	Protect and Enhance Strategic Connectivity							
Category	Freight							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	0							
SA5: Green Infrastructure	0							
SA6: Air Quality	?							It is assumed that increased collaboration and freight management policies will impact the frequency and mode of freight transportation, but the effects of these interventions on air quality are uncertain until further details of these interventions are known.
SA7: Greenhouse Gases	?							It is assumed that increased collaboration and freight management policies will impact the frequency and mode of freight transportation, but the effects of these interventions on greenhouse gases are uncertain until further details of these interventions are known.
SA8: Climate Resilience	0							
SA9: Noise	?							It is assumed that increased collaboration and freight management policies will impact the frequency and mode of freight transportation, but the effects of these interventions on noise in the Borough are uncertain until further details of these interventions is known.
SA10: Landscape and Townscape	?							It is assumed that increased collaboration and freight management policies will impact the frequency and mode of freight transportation, but the effects of these interventions on landscape and townscape are uncertain until further details of these interventions is known.
SA11: Historic Environment	?							It is assumed that increased collaboration and freight management policies will impact the frequency and mode of freight transportation, but the effects of these interventions on historic environment are uncertain until further details of these interventions is known.

SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	0							
SA15: Health	?							It is assumed that increased collaboration and freight management policies will impact the frequency and mode of freight transportation, but the effects of these interventions on health are uncertain until further details of these interventions is known.
SA16: Economy and Employment	?							It is assumed that increased collaboration and freight management policies will impact the frequency and mode of freight transportation, but the effects of these interventions on the economy and employment in the Borough are uncertain until further details of these interventions is known.
Potential Cumulative / Synergistic Effects	No cumulative effects have been identified for this category.							
Mitigation and Enhancement Measures	SA6/SA7/SA9: Freight development should minimise road freight in favour of rail freight where possible. SA6/SA7: Sustainable fuelled freight vehicles should be included within development where possible. SA6/SA9/ SA10/SA11: Freight management should minimise increasing of freight vehicles on roads during peak times. SA8: Climate resilience measures should be included within the freight management policies, with consideration given to the adaptation of the freight network to climate change.							
Recommendations	There are no category specific recommendations identified.							
Assumptions	It is assumed that the proposed interventions relate to engagement, collaboration and policy rather than physical works.							

OBJECTIVE: A WELL-MAINTAINED NETWORK

Category: Operational Maintenance

The interventions included are:

- Increase use of lower carbon materials in construction and highway maintenance (Boroughwide)
- Test and trial measures that can support LTP objectives and reduce maintenance (Boroughwide)
- Align proposed improvement schemes with the maintenance program (Boroughwide)
- Work with operators to share data to improve maintenance activities in Wokingham (Boroughwide)

Table A-23: Assessment of effects associated with – A Well Maintained Network – Operational Maintenance interventions

Vision Theme	Grow the Economy							
Objective	A Well-Maintained Network							
Category	Operational Maintenance							
SA Objective 187	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	+	M	D	L	I	P	LT	Minor positive effects are anticipated due to the use of sustainable design measure and materials. The extent of increase of lower carbon materials is not yet known, hence why positive effects have not been assessed as significant.
SA3: Soils	0							
SA4: Biodiversity	0							
SA5: Green Infrastructure	0							
SA6: Air Quality	+	M	I	L	R	T	ST	Mixed positive and negative effects are anticipated as improving maintenance activities, and aligning improvement schemes with maintenance programmes has the potential to reduce the construction related air quality impacts.
SA7: Greenhouse Gases	+	M	I	L	R	T	ST	Positive effects are anticipated as improving maintenance activities, and aligning improvement schemes with maintenance programmes has the potential to reduce the construction related GHG emissions. The use of lower carbon materials within development will also help to reduce the amount of embodied carbon.
SA8: Climate Resilience	+	M	I	L	I	P	LT	Minor positive effects are anticipated due to the use of lower carbon materials, reducing the dependency on carbon and therefore increasing the resilience to climate change. The extent of increase of lower carbon materials is not yet known, hence why positive effects have not been assessed as significant.
SA9: Noise	?							Uncertain effects are anticipated as it is not known at this stage if improving maintenance activities and aligning improvement schemes with maintenance programmes will result in an increase or decrease in noise levels.

SA10: Landscape and Townscape	0							
SA11: Historic Environment	0							
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	?							Uncertain effects have been identified as it is currently unclear if the alignment of maintenance and improvement works will reduce disruption on the population of Wokingham Borough.
SA15: Health	0							
SA16: Economy and Employment	?							Uncertain effects are anticipated as it is not known at this stage if improving maintenance activities and aligning improvement schemes with maintenance programmes will result in an increase or decrease in employment within the Borough.
Potential Cumulative / Synergistic Effects	There are potential positive cumulative effects anticipated for greenhouse gases, air quality, and climate resilience as a result of streamlined improvements within the Borough and the reduction in embodied carbon within developments.							
Mitigation and Enhancement Measures	SA14: Information campaigns could be utilised to advertise to communities the sustainable materials utilised and provide improved synergies between works.							
Recommendations	There are no category specific recommendations identified.							

OBJECTIVE: SUSTAINABLE DEVELOPMENT

Category: Development Policy

The interventions included are:

- Update of Wokingham Borough Council Living Streets design guidance (Boroughwide)
- New development layouts designed to Living Streets Design principles (or any successor document) (Boroughwide)
- Promote “My Journey” for Travel Plans and monitoring of travel impacts for all new developments (Boroughwide)

Table A-24: Assessment of effects associated with – Sustainable Development – Development Policy interventions

Vision Theme	Grow the Economy							
Objective	Sustainable Development							
Category	Development Policy							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	+	L	D	L	R	P	LT	Minor positive effects are anticipated due to the implementation of Living Streets Design principles in new developments increasing the green space through parklets and well designed community spaces.
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	+	L	D/I	L	R	P	LT	Minor positive effects are anticipated due to the implementation of Living Streets Design principles in new developments increasing the green space through parklets, increasing available habitats and biodiversity in the Borough. Living Streets Design principles also encourage a modal shift away from vehicle use, and the implementation of lower speed limits, improving air quality and reducing noise emissions , minimising disturbance and degradation on local habitats and species. This is particularly likely to affect small mammals living in hedgerow and habitats bordering priority corridors.
SA5: Green Infrastructure	?							Uncertain effects have been identified for green infrastructure as it is uncertain if there are opportunities for the new design principles to include green infrastructure measures.
SA6: Air Quality	+	M	I	L	R	P	LT	Minor positive effects are anticipated due to the implementation of Living Streets Design principles in new developments encouraging a modal shift away from vehicle use, and the implementation of lower speed limits, improving air quality in the vicinity of new developments.
SA7: Greenhouse Gases	+	M	I	L	R	P	LT	Minor positive effects are anticipated due to the implementation of Living Streets Design principles in new developments encouraging a modal shift away from fossil fuel based vehicle use, and the implementation of lower speed limits. This leads to a reduction in GHG emissions in the vicinity of new developments.

SA8: Climate Resilience	0							
SA9: Noise	+	L	I	L	R	P	LT	Minor positive effects are anticipated due to the implementation of Living Streets Design principles in new developments encouraging a modal shift away from vehicle use and encouraging active travel, reducing the number of vehicles in the local area of the new developments and therefore reducing noise.
SA10: Landscape and Townscape	+	M	D/I	L	R	P	LT	Minor positive effects are anticipated due to the implementation of Living Streets Design principles in new developments, reducing street clutter and increasing the green space and improving the local townscape. The interventions also encourage a modal shift away from vehicle use, reducing the number of vehicles on the roads, likely to result in indirect positive effects upon the landscape setting of the Borough due to a reduction in noise pollution.
SA11: Historic Environment	+	L	I	L	R	P	LT	Poor air quality contributes to the increased degradation of heritage assets. Minor positive effects are anticipated as these interventions contribute to encouraging a modal shift away from private car use, improving air quality, and therefore reducing degradation of heritage assets local to the new developments.
SA12: Water Quality	?							Uncertain effects have been identified as it is uncertain if there are opportunities for the new design principles to include water quality guidance, improving water quality within the Borough.
SA13: Flooding	?							Uncertain effects have been identified as it is uncertain if there are opportunities for the new design principles to include flooding guidance, such as the inclusion of SuDS, reducing flood risk within the Borough.
SA14: Population	++	M	D	R	R	P	LT	Significant positive effects are anticipated as Living Streets Design principles include the removal of street clutter and pavement parking to allow inclusive access to all population groups. Encouraging active travel and improving active travel provision also increases social cohesion, for example encouraging multiple families to walk to school together.
SA15: Health	++	M	D	R	R	P	LT	Significant positive effects are anticipated as Living Streets Design principles encourage active travel and increases the accessibility of exercise for residents in new developments. These principles include the removal of street clutter and pavement parking to allow access to those with pushchairs or in wheelchairs to access local facilities, including healthcare facilities.
SA16: Economy and Employment	+	L	I	R	R	P	LT	Minor positive effects are anticipated as Living Streets Design principles include the removal of street clutter and pavement parking to allow inclusive access to local employment opportunities for all population groups.
Potential Cumulative / Synergistic Effects	There are potential positive cumulative effects upon landscape through design improvements in new developments. There are additional potential positive cumulative effects on population and health due to these design principles. There are also potential for positive cumulative effects on economy, historic environment, landscape, noise, greenhouse gases, air quality, natural capital, and biodiversity through the inclusion of new design principles.							
Mitigation and Enhancement Measures	No mitigation or enhancement measures have been identified for this category.							
Recommendations	It is recommended that the inclusion of green infrastructure is implemented within design principles, providing benefits across green infrastructure, water quality, and flood risk.							

Category: Sustainable Design

The interventions included are:

- Appropriate secure cycle parking, EV charging facilities and identify suitable mobility hub provision for all new development (Boroughwide)
- Provide high quality sustainable and active travel facilities in and to/from all strategic development locations (Boroughwide)

Table A-25: Assessment of effects associated with – Sustainable Development – Sustainable Design interventions

Vision Theme	Grow the Economy							
Objective	Sustainable Development							
Category	Sustainable Design							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	+	L	D	L	R	P	LT	Minor positive effects are anticipated due to the implementation of high quality sustainable design in new developments increasing the green space through well designed community spaces.
SA2: Materials and Waste	?							Uncertain effects have been identified as it is unclear if the measure for high quality sustainable and active travel facilities will result in additional development and associated use of resources and production of waste.
SA3: Soils	?							Uncertain effects have been identified as it is unclear if the measure for high quality sustainable and active travel facilities will require the development of existing routes and require land take.
SA4: Biodiversity	+	M	I	R	R	P	LT	Provision of sustainable and active travel facilities to all strategic development locations will likely reduce the number of private cars on the roads throughout the Borough. The inclusion of EV charging facilities in new developments will likely reduce the number of petrol or diesel vehicles on the roads. These interventions are therefore likely to contribute to reduced traffic noise and air quality impacts, minimising disturbance and degradation on local habitats and species. This is particularly likely to affect small mammals living in hedgerow and habitats bordering heavily used routes.
SA5: Green Infrastructure	?							Uncertain effects have been identified for green infrastructure as it is uncertain if sustainable design will include green infrastructure measures.
SA6: Air Quality	+	L	D	L	R	P	LT	Minor positive effects are anticipated as these interventions are likely to encourage a modal shift away from the use of private vehicles throughout the Borough, and encourage the use of electric vehicles where active travel isn't suitable. This is likely to reduce the number of vehicles on the Borough's roads, especially fossil fuel powered vehicles. This is anticipated to improve air quality across the Borough, including within the AQMAs.
SA7: Greenhouse Gases	++	M	D	R	R	P	LT	Significant positive effects are anticipated as these interventions are likely to encourage a modal shift away from the use of private vehicles throughout the Borough, and encourage the use of electric vehicles where active travel isn't

								suitable. This is likely to reduce the number of vehicles on the Borough's roads, especially fossil fuel powered vehicles, leading to a reduction in GHG emissions.
SA8: Climate Resilience	+	L	I	L	R	P	LT	The inclusion of EV charging facilities supports the modal shift away from use of fossil fuels and increases the climate resilience of the transport network by reducing dependence of fossil fuels.
SA9: Noise	+	M	D	L	R	P	LT	Minor positive effects on noise have been identified as the interventions outlined contribute to encouraging a modal shift away from private transport, especially the noisier fossil fuel dependant private transport throughout all areas of the Borough. This is likely to reduce traffic noise, especially within the NIAs located within the Borough.
SA10: Landscape and Townscape	+	L	I	L	R	P	LT	Minor positive effects are anticipated as these interventions contribute to encouraging a modal shift away from private car use, reducing traffic noise and congestion in the Borough, improving landscape and townscape setting.
SA11: Historic Environment	+	L	I	L	I	P	LT	Poor air quality contributes to the increased degradation of heritage assets. Indirectly, positive effects are anticipated for the historic environment through improvements to air quality due to a reduction of private vehicle use and encouraged use of active travel.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	++	M	I	R	R	P	LT	Significant positive effects are anticipated as the provision of EV charging facilities, active travel and sustainable travel facilities aims to ensure that transport modes and infrastructure will meet both current and future population growth. Encouraging active travel and improving active travel provision also increases social cohesion, for example encouraging multiple families to walk to school together. These interventions also increase connectivity of new developments to the rest of the Borough for those without access to private vehicles.
SA15: Health	++	M	D	R	R	P	LT	Significant positive effects are anticipated as these interventions encourage active travel and increases the accessibility of exercise for residents in new developments. These interventions also increase connectivity of new developments to the rest of the Borough, to improve access for those without access to private vehicles to those with pushchairs or in wheelchairs to local facilities, including healthcare facilities.
SA16: Economy and Employment	+	L	I	R	R	P	LT	Minor positive effects on economy and employment are anticipated as these interventions increase the connectivity of communities without access to private vehicles to employment and leisure spending opportunities within the Borough.
Potential Cumulative / Synergistic Effects	There are potential for positive cumulative effects upon air quality, greenhouse gases, population, health, and noise through an increased use of electric vehicles within the Borough.							
Mitigation and Enhancement Measures	No mitigation or enhancement measures have been identified for this category.							
Recommendations	It is recommended that cycle and active travel facilities are made accessible, including for the use of hand cycles. The development of the active travel facilities should be developed in line with DfT's Cycle Infrastructure Design Local Transport Note 1/20[1] to ensure minimum widths to allow all bikes, including adapted bicycles, to utilise routes safely.							

Category: Public Transport

The interventions included are:

- Provide high quality bus stop infrastructure to serve new developments (South Wokingham)
- Simplification and enhance of ‘Leopard’ bus routes serving new development (South Wokingham)

Table A-26: Assessment of effects associated with – Sustainable Development – Public Transport interventions

Vision Theme	Grow the Economy							
Objective	Sustainable Development							
Category	Public Transport							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	+	L	I	L	R	P	LT	There are anticipated minor positive effects on biodiversity as enhancing bus stop infrastructure to new developments in South Wokingham and enhancing bus routes is anticipated to reduce the number of private vehicles on roads, improving local air quality in the Borough. Additionally, this is likely to result in reductions in traffic noise, minimising disturbance and degradation on local habitats and species. This is particularly likely to affect small mammals living in hedgerow and habitats bordering priority bus corridors.
SA5: Green Infrastructure	0							
SA6: Air Quality	+	L	I	L	R	P	LT	Minor positive effects are anticipated as enhancing bus stop infrastructure to new developments in South Wokingham and enhancing bus routes is anticipated to reduce the number of private vehicles on roads from the new developments, resulting in improved air quality near the new developments in South Wokingham.
SA7: Greenhouse Gases	?							Uncertain effects have been identified for greenhouse gases as a result of these interventions. Whilst there is the potential for a reduction in private vehicle related greenhouse gas emissions in South Wokingham due to enhancement of the bus services to new developments, there is potential that increased bus services may contribute to an increase in greenhouse gases. It is currently uncertain if green buses will be used within these interventions.
SA8: Climate Resilience	0							
SA9: Noise	+	L	D	L	R	P	LT	Minor positive effects are anticipated as enhancing bus stop infrastructure to new developments in South Wokingham and enhancing bus routes is anticipated to reduce the number of private vehicles on roads from the new developments,

								resulting in reduced noise emissions near the new developments in South Wokingham.
SA10: Landscape and Townscape	+	L	I	L	R	P	LT	Minor positive effects are anticipated as these interventions contribute to encouraging a modal shift away from private car use, improving the setting of the Borough's landscapes and townscapes.
SA11: Historic Environment	+	L	I	L	R	P	LT	Minor positive effects are anticipated as these interventions contribute to encouraging a modal shift away from private car use, improving air quality, and therefore reducing degradation of heritage assets.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	+	L	I	L	R	P	LT	Minor positive effects are anticipated as these interventions contribute to encouraging a modal shift away from private car use and ensure that transport modes and infrastructure will meet both current and future population growth. These interventions also increase connectivity of new developments to the rest of the Borough for those without access to private vehicles.
SA15: Health	+	L	I	L	R	P	LT	Minor positive effects are anticipated as these interventions encourage active travel and increases the accessibility of exercise for residents in new developments. These interventions also increase connectivity of new developments to the rest of the Borough, to improve access for those without access to private vehicles to those with pushchairs or in wheelchairs to local facilities, including healthcare facilities.
SA16: Economy and Employment	+	L	I	L	R	P	LT	Minor positive effects on economy and employment are anticipated as these interventions increase the connectivity of communities without access to private vehicles to employment and leisure spending opportunities within the Borough.
Potential Cumulative / Synergistic Effects	There are potential for positive cumulative effects upon biodiversity, air quality, noise, population, health, economy, landscape and townscape, and the historic environment as a result of the modal shift away from private car use.							
Mitigation and Enhancement Measures	SA14: Design of bus stop infrastructure should be inclusive, and provide infrastructure for all social groups, including rest stops for the elderly.							
Recommendations	Bus stop infrastructure should include inclusive design to allow for users to stop and rest, and feel safe at bus stops.							

Category: Infrastructure Delivery

The interventions included are:

- Completion of Wokingham South Distributor Road and active travel package (Wokingham & Winnersh)
- Infrastructure required to support new strategic scale development (Edge of Reading)
- Complete the active travel, Greenways and Loddon Long Distance path in the Loddon Valley (Wokingham & Winnersh / Edge of Reading)

Table A-27: Assessment of effects associated with – Sustainable Development – Infrastructure Delivery interventions

Vision Theme	Grow the Economy							
Objective	Sustainable Development							
Category	Infrastructure delivery							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	-	M	D	L	I	P	LT	Minor negative effects are anticipated as there is potential for development to result in a loss of biodiversity and natural capital as a result of land take.
SA2: Materials and Waste	-	M	D	L	I	P	LT	The development of new infrastructure is likely to be resource intensive and has potential to result in waste during construction.
SA3: Soils	-	M	D	L	I	P	LT	The development of new infrastructure is likely to result in additional land take for development, resulting in negative effects on soils.
SA4: Biodiversity	+/-	M	D/I	L	R/I	P	LT	Mixed positive and negative effects have been identified. Improvement of active travel provision is anticipated to reduce the number of private vehicles on roads, improving local air quality and reducing in traffic noise, minimising disturbance and degradation on local habitats and species. Completion of the Wokingham South Distributor Road has the potential to reduce traffic on residential roads but increase traffic in other areas of Wokingham and Winnersh, having negative effects on biodiversity in these areas. Additionally, there is potential for development of infrastructure to result in land take and loss of biodiversity.
SA5: Green Infrastructure	?							There is potential for development to include green infrastructure interventions. However, as the design of development is currently unknown, this is uncertain at this stage.
SA6: Air Quality	+/-	M	D	L	R	P	ST/LT	Improvement of active travel provision is anticipated to encourage a modal shift away from private vehicles use on roads, improving local air quality, however completion of the Wokingham South Distributor Road has the potential to reduce traffic on residential roads but increase traffic in other areas of Wokingham and Winnersh, impacting air quality in these areas. There is potential for short-term poor air quality as a result of construction plant equipment and activities.
SA7: Greenhouse Gases	+	L	D	L	R	P	LT	Improvement of active travel provision is anticipated to encourage a modal shift away from private vehicles use on roads, reducing the GHG emissions within Wokingham and Winnersh, and Edge of Reading.

SA8: Climate Resilience	?							Uncertain effects have been identified. It is anticipated that new or improved infrastructure will be designed with climate adaptation and resilience in mind, however this is likely to be determined by individual design.
SA9: Noise	+/-	L	D	L	R	P	LT	Improvement of active travel provision is anticipated to encourage a modal shift away from private vehicles use on roads, reducing traffic noise. Completion of the Wokingham South Distributor Road has the potential to reduce traffic on residential roads but increase traffic in other areas of Wokingham and Winnersh, resulting in negative noise effects in these areas.
SA10: Landscape and Townscape	+/-	M	D/I	L	R	P	ST/LT	Completion of the Wokingham South Distributor Road has the potential to reduce traffic on residential roads but increase traffic in other areas of Wokingham and Winnersh, having positive and negative effects on landscape and townscape setting throughout Wokingham and Winnersh. Additionally, development is likely to result in noise and alterations to the visual landscape setting as a result of construction activities.
SA11: Historic Environment	+/-	L	I	L	I	P	LT	Poor air quality contributes to the increased degradation of heritage assets. Improvement of active travel provision is anticipated to encourage a modal shift away from private vehicles use on roads, improving local air quality and therefore reducing impacts on historic assets, however completion of the Wokingham South Distributor Road has the potential to reduce traffic on residential roads but increase traffic in other areas of Wokingham and Winnersh, having negative effects on heritage assets in these areas.
SA12: Water Quality	?							Uncertain effects have been identified. It is anticipated that new or improved infrastructure will be designed with water quality in mind, however this is likely to be determined by individual design.
SA13: Flooding	?							Uncertain effects have been identified. It is anticipated that new or improved infrastructure will be designed with flood risk in mind, however this is likely to be determined by individual design.
SA14: Population	++	M	I	R	R	P	LT	Significant positive effects are anticipated as completion of the Wokingham South Distributor Road, infrastructure for new developments and active travel provision aims to ensure that transport modes and infrastructure will meet both current and future population growth. Encouraging active travel and improving active travel provision also increases social cohesion, for example encouraging multiple families to walk to school together. These interventions also increase connectivity through Wokingham and Winnersh, and Edge of Reading whilst minimising the impact of the increase in traffic on nearby residential roads.
SA15: Health	+	L	I	L	R	P	LT	Minor positive effects are anticipated as these interventions encourage active travel and increases the accessibility of exercise for residents in through Wokingham and Winnersh, and Edge of Reading. These interventions also increase connectivity of through Wokingham and Winnersh, and Edge of Reading to the rest of the Borough, to improve access for those without access to private vehicles to those with pushchairs or in wheelchairs to local facilities, including healthcare facilities.
SA16: Economy and Employment	+	L	I	L	R	P	LT	Minor positive effects on economy and employment are anticipated as these interventions increase the connectivity of communities in Wokingham and Winnersh, and Edge of Reading to employment and leisure spending opportunities within the Borough.
Potential Cumulative / Synergistic Effects	In the long term, there is potential for positive cumulative effects on air quality and landscape through the development of schemes improving landscape settings and improving air quality. There are also potential positive effects on population, health, and economy and employment. There is potential for negative cumulative effects upon biodiversity and natural capital through the loss of habitats as a result of land take and other potential direct or indirect effects during construction.							

Mitigation and Enhancement Measures	SA2: Where possible, brownfield land should be used for development. Additionally, circular economies should be implemented within development to minimise waste.
Recommendations	It is recommended that cycle and active travel facilities are made accessible, including for the use of hand cycles. The development of infrastructure should be developed in line with DfT's Cycle Infrastructure Design Local Transport Note 1/20[1] to ensure minimum widths to allow all bikes, including adapted bicycles, to utilise routes safely. Design should consider the inclusion of green infrastructure, providing benefits across green infrastructure, water quality, and flood risk.

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Wokingham Borough Council

Local Transport Plan 4 Sustainability Appraisal

Appendix B – Scoping Report Statutory Consultee Consultation Comments

September 2023

Wokingham Borough Council

Local Transport Plan 4 Sustainability Appraisal

Appendix B – Scoping Report Statutory Consultee Consultation Comments

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Signature				
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Statutory Consultee Scoping Report Consultation Comments

Table B-1 - Consultation Responses on Wokingham LTP4 Scoping Report

Consultee	Comment	WSP Response	Where addressed?
Historic England	Broadly we support the policy context and baseline information presented, with the following minor caveats and clarifications.	Noted. No action required.	N/A
	In Table 4-1 - key messages from the policy review - the first and final bullet points on the historic environment would benefit from a little tweaking, without affecting the essence of the points being made. We suggest wording for consideration, noting the importance of heritage significance and potentially simplify the final bullet: "Conserve and enhance the significance of nationally and locally designated cultural and heritage assets as well as those which are undesignated." "Ensure that transport development within historic areas or near to historic buildings and places respects their character and context, and does not detract from the quality of the built environment."	WSP have amended the wording of Table 4-1 to reflect this comment.	Scoping Report (Appendix C to the SA Report)
	Table 5-4 focuses on biodiversity, flora and fauna issues and opportunities. We suggest recognition that the natural environment and historic environment often overlap and, as a result, there are benefits where appropriate of considering them together in a more holistic way. Possible wording of a sustainability issue: "The natural environment and the historic environment often overlap. Consideration should be given to the importance and role of heritage and character when considering landscape."	WSP have considered this comment and the enhancements the natural environment/biodiversity can bring to the historic environment when assessing the LTP4 and Action Plan.	N/A
	Possible wording of a sustainability opportunity, editing an existing bullet: "LTP4 presents opportunities to be strategic in the enhancement of biodiversity at the landscape scale, which has the potential to deliver heritage benefits too."	WSP have considered this comment and natural environment/biodiversity enhancements to heritage assets when assessing the LTP4 and Action Plan.	N/A
	On page 38, I am not sure how helpful it is to state exact numbers of listed buildings within key towns. Might this be edited to refer more generally to the places where there is a concentration of designated heritage assets, while also adding the qualitative aspect e.g. noting if there are focal points for highly designated assets (such as GI and GII* listed buildings, GI and GII* Registered Parks and Gardens and Scheduled Monuments). The current baseline should refer to Registered Parks and Gardens (RPGs). Also, note that RPGs are graded in the same way as Listed Buildings. This detail should be added to Figure A-4.	Page 38 has been amended to reflect the changes proposed. Reference to listed buildings has been amended, with inclusion of RPGs. RPGs are also included on Figure A-4.	Scoping Report (Appendix C to the SA Report)
	In Table 5-12, as WSP will be aware, the setting of components of the historic environment can include various aspects. This need not be made explicit in the scoping report, but we assume this will feature as appropriate in related work e.g. linked with noise, not solely visual impacts. Also, we suggest adding a bullet on enhancing access to heritage as a sustainability opportunity. While this may be covered by the opening bullet on enhancing the understanding and appreciation of assets, the example given suggests a different focus to that element. An additional bullet could simply be: "Improving access and accessibility to heritage assets."	WSP have included the additional bullet within Table 5-12. This has also been carried forward into the main SA Report and decision making criteria.	Scoping Report (Appendix C to the SA Report), SA Report - Section 4.3

	While the text is relatively clear on designated heritage assets, it is not as clear on non-designated heritage assets (NDHAs). We suggest adding a short paragraph on NDHAs to the current baseline text, including appropriate reference to any Local List(s) and the local Historic Environment Record.	WSP have investigated non-designated heritage assets as part of the baseline investigation into Wokingham's historic environment. All relevant historic assets have been included within the baseline.	Scoping Report (Appendix C to the SA Report)
	We broadly support the objectives put forward, including those relevant to heritage - in particular "To protect and enhance the Borough's historic environment, including heritage resources, historic buildings, historic landscapes and archaeological features."	Noted. No action required.	N/A
	We note that the Scoping Report does not include a draft decision-making criteria and infer the intention is to develop relevant criteria as part of the next steps undertaken. As a result, it is not yet clear that the approach to assessing potential heritage impacts is appropriate; but we look forward to further engagement as plans for the SA progress. Clearly, careful consideration will be needed on the criteria used to test draft proposals/policies against the objective.	WSP have developed a decision making criteria as part of the SA process and have referred to this throughout the assessment of the LTP4 and Action Plan.	SA Report - Section 4.3
	When assessing schemes, we emphasise the importance of an approach centred on the significance of heritage assets (rather than solely based on proximity to assets) and encourage early engagement with the Council's conservation team and archaeological advisers, and for that engagement to be continued throughout preparation of the SA.	WSP have considered the significance of heritage assets throughout their assessment of the LTP4.	SA Report, Appendix A, Appendix D
Natural England	Natural England agrees with the scope of the SEA and has no further comments to make on this SEA scoping report for the Local Transport Plan 4. However, we refer you to the advice in the attached annex which covers the issues and opportunities that should be considered when preparing a Neighbourhood Plan.	Noted. No action required.	N/A
Environment Agency	N/A	The Environment Agency were contacted for consultation response on the Wokingham Borough Council LTP4 Scoping Report but no response was received.	N/A

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Wokingham Borough Council

Local Transport Plan 4
Sustainability Appraisal

Appendix C - Scoping Report, SEA Policy Review and Baseline Information

May 2023

Wokingham Borough Council

Local Transport Plan 4 Sustainability Appraisal

Appendix C - Scoping Report, SEA Policy Review and Baseline Information

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Relevant Plans, Policies and Programmes

1 Introduction

1.1 Background

1.1.1. Wokingham Borough Council (WBC) are currently preparing their Fourth Local Transport Plan (LTP4) that will primarily focus on the period from 2024. This will replace the existing Wokingham Local Transport Plan 3 (LTP3)[1], which was adopted in 2011.

1.1.2. Wokingham Borough is located in Berkshire in the south of England, covering 179km^2. The Borough has higher car ownership than the national average. The transport network includes the M4, three A-roads and six railway stations which serve a total of five railway routes connecting Wokingham to other parts of the South East.

1.1.3. The road network in Wokingham Borough experiences high volumes of vehicular traffic. Car travel is the primary means of transport for many local journeys in the Borough. As of 2016, Wokingham Borough had limited electricity charging infrastructure (with 6 publicly accessible charging points), however in 2022 WBC received a grant for new charging infrastructure at 19 locations within the Borough, 12 of which will be located within residential areas[2].

1.1.4. The rail routes within the Borough provide services to Reading, London Waterloo, and Gatwick Airport, as well as stations throughout the Borough. The railways reach capacity during peak times, causing issues with congestion and unreliable journey times.

1.1.5. The Borough is rural in nature and the public transport network is dispersed, disconnected and unreliable limiting accessibility to areas and services. Bus services are particularly limited in the evenings and at weekends.

1.1.6. In the WBC area, in 2020, 18% of the total highway network was made up of Public Rights of Way (PRoW)[3][4]. The routes are well used throughout the Borough. Issues with the routes include limited information, accessibility for wheelchairs and pushchairs, seasonal restrictions, maintenance, and personal safety concerns.

[1] Wokingham Borough Council, Local Transport Plan 2011-2026 [online] Available at: https://www.wokingham.gov.uk/council-and-meetings/open-data/plans-policies-and-strategies/?assetdet91f252ff-550d-4cfa-a838-92ef2cb5f83c=210332&categoryesctl91f252ff-550d-4cfa-a838-92ef2cb5f83c=7749

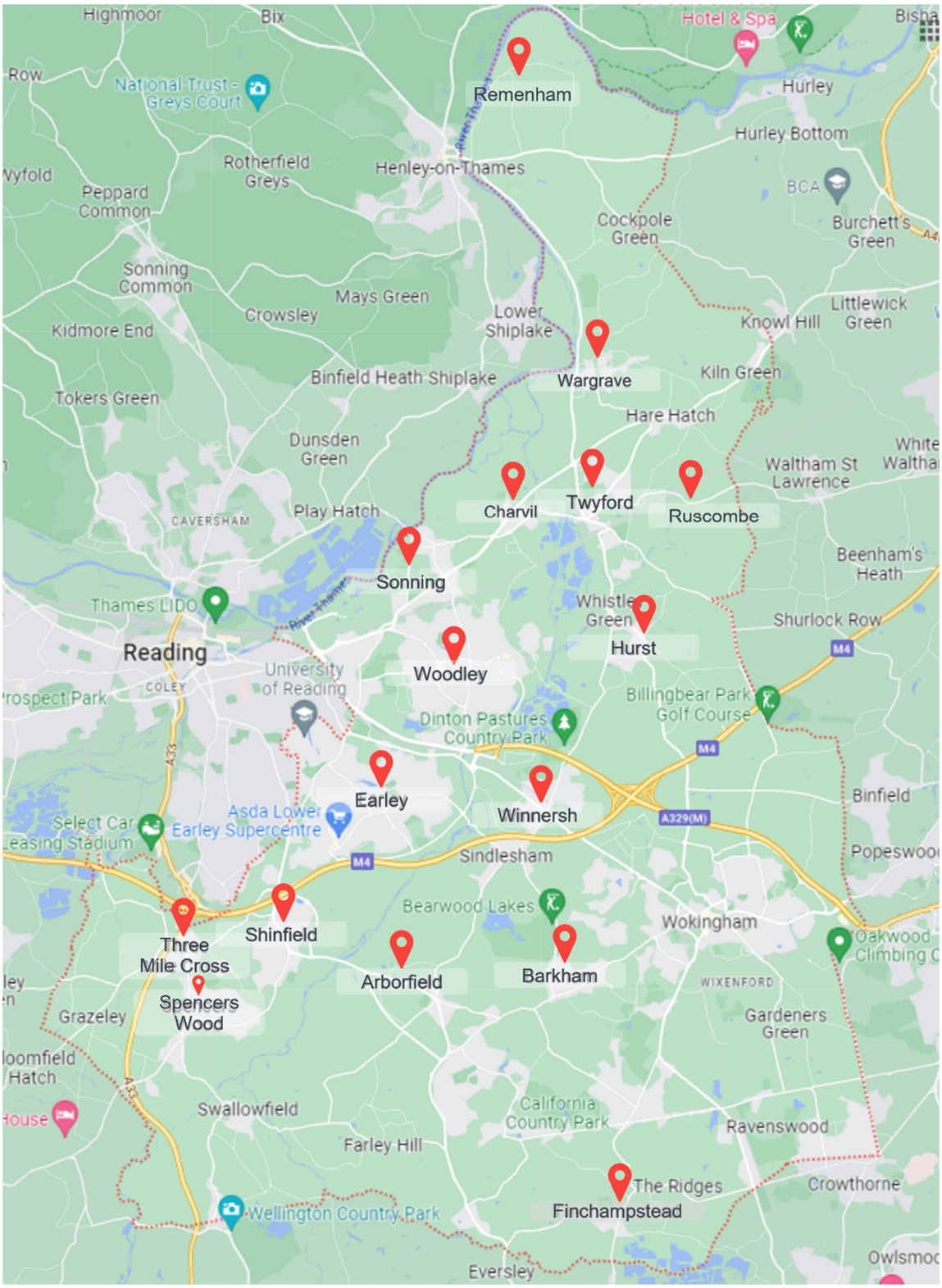
[2] Wokingham Borough Council (2022) Locations Confirmed for new Electric Vehicle Chargers. Available at: https://news.wokingham.gov.uk/news/locations-confirmed-new-electric-vehicle-chargers/

[3] Wokingham Borough Council (2020). 'Rights of Way Improvement Plan 2020 – 2030'. Available at: https://www.wokingham.gov.uk/countryside-parks-and-conservation/footpaths-and-bridleways/public-rights-of-way-improvement-plan/

[4] Wokingham Borough Council (2020). 'Strategic Roads and Highways Map.' Available at: https://wokingham.maps.arcgis.com/apps/MapJournal/index.html?appid=b0a1cb1052f74527b89ed96d9e2145f6

1.1.7. The LTP4 will apply to transport systems, assets and resources within WBC's administrative boundary, incorporating the towns and parishes of Arborfield, Barkham, Charvil, Earley, Finchampstead, Hurst, Sonning, Remenham, Ruscombe, Shinfield, Twyford, Wargrave, Three Mile Cross, Winnersh, Spencers Wood, and Woodley, shown in **Figure 1-1**.

Figure 1-1 - Towns and parishes of WBC



1.2 Local Transport Plans

1.2.1. The Government's 1998 White Paper on transport, 'A New Deal for Transport: Better for Everyone'[5], introduced the concept of Local Transport Plans (LTPs) to steer the development of national transport policies at the local level. The Transport Act 2000[6] (now amended by the Local Transport Act 2008[7]) then made it a statutory requirement for local transport authorities outside of London to produce LTPs having regard to Government guidance and policies on the environment.

1.2.2. The more recent Local Transport Act 2008[7] gave local authorities the freedom to decide for themselves how many years future LTPs should cover, including the option to set different time spans for the Strategy and implementation plan elements of the LTP.

1.2.3. The Local Transport Act 2008[7] makes particular reference to climate change mitigation and adaptation, but states that authorities should consider how their strategies and implementation plans relate to all relevant environmental issues, including air quality, noise, landscape and biodiversity.

1.2.4. The Department for Transport (DfT) are currently updating LTP guidance. This guidance will set out how local areas will deliver quantifiable carbon reductions in transport, considering the different requirements of different areas. New guidance is due to be published in 2023 along with additional standalone quantifiable carbon reductions (QCR) guidance. When used as a part of the LTP development process, the QCR guidance will help local authorities make long term, evidence-based plans for local transport by considering the carbon impacts at a strategic planning stage[8].

1.3 Purpose of this Report

1.3.1. WBC has commissioned WSP to undertake a Sustainability Appraisal (SA) that incorporates the requirement of a Strategic Environmental Assessment (SEA) of the LTP4. The SA will ensure that sustainability aspects are incorporated into the LTP4 and that the LTP4 aligns with the upcoming LTP guidance, including QCR guidance.

1.3.2. This Scoping Report sets out the first stage of the SA process, known as Scoping. The purpose of this stage is to set out proposals for conducting the SA, through:

[5] Department for Transport, A new deal for transport: better for everyone - White Paper, 1998 [online] available at:https://webarchive.nationalarchives.gov.uk/+/http://www.dft.gov.uk/about/strategy/whitepapers/previous/anewdealfortransportbetterfo5695
[6] Transport Act 2000 [online] available at: https://www.legislation.gov.uk/ukpga/2000/38/introduction
[7] Local Transport Act 2008 [online] available at: https://www.legislation.gov.uk/ukpga/2008/26/contents
[8] Department for Transport, Transport decarbonisation: local authority toolkit [online] available at: https://www.gov.uk/government/collections/transport-decarbonisation-local-authority-toolkit

- Introducing the Local Transport Plan and this Scoping Report (**Section 1**);
- Identifying likely options for delivery of the Local Transport Plan (**Section 2**);
- Presenting the methodology and framework for undertaking the SA (**Section 3**);
- Reviewing relevant legislation, plans, and programmes baseline (**Section 4**);
- Identifying key issues and opportunities for the LTP4, reflecting for example the increased pressure of development on the natural environment or the beneficial health effects of active travel (**Section 5**);
- Identifying Sustainability Objectives to feed into an overall framework for appraisal of options (**Section 6**); and
- Setting out next steps (**Section 7**).

1.3.3. The Scoping Report also provides baseline information on the environmental, social and economic characteristics of the area, including the likely evolution of the baseline position which would occur without the LTP4.

2 Transport Plan

2.1 Introduction

2.1.1. The current WBC LTP3 and associated Strategic Environmental Assessment (SEA) were approved in 2011.

2.1.2. WBC's LTP3 is applicable between 2011-2026 and requires a refresh to ensure that the overarching Strategy and policy statements remain consistent with the emerging Local Plan and to reflect a changed policy, funding and transport scheme delivery environment since 2011.

2.1.3. The updated LTP4 will require a SA to assess any significant effects and identify mitigation and monitoring for effects. The SEA completed for the LTP3 will be used as a basis for the LTP4 SEA update, where possible.

2.1.4. The emerging LTP4 will provide the key mechanism for expressing how transport interventions will help WBC will achieve its vision and Strategic Objectives.

2.1.5. The LTP4 will provide a strategy for the development of implementation plans; the first will be a short term action plan (expected 3 years), with further revisions of specific policies within the implementation plans during the life of the LTP4.

2.1.6. The LTP4 will comprise two elements, the Long Term 'Strategy' and the 'Implementation Plan'.

2.2 The Strategy

2.2.1. The LTP4 will take a place-based approach to addressing local problems and opportunities. Four different Places types have been identified:

- Wokingham Town;
- Woodley / Earley / Shinfield;
- Rural North; and
- Rural South Areas.

2.2.1. The LTP4 will describe how these individual places function and consider appropriate themes for these distinct areas.

2.2.2. Draft vision themes for the LTP4 have been formulated. These include:

- Connect people and places;
- Reduce emissions from transport;
- Enable sustainable and inclusive economic growth; and
- Create liveable, healthy and safe places.

2.2.3. As part of the development of the LTP4, a number of objectives and outcomes are being developed from evidence, principles consultation and national/regional targets.

2.3 The Implementation Plan

2.3.1. The Implementation Plan will set out how the Strategy will be implemented, identifying what interventions are required and options available which could achieve the WBC's objectives. It will set out issues and proposals for each of the identified place types within Wokingham Borough.

3 Approach to the Sustainability Appraisal

3.1 Introduction

3.1.1. The SEA/Sustainability Appraisal (SA) process is carried out during the preparation of local plans and spatial development strategies. Its role is to promote sustainable development by assessing the extent to which emerging plans will help to achieve relevant environmental, economic and social objectives.

3.1.2. SEA is used to describe the application of environmental assessment to plans and programmes in accordance with the "Environmental Assessment of Plans and Programmes Regulations" (SI 2004/1633, known as the SEA Regulations)[9].

3.1.3. An SEA is mandatory for plans and programmes which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste or water management, telecommunications, tourism, town and country planning or land use, and which set the framework for future development consent of projects listed in the Town and Country Planning (Environmental Impact Assessment) Regulations[10].

3.1.4. SEA only considers the environmental effects of a plan, whilst SA considers a plan's wider economic and social effects in addition to its potential environmental impacts. It is obligatory that SAs meet all of the requirements of the SEA Regulations.

3.2 Sustainability Appraisal

3.2.1. SA is an iterative process of gathering data and evidence, assessment of environmental, economic, and social effects, developing mitigation and monitoring measures, and making recommendations to refine plans or programmes in view of the predicted environmental, economic, and social effects.

3.2.2. The approach adopted for the SA of the LTP4 follows that set out in the Practical Guide to SEA[11] and the Planning Practice Guidance to SEA and SA[12]. It involves the development of an assessment framework comprising a series of sustainability objectives, assessment criteria and indicators. This framework is developed from an understanding of environmental

[9] SI 2004 No. 1633, The Environmental Assessment of Plans and Programmes Regulations 2004 [online] available at: http://www.legislation.gov.uk/uksi/2004/1633/pdfs/uksi_20041633_en.pdf
[10] The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 [online] Available at: http://www.legislation.gov.uk/uksi/2017/571/introduction/made
[11] Office of the Deputy Prime Minister (2005) A Practical Guide to the Strategic Environmental Assessment Directive. [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf
[12] Department for Communities and Local Government (2015) Strategic environmental assessment and sustainability appraisal. [online] Available at: http://planningguidance.communities.gov.uk/blog/guidance/strategic-environmental-assessment-and-sustainability-appraisal/

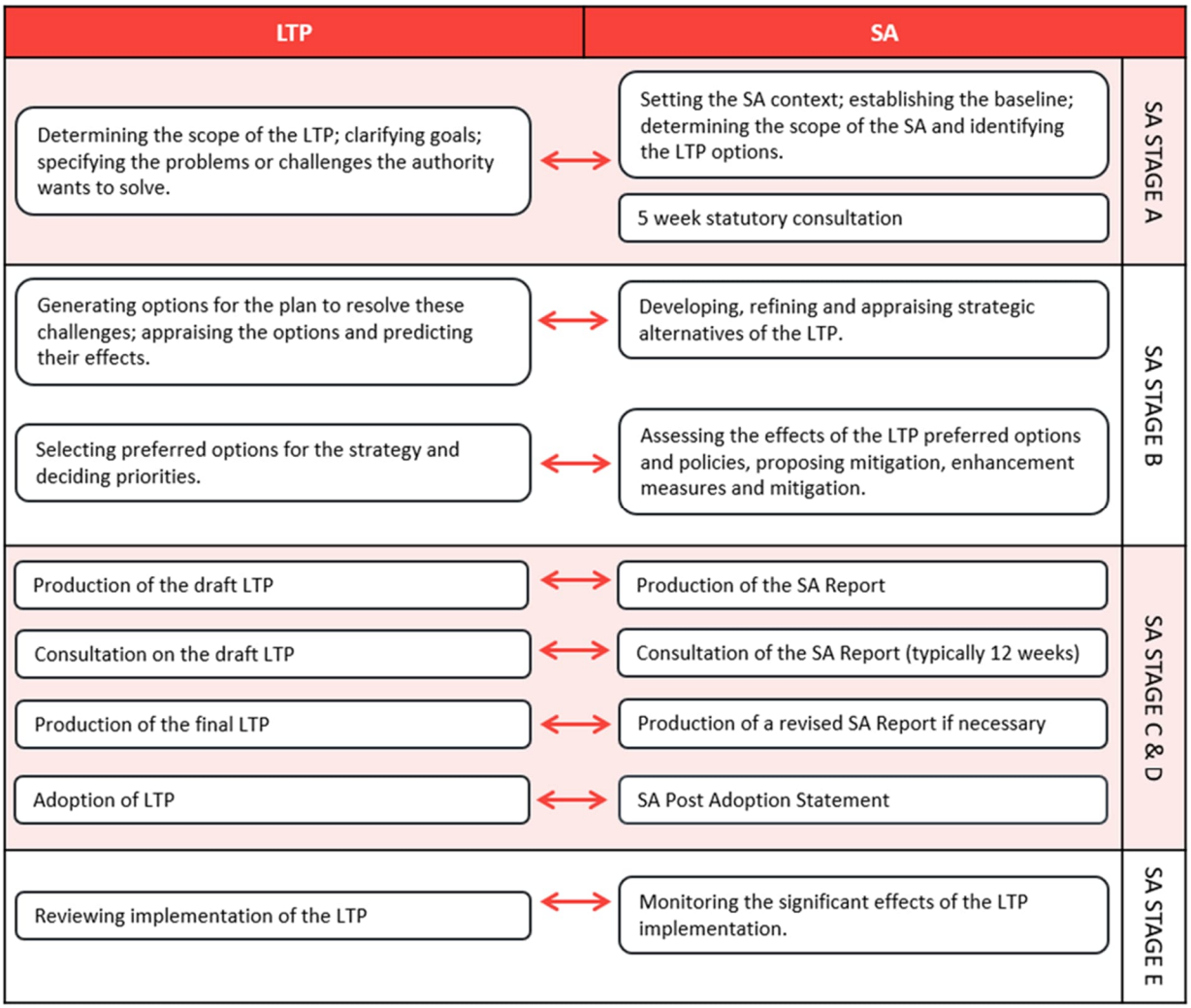
problems and opportunities. These are identified through a review of existing baseline information and a review of other plans, programmes and environmental protection objectives relevant to the plan area (i.e. Wokingham Borough) and subject matter (transport).

3.2.3. The key stages of the SEA process are:

- **Stage A**: Setting the context and objectives, establishing the baseline and deciding on scope (this stage);
- **Stage B**: Developing and refining strategic alternatives and assessing their effects;
- **Stage C**: Preparing the SA Report;
- **Stage D**: Consulting on the draft plan or programme and the Environmental Report; and
- **Stage E**: Monitoring the significant effects of implementing the plan or programme on the environment.

3.2.4. The stages of the SA process and their interactions with the LTP process are shown in **Figure 3-1**.

Figure 3-1 - SA and LTP Stages



3.3 Relationship With Other Processes

Habitats Regulations Assessment (HRA)

3.3.1. Under the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended) ('The Habitats Regulations')[13] a duty is placed upon 'Competent Authorities' to consider the potential for effects upon sites of European importance identified by the Regulations, prior to granting consent for projects or plans. Following the UK's exit from the EU, The Conservation of Habitats and Species Regulations 2017 were amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[14]. As advised by national governments in the UK, the Habitats Regulations remain in force, including the general provisions for the protection of European sites and the procedural requirements to undertake HRA to assess the implications of plans or projects for European sites. The changes made were only those necessary to ensure that they remain operable now that the UK has left the EU.

3.3.2. Regulation 63 of the Habitats Regulations defines the procedure for the assessment of the implications of plans or projects on European Sites. Under this Regulation, if a proposed development is unconnected with site management and is likely to significantly affect the designated site, the competent authority must undertake an 'Appropriate Assessment'. According to the Habitats Regulations the competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).

3.3.3. Guidance on the Habitats Directive (European Commission, 2000)[15] sets out the stepped approach which should be followed to enable Competent Authorities to discharge their duties under the Habitats Directive and provides further clarity on the interpretation of Articles 6 (3) and 6 (4). The process used is usually summarised in four distinct stages of assessment. As set out in Regulation 3 of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, where Natura 2000 sites are referenced in previously issued guidance this should be interpreted as relating to the national site network but does not otherwise affect guidance as it applied before EU exit day.

3.3.4. The stages of a HRA are:

[13] UK Government (2017) The Conservation of Habitats and Species Regulations 2017. Available at: https://www.legislation.gov.uk/uksi/2017/1012/contents/made
[14] UK Government (2019) The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Available at: https://www.legislation.gov.uk/ukdsi/2019/9780111176573
[15] European Commission (2000) Habitats Directive. Available at: https://ec.europa.eu/environment/nature/natura2000/index_en.htm

- Stage 1: Screening: the process which identifies whether effects upon a Natura 2000 site of a plan or project are possible, either alone or in combination with other plans or projects and considers whether these effects are likely to be significant.
- Stage 2: Appropriate Assessment: the detailed consideration of the effect on the integrity of the Natura 2000 site of the plan or project, either alone or in combination with other plans or projects, with respect to the site's conservation objectives and its structure and function.
- Stage 3: Assessment of alternative solutions: the process which examines alternative ways of achieving the objectives of the plan or project that avoid adverse effects on the integrity of the Natura 2000 site.
- Stage 4: Assessment where no alternative solutions exist and where adverse effects remain: an assessment of whether the development is necessary for Imperative Reasons of Overriding Public Importance (IROPI) and, if so, of the compensatory measures needed to maintain the overall coherence of the Natura 2000 network.

3.3.5. The first stage of the Habitats Regulations Assessment (screening) as well as subsequent stages where required, will be undertaken as the LTP4 develops. Pre-screening will be conducted by WSP to establish the scope, which will need to be agreed with Natural England. Information from the HRA relating to European sites and potential impacts on them can be used within the SA.

Equalities Impact Assessment

3.3.6. An Equalities Impact Assessment (EqIA) will be undertaken as part of preparing the LTP4. Under the Equalities Act 2010, public bodies have a duty to assess the impact of their policies on different population groups to ensure that discrimination does not take place and, where possible, to promote equality of opportunity.

3.3.7. The EqIA process focuses on assessing and recording the likely equalities effects as a result of a policy, project or plan. It seeks to ensure that the policy, project or plan does not discriminate or disadvantage people and enables consideration of how equality can be improved or promoted. The equality duty came into force in April 2011 and covers the following nine Personal Protected Characteristics:

- Age;
- Disability;
- Gender;
- Gender reassignment;
- Marriage and civil partnership;
- Pregnancy and maternity;
- Race;
- Religion or belief; and
- Sexual orientation.

Health Impact Assessment

3.3.8. HIA is a process to identify the likely health effects of plans, policies or developments and to implement measures to avoid negative impacts and promote opportunities to maximise the benefits. There is no formally adopted methodology for HIA although there is a body of practice and guidance at a policy level. Assessment of health can be undertaken as a discrete process within an HIA and can also be embedded within environmental assessments.

3.3.9. HIA is not a statutory requirement of the Local Transport Plan preparation process. However, Planning Practice Guidance states that 'Local planning authorities should ensure that health and wellbeing and health infrastructure are considered in local and neighbourhood plans and in planning decision making'.

3.3.10. HIAs can be done at any stage in the development process but are best done at the earliest stage possible.

3.4 Transport for the South East

3.4.1. Transport for the South East (TfSE) is a sub-national transport body for the South East of England. It brings together 16 local transport authorities, of which WBC is one, and a range of wider stakeholders. TfSE is dedicated to creating an integrated and sustainable transport system that makes the South East more productive and competitive, improves the quality of life for all residents giving access to opportunity whilst protecting and enhancing the unique natural and built environment. TfSE's vision is for the South East to be a leading global region for:

- net-zero carbon;
- sustainable economic growth where integrated transport, digital and energy networks have delivered a step change in connectivity; and
- environmental quality.

3.4.2. TfSE's Transport Strategy for the South East[16] provides a strategy for a more connected, productive and sustainable transport network in the south east. The Covid-19 pandemic saw significant behavioural changes, with more individuals working from home, increased use of online retail, and individuals seeking greater access to open space. To understand and consider the impact of the pandemic TfSE released a Covid-19 recovery scenarios report documenting rising inequality, technological and behavioural change, the importance of

[16] Transport Strategy for the South East June 2020. https://transportforthesoutheast.org.uk/app/uploads/2020/09/TfSE-transport-strategy.pdf

polycentricity and a new relationship with London[17]. The report's purpose was to help consider and adapt to the changes brought about as a result of the pandemic.

3.4.3. In 2023 TfSE released a Strategic Investment Plan[18] which sets out a vison for the region with priorities to decarbonise the transport system, level up left behind communities, and facilitate sustainable economic growth in the south east. It includes nearly 300 multi-modal transport interventions to be implemented between now and 2050.

3.4.4. Alongside other sub national transport bodies such as England Economic Heartland and Transport East, TfSE has also been working with local transport authorities across the three regions to provide support to deliver on commitments in the Government's Bus Back Better strategy. This has included looking at fares and ticketing, and integration of rural hubs as well as alternative fuels. TfSE is also developing an electric vehicle (EV) charging infrastructure strategy linking with the DfT National EV Infrastructure Strategy.

[17] Covid-19 recovery scenarios: Opportunities for a more prosperous and sustainable South East. January 2021 https://transportforthesoutheast.org.uk/app/uploads/2021/03/Covid-recovery-scenarios-key-insights.pdf [accessed March2023]

[18] A Strategic Investment Plan for the South East March 2023. https://transportforthesoutheast.org.uk/app/uploads/2023/03/SIP-1.pdf

4 Policy Context

4.1.1. To establish a clear scope for the SA, it is necessary to review and develop an understanding of the environmental, social and economic objectives contained within international, national and regional legislation, policies and plans that are of relevance to the LTP4.

4.1.2. The SEA Regulations require information on:

- *"An outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes."* (Schedule 2, Paragraph 1); and
- *"The environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation."* (Schedule 2, Paragraph 5).

4.1.3. The review process ensures that the SA complies with existing international, national, regional and local governance. The DfT's emerging guidance for LTPs, due to be released in 2023, will be considered as part of the review. The process entails identifying and reviewing those environmental protection objectives that are directly relevant to both the LTP4 and the SA.

4.1.4. The Scoping task of identifying related legislation, policies and plans cannot yield an exhaustive or definitive list. Therefore, the review has been focussed to ensure that only policies that are current and of direct relevance to the LTP4 and sustainability are included.

4.1.5. A detailed outline of the policy documents, objectives and targets reviewed is set out in **Table B-1** in **Appendix B**. **Table 4-1** outlines the key messages from the policy review. The review provides the context for the SA and helps to inform a SA Framework of objectives which will guide the subsequent appraisal process.

4.1.6. Due to the overlapping content of policies and plans, some of the SA topics in **Table 4-1** have been combined. Therefore, the SA topics in Chapter 5 of this Scoping Report are not exactly the same as those listed in **Table 4-1**.

Table 4-1 - Key Messages from Policy Review

SA Topic	Key Messages from Review
Natural Resources and Waste	There is a need to: ■ Facilitate the sustainable use of minerals, considering any mitigation measures proposed; ■ Maintain and enhance geodiversity through the management of sites, areas and wider landscapes; and ■ Encourage a circular economy.
Soils	There is a need to:

SA Topic	Key Messages from Review
	▪ Minimise impacts on soil quality, considering any mitigation measures proposed; ▪ Protect the Best and Most Versatile Land; and ▪ Consider land stability in respect of new development; and encourage a circular economy.
Biodiversity and Natural Capital	There is a need to: ▪ Identify opportunities for green infrastructure provision, recognising the multiple functions that green infrastructure provides to the area and linking into regional and national green infrastructure networks; ▪ Protect and enhance biodiversity, including designated sites, priority species, habitats and ecological networks; ▪ Minimise the impact on biodiversity and ensure net gain wherever possible; ▪ Maintain and enhance ecosystems and their services; and ▪ Improve the long-term sustainability of ecological and physical processes that underpin the functioning of ecosystems.
Air Quality	There is a need to: ▪ Ensure that air quality is maintained or enhanced and that emissions of air pollutants are kept to a minimum.
Climate Change	There is a need to: ▪ Take all practical steps to mitigate climate change, while adapting to reduce its impact. ▪ Avoid increased vulnerability to the range of impacts arising from climate change. ▪ Reduce emissions of greenhouse gases that may cause climate change; and ▪ Increase energy efficiency and move towards a low carbon economy.
Noise	▪ Development must be undertaken in accordance with statutory requirements for noise. ▪ There is a need to promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.
Landscape and Townscape	There is a need to: ▪ New developments should not have adverse impacts on the quality of the natural and built environment; ▪ Protect and enhance the quality and distinctiveness of natural landscapes in ways that allow them to continue to evolve; and ▪ Provide greater access to greenspace, to help reconnect people to nature.
Historic Environment	There is a need to: ▪ Conserve and enhance the significance of nationally and locally designated cultural and historical assets as well as those which are undesignated; ▪ Enhance the beauty of the natural scenery and improve its environmental value while being sensitive to considerations of its heritage; ▪ Encourage engagement with the historic environment; and

SA Topic	Key Messages from Review
	▪ Ensure that transport development within, adjacent, or in close proximity to, historic areas or historic buildings, respects their character and context, and does not detract from the quality of the built environment.
Water Environment	There is a need to: ▪ Protect and enhance surface and groundwater quality and ensure that water quality is improved or maintained where possible; ▪ Avoid development in areas prone to flooding; ▪ Water resources in the county are under increasing pressure from a rapidly growing population, climate change and environmental needs; ▪ Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest flood risk; and ▪ Any 'essential infrastructure' proposed to be located in Flood Zone 3a or 3b should be designed and constructed to remain operational and safe for users in times of flood.
Population and Equalities	There is a need to: ▪ Reduce inequalities in care (both physical and mental) across and within communities; ▪ Ensure fair and equal access to services and support irrespective of race, religion, sex, age, income, sexual orientation, disability, gender reassignment, marriage and civil partnership or pregnancy/maternity; ▪ Plan for an aging population with complex needs, which will require inputs from all parts of the health and social case system; ▪ Ensure that there are appropriate facilities for people with disabilities and the elderly; ▪ Transport is a key factor shaping experiences of poverty. The ability of households in poverty to find paid work often depends on access to affordable, regular and reliable transport; and ▪ The delivery of new developments should not be of detriment to the interests of existing communities.
Human Health	There is a need to: ▪ Promote healthy standards of living; ▪ Prioritise walking, cycling and use of public transport; and enhance accessibility to key community facilities, services and employment; ▪ Good placemaking is linked to a wider set of positive social, economic and environmental outcomes. ▪ Twenty-minute neighbourhoods can provide effective way to create healthy and active communities whilst improving equality, inclusion and help tackle climate change; ▪ Regular physical activity provides a range of physical and mental health and social benefit; ▪ The Covid-19 pandemic will have significant consequences for people's health outcomes in the short and longer term. There is a need to level-up in the wake of the pandemic to create a level playing field for both life and job opportunities; ▪ Transport plays a key role in improving access to health services particularly for vulnerable groups.
Economy	There is a need to:

SA Topic	Key Messages from Review
	■ Promote a low carbon economy; ■ Support the sustainable growth and expansion of businesses particularly within the science, research and innovation sectors; ■ Ensure that housing growth requirements are accommodated in the most sustainable way, whilst also delivering a mix of high-quality housing of varying size and tenure to meet local needs; ■ Deliver increased economic growth and decreased emissions; ■ The National Planning Policy Framework (NPPF) states that planning policies should recognise and address the specific locational requirements of different sectors. This includes making provision for clusters or networks of knowledge, and data-driven, high technology industries in suitably accessible locations; ■ Working with businesses and infrastructure owners is necessary to develop proposals that meet the needs of the freight and logistics sector; and ■ Continued investment in the transport infrastructure is an essential part of post-pandemic economic recovery.
Crime and Disorder	There is a need to: ■ Continue to improve safety by investing in the road network, both to prevent incidents from occurring and to reduce the severity of those that do; ■ Reduce crime and the fear of crime, as well as encourage reporting; and ■ Safety is an important consideration for road users owing to the significant impact of serious and fatal accidents.
Transport and Accessibility	There is a need to: ■ Improve sustainable transport modes (public and active); ■ Ensure transport access to all social groups, including those with disabilities and the elderly; ■ Rural populations and ■ Provide access to employment, leisure, retail and education facilities.

5 Baseline, Sustainability Issues and Opportunities

5.1 Introduction

5.1.1. This section sets out the sustainability policy context; baseline and any future trends regardless of the implementation of the LTP4. It identifies key issues for sustainability in relation to the LTP4. This information can then be used to develop an appraisal framework in Section 4.

5.1.2. The applicable sustainable policy context for each sub-section is included in **Appendix B**.

5.2 Natural Capital and Ecosystem Services

5.2.1. Natural capital is a term used to describe those elements of the natural environment that provide benefits for humans (also known as ecosystem services), including food, water, recreation and clean air and water. Some ecosystem services fall across a number of sustainability topics, for example, recreational and aesthetic value services could be considered under the Health and Biodiversity, Landscape and Townscape, and Water Environment topics, amongst others. Biodiversity (the variety of life on Earth) is a fundamental component of natural capital, and underpins the provision of ecosystem services, for example pollination, recreational, and water, soil, disease and pest regulation services.

5.2.2. A natural capital approach is therefore useful for understanding the inter-dependencies between nature, people, the economy and society, and ensuring that natural capital is considered as an integrated system. It provides a framework for incorporating the value of nature into decision-making and revealing the cost of its degradation. Degradation of natural capital (including biodiversity loss) has an adverse effect on the benefits that humanity receives from the natural environment such as flood risk reduction, food, water provision and energy production. As such, this represents an overarching topic to frame the rest of the SA.

Summary of Baseline and Future Trends

Current Baseline

5.2.3. The UK National Ecosystem Assessment (UK NEA) (2014) revealed that the loss, fragmentation and deterioration of natural habitat in the UK since the 1940s has caused a decline in the provision of many ecosystem services, and that this declining trend is containing. Though not the key cause, transport networks have nevertheless contributed to this decline; however, they also have the potential to improve ecosystem service delivery.

5.2.4. In 2011, the Government stated, through Commitment 32 of the Natural Environment White Paper, that it would “work with its transport agencies and key delivery partners to contribute to the creation of coherent and resilient ecological networks”. In response to this, Natural England published a report in 2014 investigating how land within or adjacent to transport

corridors (the 'soft estate') can be used or enhanced for green infrastructure that delivers biodiversity gain, ecological connectivity and ecosystem services[19].

5.2.5. A £3 million pilot project followed in 2015-2017, drawing together Natural England, National Highways, Network Rail, and Nature Improvement Area (NIA) partnerships in northern England[20]. The aim of the pilot was to ensure that transport corridors not only accommodate more wildlife (especially pollinators), but to benefit transport users and the wider public by making infrastructure more resilient to the growing impacts of climate change, such as increased flooding and winter storms.

5.2.6. Its findings and recommendations have helped influence the recent Varley review into Network Rail lineside vegetation management, the establishment of the Linear Infrastructure Network (LINet), and Natural England's work on developing an ongoing impact within National Highways and with the Office of Road and Rail (ORR), and a similar approach is desired for transport corridors across the country.

5.2.7. The Office for National Statistics (ONS) has produced national level natural capital accounts. These show that carbon sequestration by woodlands in England was valued at £2 billion in 2020. Additionally, air pollution removal in 2020 was valued at approximately £2.4 billion.

5.2.8. The value of recreation and tourism (based on the number of hours people spend outside in the natural environment) has also been estimated for the UK. In 2019, this was valued at £12.4 billion, with associated health benefits valued at £5.5 billion. This is an increase on previous years due to increased expenditure in urban, woodland and coastal habitats.

Future Trends

5.2.9. The declining trend in the provision of many ecosystem services reported in the UK NEA is expected to continue – in part due to the continuing deterioration, loss and fragmentation of habitats, as reported in the national 'State of Nature' report 2019[21].

5.2.10. Further development to address the needs of the SE's growing population – in combination with a changing climate – has the potential to further fragment and deteriorate the region's ecosystems, impacting on natural capital and its ability to provide ecosystem services.

[19] Davies, H., Frandsen, M. & Hockridge, B (2014). 'NEWP32 Transport green corridors: literature review, options appraisal and opportunity mapping'. Natural England Commissioned Reports, Number 168. Available at: http://publications.naturalengland.org.uk/publication/5752930789490688
[20] Natural England, Defra and Highways England (2014). 'Greener Transport Network to provide highways for Wildlife'. Available at: https://www.gov.uk/government/news/greener-transport-network-to-provide-highways-for-wildlife
[21] Royal Society for the Protection of Birds (2019). 'The State of Nature Reporting'. Available at: https://www.rspb.org.uk/our-work/state-of-nature-report/

5.2.11. An increase in the number of private vehicles on the roads and associated increases in noise pollution, air pollution, and contamination surface water run-off, could restrict the ability of existing roadside habitats (including trees) to reduce these impacts.

5.2.12. However, there is also an increasing trend amongst governments and businesses to be "Future Ready", which includes addressing issues surrounding biodiversity, resource use, and climate change.

Issues and Opportunities

5.2.13. The following issues and opportunities have been identified in **Table 5-1**.

Table 5-1 - Natural Capital and Ecosystem Services Issues and Opportunities

Sustainability Issues	Sustainability Opportunities
▪ New transport routes will need to be carefully planned so that they do not cause adverse effects on ecosystems with high (potential) ecosystem service provision. Given that ecosystem services are the benefits that nature provides to people, areas of high (potential) provision are often the green and blue spaces close to centres of population, as well as connecting habitats that link these with more remote designated habitats and landscapes. ▪ As transport corridors are typically linear, ensuring the connectivity of ecosystems is both an issue and an opportunity for the Transport Strategy. There is scope to focus on redevelopment of existing assets rather than build new, to focus development away from areas of high biodiversity and ecosystem service provision, and to enhance the quality of the transport 'soft estate' alongside existing and new transport corridors to improve habitat connectivity. ▪ Human health and quality of life can be improved by taking a natural capital approach to the Transport Strategy. For example, improving the quality of habitats (including tree planting, sowing wildflower mix rather than amenity grassland to improve biodiversity) alongside walking and cycling routes can help encourage more active lifestyles with benefits for people's physical and mental health and wellbeing. Views of vegetation from other modes of transport (e.g. along roads and railways) can also enhance mental wellbeing, for example by reducing stress levels. ▪ Enhancing the quality of transport 'soft estate' can also help improve the resilience of the transport network to future climate change, for example by reducing flood risk and providing shading and cooling benefits.	▪ Enhancing the quality of transport 'soft estate' can also help improve the resilience of the transport network to future climate change, for example by reducing flood risk and providing shading and cooling benefits. ▪ Human health and quality of life can be improved by taking a natural capital approach to the Transport Plan. ▪ Views of vegetation from other modes of transport (e.g. along roads and railways) can also enhance mental wellbeing, for example by reducing stress levels. ▪ There is scope to encourage the redevelopment of existing assets as well as build new, to focus development away from areas of high biodiversity and ecosystem service provision, and to enhance the quality of the transport 'soft estate' alongside existing and new transport corridors or to improve habitat connectivity.

5.3 Materials and Waste

Summary of Baseline and Future Trends

Current Baseline

Materials and Minerals

5.3.1. Construction and operation of new or improved transport infrastructure can lead to the use of materials and generation of waste. The transport of waste and materials can also lead to indirect effects from traffic such as congestion, air pollution and noise.

5.3.2. The distribution of mineral reserves across the UK is not even. Wokingham Borough is underlain by the following bedrock geology[22]:

- Chalk Formations (in the north);
- Lambeth Group – Clay and Sand (in the north);
- London Clay Formation (in the middle and south); and
- Bagshot Formation – Sand (in the south).

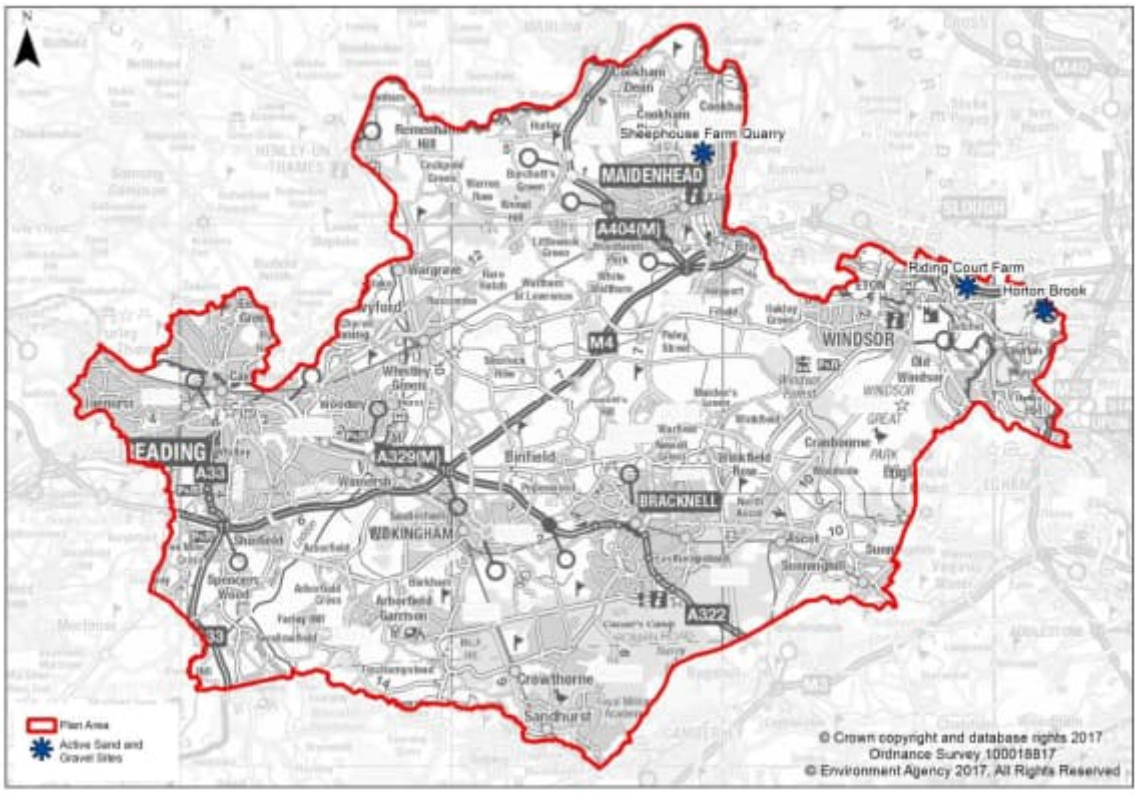
5.3.3. The superficial geology within Wokingham Borough consists of the following[22]:

- Alluvium;
- Clay with Flint;
- River Terrace Deposit; and
- Sand and Gravel.

5.3.4. There are three active quarries located within Central Eastern Berkshire, shown in **Appendix A**.

[22] Central and Eastern Berkshire (2018). 'Local Aggregate Assessment'. Available at: https://www.wokingham.gov.uk/planning-policy/planning-policy-information/minerals-and-waste/

Figure 5-1 - Location of active quarries in Central Eastern Berkshire, 2017[24]



Waste

5.3.5. The following waste management facilities are located within Wokingham Borough[23] (See **Figure 5-2**):

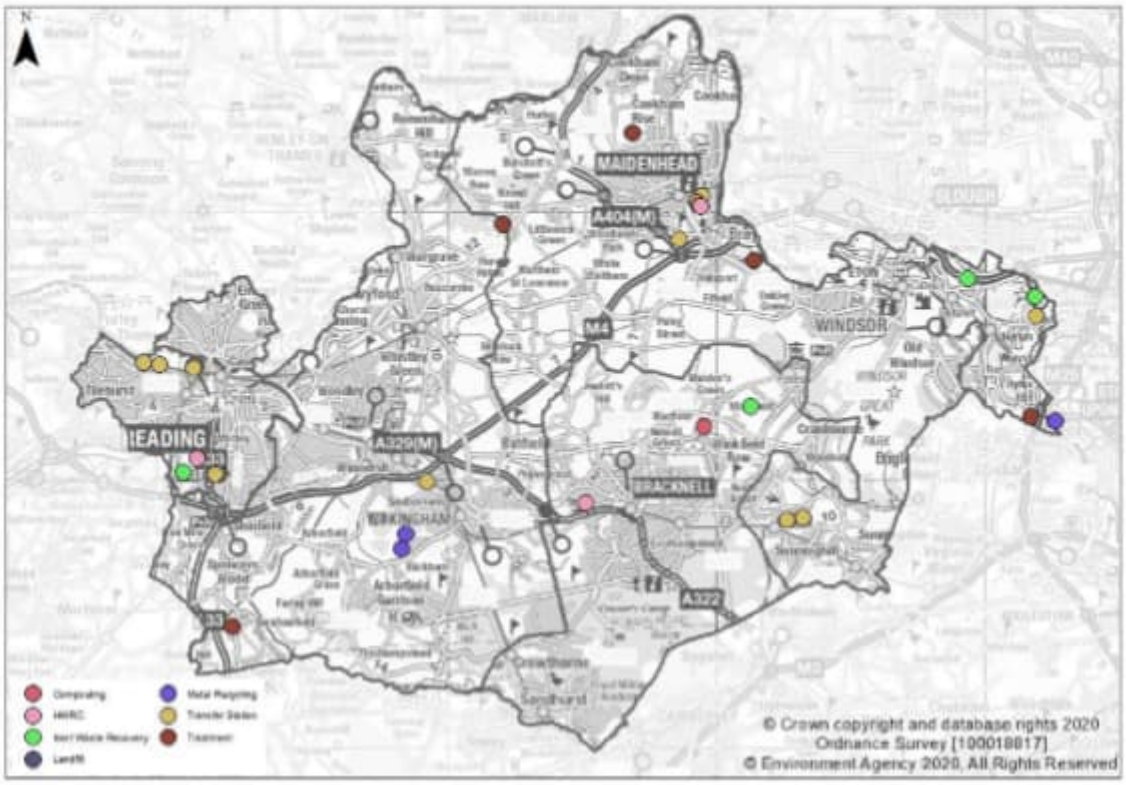
- One end of life vehicles;
- One waste transfer station;
- Two metal recovery facilities; and
- Two water waste treatment works.

5.3.6. Inert waste has the highest arisings from the waste streams in CEB with non-hazardous waste having the second highest arisings in CEB.

5.3.7. There are nine Preferred Waste Areas within Wokingham Borough outlined within the Joint Minerals and Waste Plan[23]. These areas present opportunities for the development of sites for waste management.

[23] Central and Eastern Berkshire (2023) Joint Minerals and Waste Plan (Adopted January 2023). Available at: https://www.wokingham.gov.uk/planning-policy/planning-policy-information/minerals-and-waste/

Figure 5-2 - Location of waste management facilities in Central and Eastern Berkshire[24]



Future Trends

5.3.8. Predicted infrastructure projects within CEB are anticipated to place significant demands on aggregate supply within CEB. As such, CEB needs to maintain a sufficient aggregate landbank and encourage recycled and secondary aggregate sites to supply future demand.

5.3.9. Regarding provisions of sand and gravel, there is anticipated to be a total additional requirement of 7,639,000 tonnes required up to 2036. As CEB is reliant on imports, sources for this supply will need to be met elsewhere, however due to sand and gravel constraints in Berkshire, Hampshire and Surrey future supply may need to be considered from alternative sources.

[24] Central and Eastern Berkshire (2020 Proposed Submission). 'Waste: Background Study'. Available at: https://documents.hants.gov.uk/environment/Regulation19-ProposedSubmissionConsultation-JCEBWasteBackgroundStudy-ProposedSubmission.pdf

5.3.10. With a growing population and increased development (see **Section 5.12**) the potential for generating waste is increasing. There is a need to apply resource efficiency and waste management to limit the amounts of waste generated.

Issues and Opportunities

5.3.11. The following issues and opportunities have been identified in **Table 5-2** below.

Table 5-2 – Materials and Waste Issues and Opportunities

Sustainability Issues	Sustainability Opportunities
▪ New transport infrastructure can lead to use of minerals and other materials, in addition to generating waste. The transport of waste and materials can lead to indirect effects from traffic such as congestion, air pollution and noise. ▪ There is a reliance upon the road network to transport materials, and it is unlikely that this will change; and ▪ Increasing population of the County is likely to generate more waste which requires transportation. Construction of new transport infrastructure also has the potential to generate waste.	▪ Resource efficiency is important in the reduction of waste and conservation of resources. ▪ The LTP4 could promote opportunities to support a circular economy. ▪ Materials, including minerals, will be required in any new transport infrastructure schemes. The application of resource efficiency including use of recycled materials is important for reducing waste. There is also significant capacity for increasing the levels of recycled and secondary aggregate production used for transport infrastructure.

5.4 Soils

Summary of Baseline and Future Trends

Current Baseline

5.4.1. The UK has over 700 different soil types arising from a diverse array of geological deposits. There are six soil groups within Wokingham Borough, which can be loosely related to the geology. These are as follows[25]:

- Argillic Brown Earths;
- Podzols/Brown Sands;
- Gley-Podzols;
- Argillic Gley Soils; and
- Stagnogley Soils.

[25] LUC (2019). 'Wokingham Borough Landscape Character Assessment'. Available at: https://www.google.com/url?client=internal-element-cse&cx=008624316100129476043:osi-gdj83g0&q=https://www.wokingham.gov.uk/_resources/assets/attachment/full/0/508875.pdf&sa=U&ved=2ahUKEwiYmovzh6DtAhVDQkEAHYXNCDUQFjAAegQIABAC&usg=AOvVaw26wPfDSZTQf2_BCVbJKlij

5.4.2. Agricultural Land Classification (ALC) is a system used in England and Wales to grade the quality of land for agricultural us. It is graded by the extent by which physical or chemical characteristics impose long-term limitations and is graded as follows:

- Grade 1 – Excellent;
- Grade 2 – Very Good
- Grade 3a – Good
- Grade 3b – Moderate
- Grade 4 – Poor
- Grade 5 – Very Poor

5.4.3. Grades 1, 2 and 3a are considered within the 'best and most versatile' land. Grade 3 (a and b) agricultural land is the predominant agricultural grade throughout WBC, with Grade 2 and Grade 1 predominantly found in the northern area of WBC. Grade 4 agricultural land is threaded throughout WBC (**Appendix A**).

5.4.4. Approximately 25% of the land area in Wokingham Borough is built up, the remainder is predominantly agriculture and woodland but also present to varying degrees are other types of land use associated with the urban fringe[25].

Future Trends

5.4.5. Economic growth and rising population within the county will undoubtedly place additional pressures upon agricultural land; it is likely that land for development will become more of a premium and intensify competition for land amongst developers. Development on greenfield sites prevents their use for agriculture. New transport developments need to consider optimised use of brownfield sites, or agricultural land which is of lower grade (Grades 3b to 5) and minimise severance wherever possible, particularly when unlocking land for future development.

Issues and Opportunities

5.4.6. The following issues and opportunities have been identified in **Table 5-3**.

Table 5-3 – Soils Issues and Opportunities

Sustainability Issues	Sustainability Opportunities
▪ Soil is an important natural resource for agriculture, food production, biodiversity and archaeological and geological purposes. Acknowledgement should be given to the detrimental impacts arising from soil compaction, erosion and cumulative pollution. ▪ It is important that any future development of the transport network in WBC does not have adverse impacts or lead to the degradation of Best and Most Versatile (BMV) (grades 1 to 3) agricultural land.	▪ There's an opportunity to avoid development on some of the Borough's best and most versatile land and support the repurposing of existing infrastructure.

Sustainability Issues	Sustainability Opportunities
▪ Improvements to transport infrastructure will likely require land take; and ▪ Land should be used in the most efficient manner.	

5.5 Biodiversity, Flora and Fauna

Summary of Baseline and Future Trends

Current Baseline

5.5.1. WBC contains the following international, national, regional and local nature reserve designations, as follows[26] [27] (see **Appendix A** for more details):

- Special Protection Area (SPA): 1 (Thames Basin Heath);
- Sites of Special Scientific Interest (SSSI): 5;
- National Nature Reserve (NNRs): 5;
- Local Nature Reserves (LNR): 11[26];
- Local Geological Sites (LGS) (formerly known as Regionally Important Geological / Geomorphological Sites (RIGS)): 5;
- Local Wildlife Sites (LWS) (formerly known as Sites of Nature Conservation Importance (SNCIs)): 111;
- Biodiversity Opportunity Areas: 7; and
- Suitable Alternative Natural Greenspace (SANG): 10.

5.5.2. Within Wokingham Borough, 2,031ha of land consist of UK Habitats of Principal Importance (as of 2022)[26] .

5.5.3. There are125 priority species and 18 farmland birds listed within Wokingham Borough[28].

5.5.4. Wokingham Borough contains a range of woodland types, including 1780ha of Plantations on Ancient Woodland (PAWS) located throughout the Borough. A total of 14% of the

[26] Thames Valley Environmental Record Centre (2016). 'Biodiversity Annual Monitoring Report'. Available at: https://www.wokingham.gov.uk/planning-policy/planning-policy-information/planning-policy-supporting-information/

[27] Wokingham Borough Council (2020). 'Proposals Map'. Available at: http://www.planvu.co.uk/wbc/

[28] Wokingham Borough Councul (2022) Biodiversity Annual Monitoring Report. Available at: https://wokingham.berkshireobservatory.co.uk/wp-content/uploads/2023/02/Wokingham-Borough-Council-AMR-2021-2022.pdf

Borough is covered in woodland and as such Wokingham Borough is of county importance for its woodland resource.

5.5.5. According to the South East England Biodiversity Forum[29], the south east (which includes Wokingham Borough) is a key area for a range of priority habitat. For example, the south east holds over 40% of England's Ancient Woodland, making this important habitat for the area. The south east also holds more than 30% of England's broadleaved, mixed and yew woodland; and more than 40% of its lowland heath habitats. The low chalk and hard limestone hills of southern England show excellent examples of lowland calcareous grassland – famous for its floristic (and therefore invertebrate) richness. The south east region holds over 10% of England's lowland calcareous grassland resource.

Future Trends

5.5.6. Projected population growth (see **Section 5.12**) and industrial development are anticipated to place increasing pressure on sensitive wildlife sites within WBC[30].

5.5.7. Studies such as '*State of Nature UK'*[30] report have shown that biodiversity has been declining across the UK despite the prevalence of conservation efforts; with 41% of UK species in decline and 15% of Red List criteria species threatened with extinction or already extinct[30]. In some cases, this may be a result of the traditional approach to protecting designated areas on an individual basis, whereas perhaps a regional or county level approach may be more effective. The most important habitats (those for which the UK has a European level responsibility) also remain in relatively poor condition (71% unfavourable for the UK versus an EU average 30%). A rising population and associated need for development may cause further loss, fragmentation and degradation of habitats, causing a further decline in biodiversity.

5.5.8. Avoiding overall decline in biodiversity will be increasingly important as the population grows and development gives rise to habitat loss, severance and other impacts. Development on greenbelt land in particular is likely to encourage less sustainable travel methods (i.e. use of the private car), given these areas are likely to have limited existing transport infrastructure available. This may have knock-on effects on habitats sensitive to air quality and disturbance.

5.5.9. Biodiversity is also threatened by climate change, with changing temperatures and extreme weather events resulting in the loss, degradation and movement of species and habitats. Increased frequency and severity of summer drought will be a particular threat to

[29] South East Biodiversity Forum (2012). 'A Summary of Climate Change Risks for South East England'. Available at: https://www.arun.gov.uk/download.cfm?doc=docm93jijm4n1708.pdf&ver=1350
[30] RSPB (2019). 'State of Nature' Available at: https://nbn.org.uk/stateofnature2019/reports/

woodlands, with sensitive tree species on shallow freely draining soils in southern and eastern England being most at risk[31] .

Issues and Opportunities

5.5.10. The following issues and opportunities have been identified in **Table 5-4**.

Table 5-4 – Biodiversity, Flora and Fauna Issues and Opportunities

Sustainability Issues	Sustainability Opportunities
▪ Due consideration should be given to protecting and conserving WBC's biodiversity, particularly in light of the disturbance and habitat degradation that may arise from the construction of transport infrastructure and projected population increase; ▪ There are a number of statutory local, national and international sites designated for nature conservation within the country which may be affected by development, including transport infrastructure; ▪ Habitats, particularly those designated as HPI and Ancient Woodland are at risk of being lost, damage or fragmented by development, including transport infrastructure; ▪ Species, including Species of Principal Importance and protected species, may also be affected by construction and operation of new infrastructure, both directly and indirectly; and ▪ Biodiversity may be lost as the end result of development of new infrastructure resulting from the LTP4.	▪ LTP4 presents opportunities to be strategic in the enhancement of biodiversity at the landscape scale. ▪ The LTP4 presents opportunities to achieve biodiversity net gain (BNG) through the development of its policies and schemes. ▪ There is scope to encourage the redevelopment of existing assets as well as build new, to focus development away from areas of high biodiversity and ecosystem service provision, and to enhance the quality of the transport 'soft estate' alongside existing and new transport corridors to improve habitat connectivity. ▪ Enhancing biodiversity can also help improve the resilience of the transport network to future climate change, for example by reducing flood risk and providing shading and cooling benefits. ▪ Human health and quality of life can be improved by improving biodiversity. ▪ Views of vegetation during travel (e.g. along roads and railways) can also enhance mental wellbeing, for example by reducing stress levels. ▪ The LTP4 presents opportunities to be strategic in the landscape scale across the corridors (and, once the interventions are defined, also in relation to any necessary offsets beyond the boundary of specific developments). Existing biodiversity Opportunity Areas (Natural England) can be combined with priorities for wider ecosystem services benefits to deliver landscape wide environment gain for biodiversity and people.

[31] The Woodland Trust (2011). 'The State of the UK's Forests, Woods and Trees'. Available at: https://www.woodlandtrust.org.uk/publications/2011/11/state-of-uk-forests/

5.6 Air Quality

Summary of Baseline and Future Trends

Current Baseline

5.6.1. The major source of air quality pollution in WBC is road transport, specifically the M4. The pollutant identified as being a main concern is nitrogen dioxide (NO_2).

5.6.2. Three AQMA's are located within WBC as presented in **Table 5-5**[32] [33]. All AQMA's are declared for exceedances of NO_2 with all cases associated with traffic. Details of the current AQMA's are presented in **Appendix A.**

Table 5-5 – Air Quality Monitoring Areas

Name	Location
Wokingham AQMA (and M4 AQMA)	An area encompassing properties along the M4 Motorway and along part of the A329 where it passes under the M4.
Twyford Crossroads	An area extending along roads from High Street, Wargrave Road, London Road and Church Street.
Wokingham Town Centre	An area incorporating areas of Wokingham including Reading Road, Station Road, Shute End, Broad Street, Denmark Street, Peach Street, London Road and Seaford Road.

5.6.3. The NO_2 levels in Wokingham Borough have shown a decreasing trend since 2016[33].

5.6.4. Within WBC, the average $PM_{2.5}$ level is 10.13 with a maximum level of 11.98[33]. 0.81% of $PM_{2.5}$ is produced by road and transport, the remaining 99.19% is produced by other factors (such as rail, industry, domestic etc.). No $PM_{2.5}$ or PM_{10} monitoring is undertaken outside of the AQMA's in WBC[33].

5.6.5. The number of vehicles in WBC has been increasing, albeit usage of each individual vehicle falling.

[32] Defra (2022). 'Local Authority Details Wokingham Borough Council'. Available at: https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=318

[33] Wokingham Borough Council (2022). '2022 Air Quality Annual Status Report (ASR)'. Available at: https://www.woking.gov.uk/sites/default/files/documents/environmental-services/pollution/Woking%20Air%20Quality%20Report_2022_Final.pdf

Future Trends

5.6.6. Predicted increase in the use of cleaner vehicles has potential to improve air quality in the future, and improving the health, wellbeing and quality of life of residents of Wokingham Borough (see **Sections 3.11** and **3.12**).

Issues and Opportunities

5.6.7. The following issues and opportunities have been identified in **Table 5-4**.

Table 5-6 – Air Quality Issues and Opportunities

Sustainability Issues	Sustainability Opportunities
▪ Within WBC, AQMA's are predominantly associated with transport sources and emissions. Potential adverse impacts affecting human health and the wider surrounding environment arising from transport sources will need to be given appropriate consideration. ▪ Where AQMAs are declared, due consideration of transport associated measures should be given to address their declaration; ▪ Addressing local problems associated with PM_{10}, $PM_{2.5}$, NO_x and NO_2 emissions to reduce air pollution; and ▪ Although changes in technology mean that vehicles are producing fewer emissions, the number of vehicles on roads is expected to increase. This has the potential to affect air quality and as a consequence, human health, natural capital, and ecological sites.	▪ Ensuring that air quality continues to improve across WBC. ▪ There is the potential that improved transport links will facilitate traffic flows, reduce idling times and thus improving air quality locally. However, an improved highway network could also result in increased usage, thus increasing emissions. ▪ The UK Government's plan to end the sale of all new conventional petrol and diesel cars and vans by 2030 and support for work and home-based electric charging facilities, will promote use of hybrid and electric vehicles, with positive effects for air quality. ▪ The UK Government's commitment to end diesel haulage on the rail network by 2040 and introduce at least 4,000 more zero emission buses. ▪ Uptake of technological advances such as autonomous vehicles. These have the potential to further reduce emissions through reduction in the stop start nature of traffic, opening up the possibility of vehicle platooning[34]. ▪ Air quality issues across Wokingham Borough can be addressed by promoting a modal shift towards less polluting methods of transport (low carbon transport initiatives) and inclusive of active transport (e.g. cycling, walking etc.) into the LTP4 thereby leading to a higher standard of air quality. ▪

[34] Platooning is a newly developed technology referring to referring to linking up the driving of vehicles, by maintaining a distance between vehicles to increase road capacities and decrease distances between vehicles.

5.7 Climate change

Summary of Baseline and Future Trends

Current Baseline

5.7.1. WBC declared a climate emergency in July 2019 and committed to reducing the Borough carbon footprint to net carbon zero by 2030[35]. The Borough, including sectors beyond the Council's scope (e.g. the M4), currently produces 557ktCO_{2e} of carbon emissions per annum[35] . Without the inclusion of sectors beyond the Council's control, the Borough produces 388.6 ktCO_{2e} per annum.

5.7.2. Sectors beyond the Council's sphere of influence include emissions from major transport links (predominantly the M4) and diesel rail transport which are managed by National Highways and national rail companies, respectively. These sectors contribute 168.4 ktCO_{2e} to the total emissions produced in the Borough.

5.7.3. In addition to the sectors that are beyond the Council's remit, the two highest emitting areas in WBC are transport and the use of gas in the domestic sector.

5.7.4. During the most recent decade (2009-2018) the UK has been on average 0.3°C warmer than the 1981-2010 average and 0.9°C warmer than 1961-1990. All of the top ten warmest years have occurred since 2002. In the past few decades there has been an increase in annual average rainfall over the UK, for which the most recent decade (2009–2018) has been on average 5% wetter than 1961–1990 and 1% wetter than 1981-2010[36].

Future Trends

5.7.5. WBC has committed to reducing the Borough's carbon footprint to net zero carbon by 2030. However, projected population increase (**Section 5.12**) and development within the Borough is anticipated to increase carbon dioxide emissions.

5.7.6. Carbon off-setting/Sequestration is anticipated to increase throughout the Borough to help negate carbon emissions.

[35] Wokingham Borough Council (2022). 'Climate emergency Action Plan'. Available at: https://www.wokingham.gov.uk/council-and-meetings/open-data/climate-emergency/#:~:text=Progress%20report%202022,net%20carbon%20zero%20by%202030.
[36] Met Office, UK Climate Projections: Headline Findings, 2022, [online] Available at: https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/research/ukcp/ukcp18_headline_findings_v4_aug22.pdf

5.7.7. All areas of the UK are predicted to be warmer, more so in summer than in winter, by the end of the 21st century[37]. The UKCP 18[38] predicts an increase in hotter, drier summers and warmer, wetter winters by 2070. Should the currently high greenhouse gas emissions remain unchanged or increase, hot summers are even more likely.

5.7.8. The current baseline review identifies that areas of WBC are at risk of flooding from a variety of sources. Future climate change is anticipated to exacerbate this risk through increases in the occurrence of extreme weather events and annual precipitation in the Borough.

Issues and Opportunities

5.7.9. The following issues and opportunities have been identified in **Table 5-7**.

Table 5-7 – Climate Change Issues and Opportunities

Sustainability Issues	Sustainability Opportunities
▪ WBC has committed to reducing the Borough's carbon footprint to net zero carbon by 2030. Transport infrastructure is one of the largest contributors to greenhouse gas emissions and must be considered accordingly before progressing future schemes; ▪ Climate change is anticipated to exacerbate flood issues across WBC putting livelihoods, dwellings, businesses and lives at risk; and ▪ The RAIN project[39] has been investigating the impact of severe meteorological occurrence on critical infrastructure across Europe. Conclusions highlighted that rail and road infrastructure were more vulnerable than power or telecommunications infrastructure since structural damage is not required for the system to fail.	▪ There is a need to plan for and implement/ facilitate climate change adaptation, in respect of rising temperatures, water scarcity and extreme weather events, particularly heavy rainfall/ flooding. ▪ There is a need to support the continued increase in infrastructure to support the demand in electric cars. ▪ Supporting climate change mitigation via promoting alternative methods of sustainable transport, and thereby limiting the contribution of transport to greenhouse gas emissions; ▪ Increasing the resilience of the local transport network to the effects of climate change; ▪ Supporting low emission fuels, infrastructure and associated technologies; ▪ Supporting green infrastructure enhancements; and ▪ The continuation of the reduction in carbon dioxide (CO_2) emissions, where appropriate, alongside limiting emissions of other greenhouse gases.

[37] Met Office (2019). 'UK Climate Projections: Headline Findings'. Available at: https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/research/ukcp/ukcp-headline-findings-v2.pdf
[38] UKCP18 (2018). 'UKCP18 Climate Change Over Land'. Available at: https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/research/ukcp/ukcp18-infographic-headline-findings-land.pdf
[39] RAIN Project (2017). 'Risk Analysis of Infrastructure Networks in Response to Extreme Weather'. Available at: http://rain-project.eu/wp-content/uploads/2015/11/D2.2-Past-Cases-final.compressed.pdf

5.8 Noise

Summary of Baseline and Future Trends

Current Baseline

5.8.1. There are 52 Noise Important Areas (NIA's) located within Wokingham Borough. These are primarily located along the M4, A3290, A329, A329M, A4 and the railway line in the north of the Borough.

5.8.2. Wokingham Borough is included in the Reading/Wokingham agglomeration[40] which also includes Bracknell Forest and West Berkshire[41]. Significantly more people are exposed to road noise than railway noise, with the M4 and the A329(M) being the major sources of noise in the Borough[42]. **Table 5-8** and **Table 5-9** present the estimated number of people exposed to various noise levels from roads and railways respectively.

Table 5-8 – The estimated number of people exposed to various noise levels due to roads within the Reading/Wokingham agglomeration[41]

Noise Level (Lden) (dB)	Number of People
≥55	127,000
≥60	53,000
≥65	27,000
≥70	10,000
≥75	<500

Table 5-9 – The estimated number of people exposed to various noise levels due to railways within the Reading/Wokingham agglomeration[41]

Noise Level (Lden) (dB)	Number of People
≥55	14,000

[40] "An agglomeration is an area with a population of more than 100,000 people; for major roads with more than 3,00,000 vehicle passages per year, and for major railways with more than 30,000 train movements per year,"
.

[41] Defra (2019). 'Noise Action Plan: Agglomerations (Urban Areas). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/813776/noise-action-plan-2019-agglomerations-appendix.pdf

[42] Wokingham Borough Council (2018). 'Creating the right environments for health'. Available at: https://wokingham.moderngov.co.uk/documents/s25901/Wokingham%20Borough%20Council%20Annual%20Report.pdf

≥60	7,000
≥65	3,000
≥70	1,000
≥75	<500

5.8.3. For 3.9% of Wokingham Borough residents, transport noise is above the 65dB daytime limit, rising to 11.3% for the night time limit 55dB limit[41].

Future Trends

5.8.4. Given the projections for an increasing population in the Borough, and the popular use of cars as the main mode of transport, it is likely that noise levels will increase along major roads. In addition, the increased population is likely to place pressure on public transport methods such as rail and buses. Increased number of services of those public transport would lead to similar increases in noise levels along road and rail networks.

5.8.5. An increase in development is also likely to cause an increase in construction noise in areas within the Borough, although this will be temporary in nature.

Issues and Opportunities

5.8.6. The following issues and opportunities have been identified in **Table 5-10**.

Table 5-10 – Noise Issues and Opportunities

Sustainability Issues	Sustainability Opportunities
▪ Transport noise may adversely impact sleep, health and wellbeing as well as disturb wildlife and there is potential for an increase in noise levels in the NIAs in Wokingham Borough; and ▪ The natural environment, particularly tranquil areas, may experience an increase in transport-related noise pollution.	▪ There exists an opportunity to reforecast the understanding of transport noise profiles and exposure. This could account for the benefits from low-noise electrified road vehicles and reactions to climate change. A plan could be developed from this that accounts for the future and realises benefits for Wokingham Borough.

5.9 Landscape and Townscape

Summary of Baseline and Future Trends

Current Baseline

Landscape Designations

5.9.1. Landscape character is defined as:

‘*a distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse’.*

5.9.2. WBC is located within three National Character Areas (NCA), these are the following[43]:

- 110 – The Chilterns NCA: '*The countryside is a patchwork of mixed agriculture with woodland, set within hedged boundaries. The extensively wooded and farmed Chilterns landscape is underlain by chalk bedrock that rises up from the London Basin to form a north-west facing escarpment offering long views over the adjacent vales. From the vales, the River Thames breaches the escarpment in the south at the Goring Gap and flows on past riverside towns such as Henley. Small streams flow on chalk down some of the dip slope valleys or from the scarp foot, passing through numerous settlements'*;
- 115 – Thames Valley: '*The Thames Valley is mainly low-lying, wedge-shaped area, widening from Reading...The River Thames provides a unifying feature through a very diverse landscape of urban and suburban settlements, infrastructure networks, fragmented agricultural land, historic parks, commons, woodland, reservoirs and extensive mineral workings. Hydrogeological features dominate the Thames Valley'*; and
- 129 – Thames Basin Heaths: '*The Thames Basin Heaths NCA stretches westwards from Weybridge in Surry to the countryside around Newbury in Berkshire…Woodland accounts for a quarter of this NCA, reflecting the predominance of low-grade agricultural land…Semi-natural habitat is extensive on the plateaux, and includes mosaics of wet and dry heathland, woodland and acid grassland.*

5.9.3. The WBC Landscape Character Assessment identifies 29 landscape characters located throughout WBC[44].

5.9.4. There are no Areas of Outstanding National Beauty within Wokingham Borough, although the Chiltern AONB is located along the northern border. There are no National Parks within the Borough[25].

Green Infrastructure

5.9.5. Wokingham Borough has numerous greenspaces available throughout the Borough. The importance of the PRoW and Green Infrastructure (GI) network is in enabling residents and visitors to access the countryside with its rich natural and cultural heritage.

5.9.6. WBC is in the process of increasing the greenways within the Borough. Greenways are routes which are free of traffic and provide multi-user routes to connect Strategic Development Locations to existing settlements. One Greenway has been delivered by WBC linking Finchampstead Baptist Centre with Arborfield Garrison.

5.9.7. There are multiple PRoW and green routes located throughout the Borough (**Appendix A**).

[43] Natural England (2020). 'National Character Area Profiles'. Available: https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making/national-character-area-profiles

[44] Defra (2020). 'MagicMap'. Available at: https://magic.defra.gov.uk/magicmap.aspx

Future Trends

5.9.8. Projected population increase and development within the Borough may affect the quality of the landscape character in WBC. It is critical that due consideration is given to areas of landscape importance to prevent adverse impacts arising.

5.9.9. Landscape character quality may be affected both positively and adversely by new transport infrastructure and residential developments, and the development of greenfield and unoccupied sites resulting from population pressure. Adverse impacts are more likely to occur in areas with no previous transport infrastructure, in particular woodland areas, in terms of both visual amenity and overall quality (e.g. presence of new hard engineering, landscape fragmentation, signage and other infrastructure elements of height, street lighting affecting night skies, urbanisation and widening of rural roads etc.). However, future transport infrastructure may improve accessibility to valued landscape and townscape areas; other non-road infrastructure (e.g. footpath and cycling route networks) may facilitate access with little adverse impact, while linking up with goals identified in **Sections 5.6**, **5.7,** and **5.13**.

Issues and Opportunities

5.9.10. The following issues and opportunities have been identified in **Table 5-11**.

Table 5-11 – Landscape and Townscape Issues and Opportunities

Sustainability Issues	Sustainability Opportunities
▪ The character and quality of Wokingham Borough's landscapes and townscapes can be eroded by the construction and operation of transport infrastructure, which may impact upon the distinctive historic character of settlements; ▪ Green Infrastructure (GI) describes the multifunctional network of green and blue spaces, landscapes, and natural elements within and between our cities, towns and villages. By connecting the centres of settlement into the surrounding landscape, GI can facilitate prosperous, active, healthy and happy communities. This network may be severed or reduced due to new transport infrastructure; and ▪ Transport infrastructure has the potential to erode and adversely affect local character and distinctiveness.	▪ The design of transport infrastructure requires a landscape-led approach to design, to ensure the best placement and integration of the proposed development into the existing landscape, especially in sensitive locations. Landscape-led designs can help contribute to the climate change agenda, health and wellbeing, and tackling pollution in all its forms (such as air, light and noise). ▪ There is potential for transport to improve access to the countryside, to promote sustainable tourism and to provide greater awareness for the UK's AONBs and other designated areas. ▪ Increasing access to the countryside, whilst increasing pressure on those resources, can bring new audiences to tourist attractions and enable better appreciation of landscapes and townscapes through creating new views and vistas, providing information and enhancing access. ▪ The incorporation of 'Future Ready' Landscape principles into landscape-led designs would help ensure transport infrastructure is designed for longevity in the 21st century, for both its people and its natural environment.

5.10 Historic Environment

Summary of Baseline and Future Trends

Current Baseline

5.10.1. There are 16 conservation areas located throughout Wokingham Borough[45]. There are a number of listed buildings located within Wokingham[46]. The highest concentration of listed buildings are located in Wokingham, Wargrave and St Nicholas, and Hurst.

5.10.2. There are four registered parks and gardens within Wokingham Borough[45].

5.10.3. There are 45 Buildings of Traditional Local Character located within Wokingham Borough[47]. There are 18 Scheduled Monuments within the Borough[44].

5.10.4. No World Heritage Sites or Registered Battlefields are present within the Borough.

5.10.5. Historic England's Heritage at Risk (HAR) programme helps to understand the overall state of England's historic sites. It identifies those sites that are most at risk of being lost as a result of neglect, decay or inappropriate development. In Wokingham Borough there are six heritage assets on the HAR register[48].

Future Trends

5.10.6. The historic environment is increasingly under threat from development pressures. In addition to loss of green infrastructure and heritage assets, new infrastructure to provide for a growing population affects visual amenity and heritage setting.

5.10.7. Protection of the historic environment is firmly embedded in national and local planning policy, and this has been the case since 1990. This policy has developed independently of the European Union and is unlikely to change during the time period covered by the LTP4.

5.10.8. However, whilst direct (physical) impacts on designated historical sites are strongly restricted, adverse effects on the setting of designated heritage assets do still occur, for example relating to visual intrusion, or aspects such as traffic, lighting and noise. This can be a sensitive planning issue.

5.10.9. One trend over the last few years which may well continue is the reduction in funding for Historic England and county and local authorities, with increased pressure on the case

[45] Wokingham Borough Council (2020). 'Listed buildings, heritage and conservation areas' Available at: https://www.wokingham.gov.uk/planning/how-to-apply-for-planning-permission/listed-buildings-heritage-and-conservation-areas/

[46] British Listed Buildings (2020). 'Listed Buildings in Wokingham'. Available at: https://britishlistedbuildings.co.uk/england/wokingham#.X84Tk9j7SM8

[47] Wokingham Borough Council (2016). 'List of Buildings of Traditional Local Character'. Available at: https://www.wokingham.gov.uk/EasySiteWeb/GatewayLink.aspx?alId=443924

[48] Historic England, Heritage At Risk Register. Available at: https://historicengland.org.uk/advice/heritage-at-risk/search-register/

workload of Archaeological Officers, Conservation Officers and Historic England advisors. This can have an impact on the response times for the provision of planning advice.

Issues and Opportunities

5.10.10. The following issues and opportunities have been identified in **Table 5-12**.

Table 5-12 – Historic Environment Issues and Opportunities

Sustainability Issues	Sustainability Opportunities
▪ Conserving the character of the Borough is key, particularly in light of government policy and the extent of development and pressure for continued development in the area. Transport infrastructure has the potential to erode and adversely affect local character and distinctiveness. ▪ Adverse impacts upon the setting of components of the historic environment; ▪ The impact of vehicular damage to historic structures, buildings and the fabric of the public realm in town and village centres; ▪ The impacts of vehicular pollution on historic buildings; and ▪ The impacts of ancillary features, inclusive of marked parking bays, yellow lines etc. on the historic environment.	▪ The LTP4 presents opportunities for enhancing the understanding and appreciation of the significance of above ground heritage assets. This might be achieved for example, by reducing traffic volume, visibility and noise in the vicinity of a designated heritage asset and reducing existing detrimental effects on setting. ▪ Asset enhancement has the potential to lead to an increase in tourism and associated revenue, and education opportunities associated with Wokingham's cultural heritage. ▪ Protecting and enhancing the cultural and heritage identity of Wokingham Borough. ▪ Improvement to the access and accessibility of heritage assets.

5.11 Water and flood risk

Summary of Baseline and Future Trends

Current Baseline

5.11.1. Wokingham Borough is located within the Thames river basin district (RBD). The Thames RBD covers 16,200km[49] and contains 17 management catchments[49]. The management catchments within the Borough are the Loddon and Trib, and the Thames and Chilterns South catchments[50]. There are a total of 545 water bodies within the Thames RBD of which 342 are natural, 72 are artificial and 131 are heavily modified.

[49] Defra (2015). 'Part 1: Thames river basin district River basin management plan'. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718342/Thames_RBD_Part_1_river_basin_management_plan.pdf

[50] Environment Agency (2020). 'Thames River Basin District'. Available at: https://environment.data.gov.uk/catchment-planning/RiverBasinDistrict/6

5.11.2. Significant water management issues affecting the Thames RBD are presented in **Table 5-13**.

Table 5-13 – Significant Water Management in the Thames River Basin District[49]

Water Management Issue	Percentage (%) of Water Bodies Affected
Physical modifications (e.g. flood defences)	44%
Pollution from waste water	45%
Pollution from towns, cities and transport	17%
Changes to the natural flow and level of water	12%
Negative effects of invasive non-native species	3%
Pollution from rural areas	27%

5.11.3. The main rivers within Wokingham Borough are the following:

- River Thames;
- River Loddon;
- Twyford Brook;
- Emm Brook;
- Barkham Brook; and
- River Blackwater.

5.11.4. Wokingham Borough is underlain by a principal aquifer and Chalk bedrock. There have been several instances of historical flooding which are suspected to have been caused, either in full or in part, by groundwater. Much of the Borough is susceptible to groundwater flooding, with paths and rivers being the most susceptible[51].

5.11.5. The north of the Borough around north Aston, Remenham Hill and Cockpole Green and south-east of Ruscombe are the most permeable areas in the Borough, which corresponds with the areas of overlying chalk geology. The least permeable areas in the Borough are in

[51] Halcrow Group Limited (2011). 'Wokingham Borough Council Preliminary Flood Risk Assessment'. Available at: https://www.google.com/url?client=internal-element-cse&cx=008624316100129476043:osi-gdj83g0&q=https://www.wokingham.gov.uk/EasySiteWeb/GatewayLink.aspx%3FalId%3D196557&sa=U&ved=2ahUKEwjWzbnOz53uAhUHUBUIHQNWB3MQFjAIegQIARAC&usg=AOvVaw3jiYjsJ950I3nzgjyccywr

the south-west to the centre-east of the Borough which correspond with areas of Clay geology[52].

Loddon and Trib Catchment

5.11.6. There are 22 water bodies located within the Loddon and Trib management catchment[53]. **Table 5-14** presents the ecological classification of the water bodies. All of the water bodies chemical status are classified as 'fail'.

Table 5-14 – Ecological classification of water bodies in the Loddon and Trib management catchment[53]

Ecological Status	Number of Water Bodies
Bad	1
Poor	9
Moderate	12
Good	0

5.11.7. The top three reasons for not achieving good status and reasons for deterioration within the management area are the following:

- Water Industry;
- Urban and Transport; and
- Other.

Thames and Chilterns South Catchment

5.11.8. There are 33 water bodies within the Thames and Chilterns South catchment[54]. **Table 5-15** presents the ecological classification of the water bodies. All the water bodies chemical status are classified as 'fail'.

Table 5-15 - Ecological classification of water bodies in the Thames and Chilterns South management catchment[54]

[52] WSP (2020). 'Strategic Flood Risk Assessment'. Available at: https://www.google.com/url?client=internal-element-cse&cx=008624316100129476043:osi-gdj83g0&q=https://www.wokingham.gov.uk/_resources/assets/attachment/full/0/508886.pdf&sa=U&ved=2ahUKEwjxlM7z7bTtAhXRzqQKHSVyA4EQFjAAegQIABAC&usg=AOvVaw1Ye75R0d3hym9UFpmqnDiv

[53] Environment Agency (2020). 'Loddon Trib – Summary'. Available at: https://environment.data.gov.uk/catchment-planning/ManagementCatchment/3048/Summary

[54] Environment Agency (2022) 'Thames and Chilterns South Management Catchment'. Available at: https://environment.data.gov.uk/catchment-planning/ManagementCatchment/3098

Ecological Status	Number of Water Bodies
Bad	0
Poor	10
Moderate	23
Good	0

5.11.9. The top three reasons for not achieving good status and reasons for deterioration within the management area are the following:

- Agriculture and rural land management;
- Water industry; and
- Urban and transport.

Flooding

5.11.10. There have been multiple instances of flooding within Wokingham Borough. Significant historic flooding has occurred in recent years; 1993, 2000, 2003, 2007, 2013, 2015, 2016, 2017, and 2020[52]. The majority of flooding within the Borough is in relation to surface water flooding associated with the River Loddon and the River Thames. Areas within the Borough located immediately adjacent to these rivers areas are located within Flood Zone 3[55] [56] .

5.11.11. There is a small percentage of properties within the Borough at high to medium risk of flooding, as most properties are within Flood Zone 1. Few vulnerable sites are located within areas of high flood risk; most are located within Flood Zone 2[52].

5.11.12. Data on groundwater flood risk are limited, although there are historical floods that are believed to have been caused, either in full or in part, by groundwater flooding. The WBC Flood Risk Assessment (FRA) Report[52] indicated that parts of the Borough are at risk of groundwater flooding due to the presence of underlying primary or secondary aquifers. The highly permeable Chalk in the north of the Borough and the Sand and Gravel superficial deposits scattered across the Borough have the highest risk of groundwater flooding.

[55] Wokingham Borough Council (2015). 'Local Flood Risk Management Strategy.' Available at: https://www.wokingham.gov.uk/EasySiteWeb/GatewayLink.aspx?alId=357325
[56] Gov.uk (2020). 'Likelihood of flooding in this area'. Available at: https://flood-map-for-planning.service.gov.uk/confirm-location?easting=481266&northing=168562&placeOrPostcode=wokingham

Future Trends

5.11.13. Increasing population and development within the Borough is anticipated to place strain on water resources and may lead to a decrease in water quality. Increased development and population will also increase the number and likelihood of properties being at risk of flooding.

5.11.14. Due to climate change, the peak river flow within the Thames RBD is anticipated to increase 10-25% within the next 25 years[57]. Extreme rainfall intensity is also predicted to increase by 20-40% in the next 100 years[52].

5.11.15. It is postulated that peak river flows may increase by as much as 20% by 2080, increasing the risk and frequency of river flooding. Alongside this, the south-east region is sinking, which would result in increased flood risk throughout a large portion of the region.

5.11.16. The RAIN project[58] has been investigating the impact of severe weather occurrences (refer also to **Section 5.7**) on critical infrastructure across Europe. It concludes that rail and road infrastructure is much more vulnerable than power or telecommunications infrastructure because there does not need to be structural damage for the system to fail[59]. The official estimate of the cost of river floods in England between May and July 2007 was £3.2bn. Impacts included damage and destruction by floodwater, disruption of traffic and cessation of rail services.

5.11.17. In terms of water quality, the requirements of the Water Framework Directive should lead to continued improvements to water quality in watercourses. However, water quality is also likely to continue to be affected by pollution incidents in the area, the presence of non-native species and physical modifications to water bodies.

Issues and Opportunities

5.11.18. The following issues and opportunities have been identified in **Table 5-16**.

Table 5-16 – Water and Flood Risk Issues and Opportunities

Sustainability Issues	Sustainability Opportunities
▪ Climate change is likely to increase the occurrence of flooding from all sources and hence raise the flood risk in Wokingham Borough, including to transport infrastructure;	▪ Upgrading existing infrastructure also provides the opportunity to improve pollution control on older drainage systems.

[57] Gov.uk (2020). 'Flood risk assessments: climate change allowances'. Available at: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances
[58] RAIN (2017) RAIN project [online] Available at http://rain-project.eu/
[59] RAIN (2017) RAIN project [online] Available at http://rain-project.eu/wp-content/uploads/2015/11/D2.2-Past-Cases-final.compressed.pdf

Sustainability Issues	Sustainability Opportunities
■ Pollution of the water environment can occur from run-off from roads and pavements after rainfall; and ■ Increase in flood risk can occur through the loss of permeable surfaces due to new road construction.	■ New transport infrastructure could result in improved drainage, reducing surface water flooding.

5.12 Population

Summary of Baseline and Future Trends

Current Baseline

5.12.1. Wokingham Borough contains 17 parishes and covers an area of 179km^2 [60] [61] . The population of the Borough in 2021 was 178,169[62], increasing from 154,380 in 2011. In 2021, WBC's population profile showed 20% of people aged 0-14 years, 63% of people aged 15 – 64 years, and 17% of people aged 65+ years. This is in line with both the South East and England averages[63].

5.12.2. Wokingham Borough has seen a 28.2% increase in residents aged 65+, 11% increase in people aged 15-64, and 18% in people aged 0-15 years[64]. These increases, particularly with regard to population aged 65+, are in line with trends across England.

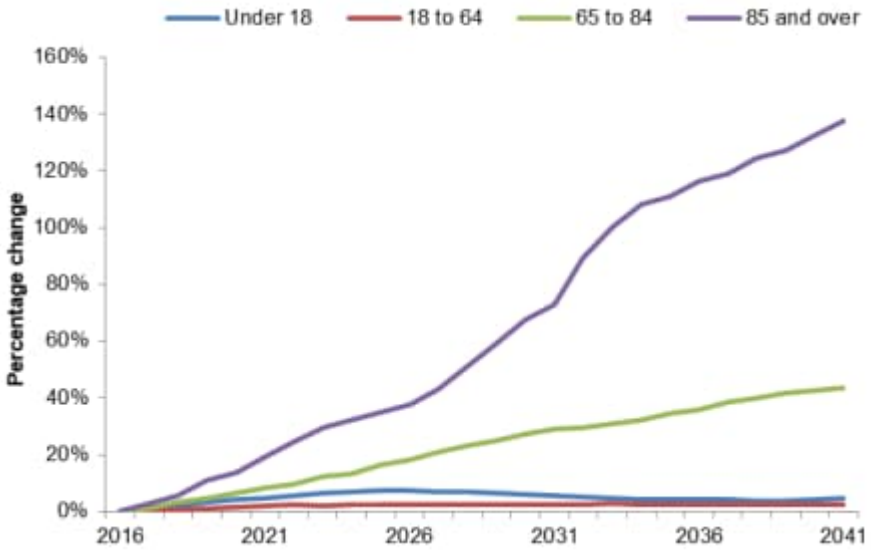
5.12.3. The National Travel Survey (2019) found that 75% of English residents aged over 17 hold a driving licence and that 76% of households have at least one car[65]. Within Wokingham Borough, 53.2% of households have two or more cars[66].

[60] Wokingham Borough Council (2021). 'Borough Statistics'. Available at: https://www.wokingham.gov.uk/community-and-safety/life-in-the-community/borough-statistics/
[61] Public Health England (2022). 'Local Authority Health Profiles'. Available at: https://fingertips.phe.org.uk/profile/health-profiles/data#page/12/gid/1938132696/pat/6/par/E12000008/ati/102/are/E06000041/cid/4
[62] Public Health England (2022). 'Wokingham'. Available at: https://fingertips.phe.org.uk/static-reports/health-profiles/2019/E06000041.html?area-name=Wokingham
[63] Wokingham Borough Council (2021) Joint Strategic Needs Assessment. Available at: https://wokingham.berkshireobservatory.co.uk/population/#/view-report/63aeddf1d7fc44b8b4dffcd868e84eac/___iaFirstFeature/G3
[64] Office for National Statistics (2022) Census 2021. Available at: https://www.ons.gov.uk/visualisations/censuspopulationchange/E06000041/
[65] Department for Transport (2020). 'National Travel Survey: England 2019'. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/906276/national-travel-survey-2019.pdf
[66] Wokingham Borough Council (2010). 'Wokingham Town Centre Masterplan Supplementary Planning Document'. Available at: https://www.google.com/url?client=internal-element-cse&cx=008624316100129476043:osi-

Future Trends

5.12.4. It is projected that the population of WBC will increase by 1% a year and reach 180,900 by 2037[64]. The population is also ageing, with the total population aged over 65 to increase from 18% in 2018 to 20% by 2027. **Figure** 5-3 presents the predicted change in resident population age groups within Wokingham Borough.

Figure 5-3 - Percentage change in resident population within Wokingham Borough from 2016 to 2041 by age group[64]



5.12.5. Within Central and East Berkshire, the objectively assessed need (OAN) is 2,902 houses per year from 2013-2036 with Wokingham Borough having an OAN of 856 houses per year.

Issues and Opportunities

5.12.6. The following issues and opportunities have been identified in **Table 5-17** – Population Issues and Opportunities.

Table 5-17 – Population Issues and Opportunities

Sustainability Issues	Sustainability Opportunities
▪ An ageing population for WBC is likely to place increased strain and demand on access to services, particularly healthcare, and public	▪ There are opportunities to improve access to rural areas through transport services, digital services and bring services to people.

gdj83g0&q=https://www.wokingham.gov.uk/EasySiteWeb/GatewayLink.aspx%3FalId%3D365578&sa=U&ved=2ahUKEwiTg-7r3aztAhVSOBoKHd7gBeAQFjAAegQIBBAC&usg=AOvVaw2g88IrJQboeK7wsQPtqWYt

Sustainability Issues	Sustainability Opportunities
transport. Proposed sites for strategic development will need to be accounted for when choosing potential locations for new transport infrastructure. ■ The population in Wokingham Borough is increasing there will be additional movement associated with this growth; and ■ The ageing population structure is likely to increase demand for access to services.	■ There will be a need for adequate support and greater access to services and facilities for the elderly population, families with young children and single parent families. ■ There were 3.5 million disabled people in work in 2017, with the Government aiming to increase this to 4.5 million by 2027. By helping more disabled people into work, this will enable people to reach their potential and to achieve economic independence. ■ Transport networks should promote a range of sustainable transport modes to limit the effects of congestion, economic vitality, and residents' quality of life.

5.13 Health and wellbeing

Summary of Baseline and Future Trends

Current Baseline

Health

5.13.1. Health in WBC is generally greater compared to the national average. WBC is the second least deprived local authority in England, with none of the neighbourhoods in the Borough ranking in the 20% of the most deprived areas in England[63]. However, 6.8% of children aged under 15 live in poverty. Deprivation is recognised as one of the most influential factors on a population's health, wellbeing and life expectancy.

Access to Healthcare

5.13.2. Wokingham Borough has one community hospital, 13 GP Practices and 24 pharmacies. A total of 164,433 people are registered to the GPs in the Borough and the practices are well spread throughout the Borough, however they are more accessible to those with cars than via public transport, as this is quite limited[67].

5.13.3. Wokingham Hospital is located within Wokingham Borough, however this does not have an accident and emergency (A&E) department, nor does it offer a full range of hospital services. The closest major hospital with an A&E department is the Royal Berkshire Hospital, located in Reading.

[67] Wokingham Borough Council (2020). 'Active Travel Plan, Supporting Local Transport Plan 2011-2036'. Available at: https://www.google.com/url?client=internal-element-cse&cx=008624316100129476043:osi-gdj83g0&q=http://www.wokingham.gov.uk/_resources/assets/attachment/full/0/432860.pdf&sa=U&ved=2ahUKEwjwttup5aztAhVSx4UKHfY9Aw0QFjABegQICRAB&usg=AOvVaw0IN3fb8kjy4GH14rxjZbTV Accessed: 01/12/2020.

5.13.4. Large employment centres and hospitals are the most difficult services to get to in a set amount of time in England[68]. Within England, the average journey time to a hospital with different modes of transport is shown in **Table 5-18**.

Table 5-18 – Average Mode of Transport Travel Time to Hospital[68]

Mode of Transport	Average Journey Time to Hospital
Car	20
Cycle	34
Public Transport / Walking	39

Mental Health

5.13.5. Within WBC, 9.1% of adults over 18 were reported as having depression and/or anxiety[63]. This rate is significantly lower than the national average (13.7%).

5.13.6. In Wokingham Borough, 823.9 out of 100,000 children between 15 and 19 are admitted to hospital annually for self-harm. This rate has been increasing in recent years and is significantly worse than the national average (648.6 admissions per 100,000 children per year)[61].

Mortality

5.13.7. In 2020 Wokingham Borough's most common cause of death was cancer, with 26.22 deaths per 100,000 people, followed by cardiovascular disease with 19.24 deaths per 100,000 people and liver disease with 8.08 deaths per 100,000 people[63]. The Borough's mortality rate from causes considered preventable is significantly lower than both the South East and England's averages.

5.13.8. Behavioural risk factors, such as a poor diet and smoking, are accountable for 40% of total deaths in England. These deaths are considered preventable and could be avoided through public health awareness and interventions. Smoking prevalence in Wokingham Borough in 2021 was lower than both the South East and England averages (11.9% and 13.0% respectively), at 6.7%.

5.13.9. Although Wokingham Borough's mortality rates are below the national average, there are differences within the Borough specifically with regards to more deprived areas which have a higher mortality rate[61].

[68] Department for Transport (2019). 'Journey Time Statistics England: 2017'. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/853574/journey-time-statistics-2017.pdf

Obesity

5.13.10. The rate of obesity within WBC in 2021 is slightly lower than the England average for adults (aged 18+), with 60.2% of adults classified as overweight or obese in Wokingham Borough, 62.4% in the South East and 63.5% in England[63]

5.13.11. In children (0-16 years), 21.2% are considered overweight or obese within Wokingham Borough. This is marginally lower than the South East average of 21.9% and slightly lower than the England average of 23%[63]..

5.13.12. Within WBC, only 43.9% of children and young people achieved at least 60 minutes of moderate-vigorous intensity activity per week, this is slightly lower than both the South East and England averages of 45.5% and 44.6% respectively[63].

5.13.13. In adults, only 68% achieve 150 minutes of moderate intensity physical activity per month in Wokingham Borough in 2021[63].

Life Expectancy

5.13.14. WBC has one of the highest life expectancies in England for both men and women, as indicated in **Table 5-19**.

Table 5-19 – Life Expectancy in Wokingham Borough and Nationally[63]

	Wokingham Borough (Years)	South East Average (Years)	England Average (Years)
Life Expectancy (Male)	83.3	80.1	78.7
Life Expectancy (Female)	87.8	83.7	82.6

5.13.15. However, there are inequalities in life expectancy within the Borough. Those in the most deprived areas have a lower life expectancy than those in the least deprived areas, with men having 4.5 years less and women having 5.5 years less life expectancy in deprived areas.

Access to Green Space

5.13.16. Access to green space is known to increase people's likelihood of being able to be physically active[63]. **Table 5-20** presents the hectares of land looked after by the WBC Countryside Services.

Table 5-20 – Green space coverage in Wokingham Borough[63]

Land Use	Coverage (hectares)
Country Parks	217ha

Nature Reserves	105ha
Suitable Alternative Natural Greenspace (SANG)	59ha
Total	**381ha**

5.13.17. In 2017, WBC opened the first greenway in the Borough which links Finchampstead (The FBC Centre) to the development at Aborfield Green (the former Aborfield Garrison). The aim of the greenway is to make walking and cycling more accessible to the local community[44].

Future Trends

5.13.18. The population of WBC is projected to increase it the future. The number of people aged 65 and over is also anticipated to increase to 60% of WBC's population by 2020[63]. In this context, accessibility to existing and new health and community facilities is likely to become increasingly important.

5.13.19. Wokingham Borough exhibits higher levels of life expectancy and general health compared to the national average, and therefore demographically it is in a favourable position. However, as noted above there is anticipated to be an increasing ageing population. As such, accessibility to transport networks may develop into an important issue since older generations may not have access to appropriate forms of private transport. Similarly, there are other inequalities in access to healthcare, employment and other services for other vulnerable groups.

5.13.20. Obesity is seen as an increasing issue by health professionals, and one that will contribute to significant health impacts on individuals, including increasing the risk of a range of diseases, including heart disease, diabetes and some forms of cancer. Transport planning will play a key role in encouraging active travel choices (e.g. walking and cycling) by Non-Motorised Users (NMUs) as well as accessibility to sports and recreation facilities. Continued traffic growth without adequate provision for NMU facilities is unsustainable. One element of this NMU provision will be the pedestrianisation of urban centres and removal of parking in urban centres, creating 'car free environments' promoting a safer and cleaner environment for exploitation of active transport.

5.13.21. Covid-19 has significantly impacted the movement of people, reducing the requirement for commutes, limiting access to services, and increasing avoidance of public transport. The impact of Covid-19 on transport movement is yet to be determined but alterations to people's approach to transport, specifically private transport, and the subsequent health impacts (such as increased walking commutes or more time spent sat down) should be considered.

Issues and Opportunities

5.13.22. The following issues and opportunities have been identified in **Table 5-21**.

Table 5-21 – Health and Wellbeing Issues and Opportunities

Sustainability Issues	Sustainability Opportunities
▪ The population of Wokingham Borough is an ageing population, transport and future mobility will need to reflect their needs; ▪ There may be inequalities in access to healthcare, jobs and other services associated with transport provision; and ▪ Active travel can play a role in reducing obesity and increasing health and wellbeing.	▪ The transport plan could present opportunities to enhance walking and cycling routes and encourage the use of non-motorised forms of transport. ▪ There will be opportunities to provide inclusive services to meet the needs of older residents. ▪ There will be opportunities to improve public transport users' confidence in returning to public transport post-Covid.

5.14 Economy and employment

Summary of Baseline and Future Trends

Current Baseline

Gross Value Added

5.14.1. Gross Value Added (GVA) is a contribution to Gross Domestic Product (GDP) made by an individual producer, industry or sector based on the value output minus the value of intermediate consumption.

5.14.2. The total GVA in Wokingham Borough is £7,612 million for the total Borough GVA being[69] . The three industries with the highest GVA in WBC are the following:

- Information and Communications (£2,817m);
- Real Estate (£929m); and
- Wholesale and Retail Trade (£656m).

5.14.3. The ONS GVA data from 2019 (balanced per head of population and income) gives values for Berkshire (which Wokingham Borough is within) £48,337 million[70]. This makes Berkshire the second highest GVA area within Berkshire, Buckinghamshire and Oxfordshire with Milton Keynes having the highest GVA in the area.

[69] Berkshire Observatory (2022). 'Wokingham'. Available at: https://wokingham.berkshireobservatory.co.uk/economy-and-employment/

[70] ONS 2019. 'Regional gross value added (balanced) per head and income components'. Available at: https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/nominalregionalgrossvalueaddedbalancedperheadandincomecomponents

5.14.4. Wokingham Borough is within the Berkshire Local Enterprise Partnership (LEP) which aims to increase net GVA over £700m by 2021 which translated to an average growth rate of 3% per annum[71].

Employment and Skills

5.14.5. Wokingham Borough's employment rate is higher than the national average rate and is consistent with other least deprived local authority areas. In 2022, 81.4% of people aged 16-64 in Wokingham Borough were in employment, higher than both the South East (78.1%) and England (75.8%) averages.

5.14.6. Similarly, in 2022, 82.8% of WBC's population aged 16-64 were economically active[69]. This is also higher than the South East and England averages of 80.5% and 78.8% respectively. Of those who are economically inactive, the two main factors for this are being a student (40.3%) or being retired (21.4%)[72].

5.14.7. In Wokingham Borough, 2.0% of young people are not in employment, education or training which is the fourth lowest average in the South East and is low in comparison to the England average[73].

5.14.8. In 2021, 66% of employed people in Wokingham Borough are employed in roles that are one of the three highest groups in the Standard Occupation Classification (SOC2010), which is higher than the national average (see **Table 5-22**)[74].

Table 5-22 – Percentage of people in employment by occupation (2017/18)[74]

Occupation Group	Wokingham Borough	England
1. Managers, Directors and Senior	12.7%	10.8%
2. Professional Occupation	34.3%	23.9%

[71] Thames Valley Berkshire (2021). 'The Fundamentals'. Available at: http://www.thamesvalleyberkshire.co.uk/the-fundamentals

[72] Nathaniel Lichfield and Partners (2016). 'Central Berkshire FEMA Economic Development Needs Assessment'. Available at: https://www.google.com/url?client=internal-element-cse&cx=008624316100129476043:osi-gdj83g0&q=https://www.wokingham.gov.uk/EasySiteWeb/GatewayLink.aspx%3FalId%3D442713&sa=U&ved=2ahUKEwiBuuTX6qrtAhUs8-AKHVVAAigQFjAAegQIBhAB&usg=AOvVaw3f-O6gKtGRMjydBgY1gfpu

[73] Wokingham Borough Council (2022). 'Economic Sustainability Facts and Figures Update'

[74] Berkshire Observatory (2022). 'Economy and Employment Map'. Available at: https://wokingham.berkshireobservatory.co.uk/economy-and-employment/map/

3. Associate Professional and Technical	19%	15.3%

5.14.9. The areas with the highest economically active population (>5,036 – 5,897) are the following[74]:

- Hawkedon (5,897);
- and Hillside (5,349).
- Loddon (5,258); and
- Winnersh (5,257).

5.14.10. In 2021, 37% of the Borough's population travel to work by private vehicle[74] with 28% of commuting journeys from being to/from Reading[75][76].

5.14.11. Within Central Berkshire, employment space is relatively evenly split between office and industrial uses[72]. The stock of employment space in Wokingham Borough is more mixed in nature and accommodates a two-tier office market. This office market comprises a number of large-scale, high-quality business parks which operate within the 'greater Reading office market' and the town of Wokingham Borough which is a smaller and more localised office location.

5.14.12. Wokingham Borough's population are highly skilled compared to the English average, with 56.8% of the population having NVQ Level 4 qualification or above and only 3.8% of the population has no qualifications[63].

Access to Town Centres

5.14.13. Wokingham town benefits from the close proximity of the M4, as well as having strategic rail connections. However, as 53.2% of households have two or more cars there are issues in the town centre of congestion. Average parking capacity within the town centre averages 75.6% of demand, and there is consistently high demand for on-street parking[72].

5.14.14. The railway station is the primary means of access to the town centre, however the station has poor integration with other forms of public transport[72] . Public transport use within WBC is 5% lower than the national average.

5.14.15. The town centre is accessible for pedestrian users and benefits from a hierarchy of routes located throughout the centre. However, there is limited clearly indefinable cycle routes across the Borough and provision within the town centre, including storage, is poor[72].

[75] Wokingham Borough Council (2020). 'Local Transport Plan 4 Vision'. Available at: https://www.wokingham.gov.uk/parking-and-transport/transport-and-travel-passes/have-your-say-about-our-local-transport-plan/

[76] Please note, this data was gathered before Covid-19. The long-term impact of Covid-19 on commuting patterns is yet to be determined.

Access to Educational Facilities

5.14.16. Within Wokingham Borough there are 60 schools that are attended by 23,000 pupils. Of these schools, 50 are infant and primary, 8 are secondary and 2 are special schools[60].

5.14.17. During peak hours in Wokingham Borough, 10% of vehicular traffic is from the school run with one third of children travelling to school in a car in 2010[65]. A total of 48% of school pupils in the Borough walked to school, with a further 6% cycling to school. There is a notable difference in the percentage of children walking to school among primary and secondary school children with more primary children (54%) walking more than secondary school children (43%). However, both of these figures are higher than the national average of pupils walking to school.

Future Trends

5.14.18. Given uncertainties arising from leaving EU/Single Market, Covid-19 and unknown aspects such as migrant labour-force, tariffs and taxes on export/inputs it is presently unknown as to how the economic market of Wokingham Borough will change.

5.14.19. The Covid-19 pandemic has significantly altered the way people work, travel and undertake leisure activities in the short term. The long-term implications of this remain to be seen and may include greater emphasis and proportion of the work force working from home (although certain sectors will not be affected by this), hesitation to use public transport and increased active transport adoption. The decline in retail shopping and increased use of online sales will also likely see a decreased footfall in urban centres.

Issues and Opportunities

5.14.20. The following issues and opportunities have been identified in **Table 5-23**.

Table 5-23 – Economy and Employment Issues and Opportunities

Sustainability Issues	Sustainability Opportunities
▪ Economic issues linked to transport include barriers to growth, enabling greater access to well-paid and satisfying employment within a flexible labour market characterised by diversity in activity and transferable and complementary knowledge solutions. Supporting sustainable economic development which mitigates or combats the effects of climate change is a key issue. ▪ Good access to customers is important, transport infrastructure is noted as an area of improvement to enable this; and ▪ Sustaining and supporting economic growth across the country in light of the withdrawal from the EU and economic issues brought about by the Covid-19 pandemic.	▪ The impact of factors such as Brexit, Covid-19, new vehicle and energy technologies, disruptive digital technologies, changing working patterns and preferences and extreme climactic events will play a part in determining the types of transport investment which will most benefit the economy. ▪ Improved connectivity between business clusters and housing markets (both planned and existing) in the county will improve access to the skills pool as well supporting improvements in productivity.

6 Sustainability Appraisal Framework

6.1 Introduction

This section sets out the Sustainability Appraisal Framework which will be used in the assessment process.

6.2 Appraisal Framework

6.2.1. While not specifically required by the SEA Regulations, sustainability objectives are a recognised way of considering the environmental effects of a plan or programme and comparing the effects of alternatives. The objectives have been developed using the sustainability issues identified in Section 3. The objectives will be used to assess emerging policies and implementation plans from the LTP4 and identify likely sustainability effects.

Table 6-1 – Sustainability issues identified and sustainability issues

Topic	Sustainability Issues Identified	Sustainability Objective
Natural Capital and Ecosystem Services	▪ New transport routes will need to be carefully planned so that they do not cause adverse effects on ecosystems with high (potential) ecosystem services provision. Given that ecosystem services are the benefits that nature provides to people, areas of high (potential) provision are often the green and blue spaces close to centres of population, as well as connecting habitats that link these with more remote designated habitats and landscapes; ▪ As transport corridors are typically linear, ensuring the connectivity of ecosystems is both an issue and an opportunity for the Transport Strategy. There is scope to focus on redevelopment of existing assets rather than build new, to focus development away from areas of high biodiversity and ecosystem service provision, and to enhance the quality of the transport 'soft estate' alongside existing and new transport corridors in order to improve habitat connectivity; ▪ Human health and quality of life can be improved by taking a natural capital approach to the Transport Strategy. For example, improving the quality of habitats (including tree planting/wildflower planting) alongside walking and cycling routes can help encourage more active lifestyles with benefits for people's physical and mental health and wellbeing. Views of vegetation from other modes of transport (e.g. along roads and railways) can also enhance mental wellbeing, for example by reducing stress levels; and ▪ Enhancing the quality of transport 'soft estate' can also help improve the resilience of the transport network to future climate change, for example by reducing flood risk and providing shading and cooling benefits.	**SA1:** To maintain and enhance the provision of ecosystem services from the Borough's natural capital and contribute to environmental net gain.

Topic	Sustainability Issues Identified	Sustainability Objective
Materials and Waste	▪ New transport infrastructure can lead to use of minerals and other materials, in addition to generating waste. The transport of waste and materials can lead to indirect effects from traffic such as congestion, air pollution and noise; ▪ There is a reliance upon the road network to transport materials, and it is unlikely that this will change; and ▪ Increasing population of the County is likely to generate more waste which requires transportation. Construction of new transport infrastructure also has the potential to generate waste.	**SA2:** To conserve natural resources, increase resource efficiency and reduce generation and disposal of waste.
Soils	▪ Soil is an important natural resource for agriculture, food production, biodiversity and archaeological and geological purposes. Acknowledgement should be given to the detrimental impacts arising from soil compaction, erosion and cumulative pollution; ▪ It is important that any future development of the transport network in WBC does not have adverse impacts or lead to the degradation of Best and Most Versatile (BMV) (grades 1 to 3) agricultural land; ▪ Improvements to transport infrastructure will likely require land take; and ▪ Land should be used in the most efficient manner.	**SA3:** To protect soils and minimise the loss of Best and Most Versatile Land.
Biodiversity, Flora and Fauna	▪ Due consideration should be given to protecting and conserving WBC's biodiversity, particularly in light of the disturbance and habitat degradation that may arise from the construction of transport infrastructure and projected population increase; ▪ There are a number of statutory local, national and international sites designated for nature conservation within the county which may be affected by development, including transport infrastructure; ▪ Habitats, particularly those designated as HPI and Ancient Woodland are at risk of being lost, damaged or fragmented by development, including transport infrastructure; ▪ Species, including Species of Principal Importance and protected species, may also be affected by construction and operation of new infrastructure, both directly and indirectly; ▪ The LTP4 presents opportunities to be strategic in the enhancement of biodiversity at the landscape scale across the corridors (and, once the interventions are defined, also in relation to any necessary offsets beyond the boundary of specific developments). Existing Biodiversity Opportunity Areas (Natural England) can be combined with priorities for wider ecosystem service benefits to deliver landscape wide environment gain for biodiversity and people; and ▪ Biodiversity may be lost as the end result of development of new infrastructure resulting from the LTP4.	**SA4:** To protect and enhance the Borough's biodiversity, fauna and flora, including designated sites for nature conservation notable and protected species. **SA5:** Enhance the connectivity between habitats through the creation of green corridors and preservation / enhancement of the Green Infrastructure Network.
Air Quality	▪ Within WBC, AQMA's are predominantly associated with transport sources and emissions. Potential adverse impacts	**SA6:** To reduce traffic related air pollution in

Topic	Sustainability Issues Identified	Sustainability Objective
	affecting human health and the wider surrounding environment arising from transport sources will need to be given appropriate consideration; ■ Where AQMAs are declared, due consideration of transport associated measures should be given to address their declaration; ■ Addressing local problems associated with PM_{10}, $PM_{2.5}$, NO_x and NO_2 emissions to reduce air pollution; ■ There are three AQMA's located within WBC and are all declared for exceedances of Nitrogen Dioxide (NO_2) with all cases associated with traffic; and ■ Although changes in technology mean that vehicles are producing less emissions, the number of vehicles on Borough roads is expected to increase, which has the potential to affect air quality and as a consequence, human health, natural capital and ecological sites.	AQMAs where possible, and enhance air quality elsewhere in Wokingham Borough.
Climate Change	■ WBC has committed to reducing the Borough's carbon footprint to net zero carbon by 2030. Transport infrastructure is one of the largest contributors to greenhouse gas emissions and must be considered accordingly before progressing future schemes; ■ Climate change is anticipated to exacerbate flood issues across WBC putting livelihoods, dwellings, businesses and lives at risk; and ■ Road and rail infrastructure are vulnerable to power and telecommunication issues as a result of an increase in severe meteorological occurrence. This may impact services as well as, in a worst case scenario, risk human health.	**SA7:** To reduce emissions of greenhouse gases in line with WBC's net zero commitment by 2030 **SA8:** Ensure that the local transport network builds resilience to climate change.
Noise	■ Excessive noise from transport can adversely affect general health, sleep and be seen as a nuisance; ■ Transport noise may adversely impact sleep, health and wellbeing as well as disturb wildlife and there is potential for an increase in noise levels in the NIAs in Wokingham Borough; and ■ The natural environment, particularly tranquil areas, may experience an increase in transport-related noise pollution.	**SA9:** To reduce noise from transport related sources in particular, Noise Important Areas and to protect tranquil areas.
Landscape and Townscape	■ The character and quality of Wokingham Borough's landscapes and townscapes can be eroded by the construction and operation of transport infrastructure, which may impact upon the distinctive historic character of settlements; ■ Green Infrastructure (GI) describes the multifunctional network of green and blue spaces, and natural elements within and between cities, towns and villages. By connecting the centres of settlements into the surrounding landscape, GI can facilitate prosperous, active, healthy and happy communities. This network may be severed or reduced due to new transport infrastructure; and	**SA10:** To protect and where possible, enhance the quality, character and diversity of the existing landscape.

Topic	Sustainability Issues Identified	Sustainability Objective
	▪ Transport infrastructure has the potential to erode and adversely affect local character and distinctiveness.	
Historic Environment	▪ Conserving the character of the Borough is key, particularly in light of government policy and the extent of development and pressure for continued development in the area. Transport infrastructure has the potential to erode and adversely affect local character and distinctiveness. ▪ Adverse impacts upon the setting of components of the historic environment; ▪ The impact of vehicular damage to historic structures, buildings and the fabric of the public realm in town and village centres; ▪ The impacts of vehicular pollution on historic buildings; and ▪ The impacts of ancillary features, inclusive of marked parking bays, yellow lines etc. on the historic environment.	**SA11:** To protect and enhance the Borough's historic environment, including heritage resources, historic buildings, historic landscapes and archaeological features.
Water	▪ Climate change is likely to increase the occurrence of flooding from all sources and hence raise the flood risk in Wokingham Borough including to transport infrastructure; ▪ Pollution of the water environment can occur from run-off from roads and pavements after rainfall; and ▪ Increase in flood risk can occur through the loss of permeable surfaces due to new road construction.	**SA12:** To protect and where possible, enhance water quality of the county's rivers, groundwater and coast. **SA13:** To reduce vulnerability to flooding of transport infrastructure and ensure that the risk of surface water flooding is not increased.
Population	▪ An ageing population for WBC is likely to place increased strain and demand on access to services, particularly healthcare, and public transport. Proposed sites for strategic development will need to be accounted for when choosing potential locations for new transport infrastructure;The population of WBC is increasing and there will be additional movement associated with this growth; and ▪ The ageing rural population is becoming increasingly isolated, increasing the demand for access to services.	**SA14:** To increase the capacity and efficiency of the transportation network to support demographic changes, including increasing travel and sustainable modes of transport.
Health and Wellbeing	▪ The population of Wokingham Borough is an ageing population, transport and future mobility will need to reflect their needs; ▪ There may be inequalities in access to healthcare, jobs and other services associated with transport provision; and ▪ Active travel can play a role in reducing obesity and increasing health and wellbeing.	**SA15:** To improve the health and well-being of the population through access to transport, active travel and reductions in pollution.

Topic	Sustainability Issues Identified	Sustainability Objective
Economy and Employment	▪ Economic issues linked to transport include barriers to growth, enabling greater access to well-paid and satisfying employment within a flexible labour market characterised by diversity in activity and transferable and complementary knowledge solutions. Supporting sustainable economic development which mitigates or combats the effects of climate change is a key issue. ▪ Good access to customers is important, transport infrastructure is noted as an area of improvement to enable this; and ▪ Sustaining and supporting economic growth across the country in light of the withdrawal from the EU and economic issues brought about by the Covid-19 pandemic, conflict in Ukraine and other regions, and inflation pressures.	**SA16:** To sustain economic growth, enable well paid employment and competitiveness across Wokingham Borough through provision of reliable and accessible transport networks.

7 Next Steps

7.1.1. WBC will undertake a statutory consultation to seek the views of the statutory bodies (Natural England, Historic England and the Environment Agency) on the scope of the SA. WBC will also seek internal views, particularly from the Heritage and Environment team. Consultation at this stage helps to ensure that the SA provides a robust assessment of the LTP4.

7.1.2. In particular views on the following questions are welcome:

- Do you agree with the policy context and baseline information presented?
- Are there any additional sustainability issues which should be identified?
- Do you agree with sustainability objectives in **Table 6.1**?

7.1.3. Following receipt of comments, they will be reviewed and changes to the appraisal framework made as necessary. The appraisal framework will then be used to assess the Local Transport Plan (refer to Stage B of **Figure 3.1**) during the next stages of its preparation.

Appendix A

Figures

Figure A-1 - Declared AQMAs, NIAs and Active Waste Mineral Sites

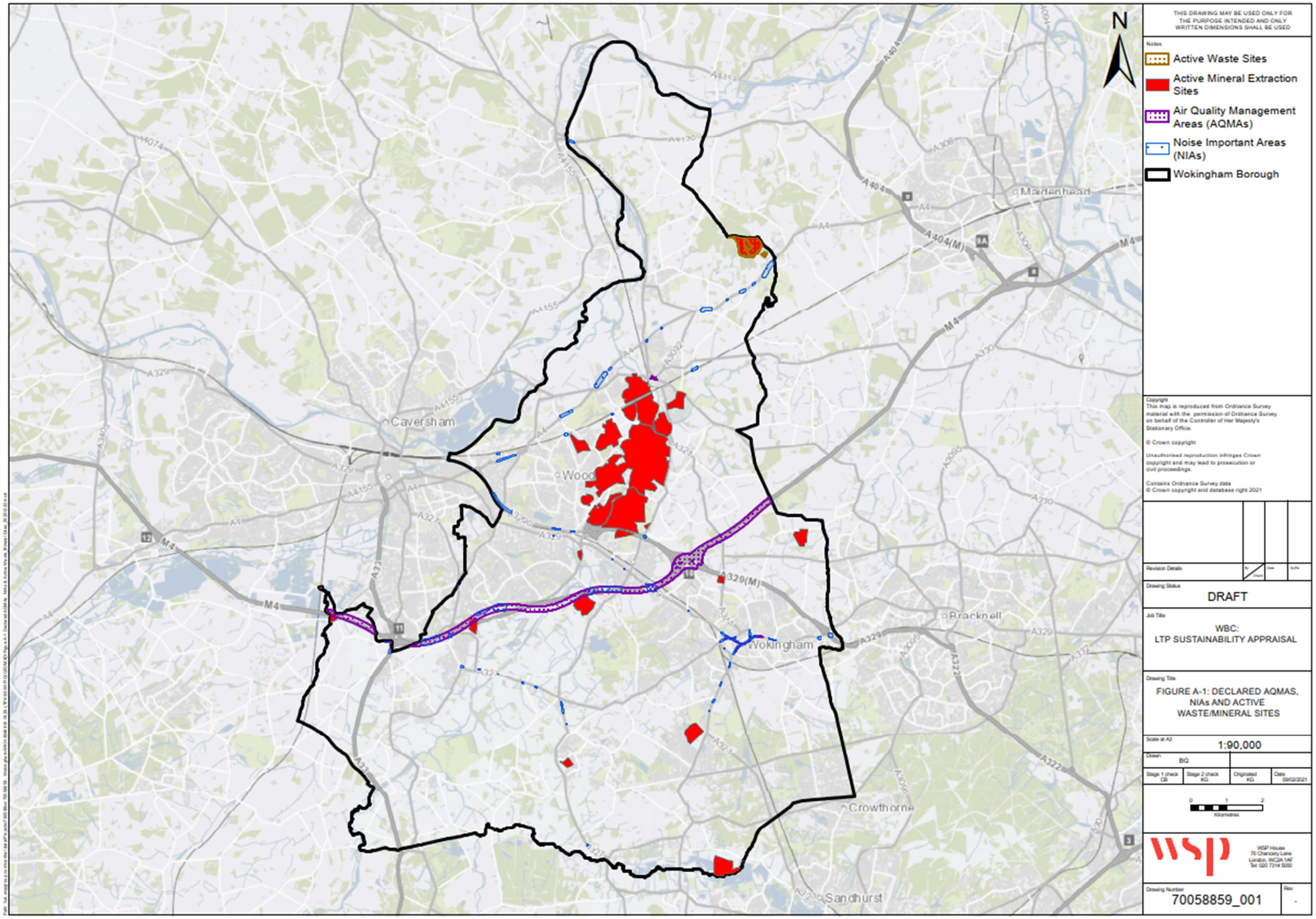


Figure A-2 - Agricultural Land Classification

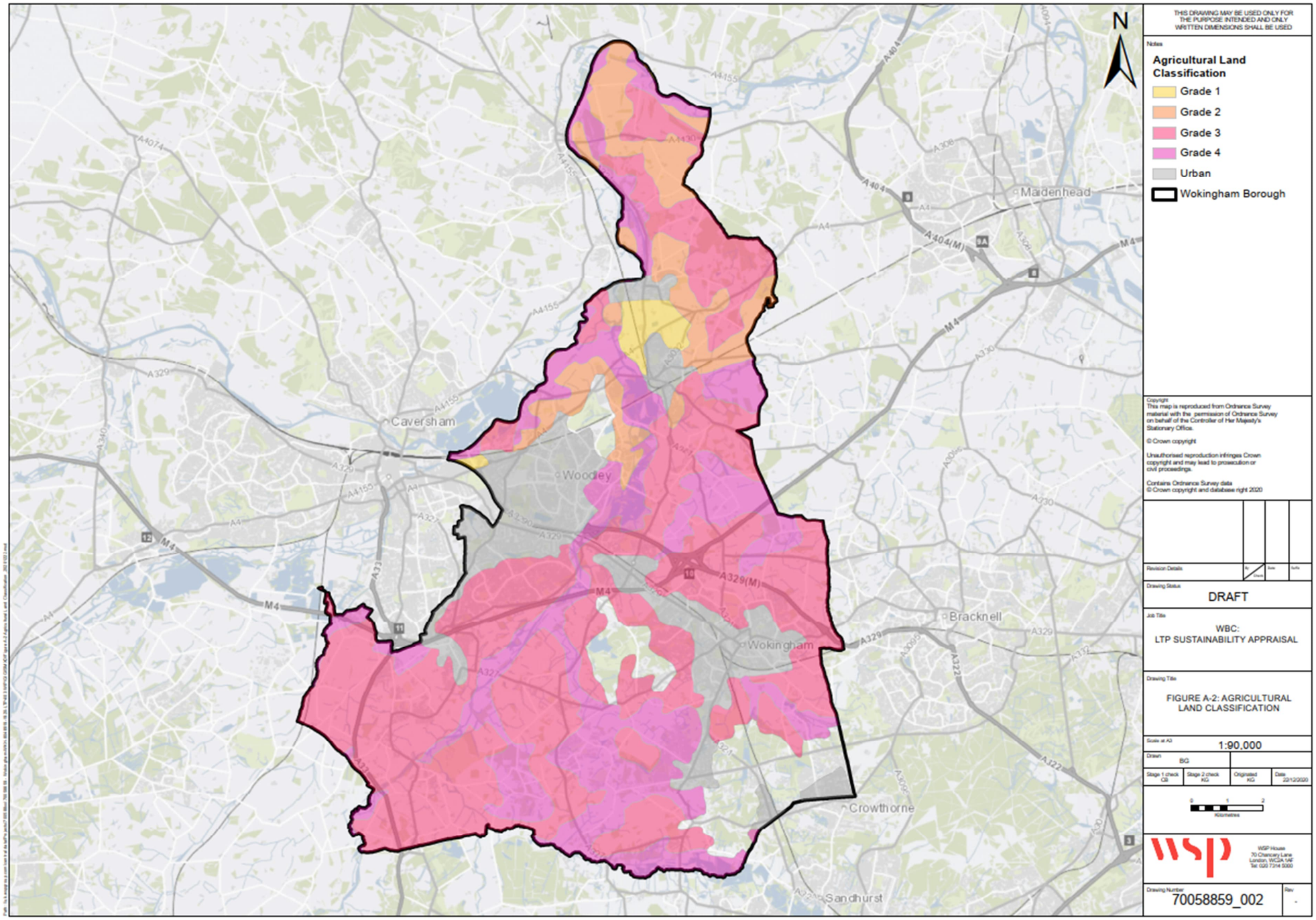


Figure A-3 - Ecological Designations

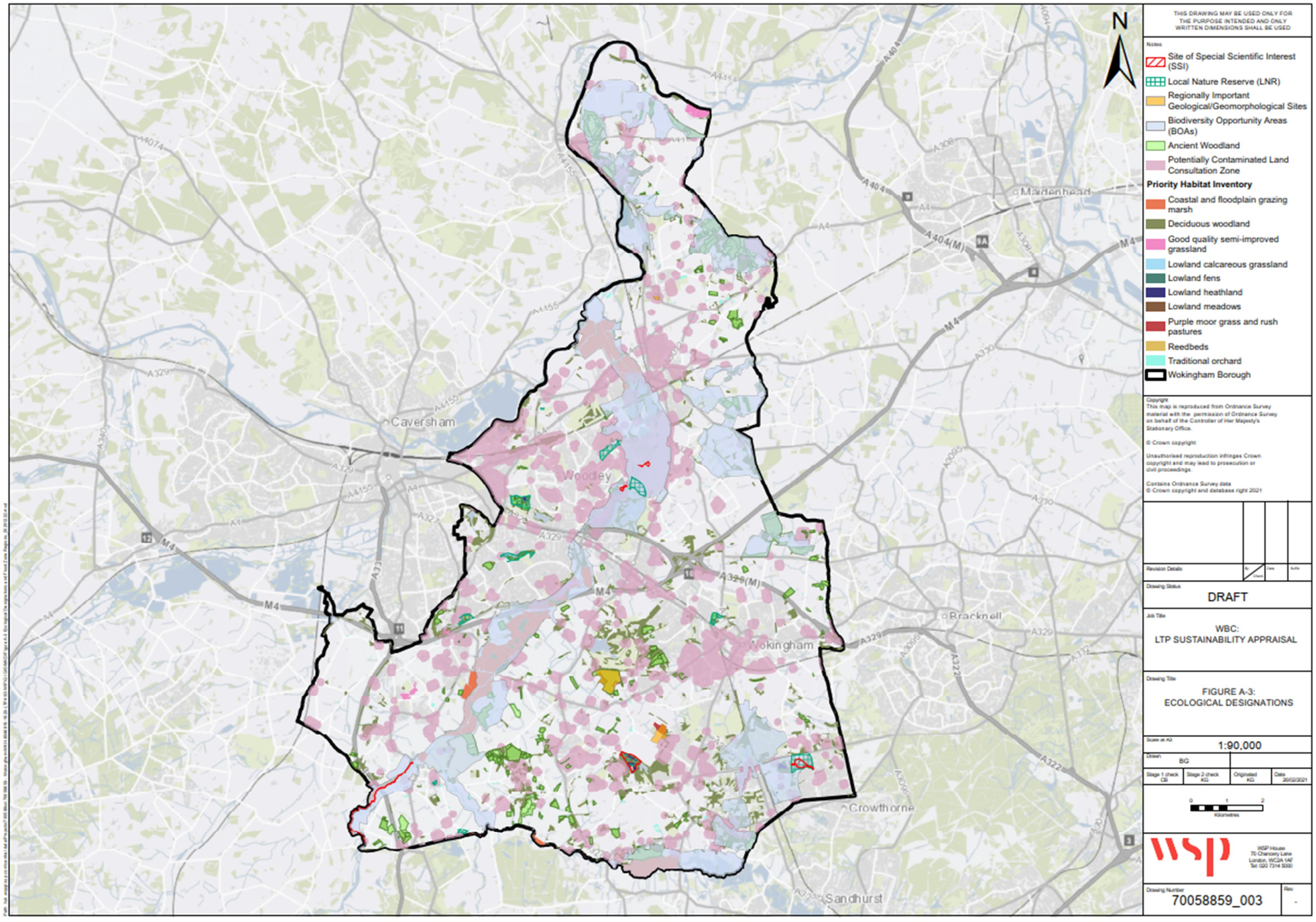


Figure A-4 - Designated Heritage Assets

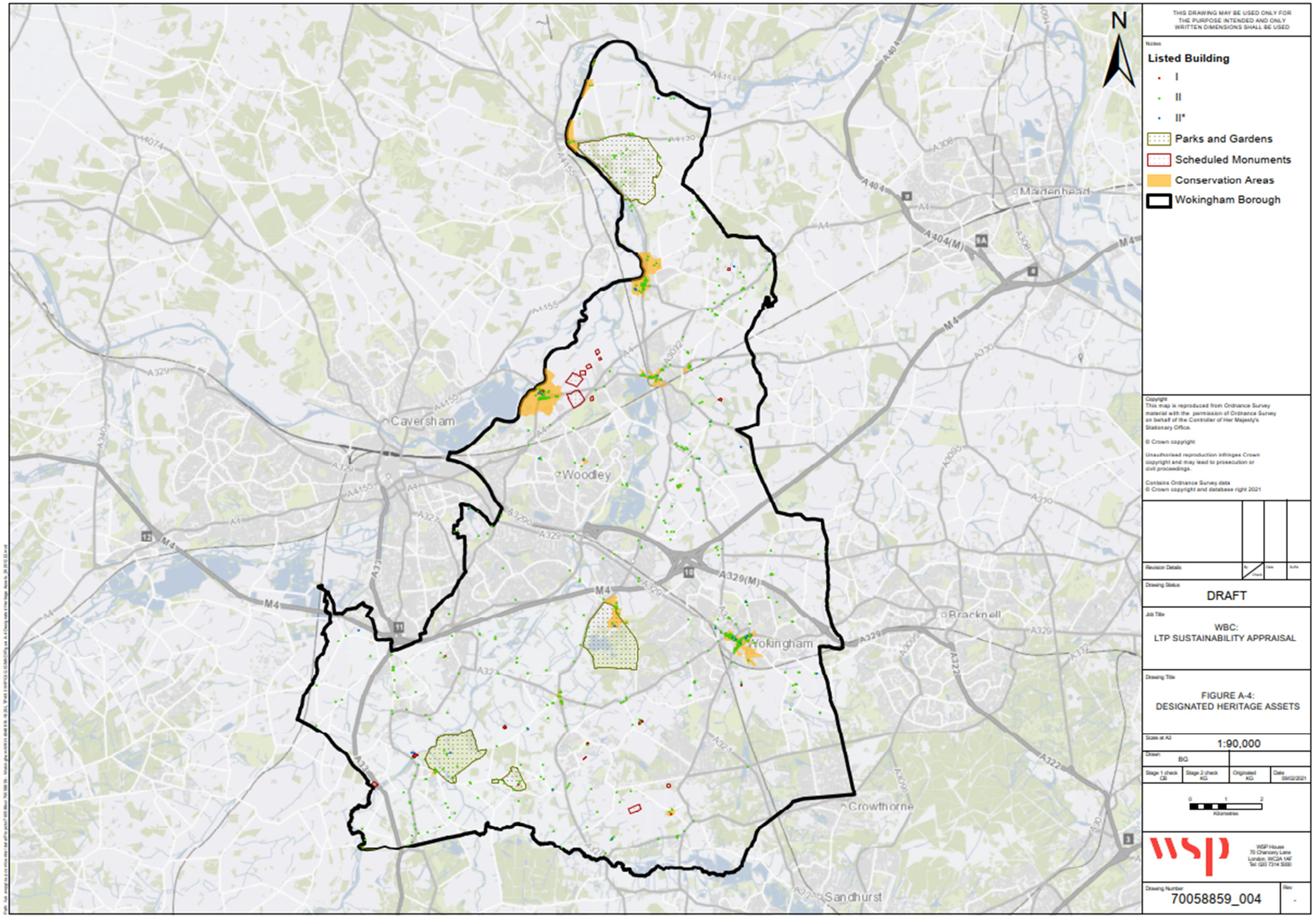


Figure A-5 - Flood Zones

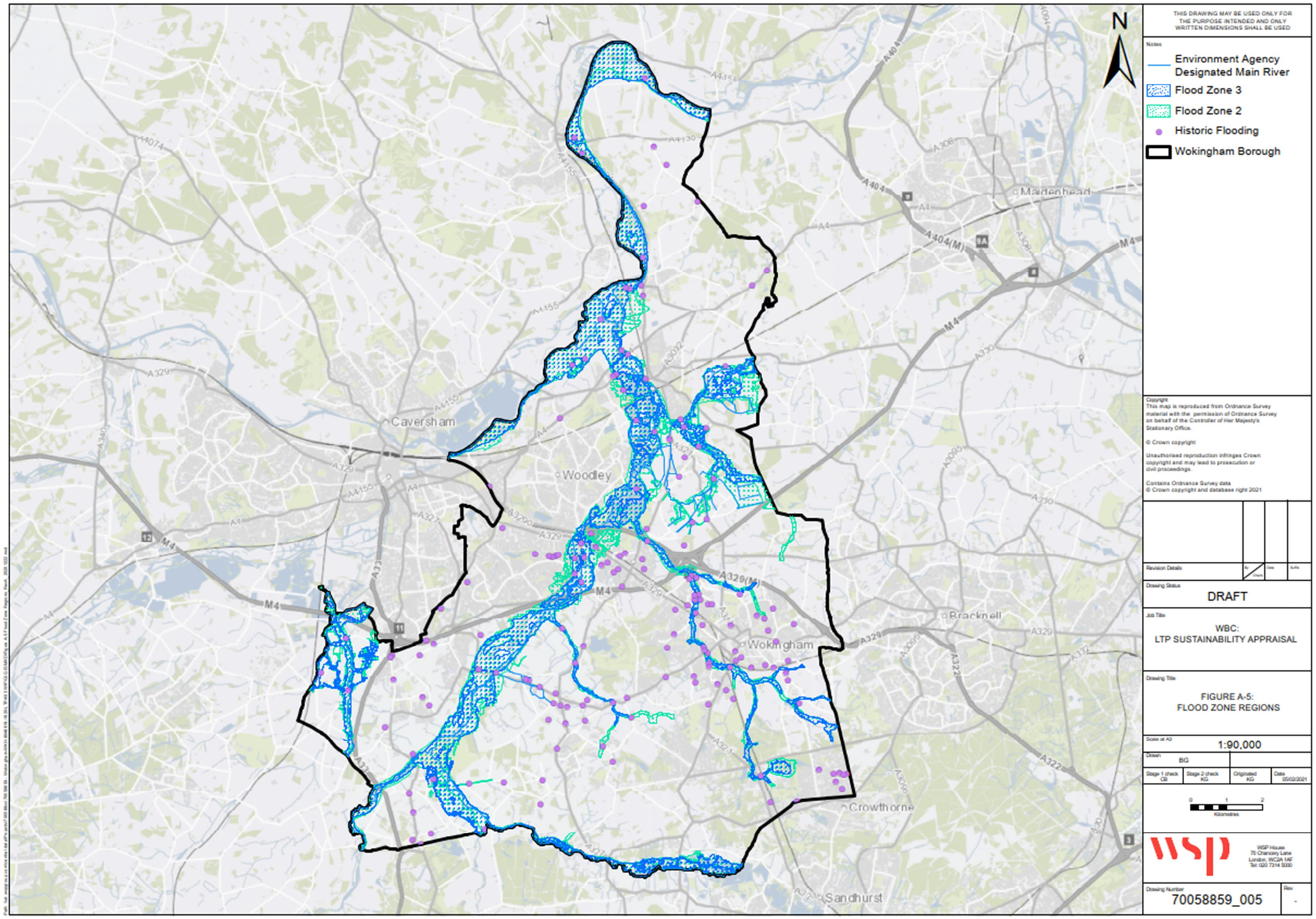
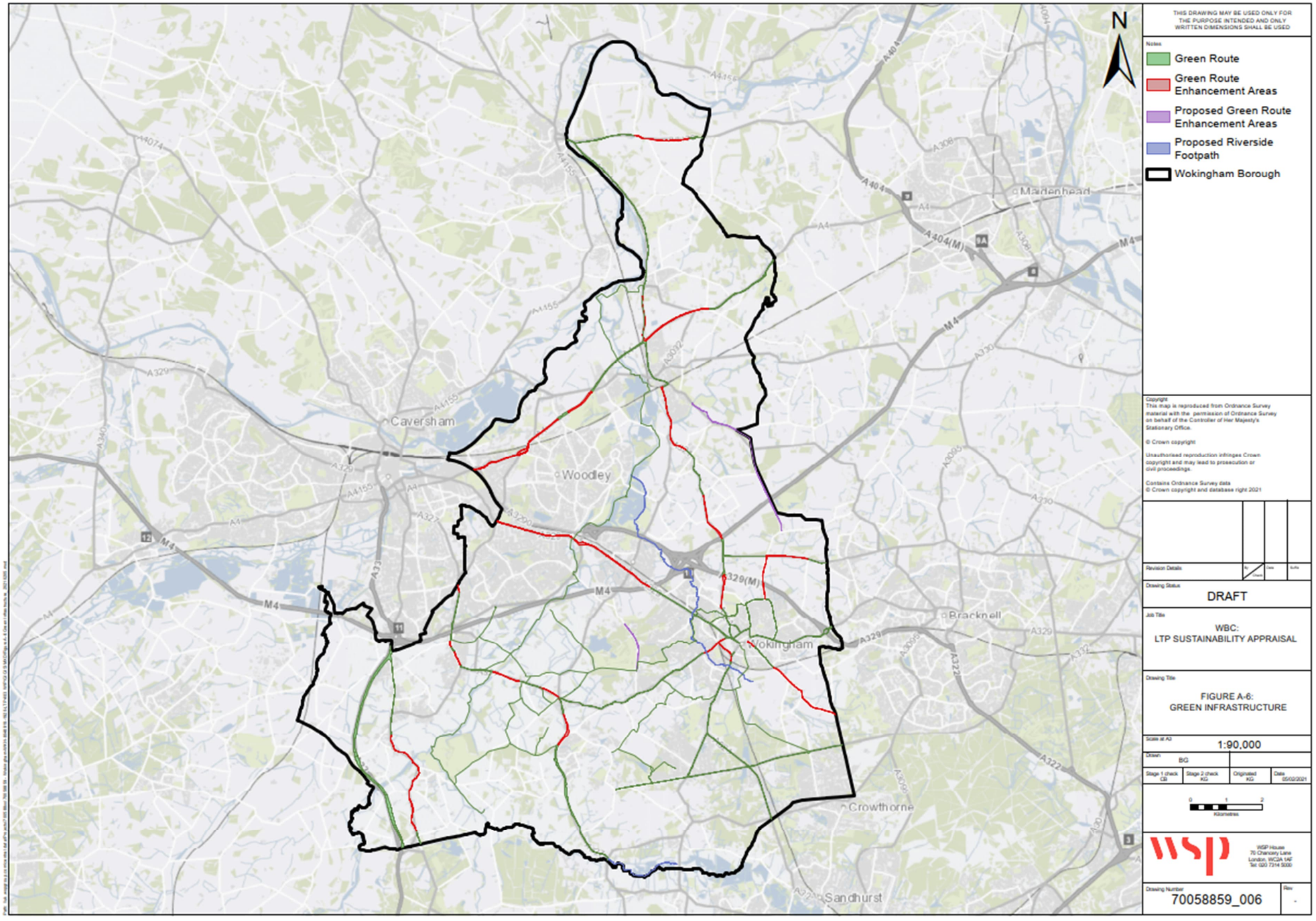


Figure A-6 - Green Infrastructure



Appendix B

Relevant Plans, Policies and Programmes

This appendix presents the findings of the review of legislation, policies and plans including relevant international, national and regional documents undertaken as a part of the evidence gathering exercise for the Wokingham LTP4 Sustainability Appraisal Scoping Report.

Tables B-1 – B-14 provide details of the relevant legislation, policies, plans and programmes (PPP) broken down by topic. Some SA topics have been combined as the content related to them overlap or are very similar and therefore the SA topics in **Chapter 5** are not entirely the same as those listed in **Table B-1 – Table B-14**.

Table B-1 – Relevant Plans, Policies, Strategies and Programmes – Natural Resources and Waste

Document	Key Messages/ Issues
National	
The Waste (England and Wales) Regulations 2011 (as amended)	Requires that an establishment that imports, produces, collects, transports, recovers or disposes of waste must take reasonable steps to apply the waste hierarchy when waste is transferred or disposed. A departure from the priority order is only permitted when this is justified by life-cycle thinking on the overall effect of generation or management of waste.  Source: Directive 2008/98/EC

Document	Key Messages/ Issues
	The main principles of the waste hierarchy include: ▪ Waste should be prevented or reduced at source as far as possible; ▪ Where waste cannot be prevented, waste materials or products should be re-used directly or refurbished and then re-used; ▪ Waste materials should be recycled or reprocessed into a form that allows them to be reclaimed as a secondary raw material; ▪ Where useful secondary raw materials cannot be reclaimed, the energy content of the waste should be recovered and used as a substitute for non-renewable energy resources; and ▪ Only if waste cannot be prevented, reclaimed, or recovered, should it be disposed of into the environment. If this occurs, then it should be disposed of in a controlled manner.
The Waste Management Plan for England (2013)	Provides an analysis on waste management in England, collating policies to meet the requirements of Article 28 of the Waste Framework Directive.
The Environment Act (2021)	The Environment Act, which became law in 2021, acts as the UK's new framework of environmental protection. The Environment Act allows the UK to enshrine better environmental protection into law. It provides the Government with powers to set new binding targets, including for air quality, water, biodiversity, and waste reduction. Objectives for targets under consideration ▪ increase resource productivity ▪ reduce the volume of 'residual' waste we generate
National Planning Policy Framework (NPPF), 2021	Paragraph 174 states: "… *contribute to and enhance the natural and local environment by:* ▪ Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils…; ▪ Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability…; and ▪ Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate". Paragraph 17 also seeks to facilitate the sustainable use of minerals. Paragraph 210 encourages so far as practicable, planning policies should "*take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the*

Document	Key Messages/ Issues
	supply of materials, before considering extraction of primary materials, whilst aiming to source minerals supplies indigenously".
National Policy Statement for National Networks (2014)	Paragraph 5.117 requires land stability to be considered in respect of new development. Specifically, proposals should be appropriate for the location, including preventing unacceptable risks from land instability. Paragraph 5.168 states "*Applicants should also identify any effects, and seek to minimise impacts, on soil quality, considering any mitigation measures proposed. Where possible, developments should be on previously developed (brownfield) sites provided that it is not of high environmental value. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination and how it is proposed to address this*". Paragraph 5.19 states "*Evidence of appropriate mitigation measures (incorporating engineering plans on configuration and layout and use of materials) in both design and construction should be presented*".
A Green Future: Our 25 Year Plan to Improve the Environment (2018)	Goal 5 'Clean and plentiful water' involves using resources from nature more sustainably and efficiently. The plan states: "*Improve our approach to soil management: by 2030 we want all of England's soils to be managed sustainably, and we will use natural capital thinking to develop appropriate soil metrics and management approaches*".
Our Waste, Our Resources: A Strategy for England (Dec 2018)	Sets out how the UK Government aims to preserve material resources by minimising waste, promoting resource efficiency and moving towards a circular economy in England.
Local	
Wokingham District Local Plan Update (undergoing development)	The Draft Wokingham District Local Plan is likely to contain policies related to materials and waste within Wokingham.
Central and Eastern Berkshire, Joint Minerals and Waste Plan	Sets out the vision for Central and Eastern Berkshire's waste and minerals: "… aim to ensure the maintenance of a steady and adequate supply of minerals, whilst maximising the contribution that

Document	Key Messages/ Issues
	minerals development can bring to local communities, the economy and the natural and historic environment." "Waste will be managed in a sustainable way, in accordance with the waste hierarchy. The Authorities will work in collaboration with others to ensure the best environmental solutions to waste management are delivered." "… ensure that the full extent of social, economic and environmental benefits of minerals and waste development are captured, contributing to Central and Eastern Berkshire's economic activity and enhancing the quality of life and living standards within the area. These benefits will be achieved, whilst minimising impacts on the natural and historic environment and positively contributing to climate change adaptation and mitigation."

Table B-2 – Relevant Plans, Policies, strategies and Programmes – Soils

Document	Key Messages/ Issues
National	
National Planning Policy Framework (NPPF), 2021	Paragraph 174 states: "… *contribute to and enhance the natural and local environment by:* ▪ Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils…; ▪ Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability…; and ▪ Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate".
National Policy Statement for National Networks (2014)	Paragraph 5.117 requires land stability to be considered in respect of new development. Specifically, proposals should be appropriate for the location, including preventing unacceptable risks from land instability. Paragraph 5.168 states "*Applicants should also identify any effects, and seek to minimise impacts, on soil quality, considering any mitigation measures proposed. Where possible, developments should be on previously developed (brownfield) sites provided that it is not of high environmental value. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination and how it is proposed to address this*".
A Green Future: Our 25 Year Plan to Improve the Environment (2018)	Goal 5 'Clean and plentiful water' involves using resources from nature more sustainably and efficiently. The plan states: "*Improve our approach to soil management: by 2030 we want all of England's soils to be managed sustainably, and we will use natural capital thinking to develop appropriate soil metrics and management approaches*".
The Natural Environment White Paper (2012)	This commits the UK government to ensuring that soils are managed in a sustainable manner by 2030. The paper highlights two major commitments: ▪ 'Undertaking a significant research programme to explore: how soil degradation can affect the soil's ability to support vital ecosystem services such as flood mitigation, carbon storage and nutrient cycling; and how to best manage our lowland peatlands in a way which supports efforts to tackle climate change; and

Document	Key Messages/ Issues
	▪ Reduce peat use to zero by 2030.'
The Path to Sustainable Farming: An Agricultural Transition Plan 2021 to 2024 (2020)	The Sustainable Farming Incentive will support sustainable approaches to farm husbandry to deliver for the environment, such as actions to improve soil health, quality, and management.
Local	
Wokingham Borough Landscape Character Assessment (LCA) (2019)	The LCA aims to provide an objective description of the landscape and a strategy for managing it. The LCA provides an evidence base to support policies within the Local Plan Update or more widely guide decision making around development and the management of future change.
Wokingham Borough Core Strategy (2010)	The Core Strategy for Wokingham also includes the priority to protect the most important areas for landscape from development and maintain the borough's landscape as far as possible.

Table B-3 – Relevant Plans, Policies, strategies and Programmes – Biodiversity and Natural Capital

Document	Key Messages/ Issues
International	
Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)	The convention has three main aims which are stated in Article 1: ▪ To conserve wild flora and fauna and their natural habitats; ▪ To promote cooperation between states; and ▪ To give particular attention to endangered and vulnerable species including endangered and vulnerable migratory species.
Conservation of Natural Habitats and Wild Fauna & Flora (the 'Habitats Directive') (1992)	The identification of a European network of Sites of Community Importance (SCIs) to be designated as Special Areas of Conservation (SACs). A SA would need to report on any potential effects on SACs and all development plans should aim to avoid adverse effects on them.
EU (2011) EU Biodiversity Strategy to 2020 – towards implementation	Aimed at halting the loss of biodiversity and ecosystem services in the EU by 2020, the strategy provided a framework for action over the last decade and covers the following key areas: ▪ Conserving and restoring nature; ▪ Maintaining and enhancing ecosystems and their services; ▪ Ensuring the sustainability of agriculture, forestry and fisheries; ▪ Combating invasive alien species; and ▪ Addressing the global biodiversity crisis.
EU (2013) 7th Environment Action Programme (EAP) to 2020	The 7th EAP guided EU environmental policy up to 2020 and set ambitions for 2050. The Programme set the following as a priority objective: "to protect, conserve and enhance the Union's natural capital." The 7th EAP reflects the EU's commitment to the preservation of biodiversity and the ecosystem services it provides for both its intrinsic value and its contribution to economic well-being. The Programme highlights that integrating the value of ecosystem services into accounting and reporting across the Union and its member states by 2020 will result in the better management of natural capital.

Document	Key Messages/ Issues
The Convention on Biological Diversity's (CBD's) Strategic Plan for Biodiversity 2011-2020	This plan provides an overarching framework on biodiversity, for all biodiversity-related conventions, the entire United Nations system and all other partners engaged in biodiversity management and policy development. The plan consists of five strategic goals, which address 20 Aichi targets:: ▪ Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across Government and society. ▪ Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use. ▪ Strategic Goal C: Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity. ▪ Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services. ▪ Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building.
Ramsar Convention on the Conservation on Wetlands of International Importance (1971)	The Ramsar Convention covers all aspects of wetland conservation. It has three main pillars of activities: ▪ The designation of wetlands of international importance as Ramsar sites; ▪ The promotion of the wise use of all wetlands in the territory of each country; and ▪ International co-operation with other countries to further the wise use of wetlands and their resources. While the initial emphasis was on selecting sites of importance to waterbirds, now non-bird features are increasingly considered, both in the selection of new sites and when reviewing existing sites.
National	
The Environment Act (2021)	The Environment Act, which became law in 2021, acts as the UK's new framework of environmental protection. The Environment Act allows the UK to enshrine better environmental protection into law. It provides the Government with powers to set new binding targets, including for air quality, water, biodiversity, and waste reduction. The Biodiversity Gain objective requires the biodiversity value attributable to a development to exceed pre-development biodiversity value by at least 10%.

Document	Key Messages/ Issues
25 Year Environment Plan, HM Government (2018) 289	The 25 Year Environment Plan outlines the UK Government's ambition to leave our environment in a better state than we found it and the steps proposed to take to achieve that ambition. The Plan includes ten key targets, of which two focus on biodiversity. <u>Thriving plants and wildlife:</u> ▪ Restoring 75% of our one million hectares of terrestrial and freshwater protected sites to favourable condition, securing their wildlife value for the long term; ▪ Creating or restoring 500,000 hectares of wildlife-rich habitat outside the protected site network, focusing on priority habitats as part of a wider set of land management changes providing extensive benefits; ▪ Taking action to recover threatened, iconic or economically important species of animals, plants and fungi and where possible to prevent human-induced extinction or loss of known threatened species in England and the Overseas Territories; and ▪ Increasing woodland in England in line with our aspiration of 12% cover by 2060: this would involve planting 180,000 hectares by end of 2042. <u>Enhancing biosecurity:</u> ▪ Managing and reducing the impact of existing plant and animal diseases; lowering the risk of new ones and tackling invasive non-native species; ▪ Reaching the detailed goals to be set out in the Tree Health Resilience Plan of 2018; ▪ Ensuring strong biosecurity protection at our borders, drawing on the opportunities leaving the EU provides; and ▪ Working with industry to reduce the impact of endemic disease.
Environmental Improvement Plan 2023	The plan outlines the UK Government's pargets for improving the environment, including for biodiversity. The plan aims to restore biodiversity and enhance biosecurity within the UK. The plan aims to: ▪ Halt the decline in species abundance by 2030, and then increase abundance by at least 10% to exceed 2022 levels by 2042. ▪ Restore or create more than 500,000 hectares of wildlife-rich habitat by 2042, alongside our international commitment to protect 30% of our land and ocean by 2030. ▪ New interim target to restore or create 140,000 hectares of wildlife-rich habitats outside protected sites by 2028, compared to 2022 levels. ▪ Improve the Red List Index for England for species extinction by 2042 compared to 2022 levels. ▪ New interim targets for all sites of special scientific interest (SSSIs) to have an up-todate condition assessment; and for 50% of SSSIs to have actions on track to achieve favourable condition by 31 January 2028.

Document	Key Messages/ Issues
	▪ Increase tree canopy and woodland cover from 14.5% to 16.5% of total land area in England by 2050, with a new interim target to increase this by 0.26% (equivalent to 34,000 hectares) by 31 January 2028, in line with the trajectory required to achieve the long-term target. ▪ For 70% of designated features in Marine Protected Areas (MPAs) to be in favourable condition by 2042 with the remainder in recovering condition, with a new interim target of 48% of designated features to be in favourable condition by 31 January 2028, in line with the trajectory required to achieve the long-term target.
Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services (2011)	The mission for this strategy is: to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people. This will be delivered through four areas: ▪ a more integrated large-scale approach to conservation on land and at sea ; ▪ putting people at the heart of biodiversity policy; ▪ reducing environmental pressures; and ▪ improving our knowledge.
Wildlife and Countryside Act (as amended 1981)	The Wildlife and Countryside Act 1981 consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the conservation of wild birds (Birds Directive) in Great Britain (NB Council Directive 79/409/EEC has now been replaced by Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version). The Act provides for the notification and confirmation of Sites of Special Scientific Interest (SSSIs) and the protection of wildlife.
Working with the grain of nature: A Biodiversity Strategy for England 2002	The Biodiversity Strategy for England sets a fundamental shift by ensuring that biodiversity considerations become embedded in all the main sectors of economic activity, public and private. The Strategy capitalises on the opportunities presented by the report of the Policy Commission on Food and Farming and the transition away from the Common Agricultural Policy. The Strategy sets out a programme for five years for the other main policy sectors, to make the changes necessary to conserve,

Document	Key Messages/ Issues
	enhance and work with the grain of nature and ecosystems rather than against them. It takes account of climate change as one of the most important factors affecting biodiversity and influencing policies.
The Path to Sustainable Farming: An Agricultural Transition Plan 2021 to 2024 (2020)	By 2028, the goals are: ▪ a renewed agricultural sector, producing healthy food for consumption at home and abroad, where farms can be profitable and economically sustainable without subsidy; and ▪ farming and the countryside contributing significantly to environmental goals including addressing climate change The second goal will be backed up with support for tree planting, peatland restoration and nature recovery.
The Natural Environment White Paper (2011)	The White Paper sets out a clear 25 year framework for protecting and enhancing the things that nature gives us for free. Four core themes: ▪ Protecting and improving our natural environment ▪ Growing a green economy ▪ Reconnecting people and nature ▪ International and EU leadership The White Paper has led to the development of Natural Environment Indicators against which to assess progress towards the goals of the Paper.
Making Space for Nature: A review of England's Wildlife Sites and Ecological Network: Chaired by Professor Sir John Lawton CBE FRS (2010)	Species and habitats should be restored and enhanced in comparison with 2000 levels. Improve the long-term sustainability of ecological and physical processes that underpin the functioning of ecosystems, thereby enhancing the capacity of ecosystem services. Provide accessible natural environments rich in wildlife for people to enjoy and experience. This has also influenced other documents, such as the 25-year Environment Plan.
The Natural Choice: Securing the value of nature; HM Government (2011)	Protect and enhance biodiversity through Nature Improvement Areas (NIAs), biodiversity offsetting, Local Nature Partnerships and phasing out peat use by 2030.

Document	Key Messages/ Issues
	Place natural capital at the centre of economic decision making to avoid the unintended environmental consequences that arise from undervaluing natural assets.
National Networks National Policy Statement (NN NPS) (2014) 292	NN NPS states that development should avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives. The applicant may also wish to make use of biodiversity offsetting in devising compensation to counteract impacts on biodiversity which cannot be avoided or mitigated. Where significant harm cannot be avoided or mitigated, as a last resort, appropriate compensation measures should be sought. Paragraphs 3.2 to 3.5 of the NN NPS state that not only should national road and rail networks be designed to minimise social and environmental impacts, but that they should also seek to improve quality of life. In part this may be achieved by "reconnecting habitats and ecosystems […] improving water quality and reducing flood risk, […] and addressing areas of poor air quality." Paragraph 5.162 recognises the potential for developments to provide positive environmental and economic benefits through the provision of green infrastructure. Paragraph 5.175 of the NN NPS highlights that green infrastructure identified in development plans should be protected and, where possible, enhanced.
National Planning Policy Framework (NPPF), 2021	Paragraphs 174 and 179 to 182 of the NPPF require development to protect and safeguard biodiversity, and advise that development should aim to conserve, restore and enhance biodiversity adequately through mitigation or, as a last resort, using compensation. Proposals which aim to conserve or enhance biodiversity should be supported. Recognise the wider benefits of ecosystem services; minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the UK Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures. Paragraph 174 of the NPPF requires that planning decisions should be taken to enhance the natural environment by recognising the wider benefits from natural capital and ecosystem services. Further, Paragraph 175 requires plans to take a strategic approach to maintaining and enhancing green infrastructure networks and improving natural capital at a catchment or landscape scale.

Document	Key Messages/ Issues
The State of Natural Capital: Restoring our Natural Assets; Natural Capital Committee (2014)	Key points from the report are: ▪ Some assets are currently not being used sustainably and the benefits that we derive from them are at risk; ▪ There are major economic benefits to be gained from natural capital and that their value should be incorporated into decision making; and ▪ A long-term restoration plan is necessary to maintain and improve natural capital for future generations.
The State of Natural Capital; Natural Capital Committee (2020) 293	In the updated State of Natural Capital report, the Natural Capital Committee sets out that Despite some improvements, only limited progress has been made towards the 25 Year Environment Plan's goals. ▪ Its advice to Government that biodiversity net gain should be expanded to environmental net gain. ▪ Its advice that an England wide baseline of natural capital assets should be established to measure progress towards environmental goals. Natural capital should be seen as infrastructure in its own right, in recognition of its contribution to economic wellbeing.
Local	
Wokingham Biodiversity Action Plan (2012-2024)	This Wokingham Borough Biodiversity Action Plan (BAP) aims to build on the achievements of the previous Biodiversity Action Plan for the Borough (2003-2012). The overall aims of the Wokingham Borough BAP are to: ▪ Raise awareness of the issues impacting on local biodiversity ▪ Outline targets and actions which will enhance biodiversity in the Borough ▪ Encourage and support community engagement; enabling local action to deliver targets ▪ Encourage management practices sympathetic to wildlife; promoting "good practice" and providing guidance ▪ Ensure policies are in place for the protection, management and enhancement of the local wildlife resource
Biodiversity Strategy The Loddon Catchment (2003)	The Loddon catchment is located in the South East England Biodiversity Region, straddling the borders of Hampshire, Surrey and Berkshire. Objectives of the Loddon Strategy are: ▪ Ensuring that key areas for biodiversity are adequately protected

Document	Key Messages/ Issues
	▪ Creating stronger linkages between and around habitats to reduce fragmentation ▪ Influencing land use and planning to achieve sustainable development ▪ Providing conservation advice to landowners to enhance/restore habitats ▪ Working with communities on public land to enhance and restore habitats ▪ Conducting surveys on species and habitats where there is a lack of information to ensure that management decisions are based on the best available knowledge ▪ Monitoring species and habitats to ensure that management is maintaining them in favourable condition ▪ Raising awareness of the ecological value of the Loddon catchment with key sectors of the community ▪ Buying or leasing land to maintain and restore habitats where appropriate

Table B-4 – Relevant Plans, Policies, strategies and Programmes – Air Quality

Document	Key Messages/ Issues
International	
Ambient Air Quality Directive (2008)	The Ambient Air Quality Directive provides the current framework for the control of ambient concentrations of air pollution in the EU. The control of emissions from mobile sources, improving fuel quality and promoting and integrating environmental protection requirements into the transport and energy sector are part of these aims.
National	
The Environment Act (2021)	The Environment Act, which became law in 2021, acts as the UK's new framework of environmental protection. The Environment Act allows the UK to enshrine better environmental protection into law. It provides the Government with powers to set new binding targets, including for air quality, water, biodiversity, and waste reduction. Objectives for targets under consideration: ▪ reducing the annual mean level of fine particulate matter (PM2.5) in ambient air (as required by the Environment Bill) ▪ in the long-term, reducing population exposure to PM2.5
25 Year Environment Plan, HM Government (2018)	With regards to the transport sector, the 25 Year Environment Plan identifies four 'early' priorities through the 'Future of Mobility Grand Challenge'. These include encouraging new modes of transport; addressing the challenges of moving from hydrocarbon to zero emission vehicles; and Preparing for a future of new mobility services, increased autonomy, journey-sharing and a blurring of the distinctions between private and public transport.
The Clean Growth Strategy, 2017	This Strategy sets out a comprehensive set of policies and proposals that aim to accelerate the pace of "clean growth", i.e. deliver increased economic growth and decreased emissions. Key Policies and Proposals in the Strategy: ▪ Develop world leading Green Finance capabilities;

Document	Key Messages/ Issues
	▪ Develop a package of measures to support businesses to improve their energy productivity, by at least 20 per cent by 2030; ▪ Improving the energy efficiency of our homes; ▪ Rolling out low carbon heating; ▪ Accelerating the shift to low carbon transport; ▪ Delivering clean, smart, flexible power emissions; and ▪ Enhancing the benefits and value of our natural resources.
National Policy Statement for National Networks (2014)- Paragraph 5.12	Accords air quality considerations substantial weight where, after taking into account mitigation, a scheme would lead to a significant air quality impact in relation to Environmental Impact Assessment (EIA) and/ or where they lead to deterioration in air quality in a zone/ agglomeration.
Air Quality Strategy: Framework for Local Authority Delivery (2023)	This policy outlines the strategic framework for local authorities and other partners. It sets out their powers, responsibilities, and further actions the government expects them to take. The priorities of the strategy are: ▪ Planning reforms helping to deliver on air quality; ▪ Building capacity in local councils through training, guidance and knowledge sharing; ▪ Reducing emissions from industrial sources through improved enforcement of environmental permits; ▪ Reducing pollution from domestic burning through smoke control areas and cleaner fuels; ▪ Raising awareness within local communities of air quality impacts and how to reduce them; and ▪ Boosting active travel and public transport to improve air quality.
Local	
Wokingham Borough Council Air Quality Action Plan (2017-2026)	This report outlines the actions that Wokingham Borough Council will deliver between 2017-2026 to reduce concentrations of air pollutants and exposure to air pollution; thereby positively impacting on the health and quality of life of residents and visitors to the Wokingham Borough's administrative area.

Table B-5 – Relevant Plans, Policies, strategies and Programmes – Climate Change

Document	Key Messages/ Issues
International	
Kyoto Protocol to the UN Framework Convention on Climate Change (1992) Doha Amendment to the Kyoto Protocol (2012)	Developed countries commit themselves to reducing their collective emissions of six key greenhouse gases by at least 5%. Each country's emissions target must be achieved by the period 2008-2012. Doha Amendment saw parties commit to reduce GHG emissions by at least 18 percent below 1990 levels in the eight-year period from 2013 to 2020.
The Paris Agreement, 2015	Aims to limit the global warming change to below 2°C above pre-industrial levels. However, countries aim to limit the increase to 1.5°C to reduce the impacts of global warming. The UK has committed to a binding target of a reduction of at least 40% in greenhouse gas emissions by 2030 compared to 1990.
National	
National Planning Policy Framework (NPPF), 2021	Paragraph 154 of the NPPF states that "New development should be planned for in ways that: a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the UK Government's policy for national technical standards."
The Climate Change Act, 2008	Improve carbon management and help the transition towards a low carbon economy in the UK. Demonstrate strong UK leadership internationally, showing the commitment to taking shared responsibility for reducing global emissions in the context of developing negotiations on a post-2012 global agreement at Copenhagen in 2009.

Document	Key Messages/ Issues
	Greenhouse gas emission reductions through action in the UK and abroad of at least 80% by 2050, and reductions in CO2 emissions of at least 26% by 2020, against a 1990 baseline.
Department for Transport, National Policy Statement for National Networks, 2014	Paragraph 4.38 of the NN NPS states that "New development should be planned to avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the provision of green infrastructure." The NN NPS also requires carbon impacts to be considered as part of the appraisal of scheme options, and an assessment of any likely significant climate factors in accordance with the requirements in the EIA Directive. It goes on to state that "it is very unlikely that the impact of a road project will, in isolation, affect the ability of UK Government to meet its carbon reduction plan targets."
A Green Future: Our 25 Year Plan to Improve the Environment, 2018	The 25 Year Environment Plan outlines the UK Government's ambition to leave our environment in a better state than we found it and the steps proposed to take to achieve that ambition. Mitigating and adapting to climate change: ▪ Continuing to cut greenhouse gas emissions including from land use, land use change, the agriculture and waste sectors and the use of fluorinated gases. The UK Climate Change Act 2008 commits us to reducing total greenhouse gas emissions by at least 80 per cent by 2050 when compared to 1990 levels; ▪ Making sure that all policies, programmes and investment decisions take into account the possible extent of climate change this century; and ▪ Implementing a sustainable and effective second National Adaptation Programme.
UK Committee on Climate Change, Interim UK Carbon Budgets	The UK has committed to an 80% reduction in its greenhouse gas emissions by 2050. In order to help meet this target, the UK Committee on Climate Change (CCC) has devised a series of interim UK "carbon budgets" as follows: ▪ 1st carbon budget (2008 to 2012): 23% reduction; ▪ 2nd carbon budget (2013 to 2017): 29% reduction; ▪ 3rd carbon budget (2018 to 2022): 35% reduction by 2020; ▪ 4th carbon budget (2023 to 2027): 50% reduction by 2025; ▪ 5th carbon budget (2028 to 2032): 57% reduction by 2030.

Document	Key Messages/ Issues
25 Year Environment Plan, HM Government (2018)	Goal 7 of the 25 Year Environment Plan, 'Mitigating and adapting to climate change', is to "take all possible action to mitigate climate change, while adapting to reduce its impact" by "continuing to cut greenhouse gas emissions including from land use, land use change…" and "making sure that all policies, programmes and investment decisions consider the possible extent of climate change this century".
How Local Authorities can Reduce Emissions and Manage Climate Risk (2012)	Planning functions are described as being a *'key lever in reducing emissions and adapting localities to a changing climate*', with it considered particularly important that local authorities use these to: ▪ Reduce transport emissions by concentrating new developments in existing cities and large towns and/or ensuring they are well served by public transport; ▪ Avoid increasing the area's risk to climate change impacts by locating new development in areas of lowest flood risk; and ▪ Plan for infrastructure such as low-carbon district heating networks, green infrastructure and sustainable drainage systems.
The Natural Environment White Paper (2014)	The Natural Environment White Paper (NEWP) sets out the importance of a healthy, functioning natural environment to sustained economic growth, prospering communities and personal well-being. The NEWP recognises that green infrastructure is *'one of the most effective tools available' to manage 'environmental risks such as flooding and heat waves'*.
Local	
Wokingham Borough Council Climate Emergency Action Plan (2022)	In July 2019, Wokingham Borough Council (WBC) members unanimously declared a climate emergency. The declaration set out the commitment to play as full a role as possible, leading by example as well as by exhortation, in achieving a carbon neutral borough by 2030.

Table B-6 – Relevant Plans, Policies, strategies and Programmes – Noise

Document	Key Messages/ Issues
National	
The Environmental Noise Directive (ENDS) (2002)	This requires noise action plans to be drawn up. Member states are required to produce noise maps for major roads, railways, airports and urban areas.
National Planning Policy Framework (NPPF) (2021)	The NPPF states that planning policies and decisions should aim to: ▪ Avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development; ▪ Mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions; and ▪ Identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.
The Noise Policy Statement for England (NPSE) (2010)	The NPSE is the overarching statement of noise policy for England and applies to all forms of noise other than occupational noise, setting out the long term vision of Government noise policy which is to: *"Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development."*
Planning Practice Guidance: Noise (2019)	This outlines that local authorities should take account of the acoustic environment in plan making and decision-making.
Local	
Wokingham Borough Council Core Strategy (2010)	The Core Strategy states that there is a need for proposals to provide mechanisms for noise mitigations, particularly next to the A329.

Table B-7 – Relevant Plans, Policies, strategies and Programmes – Landscape and Townscape

Document	Key Messages/ Issues
International	
European Landscape Convention 2000 (became binding March 2007)	The Council of Europe Landscape Convention promotes the protection, management and planning of the landscapes and organises international co-operation on landscape issues. Specific measures include: ▪ raising awareness of the value of landscapes among all sectors of society and of society's role in shaping them; ▪ promoting landscape training and education among landscape specialists, other related professions and in school and university courses; ▪ the identification and assessment of landscapes, ▪ analysis of landscape change, with the active participation of stakeholders; ▪ setting objectives for landscape quality, with the involvement of the public; and ▪ the implementation of landscape policies through the establishment of plans and practical programmes.
National	
Environment Act (2021)	Part 6 of the act aims to ensure biodiversity net gain and ensure nature recovery strategies for England, preserving local landscapes.
Accessible Natural Green Space Standards in Towns and Cities: A review and Toolkit for their Implementation (2003) and Nature Nearby: Accessible Green Space Guidance (2010)	English Nature (now Natural England) recommends that provision should be made of at least 2ha of accessible natural greenspace per 1000 population according to a system of tiers into which sites of different sizes fit: ▪ No person should live more than 300m from their nearest area of natural greenspace; ▪ There should be at least one accessible 20ha site within 2km from home; ▪ There should be one accessible 100ha site within 5km; and ▪ There should be one accessible 500ha site within 10km.

Document	Key Messages/ Issues
Guidance for Outdoor Sport and Play (2015)	Fields in Trust guidance, first published in the 1930s, is based on a broad recommendation that 6 acres (2.4 hectares) of accessible green space per 1,000 head of population enables residents of all ages to participate in sport and play; 75% of local authorities adopt this or an equivalent standard (2014 Fields in Trust / David Lock Associates Survey).
Local Green Infrastructure: helping communities make the most of their landscape: Landscape Institute for Green Infrastructure Partnership (2011).	Communities should identify green infrastructure requirements in their local area through addition to or creative enhancement of the existing network. Look to enhance local landscape character, heritage and biodiversity and ensure long term management is included in an overall strategy.
Green Infrastructure: An integrated approach to landscape use. Landscape Institute Position Statement (2013)	The Landscape Institute's most recent position statement, 'Green Infrastructure LI Position Statement 2013' sets out why GI is crucial to our sustainable future. The publication showcases a range of successful GI projects and shows how collaboration is key to delivering multifunctional landscapes. It also illustrates why landscape professionals should take the lead on the integration of GI.
National Planning Policy Framework (NPPF), 2021	Paragraph 174 of the NPPF requires developments to protect and enhance valued landscapes and recognise the intrinsic character and beauty of the countryside. Paragraph 176 of the NPPF states that great weight should be given to conserving and enhancing landscape and scenic beauty in National parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection. The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas. Paragraph 177 of the NPPF states that when considering applications for development within National Parks, the Broads and Areas of Outstanding Natural Beauty, permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest.

Document	Key Messages/ Issues
National Policy Statement for National Networks (2014)	Paragraph 5.149 states that when judging the impact of a project on landscape, the decision is dependent on the nature of the existing landscape likely to be affected and the nature of the effect likely to occur. The project should aim to avoid or minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.
25 Year Environment Plan (2018)	Goal 6: Enhancing beauty, heritage and engagement with the natural environment, is to "safeguard and enhance the beauty of our natural scenery and improving its environmental value while being sensitive to considerations of its heritage."
Local	
Wokingham Borough Landscape Character Assessment (2019)	The Landscape Character Assessment (LCA) forms the most up to date evidence base for planners, developers and land managers to take account of the character and valuable attributes of Wokingham's landscape when considering new development or land uses – and to pursue opportunities to enhance and strengthen landscape character whenever possible.

Table B-8 – Relevant Plans, Policies, strategies and Programmes – Historic Environment

Document	Key Messages/ Issues
International	
The Valetta Convention, 1992	This convention outlines protection measures for archaeological heritage assets, including the development and maintenance of an inventory of sites. The aim of this convention is to protect sites for future study, outlines the requirements to report 'chance finds', as well as controlling excavations. The input of expert archaeologists into the making of planning policies and decisions is also required under this convention.
Convention for the Protection of the Architectural Heritage of Europe, Granada (1985)	The main purpose of the Convention is to reinforce and promote policies for the conservation and enhancement of Europe's heritage. It affirms the needs for European solidarity with regard to heritage conservation and is designed to foster practical co-operation among the Parties. The convention considers comprising the following permanent properties, which are stated in Article 1: ▪ Monuments: all buildings and structures of conspicuous historical, archaeological, artistic, scientific, social or technical interest, including their fixtures and fittings; ▪ Groups of buildings: homogenous groups of urban or rural buildings conspicuous for their historical, archaeological, artistic, scientific, social or technical interest, which are sufficiently coherent to form topographically definable units; and ▪ Sites: the combined works of man and nature, being areas which are partially built upon and sufficiently distinctive and homogenous to be topographically definable and are of conspicuous historical, archaeological, artistic, scientific, social or technical interest.
National	
National Planning Policy Framework (NPPF), 2021	Paragraph 190 of the NPPF states that ▪ Plans should set out a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. This strategy should take into account:

Document	Key Messages/ Issues
	▪ the desirability of sustaining and enhancing the significance of heritage assets, and putting them to viable uses consistent with their conservation; ▪ the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring; ▪ the desirability of new development making a positive contribution to local character and distinctiveness; and ▪ opportunities to draw on the contribution made by the historic environment to the character of a place.
The Government's Statement on the Historic Environment for England (2010)	The statement sets out its vision for the historic environment. It calls for those who have the power to shape the historic environment to recognise its value and to manage it in an intelligent manner in light of the contribution that it can make to social, economic and cultural life. Also of note is the reference to promoting the role of the historic environment within the government's response to climate change and the wider sustainable development agenda.
Heritage at Risk Register (2015)	This lists every heritage asset currently considered to be at risk in the UK according to local planning authority. Heritage assets are split into a number of categories namely; buildings, places of worship, scheduled monuments, registered parks and gardens, registered battlefields, protected wreck sites and conservation areas.
National Policy Statement for National Networks (2014)	Paragraph 5.132 states that any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset, the greater the justification that will be needed for any loss.
25 Year Environment Plan (2018)	Goal 6: Enhancing beauty, heritage and engagement with the natural environment, is to "safeguard and enhance the beauty of our natural scenery and improving its environmental value while being sensitive to considerations of its heritage."
Planning (Listed buildings and Conservation Areas) Act 1990	This is an Act relating to special controls in respect of buildings and areas of special architectural or historic interest.

Document	Key Messages/ Issues
Ancient Monuments and Archaeological Areas Act, 1979	An Act to consolidate and amend the law relating to ancient monuments. It makes provision for the investigation, preservation and recording of areas of archaeological or historical interest.
Historic England Conservation Principles, Policies and Guidance (2008)	The primary aim of this guidance is to support the quality of decision making, with the ultimate objective of creating a management regime for all aspects of the historic environment that is clear and transparent in its purpose, and sustainable in its application.
Local	
Wokingham Borough Core Strategy (2010)	As part of the approach to the Core Strategy, WBC state that the most important areas for heritage should be protected from development. The Strategy also states that development should maintain the heritage of Wokingham as far as possible.

Table B-9 – Relevant Plans, Policies, strategies and Programmes – Water Environment

Document	Key Messages/ Issues
International	
Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy ("The Water Framework Directive")	The main aims of the Water Framework Directive (WFD) are to: ▪ prevent deterioration and enhance status of aquatic ecosystems, including groundwater ▪ promote sustainable water use ▪ reduce pollution ▪ contribute to the mitigation of floods and droughts The WFD requires the creation of River Basin Management Plans (RBMPs). Statutory objectives are set for Scottish waters through River Basin Management Planning. These objectives are based on ecological assessments and economic judgments. The plans cover all types of water body, e.g. rivers, lochs, lakes, estuaries, coastal waters and groundwater.
Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks	Requires Member States to assess if all water courses and coast lines are at risk from flooding, to map the flood extent and assets and humans at risk in these areas and to take adequate and coordinated measures to reduce this flood risk.
Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration	This Directive establishes a regime which sets groundwater quality standards and introduces measures to prevent or limit inputs of pollutants into groundwater. The directive establishes quality criteria that takes account local characteristics and allows for further improvements to be made based on monitoring data and new scientific knowledge.
National	
The Water Framework Regulations (2003)	National water policies are primarily driven by the aims of the EC Water Framework Directive (WFD) as translated into national law by the Water Framework Regulations (2003). Key objectives include

Document	Key Messages/ Issues
	improving the quality of rivers and other water bodies to 'good ecological status' by 2015; considering flood risk at all stages of the plan and development process to reduce future damage to property and loss of life; and incorporating water efficiency measures into new developments. The Directive drives a catchment-based approach to water management. In England there are 83 water catchments and it is Defra's intention to establish a 'framework for integrated catchment management' across England. The Environment presented second river basin management plans to ministers in 2015. These plans aimed to deliver the objectives of the WFD, namely; ▪ Enhance the status and prevent the further deterioration of aquatic ecosystems and associated wetlands which depend on aquatic ecosystems; ▪ Promote the sustainable use of water; ▪ Reduce the pollution of water, especially by 'priority' and 'priority hazardous' substances; and ▪ Ensure the progressive reduction of groundwater pollution.
Blueprint to Safeguard Europe's Water Resources (2012)	This highlights the need for Member States to reduce pressure on water resources, for instance by using green infrastructure such as wetlands, floodplains and buffer strips along watercourses. This would also reduce the EU's vulnerability to floods and droughts.
National Planning Policy Framework (NPPF), 2021	Paragraph 159: "… inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere". Paragraph 174 (e) Planning policies and decisions should contribute to and enhance the natural and local environment by: preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.
Water for Life (The Water White Paper) (2011)	This sets out the government's vision for a more resilient water sector, where water is valued as the precious resource it is. It states the measures that will be taken to tackle issues such as poorly performing ecosystems, and the combined impacts of climate change and population growth on stressed water resources.

Document	Key Messages/ Issues
	The avoidance of pollution is also a consideration in the White Paper, which led to a government consultation on a national strategy on urban diffuse pollution in 2012. The consultation report notes that pollutions affecting failing waterbodies can be broken down into a number of categories including point source pollution and diffuse pollution. Transport infrastructure can contribute to diffuse pollution to waterbodies (e.g. untreated stormwater runoff from roads).
The Environment Act (2021)	The Environment Act, which became law in 2021, acts as the UK's new framework of environmental protection. The Environment Act allows the UK to enshrine better environmental protection into law. It provides the Government with powers to set new binding targets, including for air quality, water, biodiversity, and waste reduction. Objectives for targets under consideration: ▪ reduce pollution from agriculture, in particular phosphorus and nitrate; ▪ reduce pollution from wastewater, in particular phosphorus and nitrate; ▪ reduce water demand; ▪ improve the quality of habitat on land, including freshwater and coastal sites, expressed through the condition of our protected sites (SSSIs); and ▪ improve the overall status of species populations on land and in freshwaters.
National Policy Statement for National Networks (2014)	Paragraph 5.105 "… if there is no reasonably available site in Flood Zones 1 or 2, then national networks infrastructure projects can be located in Flood Zone 3, subject to the Exception Test. Both elements of the test will have to be passed for development to be consented…" Paragraph 5.109 "Any project that is classified as 'essential infrastructure' and proposed to be located in Flood Zone 3a or 3b should be designed and constructed to remain operational and safe for users in times of flood; and any project in Zone 3b should result in no net loss of floodplain storage and not impede water flows". Paragraph 5.224 "Activities that discharge to the water environment are subject to pollution control" Paragraph 5.225 "… impacts on the water environment should be given more weight where a project would have adverse effects on the achievement of the environmental objectives established under the Water Framework Directive".

Document	Key Messages/ Issues
A Green Future: Our 25 Year Plan to Improve the Environment (2018)	Goal 2 ‘Clean and plentiful water’ “Improve at least three quarters of our waters to be close to their natural state as soon as is practicable by: […] Reaching or exceeding objectives for rivers, lakes, coastal and ground waters that are specially protected, whether for biodiversity or drinking water”.
Local	
Wokingham Borough Council Local Flood Risk Management Strategy (2015)	The Strategy focuses on local flood risk sources and explains the ways in which WBC will ensure flood risk is managed in an integrated and effective way. The objectives of the Strategy are to: ▪ Continue to improve knowledge and understanding of current and future local sources of flood risk within Wokingham. ▪ Continue to work collaboratively and develop effective partnerships with other Flood Risk Management Authorities and local communities to deliver a sustainable, cost effective approach to flood risk management that reduces flood risk and provides wider environmental and social economic benefits where possible. ▪ Ensure that land use planning and application decisions take full account of flood risk, avoiding development in inappropriate locations, preventing an increase in flood risk and minimising existing flood risk wherever possible. ▪ Maintain and, where necessary, improve local flood risk management infrastructure and work with riparian landowners to ensure privately owned flood defence assets, features and Ordinary watercourses, are well maintained to reduce risk. ▪ Ensure that emergency plans and responses to flood incidents are effective and that communities are prepared and resilient to local flood risk. ▪ Identify national, regional and local funding mechanisms to deliver flood risk management solutions and schemes.

Table B-10 – Relevant Plans, Policies, strategies and Programmes – Population and Equalities

Document	Key Messages/ Issues
National	
Ready for Ageing? (2013)	The Select Committee on Public Service and Demographic Change report 'Ready for Ageing?' warns that society is underprepared for the ageing population. The report says that: *'Longer lives can be a great benefit, but there has been a collective to address the implications and without urgent action this great boon could turn into a series of miserable crises'.* Key projections about ageing include 51% more people aged 65 and over and 101% more people aged 85 and over in England in 2030 compared to 2010; and a 90% increase in people with moderate or severe need for social care for the same time period. Organisations involved in urban planning will need to adjust to an older population and will have an important role to play in preventing the social isolation of older citizens.
Local Growth White Paper (2010)	The paper notes that government interventions should support investment that will have a long term impact on growth, working with markets rather than seeking to create artificial and unsustainable growth. In some cases this means focusing investments at areas with long term growth challenges, so that these areas can undergo transition to an economy that responds to a local demand. Places that are currently successful may also wish to prioritise activity to maximise further growth by removing barriers, such as infrastructure constraints.
The Equality Act, 2010	The Equality Act 2010 legally protects people from discrimination in the workplace and in wider society. It is against the law to discriminate against anyone because of: ▪ Age; ▪ Being or becoming a transsexual person; ▪ Being married or in a civil partnership; ▪ Being pregnant or having a child; ▪ Disability; ▪ Race including colour, nationality, ethnic or national origin; ▪ Religion, belief or lack of religion/belief; ▪ Sex; and

Document	Key Messages/ Issues
	▪ Sexual orientation.
National Planning Policy Framework (NPPF), 2021	When delivering new schemes, applicants must avoid and mitigate environmental and social impacts in line with the principles set out in the NPPF and the UK Government's planning guidance. Applicants should provide evidence that they have considered reasonable opportunities to deliver environmental and social benefits as part of schemes.
Department for Transport, Transport for Everyone: an action plan to promote equality, 2012	The Action Plan sets what the UK Government is doing to ensure people from all communities in society have the option to use public transport. The main aim of the report is to *'deliver better access to jobs and key services through an accessible and socially inclusive transport system, by removing the barriers to travel and ensuring that social impacts are addressed in policy development and service delivery'*.
Strong and Prosperous Communities: The Local Government White Paper, 2006	Deliver better public services through involving and consulting users more fully, providing better information about local standards and managing services at neighbourhood level.
Foresight Mental Capital and Wellbeing Project (2008). Final Project report. The Government Office for Science	As the number of older adults increases substantially in the UK over the next six decades, the existing urban and rural infrastructure will need to be adapted so that the needs of these people are met. For example, issues of access, transport, amenity and security will substantially affect the wellbeing of older people.
Addressing Transport Barriers to work in Low Income Neighbourhoods, Sheffield Hallam University, 2017	Transport is a key factor shaping experiences of poverty. The ability of households in poverty to find paid work often depends on access to affordable, regular and reliable transport. Residents of low-income neighbourhoods generally have a significant reliance on bus services. This can create issues regarding variable frequency, timing, reliability and range of places served. There is considerable evidence that transport issues affect different groups to varying extents and in particular ways, especially in terms of gender.

Document	Key Messages/ Issues
	A distinguishing feature of low-income neighbourhoods is the relatively low incidence of motor vehicle ownership. This means that residents have a much higher reliance on public transport than those living in middle and high-income areas. Difficulties in meeting the costs of transport from current incomes have given rise to the concept of 'transport poverty'.
Build Back Fairer: The Covid-19 Marmot Review, 2020 313	The Marmot Review identified that the levels of social, environmental and economic inequality in society are damaging health and well-being. This report identifies that as the UK emerges from the pandemic it would be a mistake to attempt to re-establish the status quo that existed before the pandemic. The reductions in car traffic during the pandemic resulted in cleaner air and reduction in emission of greenhouse gases. Walking and cycling as modes of transport became both necessary and desirable. As the pandemic is brought under control and public transport again becomes safe, a future for our cities based on reduction in vehicle traffic and made safe for walking and cycling in addition to public transport is a future we can both imagine and realise. Building Back Fairer requires a sizeable reduction in private car use and greater active travel and use of public transport. Efforts to support this are required urgently and would help to reduce Greenhouse Gas Emissions and lead to a more sustainable environment.
TfL, Healthy Streets for London, 2017	Although the initial strategy is based in London, the approach is becoming more widely adopted nationally. The Healthy Streets Approach puts people and their health at the centre of decisions about how we design, manage and use public spaces. It aims to make our streets healthy, safe and welcoming for everyone. The Approach is based on 10 Indicators of a Healthy Street which focus on the experience of people using streets. These are as follows: ▪ Pedestrians from all walks of life; ▪ Easy to cross; ▪ People chose to walk, cycle and use public transport; ▪ Clean air; ▪ People feel safe; ▪ Not too noisy; ▪ Places to stop and rest; ▪ Shade and shelter;

Document	Key Messages/ Issues
	▪ People feel relaxed; and ▪ Things to see and do.
Local	
Wokingham Borough Joint Strategic Needs Assessment	The Joint Strategic Needs Assessment (JSNA) assess the current and future health, care and wellbeing and needs of the population in Wokingham Borough. It highlights the key needs of the Borough and assesses how to meet these needs with partners. The evidence, analysis of needs and agreed priorities is used to help us and our partners (like the local NHS) determine what actions to take to meet health and social care needs. As well as helping address the wider factors that impact on health and wellbeing.
Wokingham Borough Council Older People's Strategy (2018)	The Strategy is aimed primarily at people aged 50 and over, and clearly refers to the needs of older people. The Strategy is described as "Young at Heart" and is a ten year strategy to signal a direction of travel for Wokingham Borough Council, its residents and partner agencies, so to anticipate and influence the changes of the next 10 years, and put some of the groundwork in place.

Table B-11 – Relevant Plans, Policies, strategies and Programmes – Human Health

Document	Key Messages/ Issues
National	
Health and Social Care Act (2012)	The increasing role that local level authorities are expected to play in producing health outcomes is well demonstrated by recent government legislation. The Health and Social Care Act 2012 transferred responsibility for public health from the NHS to local government, giving local authorities a duty to improve the health of the people who live in their areas. This requires a more holistic approach to health across all local government functions.
Ending Childhood Obesity Plan (2016)	This links transport planning to opportunities for physical activity and access to healthy food. The plan recommends increased recreational space and safe walking and cycling paths for active transport, to help make physical activity functions of daily life. These spaces will, of course, benefit the entire economy.
Transport for Health: The Global Burden of Disease from Motorised Road Transport (2014)	This explores the relationship and burden that road transport places upon global health development. It attempts to quantify global health losses arising from injury and air pollution associated with road transport. It reiterates the need for safe and clean transport methods in order to achieve global health goals, and the importance of multi-disciplinary collaboration – transport, health and urban sectors – in achieving sustainable development.
Walking and cycling: local measures to promote walking and cycling as forms of travel or recreation (2012)	The NHS National Institute of Health and Clinical Excellence (NICE) published guidance on Local measures to promote walking and cycling. The evidence presented in this report suggests that 'effective support' from local councils plays a key role in increasing rates of walking and cycling. The report emphasises that increasing the numbers of people who walk and cycle, and how often, can reduce the health costs associated with air pollution and inactivity. Relevant recommendations made in the report include: ▪ Ensure local, high-level strategic policies and plans support and encourage both walking and cycling; ▪ Develop coordinated, cross-sector programmes to promote walking and cycling for recreation as well as for transport, based on a long-term vision of what can be achieved, taking account of the needs of the whole population; and ▪ Address infrastructure issues that may prevent people from wanting to walk.

Document	Key Messages/ Issues
Wellbeing and Resilience Strategy Framework (2017)	The strategy is still in development, but it outlines five ways to wellbeing: ▪ **Give** e.g. ability to access volunteering opportunities; ▪ **Keep learning** e.g. access to school, university, workplace; ▪ **Be active** e.g. active transport, access to physical activity; ▪ **Connect** e.g. access to social activities; and ▪ **Take notice** e.g. access to green space. Projects could be delivered in a way that both provides more of the opportunities above and uses the transport network as a means of delivering those opportunities in its own right e.g. use the network itself as a learning opportunity.
Mental Health and Transport Summit (2016)	In 2016, the Department for Transport sponsored a Mental Health and Transport Summit: 1 in 4 people will experience a mental health condition at some time in their lives and 1 in 10 people live with a long term mental health condition. The summit highlighted some of the barriers that people face when using the transport network and the vital role that being able to travel plays in maintaining some control over their condition. The summit also raised the issue of both direct and indirect discrimination. Direct discrimination is easier to identify and deal with, but indirect discrimination is less visible. For example, a policy that means people can only book train tickets online may have a disproportionate impact on people with a mental health problem who experience paranoia.
Fair Society, Healthy Lives: The Marmot Review: Strategic review of health inequalities in England post, 2012	Reducing health inequalities is a matter of fairness and social justice. In England, the many people who are currently dying prematurely each year as a result of health inequalities would otherwise have enjoyed, in total, between 1.3 and 2.5 million extra years of life. Ensure a healthy standard of living for all; Create and develop healthy and sustainable places and communities; and strengthen the role and impact of ill health prevention.
Build Back Fairer: The Covid-19 Marmot Review, 2020	The Marmot Review identified that the levels of social, environmental and economic inequality in society are damaging health and well-being. This report identifies that as the UK emerges from the pandemic it would be a mistake to attempt to re-establish the status quo that existed before the pandemic. The reductions in car traffic during the pandemic resulted in cleaner air and reduction in emission of greenhouse gases. Walking and cycling as modes of transport became both necessary and desirable. As the pandemic is brought under control and public transport again becomes safe, a future for our cities

Document	Key Messages/ Issues
	based on reduction in vehicle traffic and made safe for walking and cycling in addition to public transport is a future we can both imagine and realise. Building Back Fairer requires a sizeable reduction in private car use and greater active travel and use of public transport. Efforts to support this are required urgently and would help to reduce Greenhouse Gas Emissions and lead to a more sustainable environment.
National Planning Policy Framework (NPPF), 2021 317	Paragraph 92 of the NPPF states: *'Planning policies and decisions should aim to achieve healthy, inclusive and safe places which:* *a) promote social interaction, including opportunities for meetings between people who might not otherwise come into contact with each other – for example through mixed-use developments, strong neighbourhood centres, street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods, and active street frontages;* *b) are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion – for example through the use of attractive, well-designed, clear and legible pedestrian and cycle routes, and high quality public space, which encourage the active and continual use of public areas; and* *c) enable and support healthy lifestyles, especially where this would address identified local health and well-being needs – for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling.'*
Chartered Institution of Highways & Transportation (CIHT), Better planning, better transport, better places, 2019	Poorly located and designed new development seriously hinders healthy lifestyles. Physical inactivity directly contributes to one in six deaths in the UK, drives rising levels of obesity, and is the fourth largest cause of disease and disability. It costs society an estimated £7.4 billion a year and places the national healthcare system under increasing financial strain. By enabling compact, higher density, and mixed-use patterns of development. This encourages more people to incorporate physical activity into their daily journeys, improving productivity and dramatically reducing ill health.

Document	Key Messages/ Issues
Transport, health, and wellbeing: An evidence review for the Department for Transport, 2019	There are three main mechanisms that link transport and health and wellbeing: ▪ Transport and access: Transport plays a key role in improving access to health services, particularly for vulnerable groups like older people. ▪ Mode of transport: Mode of transport affects physical and mental health, via mechanisms including physical activity and commuting time. ▪ Wider effects of transport and infrastructure: Transport can facilitate social interactions and promote social inclusion.
Public Health England, Health Matters, Physical Activity: Prevention and management of long-term conditions	Regular physical activity provides a range of physical and mental health and social benefits, including: ▪ Reducing the risk of many long-term conditions ▪ Helping manage existing conditions ▪ Ensuring good musculoskeletal health ▪ Developing and maintaining physical and mental function and independence ▪ Supporting social inclusion ▪ Helping maintain a healthy weight ▪ Reducing inequalities for people with long-term conditions The CMOs' Physical Activity Guidelines state that for good physical and mental health, adults should aim to be physically active every day. Any activity is better than none, and more is better still. Regular physical activity can help to prevent and manage a range of chronic conditions and diseases, many of which are on the rise and affecting people at an earlier age.
Local	
Wokingham Borough Open Space, Sport and Recreation Facilities Strategy (2013)	The purpose of the Strategy is to consider how Wokingham Borough's network of open spaces and sports facilities is planned, managed, protected, designed, and maintained; and to set out a series of objectives to ensure that these open spaces and sports facilities are of a consistent high standard and continue to meet the needs of Wokingham Borough's current and future communities.
Berkshire West Health and Wellbeing Strategy (2021-2030)	The strategy sets out how professionals across health and social care will work together to improve the health of the population. The new strategy is based around five health and wellbeing priorities: ▪ Reduce the differences in health between different groups of people

Document	Key Messages/ Issues
	▪ Support individuals at high risk of bad health outcomes to live healthy lives ▪ Help families and children in early years ▪ Promote good mental health and wellbeing for all children and young people ▪ Promote good mental health and wellbeing for all adults

Table B-12 – Relevant Plans, Policies, strategies and Programmes – Economy

Document	Key Messages/ Issues
International	
Europe 2020: A strategy for smart, sustainable and inclusive growth (2010)	The European Union published its strategy for achieving growth up until 2020. This strategy focuses on smart growth, through the development of knowledge and innovation; sustainable growth, based on a greener, more resource efficient and more competitive economy; and inclusive growth, aimed at strengthening employment, and social and territorial cohesion.
National	
National Planning Policy Framework, 2021	To determine the minimum number of homes needed, strategic policies should be informed by a local housing need assessment. In addition to the local housing need figure, any needs that cannot be met within neighbouring areas should also be taken into account in establishing the amount of housing to be planned for. Within this context, the size, type and tenure of housing needed for different groups in the community should be assessed and reflected in planning policies, including, but not limited to: ▪ Those who require affordable housing; ▪ Families with children; ▪ Older people; ▪ Students; ▪ People with disabilities; ▪ Service families; ▪ Travellers; ▪ People who rent their homes; and ▪ People wishing to commission or build their own homes. Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development. The approach taken should allow each area to build on its strengths, counter any weaknesses and address the challenges of the future.

Document	Key Messages/ Issues
Growth and Infrastructure Act (2013)	The Act allows the modification or discharge of the affordable housing elements of section 106 agreements in order to make developments more viable. Contains measures to extend permitted development rights to allow single-storey extensions of up to eight metres. Reduces the volume of extra paperwork required with a planning application; removing over-lapping development consent regimes that require multiple extra permissions from different government agencies.
The Enterprise Act (2016) 321	The Enterprise Act includes measures to: ▪ Establish a Small Business Commissioner to help small firms resolve issues. ▪ Extend the Primary Authority scheme to make it easier for businesses to access tailored and assured advice from local authorities, giving them greater confidence to invest and grow. ▪ Protect and strengthen apprenticeships by introducing targets for apprenticeships in public sector bodies in England, and establish an Institute for Apprenticeships – an independent, employer-led body that will make sure apprenticeships meet the needs of business.
UK Industrial Growth Strategy, 2017	The Industrial Strategy sets out a long term plan to boost the productivity and earning power of people throughout the UK. It sets out how the UK Government is working towards building a Britain fit for the future – how they will help businesses create better, higher-paying jobs in every part of the UK with investment in the skills, industries and infrastructure of the future. The strategy includes five foundations: ▪ Ideas: the world's most innovative economy ▪ People: good jobs and greater earning power for all ▪ Infrastructure: a major upgrade to the UK's infrastructure ▪ Business environment: the best place to start and grow a business ▪ Places: prosperous communities across the UK The UK Government will use this strategy to work with industry, academia and civil society over the coming years to build on the UK's strengths, make more of untapped potential and create a more productive economy that works for everyone across the UK.

Document	Key Messages/ Issues
The Clean Growth Strategy, 2017	This Strategy sets out a comprehensive set of policies and proposals that aim to accelerate the pace of "clean growth", i.e. deliver increased economic growth and decreased emissions. The Strategy has two guiding objectives: 1. To meet our domestic commitments at the lowest possible net cost to UK taxpayers, consumers and businesses; and, 2. To maximise the social and economic benefits for the UK from this transition. In order to meet these objectives, the UK will need to nurture low carbon technologies, processes and systems that are as cheap as possible.
Local	
Wokingham Borough Economic Development Strategy (2016-2021)	The key objectives set out in the strategy are: ▪ Create a place where businesses thrive by offering good quality housing and infrastructure ▪ Facilitate business growth though business support and inward investment ▪ Ensure that people have the skills that businesses need and are able to support themselves into employment ▪ Encourage innovation and technology to build a competitive business environment
Thames Valley Berkshire: Delivering national grown locally, Strategic Economic Plan (2015/16-2020/21)	The vision for the Plan is: *"By 2021, the vibrancy of our business community will be internationally envied. The ambition and creativity of our established businesses will be energised through strong, knowledge-rich, networks. Our Workforce will be the lifeblood of our economy; young people will be inspired and older workers valued. Our infrastructure will match the scale of our ambition and potential. And people will choose Thames Valley Berkshire as the place to live and work."*
Wokingham Borough Arts and Culture Strategy (2021-2030)	This Strategy states the ambition for Wokingham Borough to be a great place to live, learn, work and grow and a great place to do business. The vision for the Strategy is: "*By 2030 Wokingham Borough will be recognised regionally and nationally as a dynamic cultural hub, a Borough of surprises that delight across all our towns and villages, a Borough where everyone can access or get involved in creating high quality cultural experiences and where creativity is nurtured across all age-groups."*

Table B-13 – Relevant Plans, Policies, strategies and Programmes – Crime and Disorder

Document	Key Messages/ Issues
National	
The Crime and Disorder (Formulation and Implementation Strategy) Regulations (2007)	The regulations require all local authorities to have a county strategy group who public a community safety agreement; for Wokingham Borough Council this is the Community Safety Partnership. The Wokingham Community Safety Partnership (CSP) is made up of the following partner agencies: ▪ Wokingham Borough Council ▪ Thames Valley Police ▪ Berkshire Fire & Rescue Service ▪ Thames Valley Police and Crime Commissioner ▪ Berkshire West Clinical Commissioning Group ▪ Berkshire Healthcare Trust ▪ Wokingham Youth Offending Services ▪ National Probation Service
Resource Guide for Local Authorities: Transport Solutions for Older People (2012)	The guide identifies a number of barriers that older people face in using transport systems. It notes that local transport plans offer "*the opportunity to tackle these barriers in a clear and systematic way. Any improvements will benefit not just older people but improve access for many other members of the community".* The resource guide covers a wide range of transport issues facing older people including affordability (given many people are likely to be on fixed incomes) and accessibility in terms of providing transport options to destinations older people need to access. The guide also notes that nationally the number of older people in rural areas has increased at a faster rate than in urban areas, particularly those aged over 85. It goes on to note that "*a lack of frequent, accessible public transport is a particular concern for people living in rural areas. It may, therefore, be necessary to consider alternative transport solutions and innovative means of service delivery to help maintain access to key health, shopping and leisure facilities".*

Document	Key Messages/ Issues
National Planning Policy Framework (NPPF), 2021	Paragraph 185 of the NPPF states that any significant impacts from developments on the transport network (in terms of capacity and congestion), or on highway safety, should be cost effectively mitigated to an acceptable degree. Paragraph 92 (b) of the policy states that policies should help to develop places that '*are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion – for example through the use of attractive, well-designed, clear and legible pedestrian and cycle routes, and high quality public space, which encourage the active and continual use of public areas'*. Places and developments should also create safe spaces where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.
National Networks National Policy Statement (NN NPS) (2014)	Paragraphs 3.10 – 3.12 of the NN NPS advise that "scheme promoters are expected to take opportunities to improve road safety, including introducing the most modern and effective safety measures where proportionate", and that it is the UK Government's policy to ensure that risks of rail passenger and workforce accidents are reduced so far as reasonably practicable.
Highways England Delivery Plan 2015-2020, 2015	Whilst the number of people Killed or Seriously Injured (KSI) on UK roads has generally been declining since 2005, over the last few years the number of fatalities has remained fairly consistent with a small increase in KSIs in 2013. Highways England recognise that they must continue to improve safety by investing in the road network, both to prevent incidents from occurring and to reduce the severity of those that do. By end of 2020, they aim to have reached a target of no more than 1,393 KSIs across the network in a year. This will be achieved by a year on year reduction in those harmed across the network.
Department for Transport, Road Investment Strategy: for the 2015/16 – 2019/20 Road Period, 2015	Safety is an important consideration for road users owing to the significant impact of serious and fatal accidents. A considerable economic cost is also associated with collisions on all roads, estimated at £15 billion annually to the UK economy. While driverless technology still has to mature, it clearly has the potential to transform the UK's transport networks – improving safety, reducing congestion, and lowering emissions.

Document	Key Messages/ Issues
	Safety and the environment suffering as congested traffic is more polluting and there is an increased risk of accidents. The Strategic Road Network and local networks should work together to provide flexibility and door-to door connectivity for all users. Schemes such as the A453 upgrade highlighted below do just this, and we have also set aside funding in the ring-fenced Cycling, Safety, and Integration Fund to further support connectivity with local networks.
Local	
Wokingham Borough Older People's Strategy (2012)	The Strategy aims to reduce the fear of crime amongst older people, making them feel safer in their homes and in the Borough. This includes reducing anti-social behaviour amongst young people.
Great Western Franchise Consultation Strategy (2017)	This Strategy aims to reduce crime and anti-social behaviour on its trains, enabling passengers to feel safer while travelling.
Wokingham Borough Community Safety Strategy (2021-2024) (Draft)	The proposed draft priorities and strategic themes for the Strategy are: ▪ Listening to the needs and concerns of local residents and taking action; ▪ Intervening early and preventing issues escalating; and ▪ Working together to protect vulnerable residents.

Table B-14 – Relevant Plans, Policies, strategies and Programmes – Transport and Accessibility

Document	Key Messages/ Issues
National	
National Planning Policy Framework (NPPF), 2021	Paragraph 104 - Transport issues should be considered from the earliest stages of plan-making and development proposals so that potential impacts and opportunities are addressed. Paragraph 105 - Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. Paragraph 106 – Planning policies should: ▪ support an appropriate mix of uses across an area to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities; ▪ be prepared with the active involvement of local highways authorities; ▪ identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development; ▪ provide for attractive and well-designed walking and cycling networks; and ▪ recognise the importance of maintaining a national network of general aviation airfields, and their need to adapt and change over time Paragraph 112 - address the needs of people with disabilities and reduced mobility in relation to all modes of transport. Paragraph 112 - Create places that are safe, secure and attractive. Paragraph 112 – Developments should be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.
Transport Investment Strategy, 2017	This Strategy sets out how the government will build on recent transport progress and how they intend to respond realistically and pragmatically to today's challenges. They aim to create a more reliable, less congested, and better connected transport network that works for the users who rely on it. Through investment they aim to achieve:

Document	Key Messages/ Issues
	▪ A network that is reliable, well-managed, and safe; ▪ Journeys that are smooth, fast, and comfortable; and ▪ The right connections in the right places
Local	
Wokingham Borough Active Travel Plan (2011-2026)	The vision for the Active Travel plan is: *"To work with partners to promote walking and cycling as a health-enhancing physical activity for all of our residents and as a viable alternative to travelling short distances in cars"* There are four objectives within the plan: ▪ We will work in partnership with businesses to encourage walking and cycling to centres of employment ▪ We will actively encourage walking and cycling to schools, colleges and other education facilities ▪ Improve and encourage active travel access to town and local centres, public open spaces and public transport interchanges ▪ Work with partners and key stakeholders to promote the benefits of active travel to reinforce public heath messages
Wokingham Borough Home to School Travel Assistance Policy (2022-2023)	The goals of the strategy are to, where possible, encouraged and support children and young people, including those with special educational needs and/or disability, to travel independently. This approach helps to deliver the Community Vision and Strategic Priorities.
Wokingham Borough Council Post-16 Transport Policy Statement (2022-2023)	This policy is based on the following principles: ▪ Independence and wellbeing - Our commitment is to support and prepare every young person for adulthood, including those young people with Special Educational needs or disability through the development and promotion of individual independence, facilitating opportunities for social inclusion as well as supporting the physical well-being for all young people. Travel assistance, and the form this takes, is a key contributor to achieving these goals. ▪ Sustainability - The council will favour environmentally sustainable forms of travel, including walking, cycling and the use of public transport. The council will also promote those options which make the most effective use of public resources. In order to support a young person's needs and assisting them to develop greater independence for adulthood, a range of travel options will be explored when deciding what form of travel assistance will be offered. All pupils should be encouraged to follow a healthy lifestyle including walking a reasonable distance to college/sixth form, where possible.

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Wokingham Borough Council

Local Transport Plan 4 Sustainability Appraisal

Appendix D – Assessment of LTP4 Strategy Objectives

September 2023

Wokingham Borough Council

Local Transport Plan 4 Sustainability Appraisal

Appendix D – Assessment of LTP4 Strategy Objectives

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Introduction

The assessment of the polices will predict the following:

- Overall effect significance (negative, positive, uncertain, both positive and negative or negligible);
- Nature of effect (direct, indirect);
- Spatial extent (local, regional, national, international);
- Reversibility of effect:
  - Reversible: The receptor can return to baseline condition without significant intervention;
  - Irreversible: The receptor would require significant intervention to return to baseline condition.
- Duration (short, medium or long term) – Short term: 0-5 years, Medium term: 5-10 years (up to the end of the plan period) Long term: 10+ years (beyond the plan period).

Table A-1 below shows the key to effects that have been used within the assessments below. It should be noted that where uncertain and neutral effects have been identified, it has not been possible to determine the nature of effect, the spatial extent, the reversibility or the duration of effect. In this instance, these cells have been left blank.

Table A-1 – Key to Effects

Effect Significance	Key
Potential for significant positive effects	++
Potential for minor positive effects	+
Potential for minor negative effects	-
Potential for significant negative effects	--
Potential for both positive and negative effects	+/-
Uncertain effects	?
Negligible / No effect	0
Nature of effect (direct / indirect)	D / I
Spatial extent (local / regional / national / international)	L / R / N / I
Reversibility of effect (reversible / irreversible)	R / I
Duration (short / medium / long term)	ST / MT / LT

Create Healthy and Safe Places

SAFER STREETS FOR ALL, 50% REDUCTION IN KSIS

Vision Theme	Create Liveable, Healthy and Safe Places							
Objective	Safer Streets for All, 50% reduction in KSIs							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	+	M	I	L	R	P	MT	There are potential positive effects upon natural capital as a result of the reduced degradation to biodiversity from noise and air quality improvements, and the potential for improvements to green infrastructure.
SA2: Materials and Waste	?							Uncertain effects have been identified for materials and waste as there is potential for development arising from this objective. However, the use of materials and generation of waste from development is currently unclear.
SA3: Soils	?							There are uncertain effects on soils due to the likelihood for development arising from this objective. It is currently uncertain if this will include the use of existing roads, or additional land take for new infrastructure.
SA4: Biodiversity	+	M	I	L	R	P	MT	Minor positive effects are anticipated for biodiversity as a result of the objective. The objective is likely to result in improvements to both noise and air quality, reducing disturbance and degradation of local biodiversity, particularly those species living within hedgerows.
SA5: Green Infrastructure	?							Uncertain effects have been identified for green infrastructure as it is currently uncertain if there will be additional green infrastructure included within development that may arise. Effects upon this are likely to be determined by individual schemes that may arise.
SA6: Air Quality	+/-	M	D/I	R	R/I	P	MT/LT	The development of improved infrastructure, speed limit changes, and increasing the network of quiet roads is likely to reduce congestion throughout Wokingham. The development of safer pedestrian and cycle infrastructure is also likely to encourage a modal shift towards active travel modes, improving air quality along these routes. Additionally, the development of additional quieter rural roads may improve air quality in rural areas of the Borough. However, there is potential that changing speed limits may result in increased congestion on heavily utilised routes such as the A4 and B3349.
SA7: Greenhouse Gases	+/-	L	D/I	R	R/I	P	MT/LT	There is potential that increases in road infrastructure may encourage additional private car use, resulting in increased greenhouse gases. However, improving the routes and encouraging active travel is likely to result in reductions in greenhouse gases.
SA8: Climate Resilience	?							Uncertain effects have been identified for climate resilience as these measures are likely to be determined by individual scheme design that may arise from this outcome.
SA9: Noise	+	M	I	L	R	P	MT	There are anticipated minor positive effects upon noise as a result of this outcome. The outcome is likely to reduce both the speed and volume of vehicles on the Borough's roads, indirectly reducing noise. There is potential that increasing the network of rural roads may result in increased vehicles in these areas, and low level noise increase, however this is likely to be low level due to the quieter nature of the roads.

SA10: Landscape and Townscape	++	M	D	R	I	P	LT	There are significant positive effects anticipated for landscape as a result of this outcome. The outcome is likely to result in improvements to the local landscape setting through reductions in traffic disturbance, as well a contribute to improvements to the public realm through the development of quieter and safer streets. There is also likely to be improvements to the landscape through the development of attractive pedestrian and cyclist environments.
SA11: Historic Environment	+	L	I	L	R	P	MT/LT	There are minor positive effects anticipated for the historic environment as a result of this outcome. Indirectly, improvements to the landscape and landscape setting are likely to improve the setting of local heritage assets, and reductions in noise are also likely to contribute to improving the setting, therefore improving the significance of settings.. Additionally, improvements in air quality contributes to reducing the degradation of heritage assets.
SA12: Water Quality	0							
SA13: Flooding	?							Uncertain effects have been identified for flooding as both the A4 and B3349 intersect areas of flood zone 3. The nature of development along these routes is unclear, however there is potential for flooding along the route, particularly if there are increases in hard standing and impermeable surfaces.
SA14: Population	++	M	D	R	I	P	LT	The prosed developments to infrastructure provide increased connectivity throughout the Borough as well as infrastructure to provide for current population needs. Additionally, there is potential that the Boroughwide cycle skills network audit will result in improvements to infrastructure, however, this is currently uncertain.
SA15: Health	++	M	D	R	I	P	LT	The development of the outcome results in improvements to road safety throughout Wokingham Town Centre, the A4 and B3349, reducing the number of KSI on these routes. Additionally, the outcome also provides improved safety to schools streets and routes to school, reducing the number of accidents involving children. The development of safer school routes, as well as the development of pedestrian and cyclist routes, is also likely to encourage active travel and subsequently improve physical activity and health amongst the population. There are also potential improvements to safety as a result of the Boroughwide cycle skills network audit.
SA16: Economy and Employment	+/-	L	I	R	R	P	MT	Developments to the local network as proposed have the potential to result in improved connectivity between the town centre and rural areas. This is likely to improve accesses to employment and the local economy. However, implementing speed limit changes along key routes may result in increased traffic volumes and increased congestion during peak times.
Potential Cumulative / Synergistic Effects	There are potential for cumulative effects upon health, population and landscape due to the increased safety and development of routes. There are also potential cumulative effects upon biodiversity, noise, air quality and greenhouse gases due to changes in vehicle volumes.							
Mitigation and Enhancement Measures	The outcomes of the vision could be enhanced through incorporating drainage methods to minimise flood risk within development.							
EqIA considerations	*Older people, disabled users and those with long term health conditions, and younger people are more vulnerable to collisions on roads *Children in Wokingham walking and cycling to school may be vulnerable to collisions. *Same sex couples may be targeted on streets *Pregnant women and new mothers may struggle accessing public transportation *People holding a religion or belief may experience discrimination on public transport *LGBTQ+ can experience sexual orientation based discrimination on public transport							

Recommendations	The outcome could be expanded to include reference to how the network of safer pedestrian and cycle routes will allow access for all inclusively. The outcome could be expanded to specify how routes to school will be improved, including safer crossings and lower speeds. To improve safer streets, motor vehicle traffic should be reduced or excluded entirely.

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50% ACTIVE TRAVEL IN TOWNS BY 2030

Vision Theme	Create Liveable, Healthy and Safe Places							
Objective	50% Active Travel in Towns							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	+	L	I	L	R	P	MT	There are minor positive effects anticipated for biodiversity as a result of this outcome. The reduction in vehicles in town centres is likely to reduce noise and air quality impacts on local biodiversity.
SA5: Green Infrastructure	0							
SA6: Air Quality	+	M	D/I	L	R/I	P	MT/LT	Minor positive effects are anticipated for air quality as a result of vehicle changes within the town centre. Reducing the dominance of vehicles and reducing the number of vehicles within town centres contributes to improving air quality. Additionally, the outcome contributes to encouraging a modal shift away from private car use, towards active travel modes including cycling and walking.
SA7: Greenhouse Gases	+	M	D/I	L	R/I	P	MT/LT	Minor positive effects have been identified for greenhouse gases as a result of changes to vehicle infrastructure. A reduction in cars within the town centre contributes to a reduction in greenhouse gases. Additionally, reducing the speed limit to 20mph results in a reduction in GHG emissions from cars as lower speeds require less energy, and therefore emit lower levels of GHGs.
SA8: Climate Resilience	0							
SA9: Noise	+	M	I	L	R	P	MT	There are anticipated minor positive effects upon noise as a result of the outcome. A 20mph speed limit is likely to reduce vehicle noise along key town centre routes. Additionally, reducing the dominance of vehicles contributes to reductions in noise.
SA10: Landscape and Townscape	+	L	I	L	R	P	LT	If positively designed, the developments to cycle parking and e-scooter hire are likely to result in improvements to the streetscape. Additionally, a reduction in vehicles in town centres improves the landscape setting.
SA11: Historic Environment	+	L	I	L	R	P	LT	Indirectly, improving air quality and reducing noise within town centres is likely to improve the settings and reduce the degradation of heritage assets within town centres.
SA12: Water Quality	0							

SA13: Flooding	0							
SA14: Population	+	M	I	L	R	P	MT	Minor positive effects have been identified for population as the development to town centres provides improved provisions for current and future populations within town centres, including improved cycle parking. The development of e-scooter hire and adapted cycle parking also provides provisions for those who are disabled, elderly, or have mobility issues.
SA15: Health	++	M	D	L	R	P	MT	There are significant positive effects anticipated for health as the developments within town centres improve pedestrian and cycle infrastructure, which is likely to encourage active travel modes, improving physical activity and therefore health. Additionally, the outcome results in improvements to user safety, reducing the number of accidents.
SA16: Economy and Employment	+	M	D	L	I	P	LT	There are anticipated minor positive improvements to economy and employment as a result of the increased space for businesses within town centres. This provides more space for economies. Additionally, improving the pedestrian environment and improving cycle facilities is likely to encourage residents to access town centres.
Potential Cumulative / Synergistic Effects	There are potential for cumulative effects upon air quality, noise, population and health due to improvements within town centres for safety, and improved active travel facilities. There are also potential cumulative effects upon economy due to town centre developments and increased space for business.							
Mitigation and Enhancement Measures	No mitigation or enhancement measures have been identified at this stage. Mitigation is likely to be based on individual schemes that may arise as a result of the LTP4.							
EqIA considerations	*All age groups may be more likely to utilise safer active travel routes *Disabled users may be less likely to use unsuitable environments with inaccessible areas *Adapted cycle parking increasing accessibility for disabled users *Women are generally primary caregivers for the first 26 weeks after birth, and tend to accompany children to school and childcare. *Pregnant women and new mothers may struggle accessing public and active travel							
Recommendations	The policy could be expanded to outline the high quality cycle facilities from the LCWIP that will be carried into the LTP4. The policy could outline how vehicle dominance will be reduced within town centres. The policy could include measures to ensure that e-scooter hire schemes are affordable for all, namely elderly and disabled users.							

THRIVING VILLAGES AND TOWN CENTRES

Vision Theme	Create Liveable, Healthy and Safe Places							
Objective	Thriving Villages and Town Centres							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	0							
SA5: Green Infrastructure	?							It is uncertain if the expansion of the Greenways scheme will include green infrastructure. Effects upon this are likely to be determined by individual schemes that may arise.
SA6: Air Quality	+	L	D	L	I	P	LT	The development of additional EV charging, cycle parking, motorcycle parking, and enhancing pedestrian access is likely to encourage more sustainable modes of transportation within rural areas. This is likely to reduce traditional fuelled car use to travel to these destinations, improving air quality. Additionally, trialling low traffic areas is likely to result in improvements in air quality.
SA7: Greenhouse Gases	+	L	D	L	I	P	LT	Encouraging sustainable vehicle modes such as EV's, and improving walking and cycling environments is likely to result in a reduction in GHGs from private vehicles.
SA8: Climate Resilience	0							
SA9: Noise	+	L	D	L	I	P	LT	Encouraging the use of EV's within rural areas of the Borough is likely to result in reduced vehicle noise within these areas.
SA10: Landscape and Townscape	+	M	I	L	I	P	LT	The expansion of the Greenways network results in improvements to local landscapes, through improvements to the public realm. Additionally, this objective outcome is likely to improve local landscape setting through a reduction in private vehicle numbers and increase in improved pedestrian, cyclist, and horse riding infrastructure.
SA11: Historic Environment	+	L	I	L	R	P	LT	There is potential for positive effects to the setting of heritage assets as a result of improvements to the public realm through the Greenways expansion, and the improvement in pedestrian and cyclist infrastructure. Additionally, improvements to air quality will result in the reduction in degradation of heritage assets.
SA12: Water Quality	0							
SA13: Flooding	0							

SA14: Population	++	M	D	L	I	P	LT	Significant positive effects are identified for population as the outcome includes developments that facilitate local community needs, as well as enhancing community access for the local population. Improving EV charging and parking facilities also provides infrastructure for current and future populations. The development of the Greenways network also provides improvements to connectivity for a range of social groups, including children, and provides improvements to services where required. The development also includes improvements to public spaces, developing these facilities for public use. Additionally, the development of active travel route web-based maps provides an up-to-date service for the local population.
SA15: Health	++	M	D	L	I	P	LT	The outcome includes measures to enhance pedestrian access to local service centres. This may improve health if these services are healthcare or leisure centres. There are also potential improvements to mental wellbeing as a result of this outcome, through improving access to green spaces. Additionally, the development of active travel route web-based maps provides an improved network for encouraging physical activity and the uptake of active travel. Measures within the objective support the improvements of pedestrian, cyclist and horse riding infrastructure, encouraging physical activity.
SA16: Economy and Employment	+	L	D	L	R	P/T	MT	There are anticipated minor positive effects upon economy as a result of the support for opportunities for temporary highway closures for local events in rural villages. This supports the vitality of rural villages and encourages visitors to rural areas of Wokingham, boosting the rural economy.
Potential Cumulative / Synergistic Effects	There are potential cumulative effects on air quality, population, and healthcare through enhancing access to local amenities within rural areas. Additionally, there are potential cumulative effects on economy in rural areas as a result of boosting local events.							
Mitigation and Enhancement Measures	No mitigation or enhancement measures have been identified at this stage. Mitigation is likely to be based on individual schemes that may arise as a result of the LTP4.							
EqIA considerations	*Elderly and disabled users may struggle with access to services and require improved access *Same sex couples are more likely to be a victim of harassment or discrimination when on public transport, walking or cycling *People holding a religion or belief may experience discrimination on public transport							
Recommendations	The policy could be expanded to include specifications as to what local service centres will have enhanced access.							

Reduce Environmental Impacts

Net Zero Carbon Emissions
Clean Air, Removal of All Air Quality Exceedances
High Quality Sustainable Travel Corridors

NET ZERO CARBON EMISSIONS

Vision Theme	Reduce Carbon Emissions from Transport							
Objective	Net Zero Carbon Emissions							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	+/-	L	I	R	R/I	P/T	ST/LT	Improvements to air quality across the Borough is likely to result in improvements to natural capital and reduce degradation of this asset due to poor air quality, resulting in positive effects. However, there is potential that development to decarbonise the transport network may result in negative effects due to poor air quality associated with construction. It is noted that construction effects are likely to be temporary, and determined by individual schemes that may arise.
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	+	M	D	R	R	P/T	MT/LT	There are likely to be minor positive effects on biodiversity as a result of Net Zero Emissions due to improvements in air quality and reductions in noise and traffic. This is likely to reduce the disturbance to local biodiversity, particularly those in habitats bordering the Borough's busiest roads, and may also contribute to reducing biodiversity loss as a result of poor air quality.
SA5: Green Infrastructure	0							
SA6: Air Quality	++	M	D/I	R	R/I	P/T	MT/LT	There are likely to be improvements to air quality as a result of the Net Zero Emissions objective. There is anticipated to be a reduction in vehicle movements on Wokingham Borough Council (WBC)'s roads, with encouragement of the transition to zero emissions buses. The objective outcome also includes the development of electric vehicle (EV) charging infrastructure. These outcomes are likely to contribute to reducing the number of private vehicles on the network, including petrol and diesel vehicles, and encourage a modal shift towards sustainable transport. Therefore, there is likely to be a reduction in emissions across the Borough, contributing to improvements in air quality.
SA7: Greenhouse Gases	++	M	D	R	R/I	P	MT/LT	There are anticipated significant positive effects on GHGs as a result of Net Zero Emissions. A reduction in total traffic movements, combined with an encouragement of EVs and decarbonisation of the transport network, including zero emission buses. This is likely to result in a reduction in GHG emissions from transport, particularly due to the transition away from petrol and diesel fuelled vehicles.

SA8: Climate Resilience	?							There is potential that the decarbonisation of the transport network, and development of solutions to decarbonise the network, may result in increased climate resilience. However, it is currently uncertain what developments may arise and whether developments will contribute to climate resilience as this is likely to be determined by individual scheme design.
SA9: Noise	+	M	I	R	R	P	MT	An overall reduction in total traffic movements in WBC is likely to result in a reduction in road noise. This is particularly likely to occur on heavily congested and noisy routes, including the A329, M4, A329(M), A33, Reading Road, London Road, and Finchampstead Road. Additionally, EVs result in lower noise levels than petrol and diesel vehicles. Therefore encouraging a shift towards the use of EVs is likely to result in reduced noise along roads across the Borough.
SA10: Landscape and Townscape	+	L	I	R	R	P	MT	Reducing the number of vehicles on the Borough's roads is likely to result in reduced congestion. This, alongside a reducing in vehicle noise, is likely to improve the setting of Wokingham Borough's landscape and townscape.
SA11: Historic Environment	+	L	I	L	R	P	MT	Poor air quality has been linked to increased degradation of the surfaces of heritage assets. Therefore improvements to air quality within the Borough are likely to result in reductions in the degradation of heritage assets. There is also the potential that reductions in noise pollution may improve the setting of heritage assets and improve the significance of settings.
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	+/-	M	I	R	R	P	LT	Improving digital accessibility will have positive effects on the population due to an increase in efficiency and accessibility of information. Improving digital accessibility also has the potential for negative impacts on the population for individuals without the means to access digital services, who may be left without access to information. Provisions need to be in place to ensure those without the means or knowledge to access digital services are supported.
SA15: Health	+	M	I	R	R	P	MT	Indirectly, the Net Zero Emissions objective is likely to positively impact upon health. Air quality improvements are likely to result in improved health, particularly as air quality has been linked to poor health. For residents located close to areas of poor air quality, or those who regularly use highly congested routes, there are likely to be reductions to the exacerbation of respiratory conditions such as asthma. Additionally, a reduction in noise for those residents close to noisy routes is likely to result in improved mental wellbeing as a result of reduced disturbance.
SA16: Economy and Employment	+	M	I	R	R	P	MT	There are anticipated to be indirect effects on economy and employment as a result of the Net Zero Emissions objective. There are likely to be improvements to journey times as a result of reductions in the number of vehicles on the Borough's roads. This is likely to improve the reliability of transport networks and journey to work times.
Potential Cumulative / Synergistic Effects	There are potential cumulative effects on air quality and greenhouse gases as a result of encouraging a modal shift away from petrol and diesel vehicles across the transport network. Subsequently, there is also potential for cumulative benefits to health, biodiversity, and noise if multiple developments were to arise.							
Mitigation and Enhancement Measures	No mitigation or enhancement measures have been identified at this stage. Mitigation is likely to be based on individual schemes that may arise as a result of the LTP4.							

EqIA considerations	* Younger working aged people may struggle to access EV charging infrastructure in areas with limited off-street parking. *Implementing driverless buses may increase isolation amongst the elderly *People undergoing gender reassignment and same sex couples may feel unsafe on public transport *BAME communities may be more at risk of discrimination on public transport *Pregnant women and new mothers are vulnerable to social isolation. *People holding a religion or belief may experience discrimination on public transport. *People with disabilities, deaf or hard of hearing, blind or with poor vision, may struggle to hear low noise vehicles and may be more at risk of accidents.
Recommendations	The objective outcome could be developed to be more specific about the quantity of total traffic reduction on WBC roads. The objective outcome could be expanded to outline where the sustainable corridors would be located.

CLEAN AIR, REMOVAL OF ALL AIR QUALITY EXCEEDANCES

Vision Theme	Reduce Carbon Emissions from Transport							
Objective	Clean Air, removal of all air quality exceedances							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	+	M	D	R	R	P/T	MT/LT	There are likely to be minor positive effects on biodiversity due to improvements in air quality as a result of Clean Air. This is likely to reduce the disturbance to local biodiversity, particularly those in habitats bordering Town Centre roads, and may also contribute to minimising biodiversity loss in these areas as a result of poor air quality.
SA5: Green Infrastructure	0							
SA6: Air Quality	++	M	D	R	R	P	LT	The proposed outcome should result in improved air quality within the Borough, particularly within AQMA's. Additionally, reducing the quantity of traffic and changing speed limits to achieve this objective is likely to encourage a modal shift away from private transport. Improving the safety for active travel within Twyford Town Centre is also likely to contribute to a modal shift. However, the measures considered within the Wokingham Town Centre Freight Strategy are currently unclear, and therefore the contribution to air quality improvements cannot be established at this time. It is anticipated that the strategy will include improvements to freight within the town centre, including reducing emissions on deliveries.
SA7: Greenhouse Gases	++	M	D	R	R	P	LT	There are anticipated improvements to greenhouse gases as a result of this outcome. The outcome includes reducing the number of private vehicles, and likely freight, within Wokingham Town Centre, reducing vehicle related greenhouse gas emissions. Additionally, facilitating the transition to zero emission buses, and supporting the decarbonisation of the rail network will further reduce transport related greenhouse gases.
SA8: Climate Resilience	0							
SA9: Noise	0							
SA10: Landscape and Townscape	+	L	I	L	R	P	MT	Reducing the number of vehicles within the town centre is likely to result in reduced congestion. This contributes to improving the setting of Wokingham Borough's landscape and townscape.
SA11: Historic Environment	+	L	I	L	R	P	MT	Improvements to air quality within the Borough are likely to result in reductions in the degradation of heritage assets. There is also the potential that reductions in traffic, and traffic speeds, may improve the setting of heritage assets and improve the significance of settings.

SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	+	M	D	R	R	P	MT	Positive effects are anticipated for population as a result of Clean Air. Improvements to safety for cyclists, pedestrians, and reliability of public services is likely to provide improvements to infrastructure and services for the current population, and reduce the number of accidents involving cyclists and pedestrians.
SA15: Health	+	M	D	R	R	P	MT	. Air quality improvements are likely to result in improved health, this is particularly likely for those living within and using areas of air quality exceedances and AQMAs. Additionally, the outcome includes improved safety for cycling and pedestrians, increasing the likelihood of active travel usage and physical activity rates. These improvements are also likely to result in improvements to health through a reduction in accidents, improving safety.
SA16: Economy and Employment	+/-	L	I	R	R	P	LT	Positive effects on economy and employment are anticipated as a result of improvements to the reliability of public transport services, improving journey times. However, there is potential for negative effects as changes to accessibility may restrict access and cause increased journey times for those accessing work and services within Wokingham Town Centre by car.
Potential Cumulative / Synergistic Effects	There are potential for cumulative effects upon air quality and greenhouse gases through improvements to air quality. There are also potential positive effects on human health as a result of these improvements.							
Mitigation and Enhancement Measures	No mitigation or enhancement measures have been identified at this stage. Mitigation is likely to be based on individual schemes that may arise as a result of the LTP4.							
EqIA considerations	*People with long term health conditions may be more negatively impacted by poor air quality *People holding a religion or belief may experience discrimination on public transport. *People on lower incomes often live in areas that suffer with poor air quality so may benefit from improved air quality. *BAME communities may be more at risk of discrimination on public transport.							
Recommendations	The outcome objective 'Wokingham Town Centre Freight Strategy' could be expanded to give more information on what this may entail for Clean Air. The outcome objective could expand upon the nature of potential changes to access in Wokingham Town Centre and how traffic may be reduced in these areas.							

High Quality Sustainable Travel Corridors

Boroughwide

Vision Theme	Reduce Carbon Emissions from Transport							
Objective	High Quality Sustainable Travel Corridors - Boroughwide							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	?							Uncertain effects have been identified as it is currently unclear if improving access to public transport, disabled parking, bus stop enhancement, and level access improvements at stations and Tan House Bridge will result in construction works that may include additional materials, or land take if required. This is likely to be determined by individual developments arising as a result of this objective.
SA3: Soils	?							Uncertain effects have been identified as it is currently unclear if improving access to public transport, disabled parking, bus stop enhancement, and level access improvements at stations and Tan House Bridge will result in construction works that may include additional land take. This is likely to be determined by individual developments arising as a result of this objective.
SA4: Biodiversity	+/-	L	I	R	R	P/T	MT/LT	There are likely to be minor positive effects on biodiversity due to improvements in air quality. This is likely to reduce the disturbance to local biodiversity and may also contribute to minimising biodiversity loss as a result of poor air quality. However, there is potential that development may result in land take, resulting in loss of biodiversity and disturbance to local habitats and species.
SA5: Green Infrastructure	0							
SA6: Air Quality	+	L	I	R	R	P	LT	There are anticipated indirect positive effects on air quality as a result of this objective improving access to public transport. Indirectly, this encourages a modal shift away from private vehicles through making public transport more accessible and attractive to residents of the Borough, improving air quality.
SA7: Greenhouse Gases	+	L	I	R	R	P	LT	There are anticipated indirect positive effects on greenhouse gases as this objective improves access to public transport. Indirectly, this results in a likely reduction in vehicle related GHGs.
SA8: Climate Resilience	0							
SA9: Noise	0							
SA10: Landscape and Townscape	0							
SA11: Historic Environment	0							

SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	++	M	D	R	I	P	LT	Significant positive effects have been identified for population as this objective outcome improves public transport infrastructure inclusively for the current and future population. Additionally, this objective includes measures to develop lower bus fares. Lower fares help to ensure that bus services are accessible to all within the community, including those on low incomes. Additionally, community dial-a-ride services provide services for largely disabled or elderly users, providing accessibility and improving community services.
SA15: Health	+	L	I	R	R	P	LT	Indirect positive effects have been identified for health. This objective outcome is likely to improve mental well-being through providing access to the wider Borough, improving access to socialisation, facilities and employment.
SA16: Economy and Employment	+	L	I	R	R	P	LT	Minor positive effects have been identified for the economy as a result of this objective outcome. The outcome improves access to public transport and therefore improves access to the wider Borough, and employment opportunities. This also likely to improve access to retail and services across the Borough.
Potential Cumulative / Synergistic Effects	There are potential cumulative effects on population, air quality and greenhouse gases as a result of encouraging a modal shift away from private vehicles, and providing improvements to accessibility. Subsequently, there is also potential for cumulative benefits to biodiversity, health and economy.							
Mitigation and Enhancement Measures	No mitigation or enhancement measures have been identified at this stage. Mitigation is likely to be based on individual schemes that may arise as a result of the LTP4.							
EqIA considerations	*Improved public transportation improves access for younger working aged people *Improved access to railway stations may have potential positive effects on disabled and elderly users, as well as those relying on public transport *Pregnant women and new mothers may struggle accessing public transport. *BAME communities utilise bus services more than other ethnic groups. *Developing improved access to public transport improves access for low income groups.							
Recommendations	This objective outcome could be expanded to include improvements to the frequency of public transport services.							

Vision Theme	Reduce Carbon Emissions from Transport							
Objective	High Quality Sustainable Travel Corridors - Earley, Woodley and Shinfield							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	?							Uncertain effects have been identified as it is unclear if development will occur as part of the high quality cycle facilities and improved interchange facilities at Earley. There is potential for development to require additional materials, however this is currently uncertain.
SA3: Soils	?							Uncertain effects have been identified as it is unclear if development will occur as part of the high quality cycle facilities and improved interchange facilities at Earley. There is potential for development to require additional land.
SA4: Biodiversity	+	M	D	R	R	P/T	MT/LT	There are likely to be minor positive effects on biodiversity due to improvements in air quality. This is likely to reduce the disturbance to local biodiversity, particularly those in habitats bordering the A4/A321, A33, A329 and A327, and may also contribute to minimising biodiversity loss as a result of poor air quality. However, there is potential that if there are increases in noise as a result of bus services, this may disturb biodiversity along these routes.
SA5: Green Infrastructure	+	M	D	L	I	P	LT	There is anticipated positive effects on green infrastructure as the development of new cycle facilities may improve green infrastructure. Green infrastructure measures are likely to be specific to each development, however there is potential for improvements to biodiversity and ecosystem services in Earley, Woodley and Shinfield.
SA6: Air Quality	+	M	I	R	R/I	P	LT	There are anticipated indirect positive effects on air quality as a result of a modal shift away from private vehicle use. An increase in bus frequency and improved facilities at Earley train station are likely to encourage users to use public transport. Additionally, improving the cycle facilities along strategic cycle routes is likely to encourage users, particularly commuters, to use public and active travel. Through reducing the number of users on roads, there are likely to be reductions in emissions and therefore improvements in air quality.
SA7: Greenhouse Gases	+	M	D	R	R/I	P	LT	Positive effects on greenhouse gases are anticipated due to the outcome encouraging a modal shift away from private car use, providing improved public and active travel modes. Therefore, there is potential for GHG emissions from private cars to reduce across the edge of Reading area. This is particularly likely due to the large number of commuters in the area. However, it is uncertain whether the increased bus frequency will include green buses, further reducing GHG emissions.
SA8: Climate Resilience	?							There are uncertain effects upon climate resilience as it is currently unclear if development will be undertaken upon strategic cycle routes to improve facilities. There is potential that development may result in increased embodied carbon, or include climate resilience measures.

SA9: Noise	+/-	L	D/I	R	R	P	LT	The outcomes proposed within High Quality Sustainable Travel Corridors result in potential indirect positive effects on noise, through encouraging a modal shift away from private vehicles and towards public and active transport. This has the potential to reduce the number of vehicles on WBC roads, particularly reducing noise on the Borough's most congested roads. However, there is potential that an increase in bus services along priority bus corridors may result in increased noise on these routes. This is particularly notable as some of the priority bus corridors included within the scheme are not located within existing areas of high noise and are therefore likely to have increased effects on the local population.
SA10: Landscape and Townscape	+	L	I	R	R	P	MT	Encouraging a modal shift away from private vehicles is likely to result in reduced congestion, improved air quality, and reductions in vehicle noise. This has the potential to improve the setting of Wokingham Borough's landscape and townscape.
SA11: Historic Environment	+	L	I	L	R	P	MT	Air quality has been linked to increased degradation of the surfaces of heritage assets, therefore improvements to air quality within the Borough are likely to result in reductions in the degradation of heritage assets. Reductions in traffic is also likely to improve the number of
SA12: Water Quality	0							
SA13: Flooding	0							
SA14: Population	++	M	D	R	R/I	P	LT	Increasing bus frequency within priority bus corridors will result in increased services for local residents and the wider population, improving connectivity within the Borough. Increased bus services are also likely to result in positive effects through inclusively improving access to public transport services, this is particularly likely to benefit those who are more likely to rely on public transport, such as people on lower incomes, the elderly, and young adults. Additionally, providing high quality cycle facilities provides improved services for current and future populations. The proposed high quality facilities also form part of Reading Strategic Cycle Routes, further improving connectivity both within the Borough and with neighbouring areas. The improved interchange and access facilities at Earley rail station will also contribute to improving accessibility to all social groups inclusively and improving connectivity.
SA15: Health	+	L	I	R	R	P	MT	There are likely to be indirect positive effects on health as a result of the High Quality Sustainable Travel Corridors objective. The improvement of cycle facilities contributes to encouraging the update of active travel, improving physical activity rates.
SA16: Economy and Employment	+	M	I	R	R	P	LT	There are likely to be positive effects on economy and employment as a result of improvements to bus journey times and cycle facilities. This, alongside the improved interchange at Earley rail station is likely to result in improvements to both journey times and connectivity to wider employment areas. Improvements on the Edge of Reading are particularly likely to result in improved access to employment, connecting with the wider region and Reading.
Potential Cumulative / Synergistic Effects	There are potential cumulative effects on air quality and greenhouse gases as a result of encouraging a modal shift away from private vehicles. Subsequently, there is also potential for cumulative benefits to population, health and economy.							
Mitigation and Enhancement Measures	No mitigation or enhancement measures have been identified at this stage. Mitigation is likely to be based on individual schemes that may arise as a result of the LTP4.							

EqIA considerations	*Improved public transportation improves access for younger working aged people *Improvements to access to railway stations may have potential positive effects on disabled and elderly users, as well as those relying on public transport *Pregnant women and new mothers may struggle accessing public transport. *BAME communities utilise bus services more than other ethnic groups. *BAME communities may be more at risk of discrimination on public transport. *Developing improved access to public transport improves access for low income groups. *People holding a religion or belief may experience discrimination on public transport.
Recommendations	Improved access facilities could be expanded to include reference to improving equal access to rail services. The outcome could also benefit from including measures for integrated ticketing, to improve the accessibility and cost of public transport. The outcome could be expanded to specify that sustainable fuelled buses will provide increased bus frequencies.

Vision Theme	Reduce Carbon Emissions from Transport							
Objective	High Quality Sustainable Travel Corridors - Wokingham & Winnersh							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	?							Uncertain effects have been identified as there is potential for the construction works to result in loss of natural capital due to land take, as well as resulting in increased disturbance during construction. However, it is also uncertain if the developments will include measures to enhance natural capital.
SA2: Materials and Waste	?							It is currently uncertain if the development of a high-quality sustainable transport corridor along the A329 will involve the development of new infrastructure, or utilise the existing transport network. There is potential for waste, and increase use of materials if the development requires new infrastructure. This is also applicable to improving access to the stations along the North Downs Line.
SA3: Soils	?							Uncertain effects are identified for soils as it is unclear if the delivery of the transport corridor along the A329 will require additional land take, or utilise the existing highway. Similarly, it is uncertain if the improvements to access to stations will require additional land, or if this will upgrade existing access routes.
SA4: Biodiversity	+/-	M	D/I	L	R/I	P/T	ST/LT	Developing a high-quality sustainable travel corridor, as well as improving access to stations along the North Downs Line have the potential to indirectly positively effect biodiversity through reductions in noise and improvements in air quality as a result of reduced congestion on roads and improving public transport accessibility. However, there is potential for short-term negative effects on biodiversity due to construction related noise, vibration and emissions. It is also currently uncertain if land take will be required for these schemes, and therefore if there will be any direct loss of biodiversity.
SA5: Green Infrastructure	+	M	D	L	I	P	LT	There is anticipated positive effects on green infrastructure as the development of active travel corridors may improve green infrastructure. Green infrastructure measures are likely to be specific to each development, however there is potential for improvements to biodiversity and ecosystem services.
SA6: Air Quality	+	M	D	L	R	P	MT	Minor positive effects are identified for air quality as it is anticipated that the development of the A329 sustainable travel corridor will reduce congestion along this route, improving air quality. Additionally, improving the access to stations along the North Downs Line is likely to encourage a modal shift towards public transport use.
SA7: Greenhouse Gases	+/-	M	D	L	R	P/T	ST/MT	There are potential negative effects upon greenhouse gases during the construction of the sustainable travel corridor, and construction works at stations in the North Downs Line, from construction equipment. However, during operation, the routes are likely to result in reductions in vehicle emissions, reducing GHGs.
SA8: Climate Resilience	?							It is currently uncertain if the development of the new transport corridor will include climate resilience measures, including heat and flooding mitigation. It is recommended that due to its proximity to flood zone 3, there may be SuDS included within development close to the A329.

SA9: Noise	+/-	M	D	L	R	P/T	ST/MT	There is potential for increases in noise during the construction of development as a result of plant equipment. However, during operation there is likely to be a reduction in vehicle noise due to reductions in congestion along the A329.
SA10: Landscape and Townscape	+/-	M	D	L	R/I	P/T	ST/MT	During construction, there may be changes to the local landscape and townscape, including the addition of construction and plant equipment and noise. This is likely to result in negative effects upon the local landscape and townscape setting. However, developments to the facilities at stations may contribute to improving frontages, and the reductions in congestion are likely to positively affect landscape and townscape settings.
SA11: Historic Environment	+/-	M	D	L	R/I	P/T	ST/LT	There are potential negative effects anticipated for the historic environment as there are a number of heritage assets located long the boundary of the North Downs Line and the A329. There is potential that during construction, these assets may be disturbed, with negative effects on their settings as a result of construction noise, vibration and emissions. However, there is potential for positive effects on the settings of assets following construction, due to a reduction in vehicles and congestion.
SA12: Water Quality	0							
SA13: Flooding	?							Uncertain effects have been established for flooding. It is unclear if there will be development to or along the A329. However, areas bordering this route are located within Flood Zone 3. Therefore, there is potential for flooding along the route, particularly if there are increases in hard standing and impermeable surfaces.
SA14: Population	+	M	I	L	I	P	LT	Minor positive effects have been identified for population, as the development of the sustainable transport corridor along the A329 and access to stations is likely to provide additional access to Wokingham Borough, as well as the wider community. This provides improved access to services, such as leisure and healthcare, as well as providing infrastructure for a growing population. It is assumed that improvements too access may also improve access for disabled and elderly users, however this is currently uncertain.
SA15: Health	0							
SA16: Economy and Employment	+	L	I	R	R	P	MT	Minor positive, indirect effects are identified for economy and employment as the developments to both the A329 and station access is likely to result in reductions to congestion, and improvements to journey times. Additionally, this improves connections within Wokingham and Winnersh, the wider Borough, and Reading.
Potential Cumulative / Synergistic Effects	There are potential cumulative effects on economy and employment due to improved journey reliability times, and improved connectivity to the wider region. Additionally, there are potential cumulative effects on air quality, greenhouse gases, and biodiversity as a result of construction and operational phases of development.							
Mitigation and Enhancement Measures	The outcomes of the vision could be enhanced through incorporating drainage methods to minimise flood risk within development.							
EqIA considerations	*Improved public transportation along the A329 and A321 improves access for younger working aged people *Improved access to railway stations may have potential positive effects for disabled and elderly users, as well as those relying on public transport *Pregnant women and new mothers may use adapted cycles to travel and struggle accessing public transport. *BAME communities utilise bus services more than other ethnic groups. *Developing improved access to public transport improves access for low income groups.							
Recommendations	Specific measures could be included to improve access to stations for the disabled and elderly, for example, improving access routes for all users, and reducing congestion on key routes to stations.							

Vision Theme	Reduce Carbon Emissions from Transport							
Objective	High Quality Sustainable Travel Corridors - South Wokingham							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	?							There are potential for minor negative effects upon natural capital if the development along the B3349 and A321 results in the loss of biodiversity. However, the scale of this effect is currently unknown.
SA2: Materials and Waste	?							It is currently uncertain if the upgrade of active travel facilities along the B3349 and A321 will involve the development of new infrastructure, or utilise the existing infrastructure. There is potential for waste, and increased use of materials if the development requires new infrastructure.
SA3: Soils	?							Uncertain effects are identified for soils as it is unclear if the if the upgrade of active travel facilities along the B3349 and A321 will require additional land take, or utilise the existing brownfield land and footpath infrastructure.
SA4: Biodiversity	+/-	M	D	L	I	P	ST/LT	Negative effects have been identified for biodiversity as a result of the developments along the B3349 and A321. There are areas of hedgerow located along the route, which are home to a diverse range of species, including birds and other small mammals. As the current active travel route is narrow, it is assumed that the development would include additional land take. This may result in the loss or damage to habitats, and therefore species. However, there are anticipated positive effects on biodiversity as a result of improved air quality.
SA5: Green Infrastructure	-	M	D	L	I	P	ST/LT	Minor negative effects have been identified for biodiversity as a result of the developments along the B3349. There is potential that the development of active travel routes may result in small scale loss of green infrastructure, and temporary disturbance to the green routes and riverside paths located along the route.
SA6: Air Quality	++	M	D	L	R	P	LT	There are anticipated positive effects on air quality as a result of the objective. The improvement of public and active travel infrastructure is likely to facilitate a modal shift away from private car use, improving air quality along the B3349 and A321. Furthermore, increasing bus service frequency is likely to encourage residents in this area to utilise bus services to travel to Wokingham Town Centre, and the wider region, further improving air quality through a reduction in car use.
SA7: Greenhouse Gases	+/-	M	D	L	R	P/T	ST/MT	There are potential negative effects upon greenhouse gases during the construction of both the upgraded active travel routes from construction equipment. However, during operation, the routes are likely to result in reductions in vehicle emissions, reducing GHGs. Additionally, improving bus transportation services may reduce private car related GHGs.
SA8: Climate Resilience	?							It is currently uncertain if the development of the active travel facilities will include climate resilience measures, including heat and flooding mitigation. Climate resilience measures are likely to be development specific and determined in the development design stage.
SA9: Noise	+/-	L	D/I	L	R	P/T	ST/LT	Developing the active travel routes, as well as improving bus services, is likely to reduce private car use along these key routes. Indirectly, this then reduces vehicle noise along

								these routes, particularly in the Arborfield area. However, during construction, there may be changes to local noise levels as a result of construction and plant equipment and noise.
SA10: Landscape and Townscape	+/-	M	D	L	R/I	P/T	ST/MT	During construction, there may be changes to the local landscape and townscape, including the addition of construction and plant equipment and noise. This is likely to result in negative effects upon the local landscape and townscape setting. However, developing the active travel facilities along the B3349 and A321 have the potential to improve the public realm in these areas, resulting in positive effects.
SA11: Historic Environment	-	L	D	L	R	T	ST	There are potential negative effects anticipated for the historic environment as there are a number of heritage assets located along the B3349, including conservation areas, archaeological sites, and a historic park and garden. There is potential that during construction, these assets may be disturbed, with negative effects on their settings as a result of construction noise, vibration and emissions.
SA12: Water Quality	0							
SA13: Flooding	?							Uncertain effects have been established for flooding. The B3349 intersects multiple areas of Flood Zone 3 and it is currently unclear if there will be increased flood resilience measures included within the development of upgraded facilities. Therefore, there is potential for flooding along the route, particularly if there are increases in hard standing and impermeable surfaces.
SA14: Population	++	M	D	R	R/I	P	LT	Significant positive effects on population have been identified as a result of the objective. The increase to bus services, as well as the upgraded active travel facilities are likely to improve connectivity between Arborfield, Finchampstead and Wokingham Town Centre. This provides connectivity for the rural populations within Arborfield and Finchampstead, providing access to services and leisure within Wokingham, as well as providing connectivity to the wider region. These effects are particularly likely to be felt if bus services are further developed to every 15 minutes.
SA15: Health	+	M	D	L	R	P	MT	Improving active travel facilities are likely to result in an increased uptake in active travel between Arborfield and Wokingham Town Centre. This is likely to result in increased physical activity, and therefore improved physical health, amongst the local population.
SA16: Economy and Employment	+	M	I	L	R	P	MT	Improving the connectivity between the Arborfield, Finchampstead and Wokingham Town Centre is likely to result in improved access to employment for those living in rural areas in South Wokingham. Additionally, it improves the connectivity of the local economies, increasing the number of people travelling to retail and leisure across areas. Additionally, increasing bus frequency is likely to result in improved journey times for commuters in rural areas relying on public transport.
Potential Cumulative / Synergistic Effects	There are potential cumulative effects upon population, health and the economy, due to the improved connectivity between the rural towns in South Wokingham and Wokingham Town Centre. There is also potential for cumulative effects upon air quality as a result of encouragement of a modal shift towards sustainable transport modes.							
Mitigation and Enhancement Measures	The outcomes of the vision could be enhanced through incorporating drainage methods to minimise flood risk within development. Developments arising from this objective that intersect with Flood Zone 3 should incorporate SUDs.							

EqIA considerations	*Younger people have a higher reliance on active and public transportation *The current footpaths not wide enough for cyclists and pedestrians, new upgrades have the potential to increase width and make the path wide enough for cyclists, pedestrians and adapted bikes *Disabled users may struggle accessing active travel options *Pregnant women and new mothers may use adapted cycles to travel and struggle accessing public transport. *BAME communities utilise bus services more than other ethnic groups. *Developing improved access to public transport improves access for low income groups.
Recommendations	The objective outcomes could be widened to include additional rural areas within South Wokingham, linking these to the active travel network and improving bus facilities. The objective outcome could also include a measure to ensure inclusive accessibility of bus services to rural communities, through measures such as disabled access and affordable ticketing.

Vision Theme	Reduce Carbon Emissions from Transport							
Objective	High Quality Sustainable Travel Corridors - North Wokingham							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	?							There are uncertain effects upon natural capital as a result of development. There is potential that development may results in the loss of biodiversity. However, the scale of this effect is currently unknown.
SA2: Materials and Waste	?							It is currently uncertain if the upgrade of active travel facilities into Twyford and the improvements at Twyford station will involve the development of new infrastructure, or utilise the existing infrastructure. There is potential for waste, and increased use of materials if the development requires new infrastructure.
SA3: Soils	?							Uncertain effects are identified for soils as it is unclear if the if the upgrade of active travel facilities will require additional land take, or utilise the existing brownfield land and footpath infrastructure.
SA4: Biodiversity	+/-	M	D/I	L	R/I	P/T	ST/LT	Developing active and public transport modes has the potential to indirectly positively effect biodiversity through reductions in noise and improvements in air quality as a result of reduced congestion on roads and improving public transport accessibility. However, there is potential for short-term negative effects on biodiversity due to construction related noise, vibration and emissions. It is also currently uncertain if land take will be required for these schemes, and therefore if there will be any direct loss of biodiversity. There are areas of hedgerow located along the route, which are home to a diverse range of species, including birds and other small mammals. As the current active travel route is narrow, it is assumed that the development would include additional land take. This may result in the loss or damage to habitats, and therefore species.
SA5: Green Infrastructure	-	M	D	L	I	P	ST/LT	Minor negative effects have been identified for biodiversity as a result of the developments arising from this objective. There is potential that the development of active travel facilities and forecourt developments may result in small scale loss of green infrastructure, and temporary disturbance to the green routes and riverside paths located along the route.
SA6: Air Quality	++	M	D	L	R	P	LT	There are anticipated positive effects on air quality as a result of the objective facilitating a modal shift away from private car use, improving air quality within Twyford and Wargrave. This is particularly notable as this could contribute to improving air quality within Twyford Crossroads AQMA. Furthermore, reducing bus journey times and improving service reliability is likely to encourage residents in this area to utilise bus services to travel to Wokingham Town Centre, and the wider region, further improving air quality through a reduction in car use.
SA7: Greenhouse Gases	+/-	M	D	L	R	P/T	ST/MT	There are potential negative effects upon greenhouse gases during the construction of both the upgraded active travel route and Twyford station improvements from construction equipment. However, during operation, the routes are likely to result in reductions in vehicle emissions, reducing GHGs. Additionally, improving bus transportation services may reduce private car related GHGs.

SA8: Climate Resilience	?							It is currently uncertain if climate resilience measures will be included within the developments of improved infrastructure at Twyford station and along active travel facilities. There are areas of Twyford and Wargrave located within Flood Zone 2 and 3. Therefore these areas are likely to be at risk of increased flooding from climate change. However, climate resilience measures are likely to be determined at individual design stage.
SA9: Noise	+/-	L	D/I	L	R	P/T	ST/LT	Developing the active travel routes, as well as improving bus services, is likely to reduce private car use along these key routes. Indirectly, this then reduces vehicle noise along these routes, particularly in the Twyford to Wargrave area. However, during construction, there may be changes to local noise levels as a result of construction and plant equipment and noise.
SA10: Landscape and Townscape	+/-	M	D	L	R/I	P/T	ST/MT	Twyford station is located within Twyford Station Conservation Area. Therefore, improvements to the forecourt and facilities at the station are likely to, if sensitively designed, contribute to improvements to the setting of this conservation area and the assets within it. Additionally, this, and improvements to active travel facilities, result in public realm improvements. During construction, there may be changes to the local landscape and townscape, including the addition of construction and plant equipment and noise. This is likely to result in negative effects upon the local landscape and townscape setting.
SA11: Historic Environment	-	L	D	L	R	T	ST	There are potential negative effects anticipated for the historic environment as there are a number of heritage assets located around Twyford and Wargrave, including conservation areas, archaeological sites, and a listed buildings. There is potential that during construction, these assets, including buried archaeological assets, may be disturbed, with negative effects on their settings as a result of construction noise, vibration and emissions.
SA12: Water Quality	0							
SA13: Flooding	?							Uncertain effects have been identified for flood risk as there is potential that the location of active travel improvements may be located in areas of flood zone 2 or 3. However, any flood mitigation measures are likely to be determined by individual scheme design. It is assumed that if located in flood zone 2 or 3, SuDS will be incorporated into the scheme design.
SA14: Population	++	M	D	R	R/I	P	LT	Positive effects have been identified as the developments to infrastructure are likely to provide improved services for current and future populations. Additionally, improving bus services, Twyford station, and active travel facilities contributes to improving connectivity between North Wokingham and the rest of the Borough, as well as wider region.
SA15: Health	+	M	D	L	R	P	MT	Improving active travel facilities are likely to result in an increased uptake in active travel. This is likely to result in increased physical activity, and therefore improved physical health, amongst the local population.
SA16: Economy and Employment	+	M	I	L	R	P	MT	Improving the connectivity between North Wokingham and the rest of the Borough is likely to result in improved access to employment for those living in North Wokingham. Additionally, it improves the connectivity of the local economies, increasing the number of people travelling to retail and leisure across areas. Additionally, improving bus journey times and improving bus reliability improves journey times for commuters accessing employment.
Potential Cumulative / Synergistic Effects	There are potential cumulative effects upon population, health and the economy, due to the improved connectivity between North Wokingham and Wokingham Town Centre. There is also potential for cumulative effects upon air quality as a result of encouragement of a modal shift towards sustainable transport modes.							
Mitigation and Enhancement Measures	The outcomes of the vision could be enhanced through incorporating drainage methods to minimise flood risk within development.							

EqIA considerations	*Younger people have a higher reliance on active and public transportation *The width of the current active travel route is not wide enough for cyclists and pedestrians, new upgrades have the potential to increase width and make the path wide enough for cyclists, pedestrians and adapted bikes *Disabled users may struggle accessing active travel options *Pregnant women and new mothers may use adapted cycles to travel and struggle accessing public transport. *BAME communities utilise bus services more than other ethnic groups. *Developing improved access to public transport improves access for low income groups.
Recommendations	It is currently unclear how the forecourt and interchange facilities at Twyford station will be improved, the objective outcome could be expanded to include these measures and include measures to provide inclusive access. The active travel facility improvements could also include measures such as expanding paths to accommodate disabled users and reduce user conflicts, as well as provide safe routes through lighting and signage measures.

Grow the Economy

PROTECT AND ENHANCE STRATEGIC CONNECTIVITY AND FREIGHT

Vision Theme	Enable Sustainable and Inclusive Economic Growth							
Objective	Protect and Enhance Strategic connectivity and freight							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	?							It is currently uncertain if improvements to access to the A329 (M) and the capacity of the North Downs and Reading to Waterloo lines may result in development along these routes. There is potential that development may use additional resources.
SA3: Soils	?							It is currently uncertain if improvements to access to the A329 (M) and the capacity of the North Downs line may result in development along these routes. There is potential that development may require additional land take, particularly with regards to any A329 (M) development.
SA4: Biodiversity	-	L	D	R	R	P	MT	Freight movements are likely to result in increased noise, increasing disturbance to local biodiversity, particularly those species in hedgerows. Additionally, freight vehicles contribute to worsening air quality. Poor air quality is also likely to degrade local biodiversity. There is potential that freight management policies and management of freight with neighbouring authorities may reduce freight movements, minimising noise and air quality impacts, however these measures are currently unclear.
SA5: Green Infrastructure	0							
SA6: Air Quality	+/-	M	D/I	R	R/I	P	MT/LT	Improvements to the frequency of services, and capacity of the North Downs Line and Reading to Waterloo rail line is likely to result in indirect positive effects on air quality due to a modal shift away from the utilisation of private transport to travel between these destinations. Additionally, improving the access to the A329 (M) is likely to reduce congestion, improving air quality. However, the developments to the A329 (M) has the potential to encourage the use of private vehicles, reducing air quality. Additionally, it is uncertain whether the management of freight will increase the amount of freight within Wokingham Borough - there is potential that increases in freight may decrease air quality.
SA7: Greenhouse Gases	+/-	M	D/I	R	R/I	P	MT/LT	There is potential that improvements to infrastructure, including the A329 (M), service frequency on North Downs Line and Reading to Waterloo rail line may result in vehicle related greenhouse gases. Also, improving the ease of access to the road network, and freight, has the potential to increase greenhouse gases along these routes.
SA8: Climate Resilience	0							
SA9: Noise	0							

SA10: Landscape and Townscape	0							
SA11: Historic Environment	0							
SA12: Water Quality	0							
SA13: Flooding	?							Uncertain effects have been established for flooding. It is unclear if there will be development to or along the A329 (M). However, areas bordering this route are located within Flood Zone 3. Therefore, there is potential for flooding along the route, particularly if there are increases in hard standing and impermeable surfaces in close proximity to flood zones.
SA14: Population	+	M	D	R	I	P	LT	There are anticipated positive effects upon population as increasing the accessibility of both the road and rail networks provides increased capacity for current and future population needs. This objective also provides improved connectivity, allowing access to the wider area, facilities and leisure opportunities.
SA15: Health	+	L	D	L	R	P	MT	Improving safe access to the A329 (M) results in positive impacts on health as a result of reductions in accidents along the A329 (M).
SA16: Economy and Employment	+	M	D	R	R	P	MT	The continuation of freight operations further links Wokingham's economy with the wider region, resulting in minor positive effects. Additionally, improving the capacity and frequency of rail services connecting Wokingham to Reading and Waterloo improves the connectivity of the region, allowing improved access to employment.
Potential Cumulative / Synergistic Effects	There are potential positive effects upon population and economy through the improved connectivity between Wokingham Borough and the wider region.							
Mitigation and Enhancement Measures	Freight management policies could encourage freight movements by rail, reducing freight on roads.							
EqIA considerations	*Increased freight on local roads could discriminate against those most likely to be on foot, including lower income and young people.							
Recommendations	The objective could be expanded to include specifications as to how freight will be managed. The objective could also be expanded to outline how safe and efficient access will result in positive effects upon user safety, and the measures that are likely to be included within this.							

WELL-MAINTAINED TRANSPORT NETWORK

Vision Theme	Enable Sustainable and Inclusive Economic Growth							
Objective	Well-Maintained Transport Network							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	+	M	D	L	I	P/T	MT/LT	There are potential positive effects upon materials and waste as a result of the objective outcome. The outcome includes the use of recycled materials in construction and maintenance, reducing waste and contributing to a circular economy.
SA3: Soils	0							
SA4: Biodiversity	0							
SA5: Green Infrastructure	+							There are minor positive effects anticipated for green infrastructure as a result of maintaining footpath and cycle ways. This is likely to result in improved infrastructure for active travel and improved open spaces.
SA6: Air Quality	+	M	D/I	L	R/I	P/T	ST/MT	There are anticipated minor positive effects on air quality as a result of the objective. Indirectly, improving the maintenance programme links with the active travel improvements has the potential to improve the quality of the active travel facilities and environment, encouraging users and therefore improving air quality. Additionally, the trial measures included have the potential to improve air quality. However, the scale and nature of improvements are currently unknown.
SA7: Greenhouse Gases	0							
SA8: Climate Resilience	++	M	D	R	I	P	LT	There are anticipated significant positive effects on climate resilience as a result of the objective. It is currently unclear what these climate resilience measures will be, however it is anticipated that these will include heat and rainfall resilience measures.
SA9: Noise	0							
SA10: Landscape and Townscape	+	L	I	L	R	P	MT	Improving the maintenance of the transport network, including active travel use, has the potential to result in positive effects upon landscape and townscape through improved maintenance and public realm improvements.
SA11: Historic Environment	0							
SA12: Water Quality	0							
SA13: Flooding	0							

SA14: Population	0							
SA15: Health	?							Whilst there are anticipated positive effects upon health due to the road safety improvements included, these are currently not permanent due to the trial nature of measures. The nature of these measures, and maintenance improvements, are also currently uncertain, and there is also uncertainty as to the level of improvements these could have towards targets.
SA16: Economy and Employment	0							
Potential Cumulative / Synergistic Effects	There are potential cumulative effects on air quality, biodiversity and health as a result of the objective's contribution towards achieving targets. Additional positive effects on climate resilience are anticipated due to increased climate resilience within the network.							
Mitigation and Enhancement Measures	No mitigation or enhancement measures have been identified at this stage. Mitigation is likely to be based on individual schemes that may arise as a result of the LTP4.							
EqIA considerations	*Construction and maintenance works can impact the way people travel and restrict users *People undergoing gender reassignment are more likely to feel unsafe on public transport *Same sex couples are more likely to be a victim of harassment or discrimination, and feel unsafe on public transport *BAME and ethnic minority groups may experience harassment on public transport *People holding a religion or belief may experience discrimination on public transport *LGBTQ+ can experience sexual orientation based discrimination on public transport							
Recommendations	The policy could be expanded to include examples of measures to contribute towards targets. Additionally, this point could state that successful measures will be permanently implemented. The policy could also be expanded to include specific measures that will improve climate resilience.							

ENABLE SUSTAINABLE DEVELOPMENT

Vision Theme	Enable Sustainable and Inclusive Economic Growth							
Objective	Enable Sustainable Development							
SA Objective	**Significance**	**Magnitude**	**Nature of effect**	**Spatial Extent**	**Reversibility**	**Permanence**	**Duration**	**Description of potential Effects**
SA1: Natural Capital	0							
SA2: Materials and Waste	0							
SA3: Soils	0							
SA4: Biodiversity	?							Uncertain effects have been identified as the Wokingham Living Streets guidance has not been published. There is potential that this guidance may include measures that support biodiversity net gain.
SA5: Green Infrastructure	0							
SA6: Air Quality	+	M	D/I	R	R/I	P	LT	There are anticipated minor positive effects upon air quality as a result of the Support Sustainable Development objective. The objective encourages a modal shift towards sustainable travel options, including walking and cycling, and EV use. Additionally, the development of new infrastructure to support development is likely to reduce congestion, improving air quality.
SA7: Greenhouse Gases	+/-	M	D	L	R	P/T	ST/LT	The objective includes the development of infrastructure for new development. This is likely to result in localised increases in greenhouse gas emissions as a result of construction equipment. However, subsequently, improvements to this infrastructure is likely to reduce congestion, reducing greenhouse gases. Additionally, improving active and sustainable travel options reduces GHGs.
SA8: Climate Resilience	?							Uncertain effects have been identified for climate resilience. This is likely to be determined in individual schemes arising from this objective.
SA9: Noise	0							
SA10: Landscape and Townscape	++	M	D/I	L	I	P	LT	The objective is likely to result in significant positive effects on landscape and townscape as a result of attractive streets and high quality developments. This is likely to improve streetscapes as well as the public realm, and local townscape settings.
SA11: Historic Environment	+	L	I	L	R	P	MT	Indirectly, the improvements to the landscape and townscape setting improves the setting of local heritage assets.
SA12: Water Quality	0							
SA13: Flooding	0							

SA14: Population	+	M	D	R	R	P	MT/LT	Improving infrastructure, including in line with Living Streets, provides accessibility to all social groups, including the elderly, those with disabilities, and people with young children in pushchairs. Additionally, the development of infrastructure for new developments provides for a growing population with increased transport connectivity requirements. This provides for both current and future generations, resulting in positive effects.
SA15: Health	+	M	D/I	R	R	P	MT	There are anticipated minor positive effects on health as the improvements in accordance with Living Streets improves access to social and leisure facilities, and services. This is likely to improve the wellbeing of local residents. Additionally, developing active travel options is likely to result in increased physical activity rates, and improved physical health.
SA16: Economy and Employment	+	M	I	R	R	P	MT	The development of active travel, sustainable travel, and additional infrastructure supporting developments improves the connectivity of developments to Wokingham's town centres and employment opportunities, resulting in positive effects.
Potential Cumulative / Synergistic Effects	There are potential positive cumulative effects upon landscape and townscape, population, health, and economy due to the connectivity and high quality developments. Additionally, encouraging a modal shift results in cumulative effects on air quality.							
Mitigation and Enhancement Measures	No mitigation or enhancement measures have been identified at this stage. Mitigation is likely to be based on individual schemes that may arise as a result of the LTP4.							
EqIA considerations	*Construction and maintenance works can impact the way people travel and restrict users. *People undergoing gender reassignment are more likely to feel unsafe on active travel routes. *Same sex couples are more likely to be a victim of harassment or discrimination and are more likely to feel unsafe on active travel routes. *BAME and ethnic minority groups may experience harassment and are more likely to feel unsafe on active travel routes. *People holding a religion or belief may experience discrimination and are more likely to feel unsafe on active travel routes. *LGBTQ+ can experience sexual orientation based discrimination and are more likely to feel unsafe on active travel routes.							
Recommendations	The objective could be expanded to include reference to community needs and how development will result in improved journey times. The objective could be expanded to include biodiversity requirements within the development of new layouts.							

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Equality Impact Assessment (EqIA) form: the **initial** impact assessment

1. Process and guidance

The purpose of an EqIA is to make sure that the council is meeting the needs of all our residents by ensuring we consider how different groups of people may be affected by or experience a proposal in different ways. EqIAs help us to meet our Public Sector Equality Duty and where applicable the Armed Forces Duty. The council has a two stage EqIA process:

- Stage 1 - the initial impact assessment.
- Stage 2 - the full impact assessment.

Date started:	May 2023
Completed by:	WSP on behalf of Wokingham Borough Council: VH (author) / MV (reviewed) / WP (authorised)
Service:	Highways and Transport
Project or policy EqIA relates to:	Wokingham Borough Council Local Transport Plan 4 (LTP4)
Date EqIA discussed at service team meeting:	[TBC - Wokingham Borough Council]
Conclusion (is a full assessment needed?):	No
Signed off by (AD):	[TBC - Wokingham Borough Council]
Sign off date:	[TBC - Wokingham Borough Council]

PLEASE NOTE: the wording used throughout this EqIA form is in line with terminology used by the Office for National Statistics (ONS) 2021 Census, the Equality Act (2010), and the Equality and Human Rights Commission (EHRC).

2. Summary of the policy, project, or service

What is the purpose of the proposal, what are the aims and expected outcomes, and how does it relate to service plans and the corporate plan?
CONTEXT Wokingham is a thriving area, with great opportunities and is a desirable location to live. Reflecting this, the Borough is one the fastest growing districts in the country. A growing population can present challenges to transport system, yet over the last 15 years traffic volumes had remained stable, air quality has improved, the number of people cycling has increased and, prior to the COVID-19 pandemic, public transport use had been growing. Transport infrastructure plays a significant role in a successful economy and for accessing a range of vital amenities. However, transport is one of the largest polluting sectors and traffic can be a barrier to healthy lifestyles, so transport policy needs to strike the right balance. PURPOSE The Local Transport Plan 4 (LTP4) sets out the approach for all aspects of Transport across Wokingham Borough. A significant part of the old strategy (LTP3) has been delivered, technology has evolved, and there is a better understanding of travel habits; as such, there is a need to refresh the transport strategy to better reflect current priorities and the needs of communities. To help inform the development of the LTP4, a public opinion survey seeking resident's views on transport in Wokingham was conducted for six weeks from 01 February 2023. This survey received 750 public responses, plus feedback from a range of stakeholder organisations. VISION, AIMS AND EXPECTED OUTCOMES

Four visions were developed to clearly set out the aims and subsequent outcomes from the LTP4. These were developed from existing national, regional and local policies and refined through engagement and consultation on the LTP vision in 2020, and the Council Plan ambition: *"being the best we can be"*. These vision, aims, and expected outcomes are:

Create Liveable, Healthy and Safe Places

- Safer streets for All: safer environment for all road users, leading to a 50% reduction in serious injuries from road traffic collisions.
- **50% Active Travel in Towns by 2030:** healthier and more active towns that prioritise the movement of people leading to 50% of trips being made by foot or cycle.
- Thriving Villages and Rural Centres: villages and local centres that support local communities through a transport system that works for them.

Reduce Emissions from Transport

- Net Zero Emissions: reducing the impact on the environment of transport and introducing new innovative measures to support the transition to net zero emissions.
- Clean Air: improved air quality and removal of all air quality exceedances in the Borough.
- High Quality Sustainable Travel Corridors: increase the attractiveness and convenience of sustainable transport through improved facilities, better frequency and integration.

Grow the Economy

- **Protect and Enhance Strategic Road and Rail Connectivity**: retain and enhance the strategic road and rail network for effective travel and freight movements.
- A Well-Maintained Transport Network: a transport network that is well maintained for all modes, providing attractive and comfortable transport links for all users.
- Support Sustainable Development: new development that helps to create sustainable communities that meets the needs of new and existing residents.

RELATION TO SERVICE PLANS AND CORPORATE PLAN

The LTP4 seeks to support and/or achieve the Borough's Service Plans and Corporate Plan in the following ways:

- Create Liveable, Healthy and Safe Places: Aligned with national policy there will be an objective for 50% of trips in towns to be made by active travel. This will require a greater focus on active travel in urban areas, where amenities are often within walking or cycling distance.
- Reduce Emissions from Transport: Consistent with local, regional and national targets, the LTP will support the transition of the transport sector to net zero emissions. Alongside changes to travel behaviour and more sustainable travel choices to support greater access to opportunities, there will need to be an increase zero emission vehicles and charging facilities.
- Grow the Economy : Future development proposals will need to be set out in a Local Plan. Aligning transport and land use planning to support sustainable development will be a key focus of the LTP and support essential infrastructure being delivered up front.

How will the proposal be delivered, what governance arrangements are in place and who are the key internal stakeholders?

DELIVERY

The LTP4 will be delivered by the Wokingham Borough Council Transport Planning team, in accordance with current Government guidance of the requirements for LTPs. The Plan is being delivered by a Delivery Group comprising senior officers and the Borough Council's Framework Consultant (WSP) and is scrutinised and steered by a Cross-party Member Steering Group.

GOVERNANCE

The project is overseen by the Executive Member for Active Travel, Transport and Highways at the Borough Council. The LTP4 will ultimately be approved and adopted by the Council's Executive, made up of Executive Members and the Borough's Mayor and Deputy Mayor.

KEY INTERNAL STAKEHOLDERS Three stakeholder groups provide an indication of the possible LTP4 content: the LTP4 Officer Group (comprising Climate Emergency team, Local Plan team, Public Health team, etc.); the LTP4 Stakeholder Group (made up of Thames Valley Berkshire Local Enterprise Partnership (LEP), Great Western Railway, Thames Valley Buses, etc.); and the LTP4 People's Group (membership to be determined but may include the Emergency Services, Guide Dogs for the Blind Association, etc.

Who will be affected by the proposal? Think about who it is aimed at and who will deliver it.
AFFECTED PERSONS It is expected that those primarily affected by the LTP4 would be people that use Wokingham's transport network. In addition, people who live, work, and/or pass through the Borough may also be affected. This is due to the Borough enabling strategic connectivity through the following infrastructure provisions: • National Rail Network: The Gatwick - Reading Line, and the London Waterloo - Portsmouth Harbour Line. • Strategic Road Network: The M4 Motorway. • Transport for London Network: The Abbey Wood - Reading (Elizabeth) Line. As such, Wokingham Borough attracts people from a range of areas; to ensure that all potential affected persons are considered, this EqIA will assess the impacts on the population profiles of Wokingham Borough, the South East of England, and for England where possible.

3. Data **& Protected Characteristics**

The table below sets out the nine protected characteristics (under the Equality Act 2010) considered in the impact assessment:

Protected Characteristic	**Description**
Age	A person belonging to a particular age or range of ages
Disability	A person has a disability if she or he has a physical or mental impairment which has a substantial and long-term adverse effect on that person's ability to carry out normal day-to-day activities
Gender Reassignment	A person has the protected characteristic of gender reassignment if the person is proposing to undergo, is undergoing or has undergone a process (or part of a process) for the purpose of reassigning the person's sex by changing physiological or other attributes of sex.
Marriage and Civil Partnership	Marriage is a union between a man and a woman or between a same-sex couple. Same-sex couples can also have their relationships legally recognised as civil partnerships
Pregnancy and Maternity	Pregnancy is the condition of being pregnant or expecting a baby. Maternity refers to the period after the birth. In the non-work context, protection against maternity discrimination is for 26 weeks after giving birth
Race	Race refers to a group of people defined by their race, colour, and nationality (including citizenship) ethnic or national origins
Religion or Belief	Religion refers to any religion, including a lack of religion. Belief refers to any religious or philosophical belief and includes a lack of belief
Sex	A man or a woman
Sexual Orientation	Whether a person's sexual attraction is towards their own sex, the opposite sex or to both sexes

Other priority areas include: 1) socio-economic disadvantage; and 2) the Armed Forces under the Armed Forces Act 2021.

What data and **information** will be used to help assess the impact of the proposal on di**ff**erent groups of people? A list of useful resources is available for o**ffi**cers on the Council's Tackling Inequality Together intranet pages.
ASSESSMENT DATA AND INFORMATION Secondary datasets and information from trusted sources will be used to assess the LTP4's impact on different groups. Examples include: • The Department for Transport (DfT) National Travel Surveys. • The Equality and Human Rights Commission (EHRC). • The Ministry of Housing, Communities and Local Government (MHCLG) e.g., Indices of Multiple Deprivation (2019). • The Office for National Statistics (ONS) e.g., 2021 Census.

INITIAL ASSESSMENT DATA SUMMARY

At this stage, the high-level nature of the LTP4 and its associated aims preclude the comprehensive identification of specific impacts on unlawful discrimination, harassment and victimisation towards protected characteristic groups and/or other priority areas.

Age

Category	Wokingham Borough	South East England	England
Aged 0-15	19.5%	17.4%	17.4%
Aged 16-64	63.3%	63.1%	64.2%
Aged 65+	17.2%	19.4%	18.4%

Disability

Category	Wokingham Borough	South East England	England
Disabled under the Equality Act 2010	12.5%	16.1%	17.3%
Not Disabled under the Equality Act 2010	87.5%	83.9%	82.7%

Gender Reassignment

Category	Wokingham Borough	South East England	England
Gender Identity Same as Sex Registered at Birth	95.0%	94.1%	93.5%
Gender Identity Difference from Sex Registered at Birth	0.4%	0.5%	0.5%
Not Answered	5.0%	5.4%	6.0%

Marriage and Civil Partnership

Category	Wokingham Borough	South East England	England
Never Married and Never Registered a Civil Partnership	30.3%	34.8%	37.9%
Married or in a Registered Civil Partnership	55.0%	47.6%	44.7%
Separated, but Still Legally Married or Still Legally in a Civil Partnership	1.6%	2.1%	2.2%
Divorced or Civil Partnership Dissolved	7.6%	9.3%	9.1%
Widowed or Surviving Civil Partnership Partner	5.5%	6.1%	6.1%

Pregnancy and Maternity

Category	Wokingham Borough	South East England	England
Births	0.3%	0.3%	0.3%

Race

Category	Wokingham Borough	South East England	England
Asian, Asian British or Asian Welsh	12.9%	7.0%	9.6%
Black, Black British, Black Welsh, Caribbean or African	2.4%	2.4%	4.2%
Mixed or Multiple Ethnic Groups	3.1%	2.8%	3.0%
White	79.9%	86.3%	81.0%
Other Ethnic Group	1.6%	1.5%	2.2%

Religion or Belief

Category	Wokingham Borough	South East England	England
No Religion	36.9%	40.2%	36.7%
Christian	44.7%	46.5%	46.3%
Buddhist	0.5%	0.6%	0.5%
Hindu	4.8%	1.7%	1.8%
Jewish	0.2%	0.2%	0.5%
Muslim	4.8%	3.3%	6.7%
Sikh	1.7%	0.8%	0.9%
Other Religion	0.4%	0.6%	0.6%
Not Answered	5.9%	6.1%	6.0%

Sex

Category	Wokingham Borough	South East England	England
Female	50.9%	51.1%	51.0%
Male	49.1%	48.9%	49.0%

Sexual Orientation

Category	Wokingham Borough	South East England	England
Straight or Heterosexual	91.2%	89.8%	89.4%
Lesbian, Gay, Bisexual or Other (LGB+)	2.2%	3.1%	3.2%

Armed Forces Communities

Category	Wokingham Borough	South East England	England
Have previously served in the UK regular armed forces	2.4%	3.2%	2.9%
Have previously served in the UK reserve armed forces	0.7%	0.8%	0.7%
Have previously served in both the regular and reserve UK armed forces	0.1%	0.2%	0.2%

4. Assessing & Scoring Impact

Scoring Impact for Equality Groups	**Description**
Positive	The proposal promotes equality of opportunity by meeting needs or addressing existing barriers to participation and/or promotes good community relations.
Neutral	The proposal has no impact or no disproportionate impact.
Low negative	The proposal is likely to negatively impact a small number of people, be of short duration and can easily be resolved.
High negative	The proposal is likely to have a significant negative impact on many people or a severe impact on a smaller number of people.

5. **Assumptions**

This assessment has been conducted based on the assumption that the following recommended measures are adhered to as best-practice:

1) continue to undertake continuous engagement with Wokingham's independent Equality Forum;
2) follow legislation, guidance, and best practice in the delivery of the LTP4's aims, such as the DfT's Local Transport Note (LTN) 1/20; and
3) consider how to best to mitigate the low negative impacts of construction and maintenance of the LTP4 aims.

Equality Group: Age

A person's ability to access and use Wokingham Borough's transport network may differ dependent on their age. In 2021, the overall population was 56,489,800 in England and 9,278,100 in South East England, whilst the total population of Wokingham Borough stood at 177,500 residents. The Borough's population is expected to grow to 191,867 residents by 2043; of which 18.6% will be aged 0-15, 57.6% will be aged 16-64, and 23.8% will be aged 65+:

- There is a slightly higher proportion of 0-15-year-olds in Wokingham Borough compared to regionally and nationally, meaning that any impact(s) may affect this particular sub-group to a greater extent.
- The proportion of working aged people in Wokingham Borough is broadly in line with regional and national figures, meaning that any impact(s) are not likely to affect this particular sub-group to a lesser nor greater extent.
- There is a slightly lower proportion of people aged 65+ in Wokingham Borough compared to regionally and nationally, meaning that any impact(s) may affect this particular sub-group to a lesser extent.

Impact score	**Impact and supporting data**
Reduce Environmental Impacts	
Net zero carbon emissions	
POSITIVE	• Younger working aged people may have a higher dependence on active travel and public transport services due to the cost of purchasing a vehicle and its associated (upfront and prolonged) costs. The LTP4 seeks to explore expanding the Electric Vehicle network (car clubs). • Elderly people are typically inhibited from accessing public transport services as a result of digital barriers to viewing travel times and cost, leading to a reliance on motor vehicles. This is reflected in the high proportion of full car driving licence holders aged 60-69 (85.0%) and over 70 (67.0%). The minimum journey time to eight key services in Wokingham Borough by private vehicle was 18.5 minutes. LTP4's aim to reduce total traffic movements on Wokingham Borough Council roads would help to improve journey times for people reliant on a private vehicle(s). Moreover, this policy aims to support improvements to digital accessibility which will aid in the uptake of public transport by elderly residents.
Clean air, removal of all air quality exceedances	
POSITIVE	• Exposure to poor air quality can impact pre-existing and cause respiratory conditions across all age groups, particularly the young and elderly. The LTP4 aims to reduce traffic to remove air quality exceedances in Wokingham Town Centre, improve air quality in Twyford Town Centre, and support the transition to zero emission buses across the borough. • The transition to net zero buses as supported by this policy will also bring about improvements to air quality throughout the borough which will be particularly beneficial to the young and elderly.
High quality sustainable travel corridors	
POSITIVE	• A lack of suitable infrastructure can be a barrier to active travel for younger people and the elderly due to actual / perceived safety issues. The LTP4 aims to deliver high quality walking, cycling, and public transport through improved throughout the borough. The LTP4 also includes upgrades to active travel facilities along the B3349 Barkham Road (connecting Arborfield-Wokingham Town centre), A321 Finchhampstead Road, and into Twyford including to and from Wargrave. • In 2021, the national proportion of full car driving licence holders aged 17-20 (21.0%) and aged 21-29 (67.0%) was considerably lower than for all other age groups (average 82.0%), indicating that younger working aged people may have a higher dependence on active travel and public transport services. In terms of public transport, the Borough Council aims to increase bus frequency and improve bus journey times along priority bus

	corridors (A4/A321, A33, A329 and A327), deliver a high-quality sustainable transport corridor along the A329 and increasing rail service frequency to 20-minutes along the North Downs Line. • In 2021, almost a third of people aged 60 and over in England used the bus at least once a month. Wokingham Borough is forecast to become an ageing population within the next decade, meaning there will be a growing number of residents holding free Older Persons Bus Passes. This is likely to lead to additional demand on local bus services. The LTP4 seeks to increase bus frequency along priority bus corridors (A4/A321, A33, A329 and A327), and between Wokingham Town-Arborfield and Finchampstead, enabling a greater capacity for the growing demands placed on the service. • In Wokingham Borough, the minimum journey time to eight key services by public transport was 10.8 minutes. Age-related health conditions can lead to difficulty boarding and alighting public transport, leading to a greater journey time and reduced journey quality. The LTP4 looks to improve interchange and access facilities at Earley rail station, improve access to stations along the North Downs Line, and improve the forecourt, interchange facilities and car parking at Twyford Station, helping to increase access and journey quality.
Grow the Economy	
Well-maintained transport network	
NEUTRAL	• Whilst a well-maintained transport network is beneficial to people of all ages, construction and maintenance works can impact the way in which people travel. Air pollution generated through construction activities will be particularly detrimental to the young and elderly. As such, the LTP4 is expected to bring about temporary minor adverse effects to the aforementioned age groups. • In the long term, a well-maintained transport network will be beneficial to all age groups throughout the borough. The adaption of network maintenance to increase resilience to a changing climate will be beneficial to elderly residents who's pre-existing health conditions may be exacerbated under a changing climate.
Enable sustainable development	
POSITIVE	• All age groups will benefit from the enablement of sustainable development. The LTP4 looks aims to provide streets that are attractive and permeable for pedestrians and cyclists. This will encourage the uptake of active travel amongst the young and elderly through improvements to safety and connectivity.
Protect and enhances strategic connectivity and freight	
NEUTRAL	• All age groups benefit from use of strategic connectivity. The increase in local service frequency on the Reading to Waterloo rail line under this policy will enhance connectivity for all residents. Increased frequency will enable young people to access a wider range of employment opportunities, as well as reduce the potential for loneliness experienced by elderly residents through improved opportunities for visitors.
Create Healthy and Safe Places	
50% Active travel in towns	
POSITIVE	• All age groups are less likely to cycle if they perceive the local environment to be unsafe. The LTP4 aims to increase the proportion of people cycling through the delivery of high-quality cycle facilities. • A lack of dedicated, secure cycle parking can stop people of all age groups from cycling. The LTP4 seeks to increase cycle parking provision at local destinations. • Younger people may have a higher dependence on active travel and public transport services due to the expense associated with private vehicle travel and obtaining a licence. The LTP4 seeks to deliver on-street E-scooter hire schemes to improve door-to-door transport options, increasing access to employment opportunities for this age group. • The LTP4 seeks to improve access to green space, especially across Lower Earley Way and to the River Loddon. Improved access to greenspace will encourage the uptake of active travel by all.
Safer streets for all, 50% reduction in KSIs	

POSITIVE	• Certain age groups, such as younger people and older people can be more vulnerable to collisions due to reduced awareness and mobility. Targeted infrastructure changes to reduce collisions at identified cluster sites (Wokingham Town Centre, A4 and B3349), revising speed limits across the borough with targeted interventions, where appropriate, to improve road safety, and increasing the network of quiet rural roads and residential streets. • With regard to school aged pupils in 2019, 97.0% of pupils residing in Wokingham Borough were within a 15-minute journey by private vehicle to the nearest school, 79.0% lived within a 15-minute walk, and 100.0% lived within a 15-minute cycle to school. The LTP4 would support the trial and delivery of School Streets and safer routes to school across the borough.
Thriving villages and town centres	
POSITIVE	• The LTP4 includes the identification of local priorities for improving walking, cycling and horse riding and trial changes to increase network of low traffic rural/green lanes. • Road closures have been found to improve the character of streets, making streets into more pleasant, environments for people of all ages. The LTP4 aims to trial temporary highway closures for local events to support vitality of rural villages. • A lack of dedicated transport infrastructure can limit the mobility of people of all ages. The LTP4 seeks to deliver Electric Vehicle charging improvements, secure cycle parking and motorcycle parking facilities at local destinations.

Equality Group: Disability

A person's ability to access and use Wokingham Borough's transport network may differ dependent on whether or not they self-declare as Disabled under the Equality Act 2010. The proportion of people self-declared as Disabled under the Equality Act 2010 was slightly lower in Wokingham Borough compared to in the south east and England, meaning that any impact(s) may affect this particular group to a lesser extent.

Impact score	**Impact and supporting data**
Reduce Environmental Impacts	
Net zero carbon emissions	
POSITIVE	• In 2019, disabled adults in England made 26% fewer trips than those without a disability[1]. The inhibited access to public transport experienced by disabled users results in a reliance on motor vehicles. For Disabled people who are not able to cycle, walk and/or wheel, nor access public transport, the LTP4's aim to reduce total traffic movements on Wokingham Borough Council roads would help to improve journey times for Disabled people and people with short- and long-term health conditions reliant on a private vehicle(s). • Disabled people and people with short- and long-term health conditions (particularly those with mobility issues) may struggle to access and/or use Electric Vehicle charging infrastructure due to inaccessible parking or the presence of heavy charging cables. Within the centre of Wokingham, there are circa four charging points that are both publicly accessible and have no access restrictions, limiting options for Disabled people and people with short- and long-term health conditions. The LTP4 seeks to deliver suitable provisions with a priority focus in Wokingham town, Winnersh, Earley and local service centres, as well as promote of peer-to-peer electric charging networks to meet growing demand for EV charging and providing suitable EV charging infrastructure to support carbon neutral development.
Clean air, removal of all air quality exceedances	
POSITIVE	• Exposure to poor air quality can impact pre-existing respiratory conditions for Disabled people and people with short- and long-term health conditions. The LTP4 aims to reduce traffic to remove air quality exceedances in Wokingham Town Centre, improve air quality in Twyford Town Centre, and seek prioritisation of zero emission buses on routes through Wokingham Town Centre and Twyford Crossroads.
High quality sustainable travel corridors	
POSITIVE	• A lack of suitable infrastructure for Disabled people and people with short- and long-term health conditions can be a barrier to active travel. The LTP4 aims to deliver high quality walking, cycling, and public transport through improved throughout the borough. The LTP4 also includes upgrades to active travel facilities along the B3349 Barkham Road (connecting Arborfield-Wokingham Town centre), A321 Finchhampstead Road, and into Twyford including to and from Wargrave. • A lack of infrastructure that supports Disabled people and people with short- and long-term health conditions can lead to difficulty boarding and alighting public transport, leading to a greater journey time. The LTP4 looks to deliver improved interchange and access facilities at Earley rail station, improved access to stations along the North Downs Line, and to improve the forecourt, interchange facilities and car parking at Twyford Station, helping to increase access and journey quality. • In Wokingham Borough, Disabled person's bus passes are free for residents who have a permanent disability or a disability that is expected to last at least one year. The LTP4 seeks to increase bus frequency along priority bus corridors (A4/A321, A33, A329 and A327) and between Wokingham Town-Arborfield-Finchampstead, as well as the delivery of a high-quality sustainable travel corridor between Reading and Coppid Beach Roundabout, via Winnersh and Wokingham.
Grow the Economy	

[1] Transport: Disability and Accessibility Statistics, England 2019/20 (2021) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/972438/transport-disability-and-accessibility-statistics-england-2019-to-2020.pdf [Accessed: 21/09/2023]

Impact score	**Impact and supporting data**
Well-maintained transport network	
POSITIVE	• Whilst a well-maintained transport network is beneficial to disabled people and people with short- and long-term health conditions, construction and maintenance works can impact the way in which people travel. Temporary disruption to and blocking of pedestrian routes by construction and maintenance vehicles and plant is particularly detrimental to those reliant on mobility aids. Equally, increased air pollution as a result of construction will adversely affect those with health issues including respiratory conditions. As such, these specific LTP4 aims noted under the LTP4 are deemed to potentially have a low negative impact on this group in the short-term, but a positive impact in the longer term: o Test and trial measures that reduce maintenance needs whilst contributing to the borough's active travel, air quality and road safety targets. o Work with operators to share operational and real time data to improve transport services and maintenance.
Enable sustainable development	
POSITIVE	• The LTP4 aims to provide streets that are attractive and permeable for pedestrians and cyclists, the accessibility and adaptation considerations of which will be of particular benefit to disabled groups in the area. Equally, the provision of secure cycle parking including adapted cycles will continue the uptake of active travel by disabled groups who may initially be less likely to choose transport modes of this nature.
Protect and enhance strategic connectivity and freight	
NEUTRAL	• All people benefit from use of strategic connectivity. The LTP4 looks to support upgrades to the A329 (M) and deliver service enhancements on the Reading to Waterloo rail line Continue working with neighbouring authorities through the informal freight partnership to effectively manage freight on the SRN and across the region.
Create Healthy and Safe Places	
50% Active travel in towns	
POSITIVE	• Disabled people and people with short- and long-term health conditions may be less likely to cycle due to unsuitable environments, infrastructure not being accessible for adaptive cycles, and a lack of support. The LTP4 aims to increase the proportion of people cycling through the delivery of high-quality cycle facilities. • A lack of dedicated, secure cycle parking that accommodate adaptive cycles can stop disabled people and people with short- and long-term health conditions from cycling. The LTP4 seeks to increase cycle parking provision, including adapted cycles, at local destinations.
Safer streets for all, 50% reduction in KSIs	
POSITIVE	• Disabled people and people with short- and long-term health conditions are four times more likely to be injured as a pedestrian than people without a disability[2]. Targeted infrastructure changes to reduce collisions at identified cluster sites (Wokingham Town Centre, A4 and B3349), revising speed limits across the borough with targeted interventions, where appropriate, to improve road safety, and increasing the network of quiet rural roads and residential streets. • With regard to school aged pupils with a disability or short- and long-term health condition, travel to school via active modes may be difficult, even with parent / carer supervision. The LTP4 would support the trial and delivery of School Streets and safer routes to school across the borough to improve actual and perceived of safety.
Thriving villages in town centres	
POSITIVE	• Road closures have been found to improve the character of streets, making streets into more pleasant, environments for all people, in particular disabled people and people with short- and long-term health conditions. The LTP4 aims to trial temporary highway closures for local events to support vitality of rural villages.

[2] ROAD INJURIES
IN THE NATIONAL
TRAVEL SURVEY UNDER-REPORTING AND INEQUALITIES IN INJURY RISK (2018)
https://westminsterresearch.westminster.ac.uk/download/131c6fd3314dc19383f95fa6a791562f9a0dd3d1a965abbd5058a91296822352/1888783/Road_Injuries_Report_April2018.pdf [Accessed: 21/09/2023]

Impact score	**Impact and supporting data**
	• A lack of dedicated, accessible transport infrastructure can limit the mobility of disabled people and people with short- and long-term health conditions. The LTP4 seeks to deliver Electric Vehicle charging improvements, secure cycle parking and motorcycle parking facilities at local destinations. Adapted cycle parking is a measure included in the Active Travel policy and as such it is assumed inclusive provision will be applied here as well.

Equality Group: Gender Reassignment

A person's ability to access and use Wokingham Borough's transport network may differ dependent on whether they propose to undergo, are undergoing, or have undergone a process to reassign their sex. Wokingham Borough has a marginally lower proportion of people whose gender identity is difference from their sex registered at birth compared to regionally and nationally, meaning that any impact(s) may affect this particular sub-group to a lesser extent.

Impact score	**Impact and supporting data**
Reduce Environmental Impacts	
Net zero carbon emissions	
Low **Negative**	• People that propose to undergo, are undergoing or have recently undergone gender reassignment may experience difficulties or discomfort when accessing transport due to limitations on gender-neutral toilets for instance. This can inhibit use of transport services, leading to a temporary reliance on motor vehicles. For people who feel unable to cycle, walk and/or wheel, nor access public transport, the LTP4's aim to reduce total traffic movements on Wokingham Borough Council roads would help to improve journey times. • The potential implementation of a network of shared electric vehicles (car clubs) under this policy may have adverse impacts for those that propose to undergo, are undergoing or have recently undergone gender reassignment as the low level of regulation and causal nature of this proposed scheme may lead to people experiencing identity-based discrimination in this space. The policing of such car clubs would be necessary to ensure such negative effects are not felt by this group.
Clean air, removal of all air quality exceedances	
NEUTRAL	• Due to its high-level and indirect impact on transport users that propose to undergo, are undergoing, or have undergone gender reassignment, the LTP4 is deemed to potentially have a neutral impact on this particular group: o Wokingham Town Centre Freight Strategy. o Reduce traffic to remove air quality exceedances in Wokingham Town Centre. o Improve air quality in Twyford Town Centre. o Seek prioritisation of zero emission buses on routes through Wokingham Town Centre and Twyford Crossroads.
High quality sustainable travel corridors	
POSITIVE	• A lack of infrastructure that supports people with short-term health conditions due to undergoing / having undergone gender reassignment can lead to difficulty boarding and alighting public transport, leading to a greater journey time. The LTP4 looks to deliver improved interchange and access facilities at Earley rail station, improved access to stations along the North Downs Line, and to improve the forecourt, interchange facilities and car parking at Twyford Station, helping to increase access and journey quality. • The dial-a-ride service under this policy will be beneficial to this group. In instances where public transport usage is not preferable due to unfolding acts of discrimination or harassment, the provision of a private vehicle service will be beneficial.
Grow the Economy	
Well-maintained transport network	
NEUTRAL	• Individuals that propose to undergo, are undergoing, or have undergone gender reassignment are more likely to be a victim of harassment or acts of discrimination; this results in reduced feelings of safety when using public transport, walking or cycling, particularly at night-time or on quiet streets. The LTP4 seeks to enhance pedestrian access and safety in local service centres which will be beneficial to this group. • Whilst a well-maintained transport network is beneficial to people of all ages, construction and maintenance works can impact the way in which people travel. As such, these specific LTP4 aims noted under the LTP4 are deemed to potentially have a low negative impact in the short-term, but a positive impact in the longer term: o Test and trial measures that reduce maintenance needs whilst contributing to the borough's active travel, air quality and road safety targets.

Enable sustainable development	
NEUTRAL	• All people benefit from the enablement of sustainable development. The LTP4 aims to provide streets that are attractive to and permeable for pedestrians and cyclists which will bring about improvements to the public realm and overall contribute positively to the wellbeing of residents in the area.
Protect and enhance strategic connectivity and freight	
NEUTRAL	• All people benefit from use of strategic connectivity. The LTP4 looks to support upgrades to the A329 (M) and deliver service enhancements on the Reading to Waterloo rail line Continue working with neighbouring authorities through the informal freight partnership to effectively manage freight on the SRN and across the region.
Create Healthy and Safe Places	
50% Active travel in towns	
POSITIVE	• People that propose to undergo, are undergoing, or have undergone gender reassignment may be less likely to engage in active travel modes as a result of fear of discrimination in the public realm. The LTP4 aims to increase the proportion of people cycling through the delivery of high-quality cycle facilities. • Increased engagement through MyJourney under this policy will also give individuals the opportunity to feedback on their experience of active transport in the borough, enabling a process of continual improvement to boost feelings of safety and accessibility.
Safer streets for all, 50% reduction in KSIs	
NEUTRAL	• Due to its high-level and indirect impact on transport users that propose to undergo, are undergoing, or have undergone gender reassignment, the LTP4 is deemed to potentially have a neutral impact on this particular group: o Targeted infrastructure changes to reduce collisions at identified cluster sites (Wokingham Town Centre, A4 and B3349), revising speed limits across the borough with targeted interventions, where appropriate, to improve road safety, and increasing the network of quiet rural roads and residential streets. o Support a trial and delivery of School Streets and safer routes to school across the borough.
Thriving villages in town centres	
NEUTRAL	• The presence of uneven surfaces, lack of dropped kerbs and use of shared spaces can all limit the mobility of people, especially if having recently undergone gender reassignment surgery. The LTP4 seeks to enhance pedestrian access in local service centres. • Due to its high-level and indirect impact on transport users that propose to undergo, are undergoing, or have undergone gender reassignment, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Trial temporary highway closures for local events to support vitality of rural villages. o Deliver Electric Vehicle charging improvements, secure cycle parking and motorcycle parking facilities at local destinations.

Equality Group: Marriage and Civil Partnership

A person's ability to access and use Wokingham Borough's transport network may differ dependent on whether they are in and opposite- or same-sex marriage or registered civil partnership. There are a higher proportion of people married or in a registered civil partnership in Wokingham Borough compared to regionally and nationally, meaning that any impact(s) may affect this particular sub-group to a greater extent.

Impact score	**Impact and supporting data**
Reduce Environmental Impacts	
Net zero carbon emissions	
NEUTRAL	• Due to their high-level and indirect impact on transport users, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Reduce total traffic movements on Wokingham Borough Council. o Collaborate with supporting partners and innovators in developing new solutions for decarbonising transport. o Energy generation at Park and Ride sites. o Promote of peer-to-peer electric charging networks to meet growing demand for EV charging. o Provide suitable EV charging infrastructure to support carbon neutral development. o Explore expanding the Electric Vehicle network (car club).
Clean air, removal of all air quality exceedances	
NEUTRAL	• Due to its high-level and indirect impact on transport users that are in a marriage or civil partnership, the LTP4 is deemed to potentially have a neutral impact on this particular group: o Wokingham Town Centre Freight Strategy. o Reduce traffic to remove air quality exceedances in Wokingham Town Centre. o Improve air quality in Twyford Town Centre.
High quality sustainable travel corridors	
NEUTRAL	• Due to its high-level and indirect impact on transport users that are in a marriage or civil partnership, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Deliver high quality cycle facilities as part of the identified Reading Strategic Cycle Routes. o Upgrade active travel facilities along the B3349 Barkham Road (connecting Arborfield-Wokingham Town centre. o Deliver high quality cycle facilities as part of identified Reading Strategic cycle network and along Barkham Road, the A329 and the A321 Finchampstead Road. o Increase bus frequency and improve bus journey times along priority bus corridors (A4/A321, A33, A329 and A327). o Deliver a high-quality sustainable transport corridor along the A329. o Increasing rail service frequency to 20-minutes along the North Downs Line. o Increase bus frequency along priority bus corridors (A4/A321, A33, A329 and A327), and between Wokingham Town-Arborfield and Finchampstead. o Improve interchange and access facilities at Earley rail station. o Improve access to stations along the North Downs Line. o Improve the forecourt, interchange facilities and car parking at Twyford Station.
Grow the Economy	
Well-maintained transport network	
NEUTRAL	• Due to its high-level and indirect impact on transport users that are in a marriage or civil partnership, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group:

	o Test and trial measures that reduce maintenance needs whilst contributing to the borough's active travel, air quality and road safety targets. o Work with operators to share operational and real time data to improve transport services and maintenance.
Enable sustainable development	
NEUTRAL	• All people benefit from the enablement of sustainable development. The LTP4 aims to provide streets that are attractive to and permeable for pedestrians and cyclists which will bring about improvements to the public realm and overall contribute positively to the wellbeing of residents in the area.
Protect and enhance strategic connectivity and freight	
NEUTRAL	• All people benefit from use of strategic connectivity. The LTP4 looks to support upgrades to the A329 (M) and deliver service enhancements on the Reading to Waterloo rail line Continue working with neighbouring authorities through the informal freight partnership to effectively manage freight on the SRN and across the region.
Create Healthy and Safe Places	
50% Active travel in towns	
NEUTRAL	• Due to its high-level and indirect impact on transport users that are in a marriage or civil partnership, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Increase cycle parking provision at local destinations. o Deliver on-street E-scooter hire schemes to improve door-to-door transport. o Improve access to green space, especially across Lower Earley Way and to the River Loddon. o Delivery of high-quality cycle facilities; part of the Reading Strategic cycle network and along Barkham Road, A329 and A321 Finchampstead Road. o Improved pedestrian environments and space for businesses in town centres and increase the range of services and engagement.
Safer streets for all, 50% reduction in KSIs	
POSITIVE	• The LTP4 aims to develop safety initiatives, including through supporting a trial and delivery of School Streets and safer routes to school across the borough. This will be particularly beneficial to those in a marriage or civil partnership with children who attend school.
Thriving villages in town centres	
NEUTRAL	• Due to its high-level and indirect impact on transport users that are in a marriage or civil partnership, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Trial temporary highway closures for local events to support vitality of rural villages. o Deliver Electric Vehicle charging improvements, secure cycle parking and motorcycle parking facilities at local destinations.

Equality Group: Pregnancy and Maternity

A person's ability to access and use Wokingham Borough's transport network may differ dependent on whether they, their partner, or their surrogate are pregnant, have recently given birth, or have adopted. The proportion of births in Wokingham Borough is the same as regionally and nationally, meaning that any impact(s) are not likely to affect this particular group to a lesser nor greater extent.

Impact score	**Impact and supporting data**
Reduce Environmental Impacts	
Net zero carbon emissions	
POSITIVE	• A reduction in traffic movements under this policy will be beneficial to pregnant women as it will enable them more reliable estimations of journey time to maternity appointments. Moreover, in emergency events, reduced traffic movements will aid in the quick transport of the mother to the relevant healthcare facility. • The potential implementation of the Electric Vehicle Network (car club) may be a new way pregnant women and young mothers can meet and socialise. This will be beneficial due to the positive health and mental wellbeing effects associated with socialisation.
Clean air, removal of all air quality exceedances	
POSITIVE	• Exposure to poor air quality can impact foetal development, cause miscarriages, premature births, low birth weights, and stillbirths[3]. The LTP4 aims to reduce traffic to remove air quality exceedances in Wokingham Town Centre and improve air quality in Twyford Town Centre Crossroads. • Due to its high-level and indirect impact on transport users, the following LTP4 aim is deemed to potentially have a neutral impact on this particular group: o Wokingham Town Centre Freight Strategy.
High quality sustainable travel corridors	
POSITIVE	• People that are pregnant or travelling with small children may require or use adapted cycles to travel, such as bike seats, cargo bikes, etc. The presence of uneven surfaces and lack of dropped kerbs can all also limit the mobility of parents / carers with a younger person, especially if using aids such as pushchairs, walkers, wheelchairs, etc. The LTP4 seeks to increase adapted cycle parking provision across the borough. • People that are pregnant or have recently given birth may struggle to board and/or alight public transport services and/or cycle, walk or wheel due to medication and/or medical conditions related to their natal or postnatal (postpartum) stage - considered a short-term and/or long-term impairment. The LTP4 looks to deliver improved interchange and access facilities at Earley rail station, and improved access to stations along the North Downs Line, and improve the forecourt, interchange facilities and car parking at Twyford Station, helping to increase access and journey quality.
Grow the Economy	
Well-maintained transport network	
NEUTRAL	• Whilst a well-maintained transport network is beneficial to all, construction and maintenance works can impact the way in which people travel. As such, these specific LTP4 aims noted under the LTP4 are deemed to potentially have a low negative impact on this group in the short-term, but a positive impact in the longer term: o Test and trial measures that reduce maintenance needs whilst contributing to the borough's active travel, air quality and road safety targets. o Work with operators to share operational and real time data to improve transport services and maintenance.
Enable sustainable development	

[3] Outdoor Air Pollution and Pregnancy Loss: a Review of Recent Literature (2022) https://link.springer.com/article/10.1007/s40471-022-00304-w#:~:text=Each%2010%20%CE%BCg%2Fm3,%25)%20increased%20risk%20of%20miscarriage. [Accessed: 21/09/2023]

NEUTRAL	• All people benefit from the enablement of sustainable development. The LTP4 aims to provide streets that are attractive to and permeable for pedestrians and cyclists which will bring about improvements to the public realm and overall contribute positively to the wellbeing of residents in the area. Pregnant women may feel safer moving through the space upon public realm improvements under this policy.
Protect and enhance strategic connectivity and freight	
NEUTRAL	• All people benefit from use of strategic connectivity. The LTP4 looks to support upgrades to the A329 (M) and deliver service enhancements on the Reading to Waterloo rail line, continue working with neighbouring authorities through the informal freight partnership to effectively manage freight on the SRN and across the region.
Create Healthy and Safe Places	
50% Active travel in towns	
POSITIVE	• Mothers tend to take shorter journeys for childcare, work, and household responsibilities; these are more likely to involve multi-stop journeys outside of peak hours ('trip chaining'). These journey types are less likely to be served by public transport corridors due to their unique, indirect nature and can be more expensive than direct trips. The LTP4 will aid in this dilemma by providing increasing public transport services.
Safer streets for all, 50% reduction in KSIs	
NEUTRAL	• Due to its high-level and indirect impact on transport users that are pregnant or have recently given birth, the LTP4 is deemed to potentially have a neutral impact on this particular group: o Targeted infrastructure changes to reduce collisions at identified cluster sites (Wokingham Town Centre, A4 and B3349). o Revising speed limits across the borough with targeted interventions to improve road safety. o Increasing the network of quiet rural roads and residential streets.
Thriving villages in town centres	
POSITIVE	• The presence of uneven surfaces, lack of dropped kerbs, use of shared spaces can all limit the mobility of people who are pregnant or have recently given birth and travelling with prams. The LTP4 seeks to enhance pedestrian access in local service centres.

Equality Group: Race

A person's ability to access and use Wokingham Borough's transport network may differ dependent on their ethnicity. The proportion of people identifying as Asian, Asian British or Asian Welsh in Wokingham Borough is considerably higher than regionally and nationally, meaning that any impact(s) are likely to affect this particular sub-group to a greater extent. All other ethnicities are broadly similar as regionally and nationally, meaning that any impact(s) are not likely to affect these groups to a lesser nor greater extent.

Impact score	Impa**ct and supporting data**
Reduce Environmental Impacts	
Net zero carbon emissions	
NEUTRAL	• Due to their high-level and indirect impact on transport users, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Collaborate with supporting partners and innovators in developing new solutions for decarbonising transport. o Energy generation at Park and Ride sites. o Reduce total traffic movements on Wokingham Borough Council roads. o Promote peer-to-peer electric charging networks. o Provide suitable EV charging infrastructure to support carbon neutral development. o Explore expanding the Electric Vehicle network (car club).
Clean air, removal of all air quality exceedances	
POSITIVE	• People from ethnic minorities are more likely to reside in areas that experience increased levels of pollution[4]. The LTP4 aims to reduce traffic to remove air quality exceedances in Wokingham Town Centre, improve air quality in Twyford Town Centre, and seek prioritisation of zero emission buses on routes through Wokingham Town Centre and Twyford Crossroads.
High quality sustainable travel corridors	
NEUTRAL	• Bus usage by people in ethnic minority groups is typically higher than for people in White groups[5]. The LTP4 seeks to increase bus frequency along priority bus corridors (A4/A321, A33, A329 and A327) and between Wokingham Town-Arborfield-Finchampstead, as well as the delivery of a high-quality sustainable travel corridor between Reading and Coppid Beach Roundabout, via Winnersh and Wokingham. • Due to its high-level and indirect impact on transport users from ethnic minority backgrounds, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Deliver improved interchange and access facilities at Earley rail station. o Deliver high quality cycle facilities as part of the identified Reading Strategic Cycle Routes. o Upgrade active travel facilities along the B3349 Barkham Road (connecting Arborfield-Wokingham Town centre). o Deliver improved access to stations along the North Downs Line. o Improve the forecourt, interchange facilities and car parking at Twyford Station.
Grow the Economy	
Well-maintained transport network	
NEUTRAL	• Whilst a well-maintained transport network is beneficial to all, construction and maintenance works can impact the way in which people travel. As such, these specific LTP4 aims noted under the LTP4 are deemed to potentially have a low negative impact on this group in the short-term, but a positive impact in the longer term:

[4] BAME and poorer Londoners more likely to live in areas with toxic air (2021) https://www.london.gov.uk/press-releases/mayoral/bame-and-poorer-londoners-face-air-quality-risk#:~:text=Research%20shows%20that%20those%20exposed,most%20severe%20impacts%20of%20COVID. [Accessed: 21/09/2023]
[5] Travel, GOV.UK (2023) https://www.ethnicity-facts-figures.service.gov.uk/culture-and-community/transport/travel/latest#by-ethnicity-number-of-trips-and-mode-of-transport [Accessed: 21/09/2023]

	o Test and trial measures that reduce maintenance needs whilst contributing to the borough's active travel, air quality and road safety targets.
Enable sustainable development	
NEUTRAL	• All people benefit from the enablement of sustainable development. The LTP4 aims to provide streets that are attractive to and permeable for pedestrians and cyclists which will bring about improvements to the public realm and overall contribute positively to the wellbeing of residents in the area.
Protect and enhance strategic connectivity and freight	
NEUTRAL	• All people benefit from use of strategic connectivity. The LTP4 looks to support upgrades to the A329 (M) and deliver service enhancements on the Reading to Waterloo rail line Continue working with neighbouring authorities through the informal freight partnership to effectively manage freight on the SRN and across the region.
Create Healthy and Safe Places	
50% Active travel in towns	
POSITIVE	• People from ethnic minorities are more likely to have reduced access to green spaces[6]. LTP4 seeks to improve access to green space, especially across Lower Earley Way and to the River Loddon. • 55.0% of people from ethnic minority groups who do not currently cycle would like to start[7]. The LTP4 proposes the delivery of the following infrastructure to improve confidence, and as such, these specific LTP4 aims are deemed to potentially have a positive impact on this particular group: o High-quality cycle facilities as part of the identified Reading Strategic Cycle Routes. o Targeted infrastructure changes to reduce collisions at identified cluster sites, including Wokingham Town Centre, A4 and B3349. o Revise speed limits across the borough with targeted interventions where appropriate to improve road safety. o Increased network of quieter rural roads and residential streets. o Support a trial and delivery of School Streets and safer routes to school across the borough. o Deliver high-quality cycle facilities under the Reading Strategic cycle network. o Deliver cycle facilities along Barkham Road, A329 and A321 Finchampstead Road, reducing the dominance of vehicles to enable improved pedestrian environments and space for businesses in town centres, o Increase cycle parking provision at local destinations. o Deliver on-street E-scooter hire schemes to improve door-to-door transport options
Safer streets for all, 50% reduction in KSIs	
POSITIVE	• On average, there are 86 ethnic minority casualties per 10,0000 pedestrian casualties compared to 68 White pedestrians per 10,0000 pedestrian casualties[8]. The LTP4 seeks to develop targeted infrastructure changes to reduce collisions at identified cluster sites (Wokingham Town Centre, A4 and B3349), revising speed limits across the borough with targeted interventions, where appropriate, to improve road safety, support a trial and delivery of School Streets and safer routes to school across the borough, and increasing the network of quiet rural roads and residential streets.
Thriving villages in town centres	
NEUTRAL	• Around 25.0% of younger people from ethnic minority groups experience harassment due to their colour, race, or religion, on public transport[9]; this can result in reduced feelings of safety, particularly at night-time or whilst waiting for services on quieter streets. The LTP4 seeks to enhance pedestrian access and safety in local service centres. • Due to its high-level and indirect impact on transport users from ethnic minority backgrounds, the following LTP4 aim is deemed to potentially have a neutral impact on this particular group: o Trial temporary highway closures for local events to support vitality of rural villages.

[6] Out of Bounds Equity in Access to Urban Nature (2021) https://www.groundwork.org.uk/wp-content/uploads/2021/05/Out-of-Bounds-equity-in-access-to-urban-nature.pdf [Accessed: 21/09/2023]
[7] Sustrans (2020) https://www.sustrans.org.uk/our-blog/research/all-themes/all/inclusive-cycling-in-cities-and-towns [Accessed: 21/09/2023]
[8] Living Streets https://www.livingstreets.org.uk/news-and-blog/press-media/deprived-and-ethnic-minority-pedestrians-three-times-more-likely-to-be-injured-on-britain-s-roads [Accessed: 21/09/2023]
[9] Department for Transport (2012) Transport for Everyone: an action plan to promote equality [Accessed: 22/09/2023]

	o Deliver Electric Vehicle charging improvements, secure cycle parking and motorcycle parking facilities at local destinations.

Equality Group: Religion or Belief

A person's ability to access and use Wokingham Borough's transport network may differ dependent on whether they hold a religion and/or a philosophical belief, or alternatively no religion and/or belief. The proportion of people identifying as Hindu in Wokingham Borough is considerably higher than regionally and nationally, whilst the proportion of people identifying as Sikh is slightly higher comparatively. This means that any impact(s) are likely to affect these particular sub-groups to a greater extent. All other ethnicities are broadly similar as regionally and nationally, meaning that any impact(s) are not likely to affect these groups to a lesser nor greater extent.

Impact score	**Impact and supporting data**
Reduce Environmental Impacts	
Net zero carbon emissions	
NEUTRAL	• Due to their high-level and indirect impact on transport users, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Collaborate with supporting partners and innovators in developing new solutions for decarbonising transport. o Energy generation at Park and Ride sites. o Reduce total traffic movements on Wokingham Borough Council roads. o Promote of peer-to-peer electric charging networks to meet growing demand for EV charging. o Provide suitable EV charging infrastructure to support carbon neutral development. o Explore expanding the Electric Vehicle network (car club).
Clean air, removal of all air quality exceedances	
NEUTRAL	• Due to their high-level and indirect impact on transport users, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Wokingham Town Centre Freight Strategy. o Reduce traffic to remove air quality exceedances in Wokingham Town Centre o Improve air quality in Twyford Town Centre o Prioritise zero emission buses on routes through Wokingham Town Centre and Twyford Crossroads.
High quality sustainable travel corridors	
NEUTRAL	• Due to its high-level and indirect impact on transport users that visibly hold a religion or belief, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Deliver improved interchange and access facilities at Earley rail station. o Deliver improved access to stations along the North Downs Line. o Improve the forecourt, interchange facilities and car parking at Twyford Station. o Increase bus frequency along priority bus corridors (A4/A321, A33, A329 and A327) and between Wokingham Town-Arborfield-Finchampstead. o Deliver a high-quality sustainable travel corridor between Reading and Coppid Beach Roundabout, via Winnersh and Wokingham. o high quality cycle facilities as part of the identified Reading Strategic Cycle Routes, and upgrade active travel facilities along the B3349 Barkham Road (connecting Arborfield-Wokingham Town centre
Grow the Economy	
Well-maintained transport network	
NEUTRAL	• There is the potential of a heightened risk of discrimination and/or harassment (hate-crimes) for religious people who wear and/or hold a marked religious identity; this can result in reduced feelings of safety when using public transport, walking or cycling, particularly at night-time or on quiet streets. The LTP4 seeks to work with operators to share operational and real time data to improve transport services and maintenance.

	• Whilst a well-maintained transport network is beneficial to all, construction and maintenance works can impact the way in which people travel. As such, these specific LTP4 aims noted under the LTP4 are deemed to potentially have a low negative impact on this group in the short-term, but a positive impact in the longer term: o Test and trial measures that reduce maintenance needs whilst contributing to the borough's active travel, air quality and road safety targets.
Enable sustainable development	
NEUTRAL	• All people benefit from the enablement of sustainable development. The LTP4 aims to provide streets that are attractive to and permeable for pedestrians and cyclists which will bring about improvements to the public realm and overall contribute positively to the wellbeing of residents in the area.
Protect and enhance strategic connectivity and freight	
NEUTRAL	• All people benefit from use of strategic transport corridors. The LTP4 looks to support upgrades to the A329 (M) and deliver service enhancements on the Reading to Waterloo rail line Continue working with neighbouring authorities through the informal freight partnership to effectively manage freight on the SRN and across the region.
Create Healthy and Safe Places	
50% Active travel in towns	
NEUTRAL	• Due to its high-level and indirect impact on transport users, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Improve access to green space, especially across Lower Earley Way and to the River Loddon. o Deliver on-street E-scooter hire schemes to improve door-to-door transport options. o Deliver high-quality infrastructure under the Reading Strategic cycle network and along Barkham Road, A329 and A321 Finchampstead Road. o Improve pedestrian environments and space for businesses in town centres. o Increasing the range of services and engagement. o Increase cycle parking provision at local destinations.
Safer streets for all, 50% reduction in KSIs	
POSITIVE	• The LTP4 aims to develop safety initiatives, including improving safety for cycling and pedestrians in Twyford Town Centre, support a trial and delivery of School Streets and safer routes to school across the borough, targeted infrastructure changes to reduce collisions at identified cluster sites (Wokingham Town Centre, A4 and B3349), introducing targeted interventions where appropriate to improve road safety, and enhancing pedestrian safety in local service centres.
Thriving villages in town centres	
POSITIVE	• There is the potential of a heightened risk of discrimination and/or harassment (hate crimes) for religious people who wear and/or hold a marked religious identity; this can result in reduced feelings of safety when using public transport, walking or cycling, particularly at night-time or on quiet streets. The LTP4 seeks to enhance pedestrian access and safety in local service centres. • Due to its high-level and indirect impact on transport users, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Identify local priorities for improving walking, cycling and horse riding and trial changes to increase network of low traffic rural/green lanesTrial temporary highway closures for local events to support vitality of rural villages. o Deliver Electric Vehicle charging improvements, secure cycle parking and motorcycle parking facilities at local destinations.

Equality Group: Sex

Travel patterns significantly vary for females and males according to different travel purposes. The proportion of people in Wokingham Borough identifying as female or male is broadly in line with regional and national figures, meaning that any impact(s) are not likely to affect these sub-groups to a lesser nor greater extent.

Impact score	**Impact and supporting data**
Reduce Environmental Impacts	
Net zero carbon emissions	
NEUTRAL	• Due to their high-level and indirect impact on transport users, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Reduce total traffic movements on Wokingham Borough Council roads. o Collaborate with supporting partners and innovators in developing new solutions for decarbonising transport. o Energy generation at Park and Ride sites. o Promote peer-to-peer electric charging networks. o Provide suitable EV charging infrastructure to support carbon neutral development. o Explore expanding the Electric Vehicle network (car club).
Clean air, removal of all air quality exceedances	
NEUTRAL	• Due to their high-level and indirect impact on transport users, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Reduce traffic to remove air quality exceedances in Wokingham Town Centre. o Improve air quality in Twyford Town Centre. o Seek prioritisation of zero emission buses on routes through Wokingham Town Centre and Twyford Crossroads. o Wokingham Town Centre Freight Strategy.
High quality sustainable travel corridors	
POSITIVE	• Journeys taken by males tend to be in the peak hours, direct between work and home, and along key commuter corridors. The LTP4 seeks to deliver the following corridor-based measures, and as such, these specific LTP4 aims are deemed to potentially have a positive impact on this particular group: o Increase bus frequency and journey times along priority bus corridors (A4/A321, A33, A329 and A327), and between Wokingham Town-Arborfield and Finchampstead. o Delivery of a high-quality sustainable transport corridor along the A329 connecting Reading-Winnersh-Wokingham and Coppid Beach Roundabout. o Increasing rail service frequency to 20 minutes along the North Downs Line. o Increasing bus service frequency between Wokingham Town to Arborfield and Finchampstead, initially to a half hourly with aspiration to develop into 15-minutes. o Upgrade active travel facilities along the B3349 Barkham Road to create an active travel corridor connecting Arborfield and Wokingham Town Centre.
Grow the Economy	
Well-maintained transport network	
NEUTRAL	• Whilst a well-maintained transport network is beneficial to all, construction and maintenance works can impact the way in which people travel. As such, these specific LTP4 aims noted under the LTP4 are deemed to potentially have a low negative impact on this group in the short-term, but a positive impact in the longer term: o Test and trial measures that reduce maintenance needs whilst contributing to the borough's active travel, air quality and road safety targets.
Enable sustainable development	

POSITIVE	• All people benefit from the enablement of sustainable development. The LTP4 aims to provide streets that are attractive to and permeable for pedestrians and cyclists which will bring about improvements to the public realm and overall contribute positively to the wellbeing of residents in the area. Specifically, improvements to safety under this policy will be beneficial for women and girls who are disproportionately exposed to issues of gender-based violence on the streets.
Protect and enhance strategic connectivity and freight	
NEUTRAL	• All people benefit from use of strategic transport corridors. The LTP4 looks to support upgrades to the A329 (M) and deliver service enhancements on the Reading to Waterloo rail line Continue working with neighbouring authorities through the informal freight partnership to effectively manage freight on the SRN and across the region.
Create Healthy and Safe Places	
50% Active travel in towns	
LOW NEGATIVE	• Women and girls may be less likely to cycle due to a lack of perceived safety and fear of gender-based discrimination. The LTP4 aims to increase the proportion of people cycling through the delivery of high-quality cycle facilities. This policy is only likely to bring about positive effects, however, if cycle facilities are implemented with safety measures such as CCTV and lighting. • Women and girls are less likely to utilise open green space for active travel purposes due to a lack of perceived safety and fear of gender-based discrimination. Under this policy access to greenspace is improved. This policy will only be beneficial to this group if implemented with safety measures such as CCTV and lighting.
Safer streets for all, 50% reduction in KSIs	
NEUTRAL	• Due to its high-level and indirect impact on transport users, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Targeted infrastructure changes to reduce collisions at identified cluster sites (Wokingham Town Centre, A4 and B3349). o Revise speed limits across the borough with targeted interventions. o Increase the network of quiet rural roads and residential streets. o Support a trial and delivery of School Streets and safer routes to school across the borough.
Thriving villages in town centres	
NEUTRAL	• Due to its high-level and indirect impact on all transport users, the following LTP4 aim is deemed to potentially have a neutral impact on this particular group: o Trial temporary highway closures for local events to support vitality of rural villages. o Deliver Electric Vehicle charging improvements, secure cycle parking and motorcycle parking facilities at local destinations.

Equality Group: Sexual Orientation

A person's ability to access and use Wokingham Borough's transport network may differ dependent on their sexual orientation. The proportion of people in Wokingham Borough identifying as Lesbian, Gay, Bisexual or Other (LGBTQ+) is broadly in line with regional and national figures, meaning that any impact(s) are not likely to affect this group to a lesser nor greater extent.

Impact score	**Impact and supporting data**
Reduce Environmental Impacts	
Net zero carbon emissions	
LOW NEGATIVE	• The potential implementation of a network of shared electric vehicles (car clubs) under this policy may have adverse impacts for those identifying as Lesbian, Gay, Bisexual or Other (LGBTQ+) as the low level of regulation and causal nature of this proposed scheme may lead to people experiencing identity-based discrimination in this space. The policing of such car clubs would be necessary to ensure such negative effects are not felt by this group.
Clean air, removal of all air quality exceedances	
NEUTRAL	• Due to its high-level and indirect impact on transport users, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group. o Wokingham Town Centre Freight Strategy. o Reduce traffic to remove air quality exceedances in Wokingham Town Centre. o Improve air quality in Twyford Town Centre. o Seek prioritisation of zero emission buses on routes through Wokingham Town Centre and Twyford Crossroads.
High quality sustainable travel corridors	
NEUTRAL	• Due to their high-level and indirect impact on transport users, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Increase bus frequency and journey times along priority bus corridors (A4/A321, A33, A329 and A327), and between Wokingham Town-Arborfield and Finchampstead. o Delivery of a high-quality sustainable transport corridor along the A329 connecting Reading-Winnersh-Wokingham and Coppid Beach Roundabout. o Increasing rail service frequency to 20 minutes along the North Downs Line. o Increasing bus service frequency between Wokingham Town to Arborfield and Finchampstead, initially to a half hourly with aspiration to develop into 15 minutes. o Upgrade active travel facilities along the B3349 Barkham Road to create an active travel corridor connecting Arborfield and Wokingham Town Centre.
Grow the Economy	
Well-maintained transport network	
NEUTRAL	• People that identify as LGBTQ+ can experience sexual orientation-based discrimination; typically resulting in reduced feelings of safety when using public transport, walking or cycling. The LTP4 looks to with operators to share operational and real time data to improve transport services and maintenance. • Whilst a well-maintained transport network is beneficial to all, construction and maintenance works can impact the way in which people travel. As such, these specific LTP4 aims noted under the LTP4 are deemed to potentially have a low negative impact on this group in the short-term, but a positive impact in the longer term: o Test and trial measures that reduce maintenance needs whilst contributing to the borough's active travel, air quality and road safety targets.

Enable sustainable development	
POSITIVE	• All people benefit from the enablement of sustainable development. The LTP4 aims to provide streets that are attractive to and permeable for pedestrians and cyclists which will bring about improvements to the public realm and overall contribute positively to the wellbeing of residents in the area. Specifically, improvements to safety under this policy will be beneficial for members of the LGBTQ+ community who are disproportionately exposed to issues of identity-based violence on the streets.
Protect and enhance strategic connectivity and freight	
NEUTRAL	• All people benefit from use of strategic connectivity. The LTP4 looks to support upgrades to the A329 (M) and deliver service enhancements on the Reading to Waterloo rail line Continue working with neighbouring authorities through the informal freight partnership to effectively manage freight on the SRN and across the region.
Create Healthy and Safe Places	
50% Active travel in towns	
NEUTRAL	• Due to its high-level and indirect impact on transport users, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Increase services across a range of modes. o Deliver on-street E-scooter hire schemes to improve door-to-door transport options. o Increase cycle parking provision at local destinations. o Improve access to green space, especially across Lower Earley Way and to the River Loddon.
Safer streets for all, 50% reduction in KSIs	
POSITIVE	• People that identify as LGBTQ+ can experience sexual orientation-based discrimination; typically resulting in reduced feelings of safety when using public transport, walking or cycling. The LTP4 seeks to introduce targeted interventions to improve safety, and enhance pedestrian accessibility.
Thriving villages in town centres	
POSITIVE	• People that identify as LGBTQ+ often consider transport an unsafe space and are more likely to be a victim of harassment or acts of discrimination; this results in reduced feelings of safety when using public transport, walking or cycling, particularly at night-time or on quiet streets. The LTP4 seeks to enhance pedestrian access and safety in local service centres.

Equality Group: Socio-economic Disadvantage

A person's ability to access and use Wokingham Borough's transport network may differ dependent on their socio-economic circumstances, which encompass a range of different factors, including education, income and occupation.

The Department for Levelling Up, Housing & Communities' Index of Multiple Deprivation (IMD) is a relative measure of deprivation. The IMD provides a weighted average score of seven domains: 1) income deprivation; 2) employment deprivation; 3) health deprivation and disability; 4) education skills and training deprivation; 5) barriers to housing and services; 6) living environment deprivation; and 7) crime. In 2019, Wokingham Borough had an IMD score of 5.8, making it the second least deprived local authority district in England (ranked 316 out of 316 authorities). In 2021, 61.5% of households in the Borough were not deprived in any of the seven dimensions. Despite this, the Borough had four Lower Super Output Areas (LSOA) (a geographical area comprising between 400-1,200 households, typically with a resident population between 1,000-3,000) in the second most deprived quintile in England. These areas were to the south-east of Wokingham town centre (Wixenford, Gardeners Green and Holme Green); part of the Norreys Estate (near Wokingham town centre); part of Finchampstead; and a small part of Woodley. Based on 2019 mid-year population estimates these four LSOAs accounted for only 4% of the population of the Borough. Due to the relative affluence of the Borough in which the LTP4 covers, it is not envisioned that its population would be negatively impacted socio-economically by the LTP4.

Impact score	**Impact and supporting data**
Reduce Environmental Impacts	
Net zero carbon emissions	
POSITIVE	• Typically, urban areas tend to experience higher levels of both deprivation and congestion. LTP4's aim to reduce total traffic movements on Wokingham Borough Council roads would help to improve quality of life through a reduction in transport emissions in areas where it is most needed. • A lack of affordable private options for travel may mean that access to services (education, employment, healthcare, etc.) is restricted for people on lower incomes. The LTP4 seeks to explore expanding the Electric Vehicle network (car club).
Clean air, removal of all air quality exceedances	
POSITIVE	• Typically, people that are socio-economically disadvantaged live in areas that suffer with high-levels of congestion. The LTP4 aims to reduce traffic to remove air quality exceedances in Wokingham Town Centre, improve air quality in Twyford Town Centre, and seek prioritisation of zero emission buses on routes through Wokingham Town Centre and Twyford Crossroads. • Due to its high-level and indirect impact on transport users, the Wokingham Town Centre Freight Strategy is deemed to potentially have a neutral impact on this particular group.
High quality sustainable travel corridors	
NEUTRAL	• The upfront and associated costs of owning a private vehicle may be unobtainable for people that are socio-economically disadvantaged; whilst cycling does incur a cost, it is a significantly cheaper alternative. The LTP4 looks to deliver high quality cycle facilities as part of the identified Reading Strategic Cycle Routes, and upgrade active travel facilities along the B3349 Barkham Road (connecting Arborfield-Wokingham Town centre). • Due to their high-level and indirect impact on transport users that are socio-economically disadvantaged, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Increase bus frequency along priority bus corridors (A4/A321, A33, A329 and A327) and between Wokingham Town-Arborfield-Finchampstead. o Deliver a high-quality sustainable travel corridor between Reading and Coppid Beach Roundabout, via Winnersh and Wokingham. o Deliver improved interchange and access facilities at Earley rail station. o Improve access to stations along the North Downs Line. o Improve the forecourt, interchange facilities and car parking at Twyford Station.
Grow the Economy	
Well-maintained transport network	

NEUTRAL	• Whilst a well-maintained transport network is beneficial to all, construction and maintenance works can impact the way in which people travel. As such, these specific LTP4 aims noted under the LTP4 are deemed to potentially have a low negative impact on this group in the short-term, but a positive impact in the longer term: o Test and trial measures that reduce maintenance needs whilst contributing to the borough's active travel, air quality and road safety targets. o Work with operators to share operational and real time data to improve transport services and maintenance.
Enable sustainable development	
NEUTRAL	• All people benefit from the enablement of sustainable development. The LTP4 aims to provide streets that are attractive to and permeable for pedestrians and cyclists which will bring about improvements to the public realm and overall contribute positively to the wellbeing of residents in the area.
Protect and enhance strategic connectivity and freight	
NEUTRAL	• All people benefit from use of strategic connectivity. The LTP4 looks to support upgrades to the A329 (M) and deliver service enhancements on the Reading to Waterloo rail line Continue working with neighbouring authorities through the informal freight partnership to effectively manage freight on the SRN and across the region.
Create Healthy and Safe Places	
50% Active travel in towns	
NEUTRAL	• The large cost associated with cycling in relation to the bike, its maintenance and additional safety measures like bike locks is likely to inhibit the uptake of cycling among economically disadvantaged groups. The LTP4 would seek to deliver secure cycle parking at local destinations. This would alleviate fear of bike theft and money loss for this group. • For people living in less affluent areas, transport services can be seen as a constraint rather than an enabler due to factors like cost acting as a barrier. The cost of travel can extend journeys and/or the number of modes used by people, impacting upon journey quality. • Due to its high-level and indirect impact on transport users who are less affluent, the following LTP4 aim is deemed to potentially have a neutral impact on this particular group: o Improve access to green space, especially across Lower Earley Way and to the River Loddon. o Improve pedestrian environments and space for businesses in town centres. o Increase the range of services and engagement.
Safer streets for all, 50% reduction in KSIs	
POSITIVE	• People residing in less affluent neighborhoods are more likely to be killed or injured on roads than people living in more affluent areas[10]. The LTP4 seeks to introduce targeted infrastructure changes to reduce collisions at identified cluster sites (Wokingham Town Centre, A4 and B3349), revising speed limits across the borough with targeted interventions, where appropriate, to improve road safety, and increase the network of quiet rural roads and residential streets, and support a trial and delivery of School Streets and safer routes to school across the borough, helping to improve actual and perceptions of safety.
Thriving villages in town centres	
POSITIVE	• Due to its high-level and indirect impact on less affluent transport users, the following LTP4 aim is deemed to potentially have a neutral impact on this particular group: o Trial temporary highway closures for local events to support vitality of rural villages. o Deliver Electric Vehicle charging improvements, secure cycle parking and motorcycle parking facilities at local destinations. o Enhance pedestrian access in local service centres. o The LTP4 identifies local priorities for improving walking, cycling and horse riding and trial changes to increase network of low traffic rural/green lanes.

[10] The Kings Fund (2022) https://www.kingsfund.org.uk/publications/what-are-health-inequalities [Accessed: 21/09/2023)

Equality Group: Armed Forces Communities

The Armed Forces Community includes the British Army, Royal Air Force, and Royal Navy. The term 'Service People applies to current members (serving personnel), former members (veterans), as well as relevant family members. A person's ability to access and use Wokingham Borough's transport network may differ dependent on whether they have previously served in the UK regular and/or reserve armed forces.

The proportion of Service Members by type for Wokingham Borough was broadly in line with that for the south east and for England. Overall, 1,737,781 people (3.8% of the total population of England) have served in any UK armed forces, of which 317,082 (18.2%) reside in the South East. This may be due to proximity of Armed Forces sites within the region, examples of which include, but not limited to: Aldershot Garrison (Hampshire); Army Training Centre (ATC) Pirbright (Surrey); North Atlantic Treaty Organization (NATO) Allied Maritime Command (MARCOM) (north west London); Royal Air Force (RAF) Benson (south Oxfordshire); RAF High Wycombe (Buckinghamshire); RAF Kenley (south London); RAF Odiham (Hampshire); RAF Northolt (west London); and, Royal Military Academy (RMA) Sandhurst (Surrey). Wokingham Borough has a lower proportion of people who have previously served in either the regular or reserve UK armed forces, or both, compared to regionally and nationally, meaning that any impact(s) may affect this particular sub-group to a lesser extent.

Impact score	**Impact and supporting data**
Reduce Environmental Impacts	
Net zero carbon emissions	
POSITIVE	• Service People (those who have served / serve in the armed forces) who are Disabled or have a military-related injuries may struggle to access and/or use Electric Vehicle charging infrastructure due to inaccessible parking or the presence of heavy charging cables. Within the centre of Wokingham, there are circa four charging points that are both publicly accessible and have no access restrictions, limiting the charging options available. The LTP4 seeks to promote peer-to-peer electric charging networks to meet growing demand for EV charging and providing suitable EV charging infrastructure to support carbon neutral development. • The use of new digital innovations can act as a blocker to transport for Service People who may not have access and/or the knowledge to use these emerging technologies. The LTP4 looks to support improved digital accessibility for local residents. • Inadequate infrastructure can inhibit the use of transport services for Service People who are Disabled or have a military-related injuries, leading to a reliance on motor vehicles. For people who are not able to cycle, walk and/or wheel, nor access public transport, the LTP4's aim to reduce total traffic movements on Wokingham Borough Council roads would help to improve journey times for people reliant on a private vehicle(s).
Clean air, removal of all air quality exceedances	
NEUTRAL	• Due to their high-level and indirect impact on Service People, the following LTP4 aims are deemed to potentially have a neutral impact on this particular group: o Wokingham Town Centre Freight Strategy. o Reduce traffic to remove air quality exceedances in Wokingham Town Centre. o Improve air quality in Twyford Town Centre. o Seek prioritisation of zero emission buses on routes through Wokingham Town Centre and Twyford Crossroads.
High quality sustainable travel corridors	
POSITIVE	• A lack of suitable infrastructure for Service People who are Disabled or have a military-related injuries can be a barrier to travel. The LTP4 aims to deliver high quality cycle facilities as part of the identified Reading Strategic Cycle Routes, and upgrade active travel facilities along the B3349 Barkham Road (connecting Arborfield-Wokingham Town centre, deliver improved interchange and access facilities at Earley rail station, improved access to stations along the North Downs Line, and to improve the forecourt, interchange facilities and car parking at Twyford Station, helping to increase access and journey quality.

	• In Wokingham Borough, Disabled person's bus passes are free for residents who have a permanent disability or a disability that is expected to last at least one year. The LTP4 seeks to increase bus frequency along priority bus corridors (A4/A321, A33, A329 and A327) and between Wokingham Town-Arborfield-Finchampstead, as well as the delivery of a high-quality sustainable travel corridor between Reading and Coppid Beach Roundabout, via Winnersh and Wokingham. • The cost of travel can extend journeys and/or the number of modes used by Service People who are Disabled or have a military-related injuries or that do not feel comfortable/confident using particular modes, impacting upon journey quality. The LTP4 aims to work with partners to develop a lower fares structure through Enhanced Bus Partnership. • Some Service People who are Disabled or have a military-related injuries may have greater difficulty cycling, walking and/or wheeling long distances; the LTP4 indicates that community Dial-a-Ride services, which can be used by Disabled Service People, will continue to be funded.
Grow the Economy	
Well-maintained transport network	
NEUTRAL	• Whilst a well-maintained transport network is beneficial to all, construction and maintenance works can impact the way in which people travel. As such, these specific LTP4 aims noted under the LTP4 are deemed to potentially have a low negative impact on this group in the short-term, but a positive impact in the longer term: o Test and trial measures that reduce maintenance needs whilst contributing to the borough's active travel, air quality and road safety targets. o Work with operators to share operational and real time data to improve transport services and maintenance.
Enable sustainable development	
POSITIVE	• All people benefit from the enablement of sustainable development. The LTP4 aims to provide streets that are attractive to and permeable for pedestrians and cyclists which will bring about improvements to the public realm and overall contribute positively to the wellbeing of residents in the area. A lack of suitable parking infrastructure for Service People who are Disabled or have a military-related injuries can be a barrier to travel. The LTP4 aims to increase disabled vehicle and adapted cycle parking provision across the borough.
Protect and enhance strategic connectivity and freight	
NEUTRAL	• All people benefit from use of strategic connectivity. The LTP4 looks to support upgrades to the A329 (M) and deliver service enhancements on the Reading to Waterloo rail line Continue working with neighbouring authorities through the informal freight partnership to effectively manage freight on the SRN and across the region.
Create Healthy and Safe Places	
50% Active travel in towns	
NEUTRAL	• Due to its high-level and indirect impact on Service People, the following LTP4 aim is deemed to potentially have a neutral impact on this particular group: o Improve access to green space, especially across Lower Earley Way and to the River Loddon. o Deliver high-quality cycle facilities; part of the Reading Strategic cycle network and along Barkham Road, A329 and A321 Finchampstead Road. o Improve pedestrian environments and space for businesses in town centres. o Increase the range of services and engagement. o Increase cycle parking provision at local destinations.
Safer streets for all, 50% reduction in KSIs	
NEUTRAL	• Due to its high-level and indirect impact on Service People, the following LTP4 aim is deemed to potentially have a neutral impact on this particular group: o Targeted infrastructure changes to reduce collisions at identified cluster sites (Wokingham Town Centre, A4 and B3349). o Revising speed limits across the borough with targeted interventions. o Increase the network of quiet rural roads and residential streets. o Support a trial and delivery of School Streets and safer routes to school across the borough.

Thriving villages in town centres	
NEUTRAL	• Due to its high-level and indirect impact on Service People, the following LTP4 aim is deemed to potentially have a neutral impact on this particular group: o Identify local priorities for improving walking, cycling and horse riding and trial changes to increase network of low traffic rural/green lanes. o Trail temporary highway closures for local events to support vitality of rural villages. o Deliver Electric Vehicle charging improvements, secure cycle parking and motorcycle parking facilities at local destinations.

6. Conclusion and next steps.

IMPACT SUMMARY TABLE

Aim	Age	Disability	Gender Reassignment	Marriage and Civil Partnership	Pregnancy and Maternity	Race	Religion or Belief	Sex	Sexual **Orientation**	Socio-economic Disadvantage	Armed Forces **Communities**
Net Zero Carbon Emissions	Positive	Positive	Low Negative	Neutral	Positive	Neutral	Neutral	Neutral	Low Negative	Positive	Neutral
Clean Air, removal of all air quality exceedances	Positive	Positive	Neutral	Neutral	Positive	Positive	Neutral	Neutral	Neutral	Positive	Positive
High-Quality Sustainable Travel Corridors	Positive	Positive	Positive	Neutral	Positive	Neutral	Neutral	Positive	Positive	Neutral	Positive
A Well-Maintained Transport Network	Neutral	Positive	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
Enable Sustainable Development	Positive	Positive	Neutral	Neutral	Neutral	Neutral	Neutral	Positive	Positive	Neutral	Positive
Protect and Enhance Strategic Road and Rail Connectivity	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
50% Active Travel in Towns by 2030	Positive	Positive	Positive	Neutral	Positive	Positive	Positive	Low Negative	Neutral	Neutral	Neutral
Safer Streets for All	Positive	Positive	Neutral	Positive	Neutral	Positive	Neutral	Neutral	Positive	Positive	Neutral
Thriving Villages and Rural Centres	Positive	Positive	Neutral	Neutral	Positive	Neutral	Neutral	Neutral	Positive	Positive	Neutral

Impact on Equality Groups	**Description**
Positive	The proposal promotes equality of opportunity by meeting needs or addressing existing barriers to participation and/or promotes good community relations
Neutral	The proposal has no impact or no disproportionate impact
Low negative	The proposal is likely to negatively impact a small number of people, be of short duration and can easily be resolved
High negative	The proposal is likely to have a significant negative impact on many people or a severe impact on a smaller number of people

This assessment has found 40 positive impacts and 56 neutral impacts across the given equality groups, with age, disability, and pregnancy and maternity experiencing the highest level of positive effect, and marriage and civil partnership, gender reassignment, sex and religion and belief experiencing the least. Three Low Negative scores were identified for gender reassignment, sex and sexual orientation. These related to the potential for identity and gender based discrimination. As all the LTP4 aims have been identified as having predominantly

neutral and positive effects, a full impact assessment is not required, as per Wokingham Borough Council policy. As such, reference to this initial assessment must be made in any associated reports after receiving formal approval from the Assistant Director responsible for the LTP4.

Wokingham LTP4
Draft LTP Consultation Questions
28 September 2023

About You

Q1 Age

Q2 Gender

Q3 Postcode

Q4 Disability

Local Transport Plan

Q5 Do you believe the LTP should be updated

Yes
Neither Agree/Disagree
No

Q6 Which of the three themes do you believe is most important?

All equally important
High Quality Travel Corridors
Net Zero Carbon Emissions
Clean Air, Removal of air quality exceedances

Q7 The draft Strategy**: Reducing Environmental Impact**

To what extent do you agree with the

Theme	Strongly Agree	Agree	Neither Agree/Disagree	Disagree	Strongly Disagree
High Quality Travel Corridors					
Net Zero Carbon Emissions					
Clean Air, Removal of air quality exceedances					

Q8 Any other comments on this section

Q9 The draft Strategy**: Grow the Economy**

To what extent do you agree with the

Theme	Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree
Protect and Enhance Strategic Connectivity					
A Well-maintained Transport Network					
Support Sustainable Development					

Q10 Any other comments on this section

Q11 The draft Strategy**: Create Healthy and Safe Places**

To what extent do you agree with the

Theme	Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree
Safer Streets for All					
50% Active Travel in Towns					
Thriving Villages and Rural Centres					

Q12 Any other comments on this section

Q13 Can you identify your top 3 priorities out of the 9 sub themes in the draft strategy

9 themes listed, scan drop 3 into a list of priorities.

Q14 Are there any other priorities you would like to see and why?

LTP Action Plan

Q15 To what extent do you agree with the content of the Action Plan

Strongly Agree	**Agree**	**Neither Agree/ Disagree**	**Disagree**	**Strongly Disagree**

Q16 Are there any measures you particularly support

Q17 Are there any measures you strongly disagree with?

Q18 Any other comments on the Action Plan

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Wokingham Borough Council

LOCAL TRANSPORT PLAN 4

Background Paper: Evidence Base

Wokingham Borough Council

LOCAL TRANSPORT PLAN 4

Background Paper: Evidence Base

CONFIDENTIAL

PROJECT NO. 70102232

WBC-LTP4-EB_V3

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1 INTRODUCTION

1.1 BACKGROUND

1.1.1. WSP have been commissioned by Wokingham Borough Council to develop their next Local Transport Plan, LTP 4.

1.1.2. As part of these works, WSP have produced an evidence base. The focus of this report is to provide an overview of empirical data of the existing social, environmental and transport conditions within Wokingham Borough to inform the LTP4.

1.1.3. A comprehensive evidence base will assist in determining the areas key social, physical and economic characteristics. This helps to ensure that transport investment focuses on the key challenges facing Wokingham Borough.

1.2 STRUCTURE OF THE REPORT

1.2.1. The report is set out in the following sections:

- Section 2 – Location and Demographics
- Section 3 – Transport Emissions
- Section 4 – Environment
- Section 5 – Health
- Section 6 – Economy and Employment
- Section 7 – Accessibility
- Section 8 – Digital Accessibility
- Section 9 – Travel Patterns
- Section 10 — Regional and Neighbouring Authority Transport Plans
- Section 11 – Future Development
- Section 12 – Active Travel
- Section 13 – Public Transport – Provision and Use
- Section 14 – Shared and Future Mobility
- Section 15 – Freight
- Section 16 – Traffic and Road Network
- Section 17 – Road Safety
- Section 18 – Summary

2 LOCATION AND DEMOGRAPHICS

2.1 LOCATION

2.1.1. Wokingham Borough is an inland unitary authority within the Royal County of Berkshire in the South East region of England. It is located between the urban areas of Reading and Bracknell. It is made up of the following fourteen parish and three town councils, as shown in Figure 2-1.

PARISH COUNCILS

- Arborfield & Newland
- Barkham
- Charvil
- Finchampstead
- Hurst
- Remenham
- Ruscombe
- Shinfield
- Sonning
- Swallowfield
- Twyford
- Wargrave
- Winnersh
- Wokingham Without

TOWN COUNCILS

- Earley
- Wokingham
- Woodley

Figure 2-1 - Parish and Town Councils in Wokingham Borough

Source: Wokingham Borough Council, 2022

2.1.2. The M4 motorway runs east to west through the centre of the Borough linking it with London, Heathrow Airport, the South West and South Wales. The A329(M) runs north-west to south-east providing links to Reading, Bracknell and the M3 via the A322. Other key roads passing through the Borough include the A4, A33, A321, A327 and A329.

2.1.3. The Borough has six railway stations: (i) Twyford, (ii) Wargrave, (iii) Earley, (iv) Winnersh Triangle, (v) Winnersh, and (vi) Wokingham. Twyford lies on the Great Western main line which provides links to London, Oxford, the South West and South Wales and on the Elizabeth Line providing travel through London. Wargrave lies on the branch line providing a link between Twyford and Henley-on-Thames. Earley, Winnersh Triangle, Winnersh and Wokingham all lie on the London Waterloo to Reading line and Wokingham also lies on the North Downs Line between Reading, Guildford and Gatwick Airport.

2.1.4. National Express also provide coach services to London, Gatwick and Heathrow Airports, the South West and South Wales from Mereoak Park and Ride site. Mereoak Park and Ride is located to the south of M4 Junction 11. The Thames Path National Trail and NCN routes 4 and 23 also pass through the Borough.

2.2 CURRENT POPULATION

2.2.1. The population of the Borough is centred on its four main urban centres of Earley, Winnersh, Wokingham town and Woodley along with the two communities of Finchampstead and Twyford. Wokingham town is the largest settlement in the Borough, containing just over a quarter of the total population. It is also the main commercial, cultural and administrative centre.

2.2.2. Based on the 2021 census data, the population of Wokingham Borough is 177,500. The borough has an above average population density, with 992 people per square km compared with 434 people per square km across England as a whole.

2.2.3. When compared to the local authority districts it borders, Wokingham Borough is the third smallest by area but has the third-largest population density, behind only Bracknell Forest and Reading, as shown in Table 2-1.

Table 2-1 - 2021 populations of local authority districts bordering Wokingham Borough

Local authority district	Geography	Area (sq. km)	Population	Population density (people per sq. km)
Reading	Unitary authority	40	174,200	4355
Bracknell Forest	Unitary authority	109	124,600	1143
Wokingham	**Unitary authority**	**179**	**177,500**	**992**
Windsor and Maidenhead	Unitary authority	197	153,500	779
Wycombe	Non-metropolitan district	325	174,641	538
Hart	Non-metropolitan district	215	99,400	462
Basingstoke and Deane	Non-metropolitan district	634	185,200	292
West Berkshire	Unitary authority	704	161,400	229
South Oxfordshire	Non-metropolitan district	679	149,100	219

Source: Office for National Statistics (ONS), 2021 Census, Crown Copyright 2021

2.2.4. Between 2011 and 2021, Wokingham Borough's population increased by 15% from 154,380 to 177,500 (increase of 23,120). This is more than double the population growth across England and Wales of approximately 6.3% over the same period.

2.2.5. Of the total Wokingham Borough's population of 177,500, 19% were aged 15 years and under, 63% aged 16-64 and 17% post-retirement (65+).

2.2.6. Table 2-2 shows the growth of different age groups between 2011 and 2021. The population of traditional working-age people (16-64) in Wokingham Borough increased by 11% (5,278 people), whereas there was a larger growth in the post-retirement age band (65+) of 28% (6,711).

Table 2-2 - Population of Wokingham by age group in 2011 and 2021

Age Bracket (Years)	2011	2021	% Change
0-15	29,322	34,600	18%
16-64	101,269	112,400	11%
65+	23,789	30,500	28%
Total population	**154,380**	**177,500**	**15%**

Source: Office for National Statistics (ONS), 2021 Census, Crown Copyright 2021

2.2.7. Table 2-3 shows that Wokingham Borough is broadly in line with many of the local authority districts it borders. However, Reading and Bracknell Forest both have a higher proportion of working age residents and lower percentage of post-retirement age residents.

Table 2-3 – Breakdown of population by age bracket for Wokingham and adjacent local authority districts in 2021

Local authority district	0-15	16-64	65+
Basingstoke and Deane	18%	65%	17%
Bracknell Forest	19%	66%	15%
Hart	18%	62%	20%
Reading	18%	70%	12%
South Oxfordshire	17%	62%	21%
West Berkshire	18%	63%	19%
Windsor and Maidenhead	18%	64%	18%
Wokingham	19%	63%	18%
Wycombe	21%	61%	19%
England	*17%*	*64%*	*19%*

Source: ONS Census 2021, Crown Copyright 2021

2.2.8. Based on ONS Census 2021, the 16-64 age group in Wokingham exhibits an older population structure in comparison to the national average in England. Notably, Wokingham has a lower proportion of adults aged 20 to 35 years in comparison to England and there is a substantial proportion of older working-age individuals aged 40 to 55.

2.2.9. Although the proportion of residents aged 65 and above does not surpass the England average, the considerable number of individuals currently aged 40 to 55 suggests an impending trend of population aging in Wokingham over the next decade and beyond. Moreover, this aging trajectory is anticipated to exhibit a higher rate of increase compared to other geographic areas.

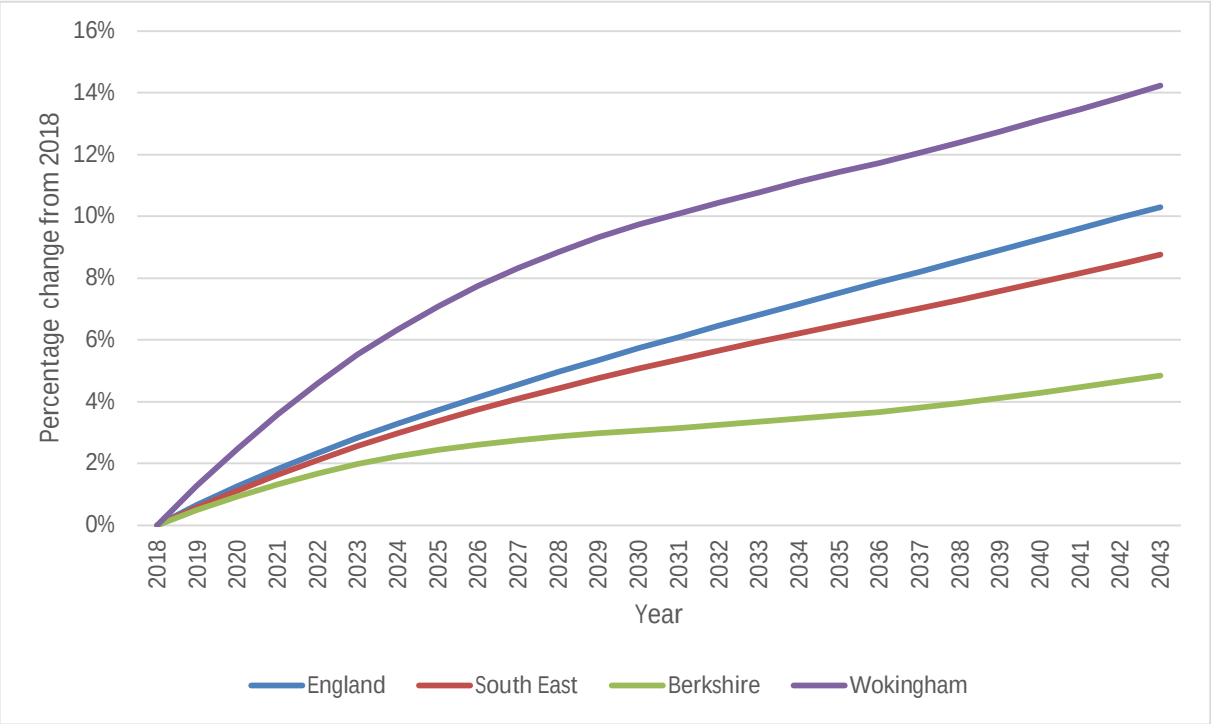
2.3 FUTURE POPULATION PROJECTIONS

2.3.1. Figure 2-2 presents the projected increase in population between 2018 and 2043 in Wokingham Borough, Berkshire, the South East and across England. The growth rates suggest Wokingham Borough experiencing slightly higher growth rates than others.

2.3.2. In Berkshire, however, population growth rates are projected to be slower with a rise in population of 5% between 2018 and 2043. The population growth in Berkshire shows some minor fluctuations, but overall, it maintains a moderate growth trajectory.

2.3.3. In Wokingham Borough, the projected growth equates to an additional 23,922 people over the 25-year period. The recent 2021 census population data however shows that between 2011 and 2021 there has been a growth of 23,120 (15%) in population. This indicates population growth could be above the 25-year projections.

Figure 2-2 - Projected change in population from 2018 to 2043, by area



Source: ONS 2018 population projections, Crown Copyright 2019

2.4 MIGRATION

2.4.1. Table 2-3 summarises the net migration into / out of Wokingham Borough from the boarding local authority districts between June 2014 and June 2019. It shows that across the five-year period, 24,530 people moved into Wokingham Borough from bordering local authority districts and 19,383 people moved out of Wokingham Borough to bordering local authority districts.

Table 2-3 - Net migration from June 2014 to June 2019 in/out of Wokingham Borough from bordering local authority districts

Local authority district	Migration in	Migration out	Net migration
Reading	12,759	8,123	4,636
Windsor and Maidenhead	2,386	1,209	1,177
Bracknell Forest	4,684	3,706	978
South Oxfordshire	989	1,224	-235
Hart	903	1,257	-354
Basingstoke and Deane	1,052	1,485	-433
West Berkshire	1757	2,379	-622
Total	24,530	19,383	5,147

Source: ONS June 2019 internal migration matrices of moves, Crown Copyright 2019

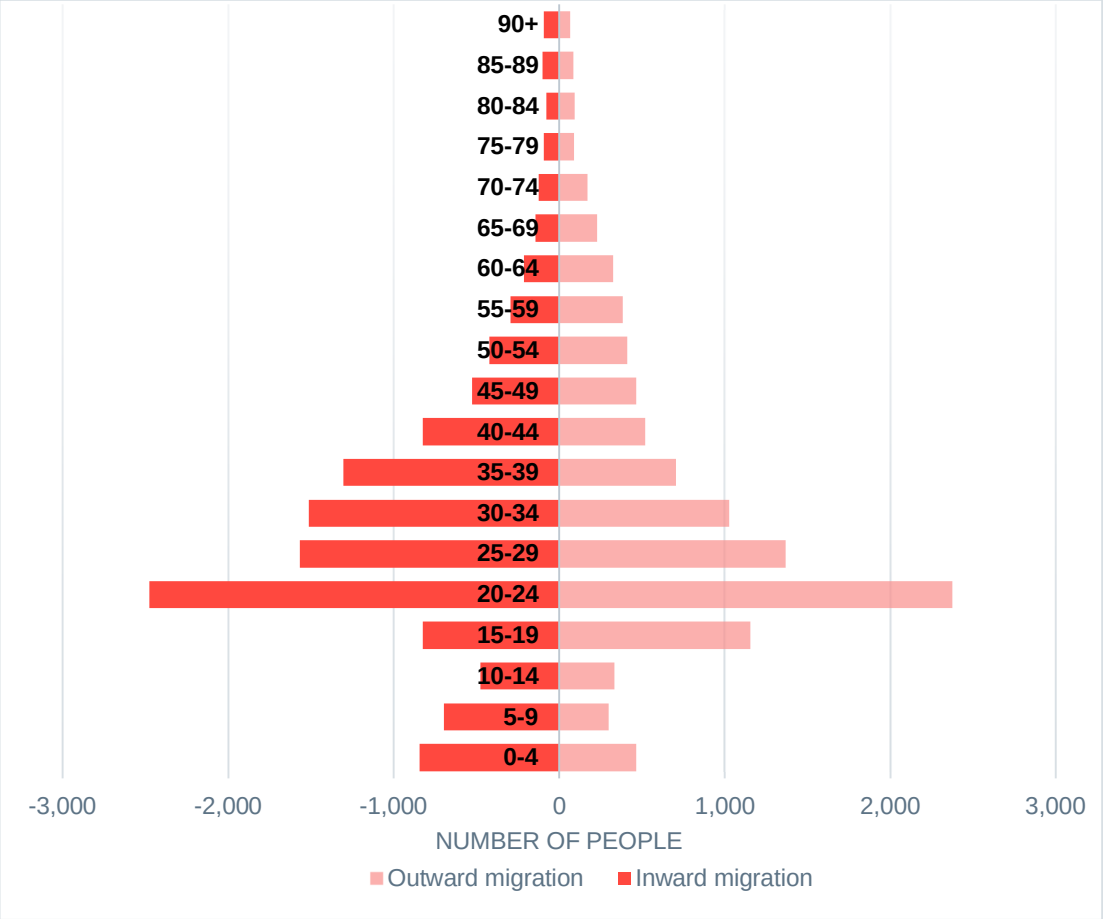
2.4.2. The overall net migration from most of the boarding local areas are often very small, with similar numbers migrating in and out of Wokingham Borough. The notable exception is Reading, where migration into Wokingham Borough far exceeded outward migration. This accounted for approximately 1000 per year migrating from Reading into Wokingham.

2.4.3. Figure 2-3 breaks down inward and outward migration by age band in 2019 up to the month of June for Wokingham Borough. It shows that amongst 15-to-24-year-olds, outward migration exceeds inward migration, with a total of 3,299 moving into the Borough and 3,536 moving out. This is largely due to school leavers moving on to attend university or to pursue opportunities elsewhere.

2.4.4. However, amongst 25-to-49-year-olds, inward migration far exceeds outward migration, with a total of 5,734 moving into Wokingham Borough and only 4,009 moving out. This indicates that postgraduates and professionals relocate to the Borough.

2.4.5. Amongst the those aged over 65 there was a slightly smaller net outward migration of 140.

Figure 2-3 - Wokingham Borough migration by age band, year to June 2019



Source: ONS June 2019 internal migration moves by age band, Crown Copyright 2019

2.5 DEPRIVATION

2.5.1. The English Index of Multiple Deprivation (IMD) scores recorded by the Ministry of Housing, Communities and Local Government in 2019 for Wokingham Borough and the bordering local authority districts are shown in Table 2-4. In this table, a rank of 1 indicates the most deprived local authority district in England and a rank of 317 indicates the least deprived local authority district in England.

Table 2-4 - Average English IMD score and rank of Wokingham Borough from bordering local authority district (2019)

Local authority district	IMD - Average score	IMD - Rank of average score (1 to 317)
Reading	19.6	141
Basingstoke and Deane	12.8	243
Wycombe	10.7	281
Bracknell Forest	10.2	286
West Berkshire	10.0	289
South Oxfordshire	8.5	302
Windsor and Maidenhead	8.4	304
Wokingham	**5.8**	**316**
Hart	5.5	317

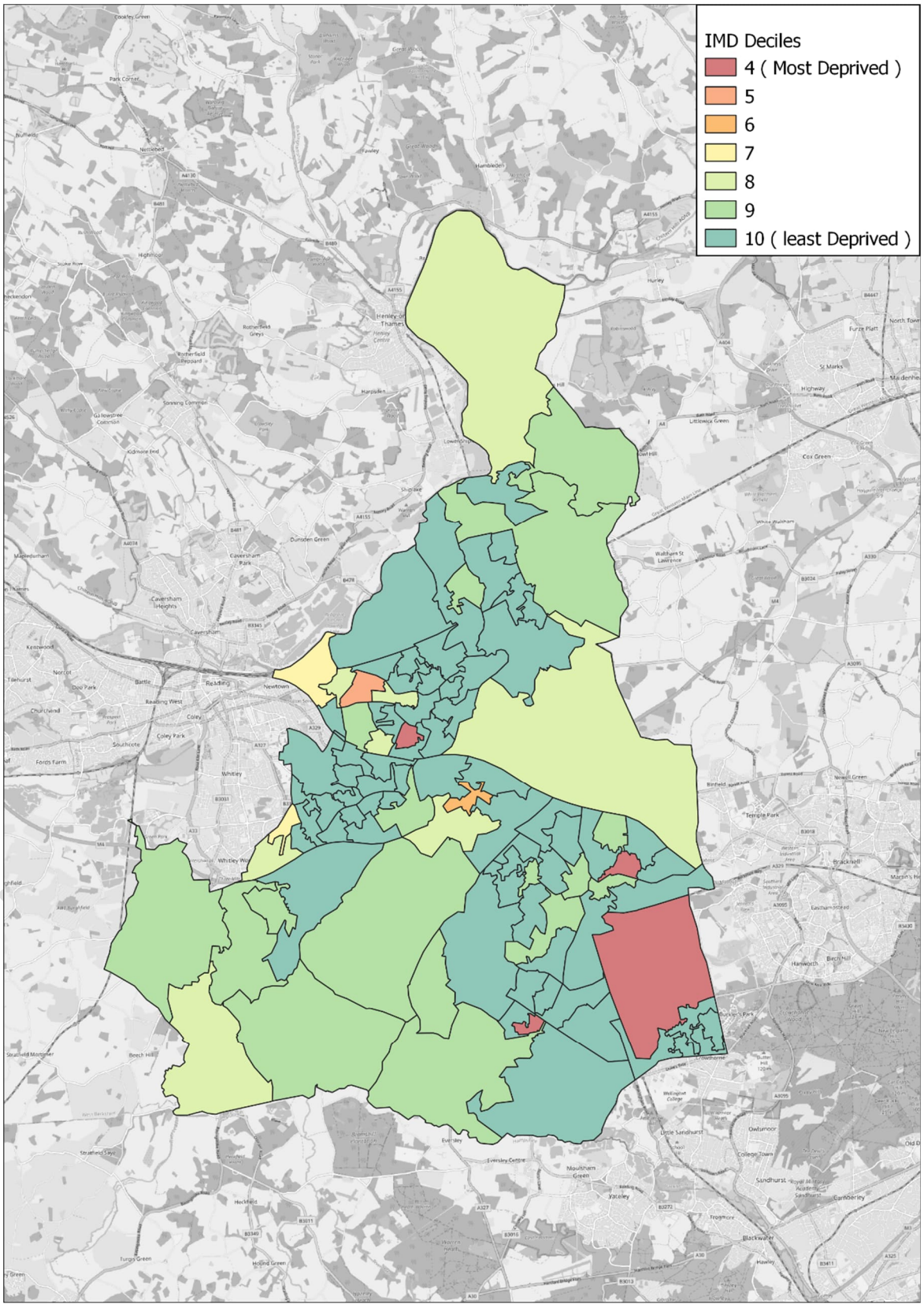
Source: Ministry of Housing, Communities and Local Government Indices of Multiple Deprivation 2019, Crown Copyright 2019

2.5.2. Table 2-4 shows that Wokingham Borough is the second least deprived local authority district in England. The majority of the bordering local authority districts are also some of the least deprived areas in England. The main exception is Reading, which is ranked 141. Reading also has 5% of its Lower Super Output Areas (LSOAs) that are considered to be in the 10% most deprived in England.

2.5.3. Figure 2-4 illustrates the levels of deprivation by LSOA in Wokingham Borough. It shows that, although Wokingham Borough is the second least deprived local authority district in England, it still has four LSOAs that are in the 4th most deprived deciles in England. These areas are shown in light red on the map and cover an area to the south-east of Wokingham town centre; part of the Norreys Estate near Wokingham town centre; part of Finchampstead; and a part of Woodley.

2.5.4. Based on 2019 mid-year population estimates these four LSOAs accounted for 4% of the population in the Borough. Deprivation is likely to also exist outside of these four LSOAs.

Figure 2-4 - Level of deprivation by Lower Super Output Area in Wokingham Borough



Source: IMD deciles 2019, Ministry of Housing, Communities and Local Government, Crown Copyright 2019

3 TRANSPORT EMISSIONS

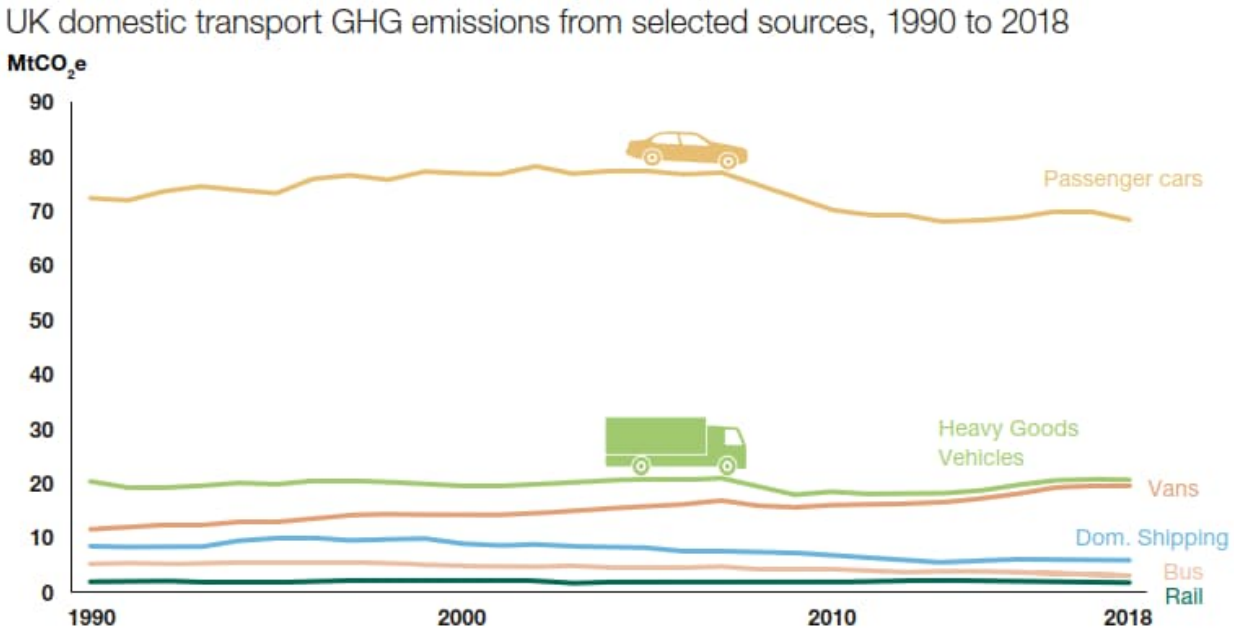
3.1 INTRODUCTION

3.1.1. Wokingham Borough Council declared a climate emergency in 2019 and commitment to playing as full a role as possible to reduce carbon footprint and to be net zero by 2030.

3.1.2. In March 2020, the Department for Transport published 'Decarbonising Transport: Setting the Scene' ahead of the government's anticipated Net Zero Strategy. This document was published to start building a picture around the changes required to the transport industry as it produces the highest levels of greenhouse gas emissions within the UK.

3.1.3. The document highlights that passenger cars have produced the greatest amount of greenhouse gases emissions within the transport industry, as shown in Figure 3-1 below.

Figure 3-1 – Greenhouse gas emissions associated with different modes across the UK between 1990 to 2018



3.2 CARBON

3.2.1. The Wokingham Climate Emergency Action Plan (CEAP) was developed in 2020 to define the activities to be undertaken by the borough council to reach the 2030 net-zero carbon target. The action plan was developed in accordance with the international, national and regional legislations such as UN Sustainable Development Goals, The Clean Growth, Road to Zero, draft Berkshire Local Industrial Strategy (BLIS) and Thames Valley Berkshire Local Economic Partnership Strategic Economy Plan through a collaboration effort supported by public consultations since August 2019.

3.2.2. The CEAP was prepared based on the current context whilst considering the aspirations of future. In addition, the action plan also aligns with the Council Plan priorities including provision of clean and green spaces in addition to becoming net zero, thereby keeping the borough moving by encouraging active and sustainable travel modes and enriching residents' lives.

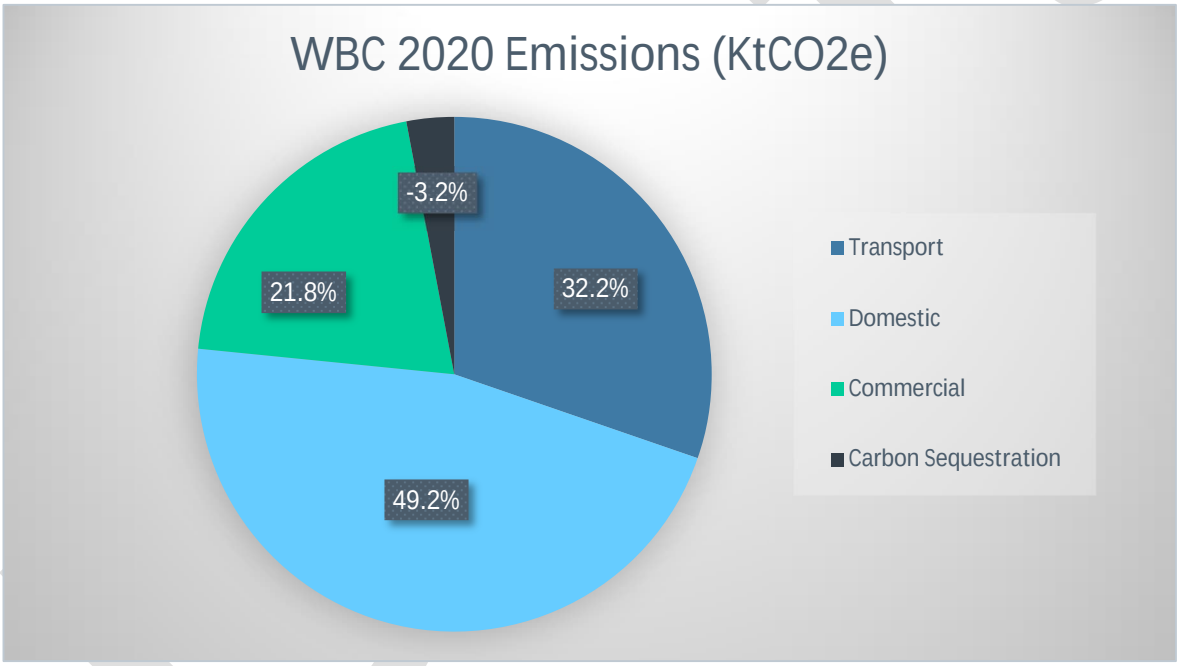
3.2.3. As part of its commitment to net zero, the council also updates the action plan every year in the annual climate emergency progress report based on the assessment of the current situation and determines its future actions in relation to the committed ten-year target.

3.2.4. Based on government data and estimated using the Department for Energy Security and Net Zero (DESNZ) method, Wokingham Borough's carbon footprint is 505 $ktCO_2$. The carbon footprint compromises transport emissions (32.2%), emissions from industrial and commercial sector (21.8%), and domestic sector emissions (49.2%), with a contribution of (-) 3.2% from carbon sequestration projects.

3.2.5. Within the Borough, transport emissions contribute 162.93 $ktCO_2$ to the overall carbon footprint of the Borough in 2020. A roads account for 61.2 $ktCO_2$, minor roads account for slightly more at 94.15 $ktCO_2$ and other modes of transport account for the least at 7.55 $ktCO_2$.

3.2.6. Figure 3-2 below shows the break-down of Wokingham Borough's Emissions in 2020 from DESNZ.

Figure 3-2 - Carbon Footprint of Wokingham Borough in 2020 (ktCO2)



3.2.7. Based on the global framework of Greenhouse Gas Protocol, the emissions occurring inside and outside Wokingham borough were divided into the following three categories:

- **Scope 1:** Emissions associated with combustion of fuels directly by a consumer. Within Wokingham this mainly refers to gas use from heating, cooking and hot water, and petrol / diesel used by vehicles whilst they are on the Borough's roads/
- **Scope 2:** Energy which is purchased from elsewhere but used by a consumer. Within Wokingham this means the electricity used in the borough. The emissions are created at power stations located outside of Wokingham, but the electricity is used within the Borough supplied via the electricity grid.
- **Scope 3:** Emissions resulting from the behaviour and activity of a consumer but occurring from sources outside of their control. Within Wokingham these are generally consumption-based

emissions, which are out of the scope of the Borough's carbon footprint. However, the council will support behavioural change through the actions in this plan.

3.2.8. It is worth noting that these figures exclude sectors that are beyond the council's scope of influence. An example of this is the emissions from major transport links such as the M4 which creates 100.02 $ktCO_2$ and is managed by National Highways. Another example is diesel rail trains which contribute 6.19 $ktCO_2$ and are managed by Network Rail and other rail companies.

3.3 AIR QUALITY

3.3.1. Air pollution has a negative impact on the health of those living and working in areas with poor air quality. There is strong evidence that air pollution causes the development of coronary heart disease, stroke, respiratory conditions, lung cancer, exacerbates asthma and has a contributory role in mortality. Public Health England (PHE) figures state that 130 annual deaths are attributed to fine particulate matter (PM) air pollution in the Wokingham Borough Council area annually[1].

3.3.2. Under the Environment Act 1995 all Local Authorities are required to assess air quality against a set of national targets for seven key pollutants. These include, carbon monoxide, benzene, 1,3-butadiene, lead, nitrogen dioxide, sulphur dioxide and fine particles (PM10).

3.3.3. The two components of exhaust gases that are of most concern for human health are nitrogen dioxide (NO_2) and particulate matter (PM) and in Wokingham Borough, and across the UK, road vehicles are the largest polluting sector[2] with vehicle emissions being the primary reason for air quality breeches in Wokingham Borough.

3.3.4. Air Quality Management Areas (AQMAs) must be declared where pollution exceeds legal limits set in the Air Quality (England) Regulations 2007. Under the reserve powers of the Localism Act 2011 any fines can be passed down to local authorities whose act or omission contributes to a breach.

3.3.5. After declaration, the authority must prepare an Air Quality Action Plan (AQAP) within 12-18 months setting out measures it intends to put in place in pursuit of the objectives. Typically, the recorded exceedances are for Nitrogen Dioxide based on the following criteria.

- Annual mean NO_2Concentration of 40 µg/m3.
- Hourly mean NO_2Concentration of 200 µg/m3 not exceeded more than 18 times a year.

3.3.6. Wokingham Borough has three AQMAs as detailed below.

- Wokingham town Centre AQMA covering Peach Street, Broad Street, Shute End, Denmark Street and London Road in Wokingham town centre, declared in 2015.
- Twyford Crosswords AQMA covering the A321 crossroads in Twyford, declared in 2015.
- Wokingham M4 AQMA covering along and either side of the M4 throughout the whole borough, declared in 2001 and amended in 2004.

[1] Estimating Local Mortality Burdens associated with Particulate Air Pollution, PHE 2014
[2] Causes of Pollution, Defra 2011

3.3.7. Table 3-1 below shows the locations in Wokingham Borough that exceeded the NO_2 legal requirement of 40 µg/m3 in 2017, 2018, 2019, 2020 and 2021 alongside the AQMA sites.

3.3.8. In 2020 and 2021, all locations were below the legal limit, although these years may be considered as anomalous years due to the impact of the Covid-19 pandemic reducing private vehicle usage for large parts in these years.

Table 3-1 – Locations in Wokingham Borough that exceed the annual NO_2 Legal Limit

Location	Site Type	Annual Mean NO2 Monitoring Results: Non-Automatic Monitoring (µg/m3)				
		2017	2018	2019	2020	2021
Wokingham Centre AQMA	Roadside	39.2	33.4	36.7	24	27.6
Giggling Spring, Shute End	Roadside	44	41.3	41.8	28.6	36.5
Buckingham Court	Roadside	45	36	38.6	25.9	31.2
Rectory Rd, Wokingham	Roadside	49.1	39.3	39.3	29	31.9
M4 AQMA	Roadside	39.1	30.1	33.3	20.7	23
Twyford Crossroads AQMA	Roadside	44.9	42.6	42.8	31	32.5
1 Waltham Rd, Twyford	Roadside	41.8	35.7	36.9	23.3	27.8

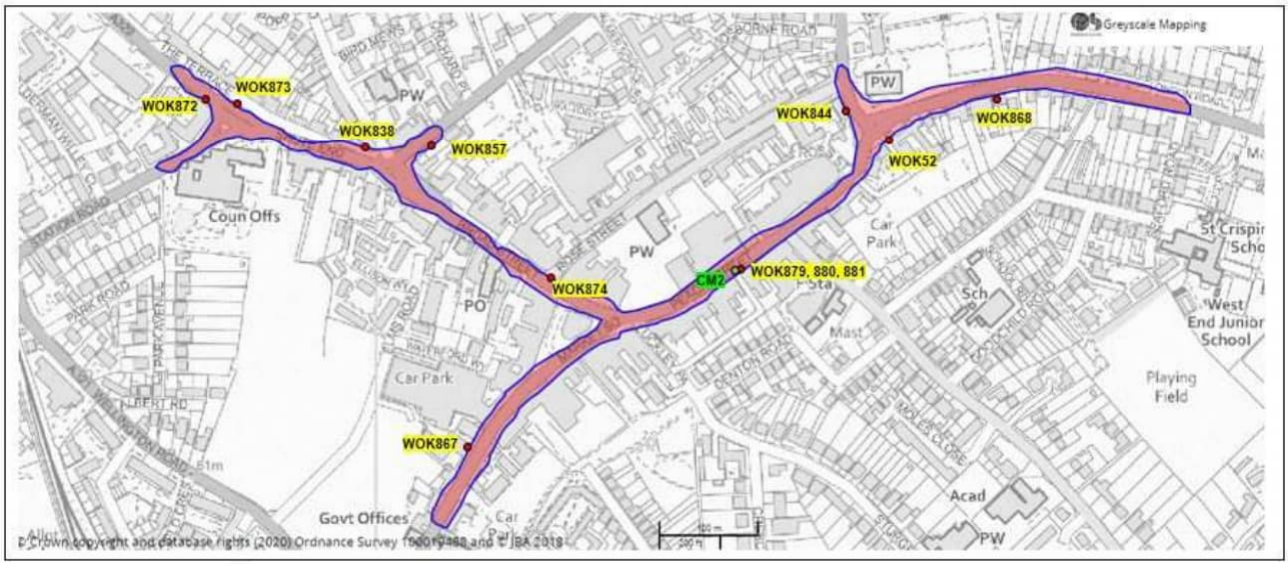
Source: Wokingham Annal Air Quality monitoring reports

3.3.9. Figure 3-3 below shows the location of NO_2 diffusion tubes within the Wokingham town Centre AQMA in 2019/2020. There are 8 diffusion tube sites within the area, including a triplicate and a Continuous Monitor.

3.3.10. The tube (WOK 838) located on Shute End was the only area that was exceeded the legal limit.

Figure 3-3 - Map of Wokingham town centre AQMA including diffusion tube locations and annual mean NO2 concentrations in 2019

Diffusion Tube	WOK 872	WOK 873	WOK 857	WOK 874	WOK 844	WOK 867	WOK 52	WOK 868	WOK 879	WOK 880	WOK 881	WOK 838	CM2
NO_2 Annual Mean Concentration (µg/m³)	32.4	24.7	39.9	28.9	38.6	23.7	30.3	27.7	36.3	36.5	37.3	**41.8**	33.0
									Triplicate Average 36.8				



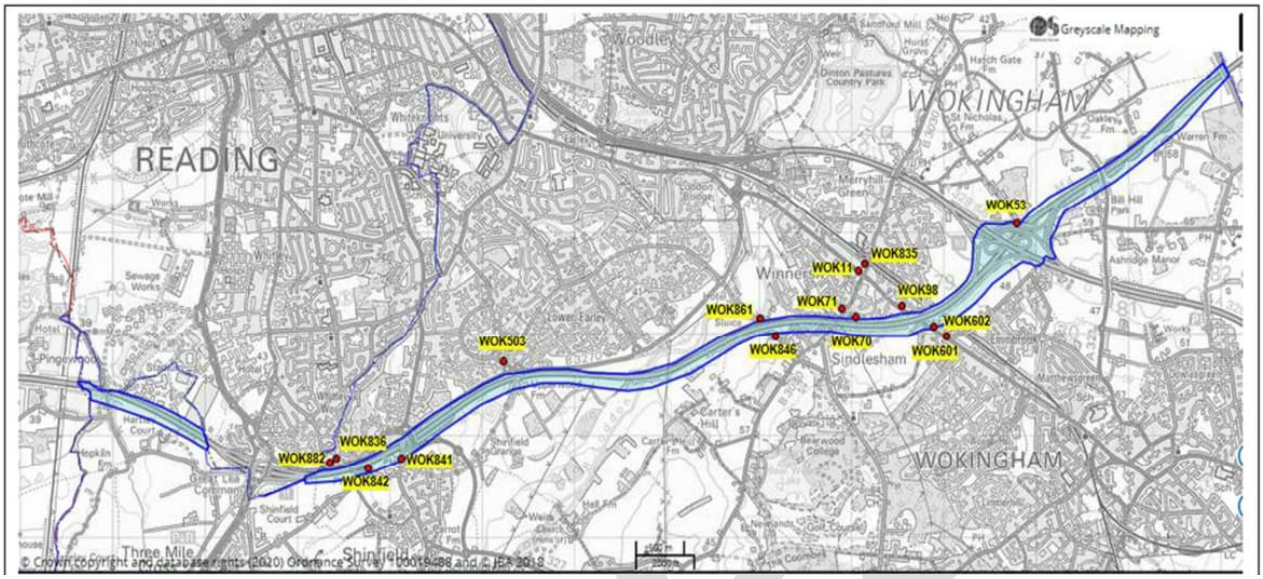
Source: Wokingham Borough Council LAQM Annual Status Report 2020

3.3.11. Figure 3-4 below shows below shows the location of NO_2 diffusion tubes within the M4 AQMA in 2019/2020. No tubes within the area exceeded the legal limit.

3.3.12. Significant changes to the road layout around the M4 AQMA have taken place in the last 3 years with the opening of the new motorway bridge and the Shinfield Eastern Relief Road. This has seen the movement of traffic on the A327 away from this monitoring location further east to the other side of Shinfield. Roadworks within the borough on the M4 with a speed limit of 50/60mph have been in place during much of 2018, 2019 & 2020 which may also account for the reduction in levels.

Figure 3-4 – M4 AQMA, diffusion tube locations and annual mean NO2 concentrations

Diffusion Tube	WOK 882	WOK 836	WOK 842	WOK 841	WOK 503	WOK 861	WOK 846	WOK 71	WOK 70	WOK 11	WOK 835	WOK 98	WOK 602	WOK 601	WOK 53
NO_2 Annual Mean Concentration (µg/m³)	37.3	27.0	20.0	33.3	27.5	23.2	21.6	31.9	25.5	32.0	26.6	25.4	21.2	20.0	21.1

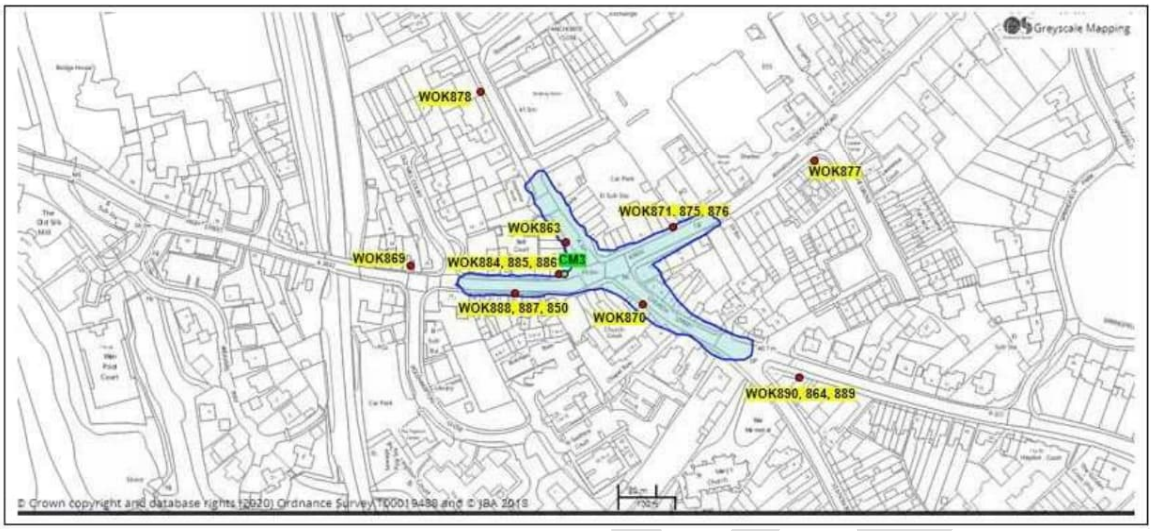


Source: Wokingham Borough Council LAQM Annual Status Report 2020

3.3.13. Figure 3-5 shows the location of NO_2 diffusion tubes within the Twyford Crossroads AQMA. The tubes (WOK 888, 887 and 850) located on the south side of the High Street exceeded the legal limit in 2019.

Figure 3-5 - Twyford AQMA, diffusion tube locations and annual mean NO2 concentrations

Diffusion Tube	WOK 878	WOK 863	WOK 877	WOK 890	WOK 889	WOK 864	WOK 869	*WOK 884*	*WOK 885*	*WOK 886*	CM3	WOK 871	WOK 875	WOK 876	**WOK 888**	**WOK 887**	**WOK 850**	WOK 870
NO_2 Annual Mean Concentration ($\mu g/m^3$)	25.7	30.7	22.9	36.2	37.9	36.9	27.1	30.5	30.8	30.1	29.9	27.0	27.7	27.3	**43.3**	**43.8**	**41.2**	29.0
				Triplicated Average 37.0				*Triplicated Average 30.5*				*Triplicated Average 27.3*			*Triplicated Average 42.8*			



Source: Wokingham Borough Council LAQM Annual Status Report 2020

3.3.14. Within the Air Quality Action Plan, five key priority actions have been identified which are reducing passenger cars; reducing HGVs; reducing buses or increasing hybrid or electric buses; encouraging sustainable transport; and reduction in total vehicles. It also includes measures for Wokingham town Centre and Twyford Crossroads as well as more generic / borough wide measures.

4 ENVIRONMENT

4.1 TOWNSCAPE AND HERITAGE

4.1.1. Wokingham Borough's historic environment is one of the county's greatest assets. Features range from prehistoric monuments to structures of the industrial revolution, from historic townscapes to fields and gardens, and from castles to mansions.

4.1.2. The quality of streets and highway space in all towns and villages, not just those areas classed as historic, is important to quality of life, and makes Wokingham Borough an attractive place for people to live in, work in, or visit.

4.1.3. Historic England's (HE) National Heritage List for England (NHLE) draws together all listed buildings, registered parks and gardens, battlefields, scheduled monuments, World Heritage Sites and conservation areas. Table 4-1 shows the NHLE data for Wokingham Borough. Listed buildings and registered parks and gardens come in three categories of 'significance':

- Grade I for buildings of the highest significance.
- Grade II*; and
- Grade II.

Table 4-1 - Designated historic buildings and areas in Wokingham Borough

Type	Category	Number	Number at risk
Listed buildings	Grade I	9	0
Listed buildings	Grade II*	40	0
Listed buildings	Grade II	601	0
Listed buildings	**Total**	**650**	**0**
Registered Parks and Gardens	Grade I	0	0
Registered Parks and Gardens	Grade II*	3	1
Registered Parks and Gardens	Grade II	2	0
Registered Parks and Gardens	**Total**	**5**	**1**
Other	Battlefields	0	0
Other	Scheduled monuments	18	4
Other	World Heritage Sites	0	0
Other	Conservation areas	16	0

Source: Historic England, NHLE, 2020 (correct as of March 2020)

4.1.4. Traffic and transport have a significant impact upon the built environment. Transport infrastructure is a key determinant of the form of our towns and villages and roads are often the only modern man-

made features in large areas of open countryside. The choice of street materials, street furniture, signs, lighting and trees all affect the quality of streetscapes and local amenity.

4.1.5. Levels of traffic and parked cars also have a significant impact. Vibration, air pollution and accidental collisions from traffic can damage buildings and street furniture, whilst visual intrusion and noise can diminish people's enjoyment of historic sites, towns and villages.

4.1.6. The potential significant effects of transport on this historic environment include:

- Damage to historic roadside buildings by traffic vibration, in particular, HGVs.
- Damage to historic buildings (particularly stone) from the effects of air pollution and collisions.
- Loss of historic bridges due to road widening.
- The ambience of conservation areas can be adversely affected by the presence of traffic and inappropriately placed street furniture; and
- Cultural monuments may be severed from their setting due to the intrusion of vehicles, including those of people visiting the monument.

4.2 NATURAL ENVIRONMENT

4.2.1. The extent of Wokingham Borough's biodiversity is reflected in the number of statutory designations for nature conservation, as shown in Table 4-2.

Table 4-2 - Nature conservation designations in Wokingham Borough

Site type	Number of sites in Wokingham Borough	Total area covered within Wokingham Borough (ha)
Special Area of Conservation (SAC)	0	0
Sites of Special Scientific Interest (SSSI)	5	34.15
Regionally Important Geological and Geomorphological Sites (RIGS)	2	43.44
Internationally protected wetland sites (Ramsar)	0	0
Registered Common	11	6.97
National Nature Reserves (NNR)	11	95.90

Source: Department for Environment, Food and Rural Affairs, 2020 and Berkshire Geoconservation Group

4.2.2. The interaction of biodiversity and the road network is significant and potential areas of concern include:

- Wildlife casualties through collisions with motor vehicles.
- Land take and associated habitat loss of fragmentation through new transport infrastructure schemes or increased traffic.
- Increased disturbance to wildlife populations.
- Changes in air quality, water quality, noise, vibration, light emissions, dust deposition as a result of construction and operation; and
- Creation of barriers to movement.

4.3 FLOOD RISK

4.3.1. There are a number of different types of flooding that does or could affect Wokingham:

- Surface water flooding mainly affects Riseley, Swallowfield and Shinfield although historically it has also affected Earley and Woodley.
- Groundwater flooding primarily affects Sonning, Woodley, Earley and Winnersh.
- Main river and ordinary watercourse flooding could affect parts of Winnersh, Woodley, Earley, Charvil, Twyford and Swallowfield located within the River Loddon flood zone. Historically, it has also affected the River Thames at Sonning Bridge and Emm Brook around Wokingham town.
- Sewer flooding could affect key town centres.
- Highway flooding affects the urban areas including Wokingham town, Earley and Woodley and historically it has affected Swallowfield, Hurst and Arborfield along with parts of the A329 and A327; and
- Reservoir flooding could affect the areas surrounding the seven major reservoirs across the Borough.

4.3.2. Wokingham Borough experienced four significant flooding events between 2000 and 2013. The 2013 event affected many of the same locations as the 2000 and 2007 events and also significantly impacted key infrastructure routes across the Borough, including many of the main routes between Reading and Wokingham when the River Loddon burst its banks.

4.3.3. Under the Flood and Water Management Act (2010) Wokingham Borough Council became a Lead Local Flood Authority, responsible for managing local flood risk from surface water, groundwater and ordinary watercourses in Wokingham.

4.3.4. One of the new duties placed on Lead Local Flood Authorities (LLFAs) to assist with the management of local flood risk is to 'develop, maintain, apply and monitor' a Local Flood Risk Management Strategy which the Borough adopted in April 2015. The objectives of this Strategy are:

- Continue to improve knowledge and understanding of current and future local sources of flood risk within Wokingham.
- Continue to work collaboratively and develop effective partnerships with other Flood Risk Management Authorities and local communities to deliver a sustainable, cost-effective approach to flood risk management that reduces flood risk and provides wider environmental and social-economic benefits where possible.
- Ensure that land use planning and application decisions take full account of flood risk, avoiding development in inappropriate locations, preventing an increase in flood risk and minimising existing flood risk wherever possible.
- Maintain and, where necessary, improve local flood risk management infrastructure and work with riparian landowners to ensure privately owned flood defence assets, features and Ordinary watercourses, are well maintained to reduce risk.
- Ensure that emergency plans and responses to flood incidents are effective and that communities are prepared and resilient to local flood risk; and
- Identify national, regional and local funding mechanisms to deliver flood risk management solutions and schemes.

4.4 WATERWAYS

4.4.1. There only navigable waterway in Wokingham Borough is the River Thames which runs from Lechlade near Swindon through Reading and London into the sea to the south of Essex. It forms the northern boundary of the Borough from just to the east of Reading to just south of Medmenham, which lies between Henley-on-Thames and Marlow.

4.4.2. To the east of the Borough, the River Thames provides links into the River Wey and the Basingstoke Canal, and to the west of the Borough, it provides links into the Kennet and Avon and Oxford canals, as shown on Figure 4-1.

Figure 4-1 - Map of the River Thames

Source: https://www.waterways.org.uk/pdf/wwwaterwaysmap

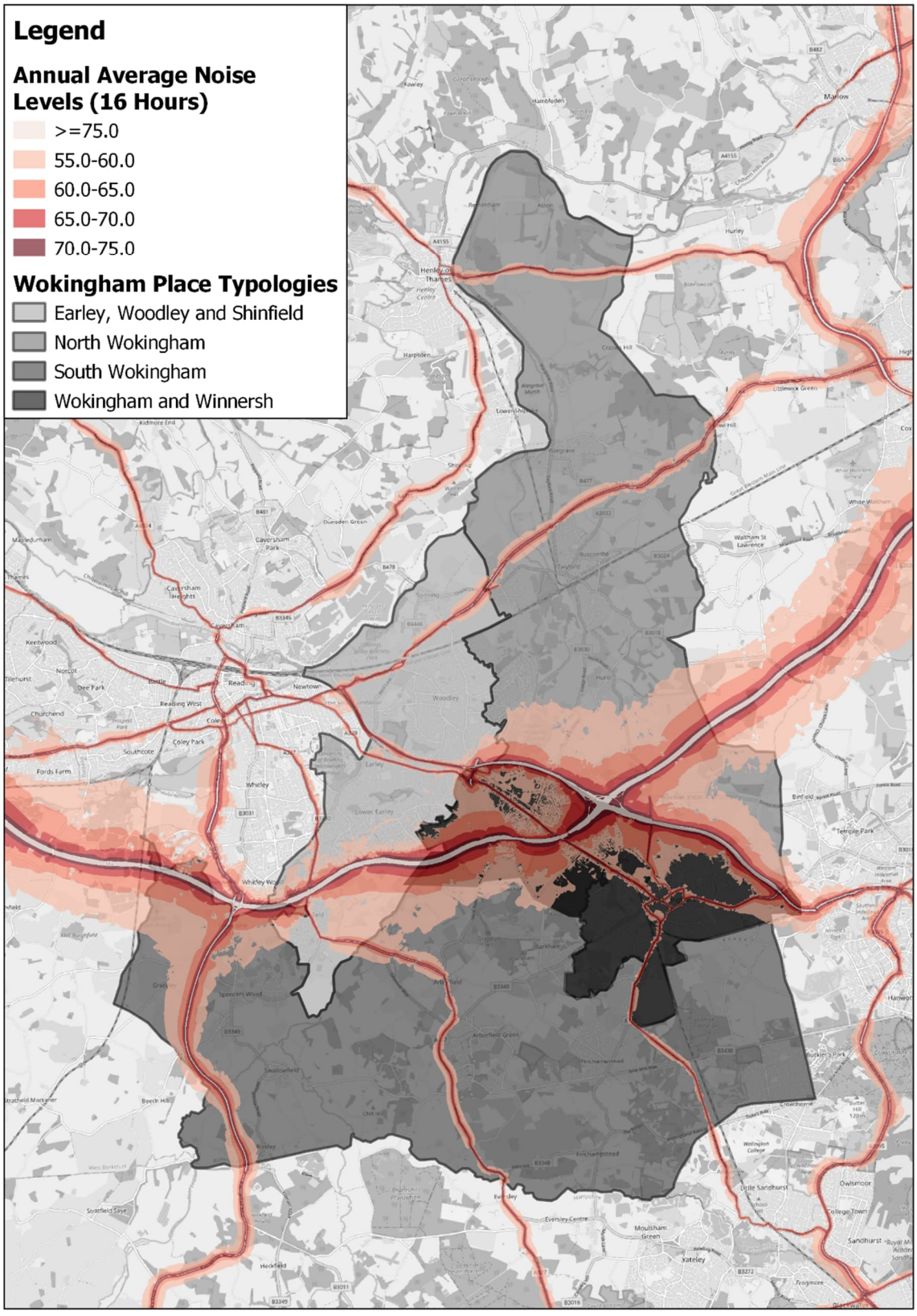
4.4.3. In addition to their primary function, the towpaths and paths adjacent to the River Thames offer excellent opportunities for cycling and walking, with the 294km Thames Path forming part of the National Trail network. From Reading to Sonning cyclists and walkers share the Thames Path, but beyond Sonning the path narrows and is for walkers only.

4.5 NOISE LEVELS

4.5.1. Noise pollution from transportation, particularly near major highways, has significant negative impacts on both individuals and the environment. The effects can include stress and sleep disturbances, impaired cognitive functions, disruption of ecosystems and wildlife behaviour, decreased property values and social isolation. The cumulative effect of noise pollution exacerbates other forms of pollution, degrading the overall environment.

4.5.2. The Figure 4-2 indicates the level of noise according to the Department for Environment, Food and Rural Affairs. The figure shows the impact of the strategic highway links of the M4 and A329 (M) and that those residents in vicinity of these links are most exposed to significant levels of noise from transport sources.

Figure 4-2: Annual average noise levels for the 16-hour period between 0700 – 2300



Source: Department for Environment, Food and Rural Affairs (2017)

5 HEALTH & WELLBEING

5.1 INTRODUCTION

5.1.1. Transport plays a significant role in peoples' health. This can include enabling access to services, enabling physical activity and the impact of emissions and noise on health.

5.1.2. The 2016 Chartered Institute for Highways and Transportation discussion paper 'A Transport Journey to a Healthier Life'[3] highlighted how transport policy and procedure can contribute to the health and wellbeing agenda. It found that:

- The reintroduction of public health responsibilities into local government offers real opportunities for integrated working across council departments and to integrate practical and measurable health and wellbeing benefits with transport projects and investment.
- The health and wellbeing benefits of transport investment need to be widened to measure the full range of physical and mental health and wellbeing impacts, to better influence funding decisions,
- The local planning system does not take sufficient account of health and wellbeing in decision-making and would benefit from the inclusion of mandatory health impact assessments.
- The influence of transport choices on people's mental health and wellbeing is being overlooked by existing policy and practice. For example, mental health and wellbeing can be enhanced by improving air quality, reducing noise/traffic volumes and maintaining access to services enhances older people's wellbeing and quality of life; and
- The transport sector is failing to take account of the full health and wellbeing benefits of walking. In places where there is a focus on improving the walking environment, such as town centres, there is a lack of evaluation of the health and wellbeing benefits and consequences.

5.1.3. In 2019, the three Health and Wellbeing Boards for Wokingham, West Berkshire and Reading took a decision to develop a shared Berkshire West Health and Wellbeing Strategy 2021-2020. Working closely with local partners from health, social care, voluntary sector and residents to identify five priorities which include.

1) reducing the difference in health between different groups of people

2) supporting individual at high risk of poor health outcomes to live healthy lives

3) help families and children in early years

4) promote good mental health and wellbeing for all children and young people and

5) Promote good mental health and wellbeing for all adults

5.1.4. Wokingham's Wellbeing Board built on this strategy and the priorities publishing their own Strategy into Action adding a sixth priority of creating and promoting physically active communities.

[3] http://www.ciht.org.uk/en/document-summary/index.cfm/docid/1DFB69FB-64B0-4221-8675F55F64DCA1E2

5.2 HEALTH INEQUALITIES

5.2.1. Transport enables access to work, education, social networks and services that can improve people's opportunities and community cohesion. The relationship between transport and health is both complex and socio-economically patterned. For example, there is a clear social gradient in access to work and services, with greater freedom to travel, linked to increased car ownership, as income increases. Likewise, not having good access to transport increases inequalities.

5.2.2. This is further evidenced in the 2010 report 'Fair Society, Healthy Lives, The Marmot Review'[4], which provided a strategic review of health inequalities in England post-2010. The review found that there remains a social gradient in health, where the lower a person's social position, the worse their health is.

5.2.3. One of the six policy objectives identified in the Marmot Review to tackle the health inequalities that persist within England was the need to create and develop healthy and sustainable places and communities. Travel was recognised as a key element and the review highlighted the importance of a sustainable transport system, investment in transport, improving active travel across the social gradient and fully integrating the planning, transport, housing, environmental and health systems to address the social determinants of health in each locality.

5.2.4. Whilst good transport connectivity can help contribute to reducing health inequalities, there are additional benefits from having and promoting physical activity such as reduced risk of a range of illnesses and improvements to mental health. Therefore, policies seeking to increase active travel should consider the impacts on health inequalities and work to target communities progressively across the social gradient.

5.2.5. According to the Public Health England (now known as Office for Health Improvement and Disparities (OHID)): Public Health Outcomes Framework, the 2018-2020 slope index of inequality in life expectancy at birth within English local authorities (based on local deprivation deciles within each area), Wokingham Borough has lower than average levels of health inequality In men the variation in life expectancy across the social gradient was 6.1 years and in women it's 4.5 years for 2018-2020. This compares with 9.7 years for men and 7.9 years for women at the national level for 2018-2020.

5.2.6. Similarly, the 2016-2018 slope index of inequality in life expectancy at 65 within Wokingham Borough is 3.6 years for men and 2.5 years for women. This compares with 5.2 years for men and 4.8 years for women at the national level.

5.3 OBESITY

5.3.1. Obesity is a significant and growing health problem in the UK. In Wokingham Borough, obesity accounts for a large and growing burden of disease.

[4] http://www.instituteofhealthequity.org/resources-reports/fair-society-healthy-lives-the-marmot-review/fair-society-healthy-lives-full-report-pdf.pdf

5.3.2. Obesity is not spread equally throughout the population and inequalities do exist. Social, economic and environmental in which people live can shape their outcomes and affordable and/or accessible transport is an important factor in this.

5.3.3. England's obesity data indicates those at increased risk are people older age groups, those who are economically inactive or unemployed, people with physical or learning disabilities and people with severe mental illness (SMI). Consequently, people in older age groups and those living in the most deprived areas of Wokingham Borough are more likely to be obese than the other parts of the borough.

5.3.4. Two thirds (63%) of the adult population in England are overweight or obese and the prevalence is increasing year on year, having increased from 61% in 2015/16.

5.3.5. The number of adults overweight or obese in Wokingham is also a growing burden. 60.2% of adults were overweight/obese in 2020/21 compared to 50.7% in 2015/16.

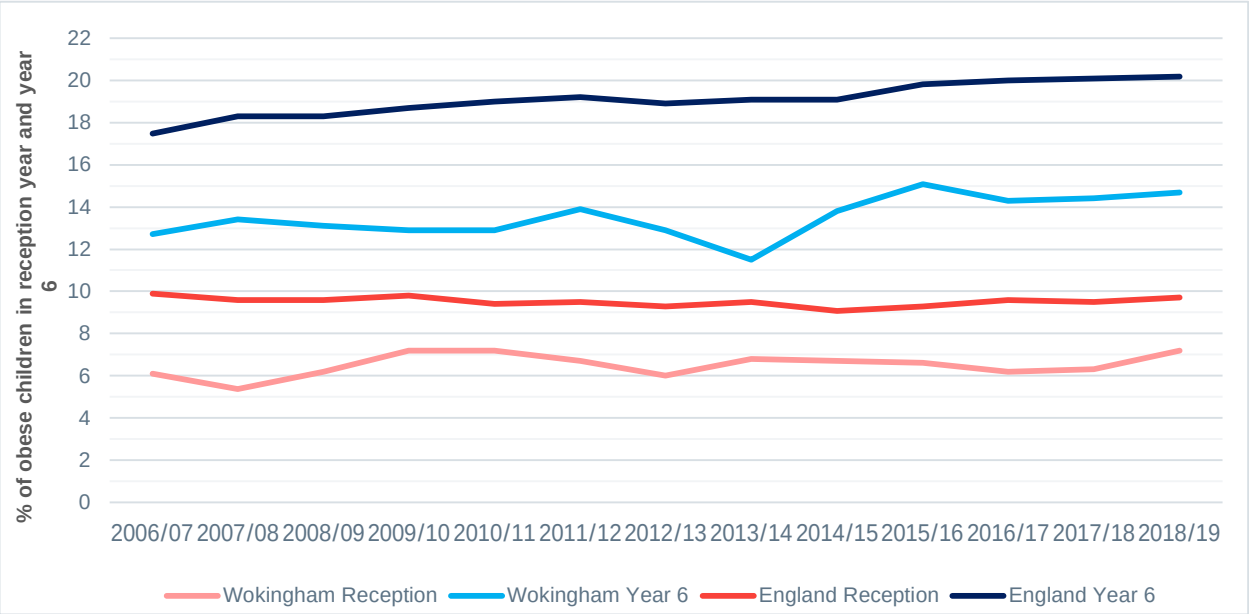
5.3.6. Figure 5-1 shows the number of hospital admissions for men and women with a primary obesity diagnosis in 2019/20 at the local, regional and national level. Wokingham Borough saw lower rates of hospital admissions than the South East of England. Female admissions are far higher than men. Amongst men, admission rates were almost half those observed in both the South East and England.

Figure 5-1 - Hospital admissions with a primary diagnosis of obesity 2019/20

Source: NHS Digital Statistics on Obesity, Physical Activity and Diet in England, 2021

5.3.7. Figure 5-2 shows the obesity levels in reception and year 6 children between 2006/07 and 2018/19 in Wokingham Borough and across England. Obesity levels amongst reception aged children in Wokingham Borough (7.2%) are much lower than in England (9.7%) in 2018/19. Obesity in year 6 children is notably higher than reception aged children, Despite Wokingham being below the national level, obesity in year 6 children is still approximately 50% more common than in reception aged children.

Figure 5-2 - Trends in childhood obesity in Wokingham Borough and England



Source: NHS National Child Measurement Programme

5.4 PHYSICAL ACTIVITY

5.4.1. The UK Chief Medical Officers' Physical Activity Guidelines, published in 2019, recommend that adults should aim to be physically active every day. Adults should be accumulating at least 150 minutes of moderate activity (such as brisk walking or cycling) or 75 minutes of vigorous activity (such as running) across the week.

5.4.2. The Guidelines state that there is moderate to strong evidence that physical activity will reduce the risk in adults of all-cause mortality, coronary heart disease, eight types of cancer, stroke, type 2 diabetes, dementia, anxiety, depression, weight issues and sleep problems.

5.4.3. In 2017/18, the Public Health England: Physical Activity Tool showed that Wokingham Borough was one of the top 20 local authority districts in England for physical activity in adults, with 73.5% of its adults considered physically active. However, OHID's Physical Activity Tool showed that in 2020/21 the percentage of physical active adults had decreased to 68.4%. Wokingham is now similar to England which is 65.9% and the South East of England which is 69.2%. Similarly, the percentage of physical inactive adults in Wokingham increased, it was 13.9% in 2018/19 and was 19.7% in 2020/21.

5.4.4. In 2019/2020, physical activity in children and young people in Wokingham was 43.9% which was similar to England (44.9%) and the South East of England average (47.5%). This had improved from 2018/2019 when it was 41.1% of children and young people and Wokingham was one of the bottom 20 local authority districts in England for physical activity in children and young people.

5.5 TRANSPORT AND HEALTH

5.5.1. The 2016 Chartered Institute for Highways and Transportation discussion paper 'A Transport Journey to a Healthier Life'[5] highlighted how transport policy and procedure can contribute to the health and wellbeing agenda. It found that:

- The reintroduction of public health responsibilities into local government offers real opportunities for integrated working across council departments and activities to integrate practical and measurable health and wellbeing benefits with transport projects and investment, but progress is being hampered by a lack of strategic integration nationally and joint working locally.
- The health and wellbeing benefits of transport investment need to be measured in terms of cost and non-monetary values to better influence funding decisions, and the traditional cost benefit analysis approach needs to be widened to measure the full range of health and wellbeing impacts, including mental health.
- The local planning system does not take sufficient account of health and wellbeing in decision-making and would benefit from the inclusion of mandatory health impact assessments.
- The influence of transport choices on people's mental health and wellbeing is being overlooked by existing policy and practice. For example, mental health and wellbeing can be enhanced by improving air quality, reducing noise and traffic volume and maintaining access to services enhances older people's wellbeing and quality of life; and
- The transport sector is failing to take account of the full health and wellbeing benefits of walking. In places where there is a focus on improving the walking environment, such as town centres, there is a lack of evaluation of the health and wellbeing benefits and consequences, often due to time and financial constraints.

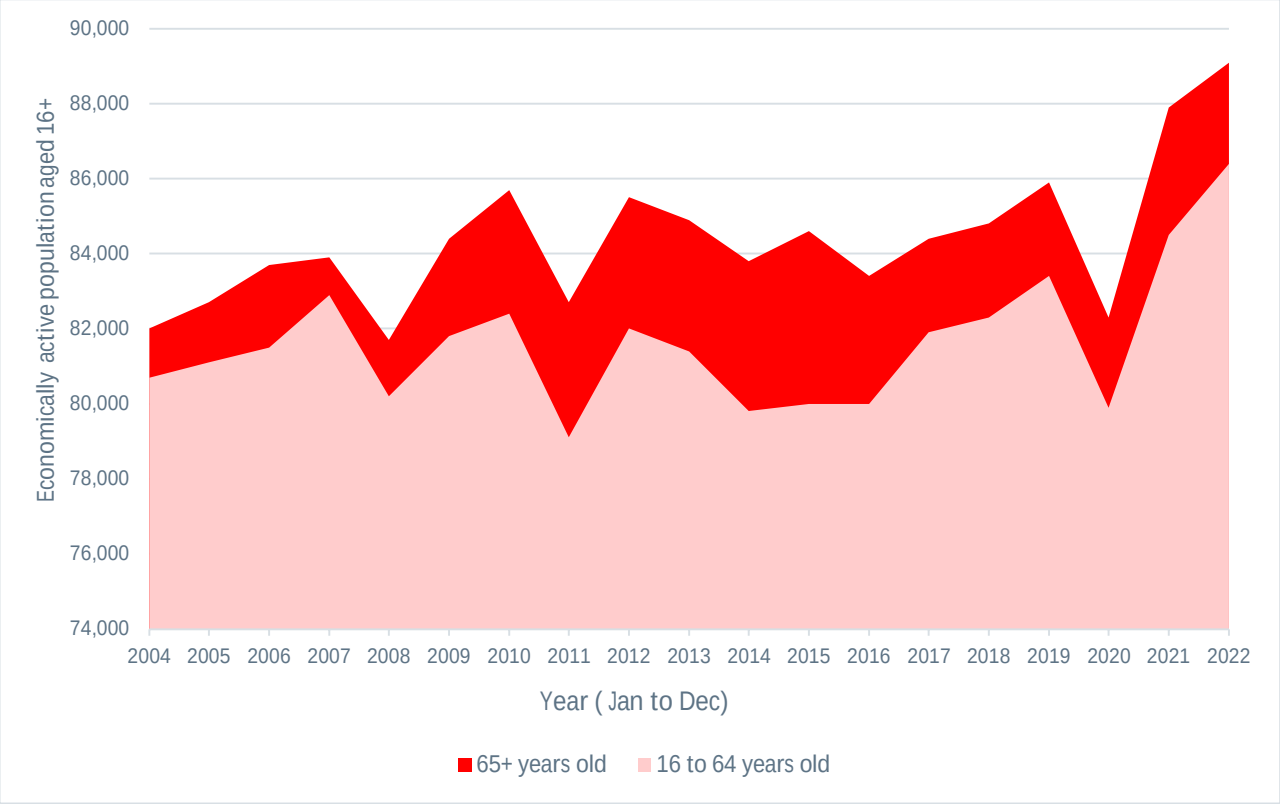
[5] http://www.ciht.org.uk/en/document-summary/index.cfm/docid/1DFB69FB-64B0-4221-8675F55F64DCA1E2

6 ECONOMY AND EMPLOYMENT

6.1 ECONOMIC ACTIVITY

6.1.1. The number of economically active people aged 16 years and older in Wokingham Borough is shown in Figure 6-1.

Figure 6-1 - Economically active people aged 16+ in Wokingham Borough since 2004



Source: 2022 ONS Annual Population Survey, Crown Copyright 2019

6.1.2. Figure 6-1 shows that the number of economically active people 16 years and older in Wokingham Borough has increased by 7,100 people or 8.7% between 2004 and 2022, although this number has fluctuated annually. This compares with a much bigger increase of 12.4% and 13.8% over the same period in the South East and England respectively.

6.1.3. Since 2015, the number of economically active people aged 16 to 64 years old has exhibited an upward trend in Wokingham Borough, increasing by 64,00 people or 8%. This compares with the South East and England, which have exhibited rises of only 2.4% and 2.6% respectively.

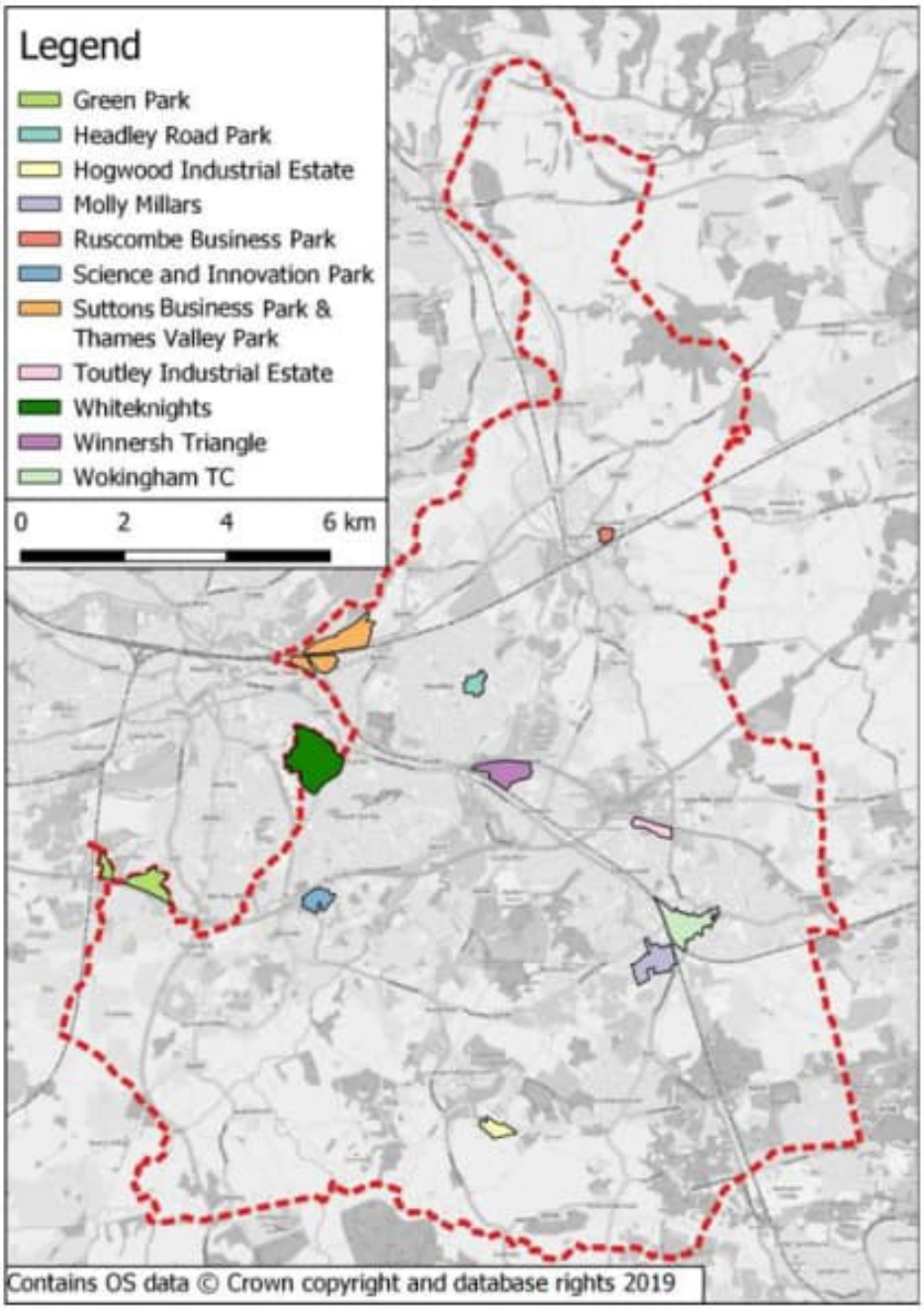
6.1.4. Conversely, since 2015, the percentage of economically active people aged 65 years and older has exhibited an upward trend in Wokingham Borough, increasing by 4,500 people or 5.3%. This compares with the South East, which saw a smaller rise of 2.9% and England, which saw an increase of 3.0%.

6.1.5. There were 89,100 economically active people in Wokingham Borough in 2022, which was the equivalent of 84.8% of the population aged 16 to 64 years old.

6.2 EMPLOYMENT

6.2.1. As shown below in Figure 6-2, there at 11 key employment areas within the Borough. These include areas in and around Wokingham town, Winnersh and towards the Reading facing towns. There are also some employment centres in the rural areas in the north and south of the Borough.

Figure 6-2 - Main employment Areas in Wokingham Borough



Source: OS, Wokingham Borough Council, 2018

6.2.2. As shown in Table 6-1, 80.7% of Wokingham Borough residents aged 16-64 were in employment in 2018, which compares favourably with both the South East and Great Britain due to both higher economic activity rates and lower levels of unemployment. The percentage of people aged 16-64 in

employment who are self-employed in Wokingham Borough is similar to the percentage in Great Britain but lower than the percentage in the South East.

Table 6-1 - Percentage of people aged 16-64 in employment in 2018.

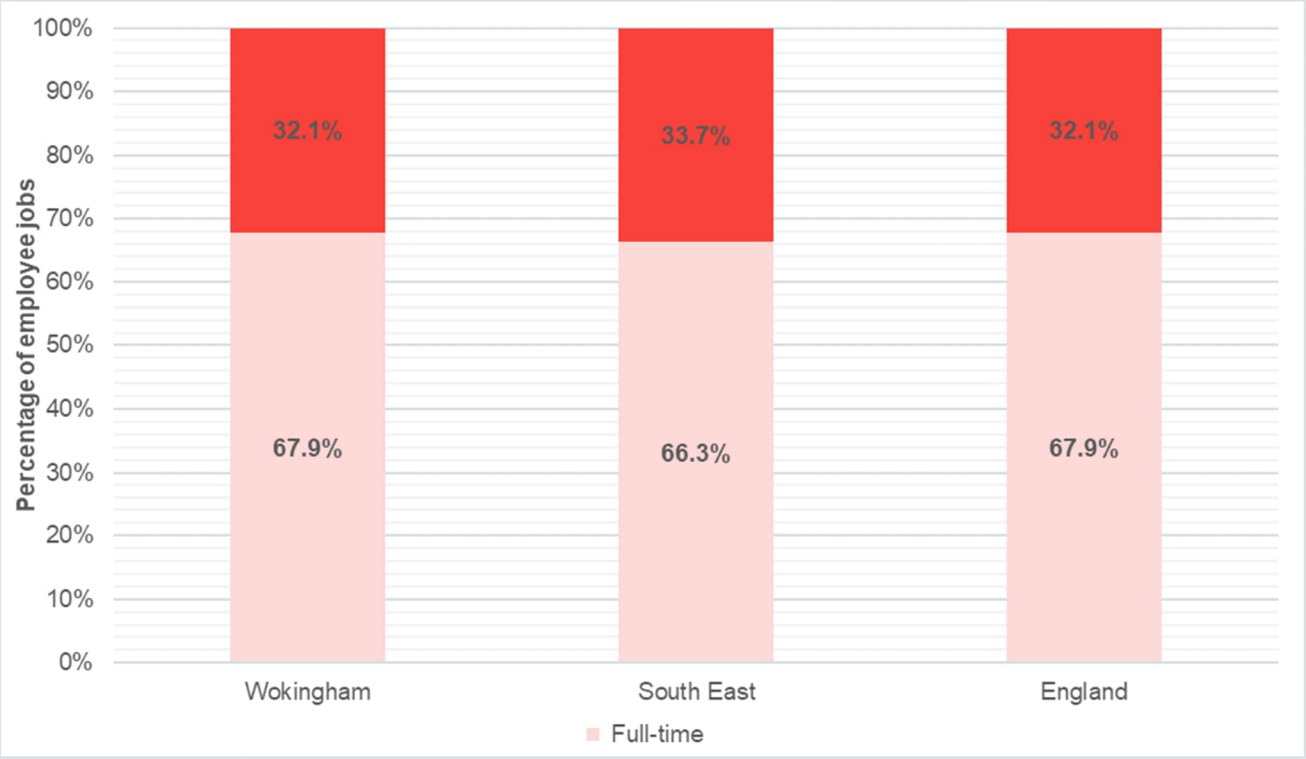
	Wokingham	South East	England
In employment	80.7%	78.0%	75.4%
Employees	69.6%	65.9%	64.2%
Self-employed	10.7%	11.8%	10.9%

Source: 2018 (to December) ONS Annual Population Survey, Crown Copyright 2019

6.3 TYPES OF EMPLOYMENT

6.3.1. Figure 6-3 illustrates the breakdown of full-time and part-time employees in Wokingham Borough, the South West and in Great Britain.

Figure 6-3 - Breakdown of employee jobs by full/part-time, 2018



Source: 2018 ONS BRES, Crown Copyright 2019

6.3.2. Figure 6-3 shows that, In Wokingham Borough, the penetration of part-time jobs matches levels observed across England at 32.1% of all employee jobs. This is slightly lower than the 33.7% level observed in the South East.

6.3.3. Prevalence of part-time work can be an indicator of under-employment and so these results highlight the robustness of the local economy in the Borough.

6.4 SKILLS AND OCCUPATIONS

6.4.1. According to the ONS annual population survey, the Wokingham Borough resident population of working age (16-64) people is highly qualified, with 53.7% having qualifications equivalent to at least National Vocational Qualification Level 4 in 2018, compared to 42.2% in the South East and only 39.0% across England.

6.4.2. In contrast, the proportion of the Wokingham Borough resident population of working age (16-64) people with no qualifications is very low at 3.8% in 2018, compared to 5.6% in the South East and 7.6% across England.

6.4.3. Table 6-2 presents the 2018 breakdown of resident workforce by occupational classification for Wokingham Borough, the South East and England. It shows that a higher percentage of Wokingham Borough residents are employed in Standard Occupational Classification (SOC) major group 1-3 occupations compared with the regional and national averages. In particular, 28.5% of Borough residents are employed in professional occupations, compared with just 22.4% regionally and 20.8% nationally.

6.4.4. In all other occupational classifications, Wokingham Borough has a lower percentage of residents employed when compared to regional and national levels, reflecting again the highly skilled nature of the local workforce.

Table 6-2 - 2018 Breakdown of the resident workforce by occupational classification

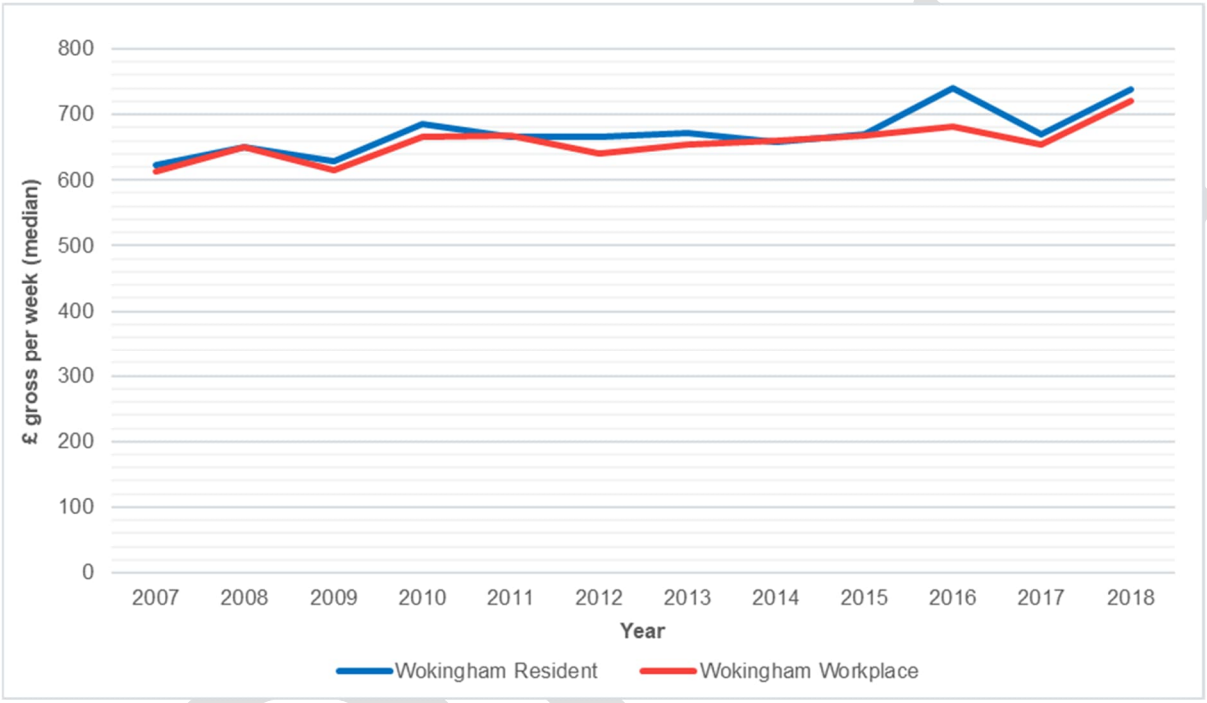
Occupation	Wokingham	South East	England
Managers, directors and senior officials	14.3%	12.2%	11.1%
Professional occupations	28.5%	22.4%	20.8%
Associate professional & technical occupations	18.3%	16.2%	14.9%
SOC 2010 major group 1-3	**61.3%**	**50.9%**	**46.9%**
Administrative and secretarial occupations	9.6%	10.3%	10.1%
Skilled trades occupations	8.6%	9.5%	9.9%
SOC 2010 major group 4-5	**18.2%**	**19.9%**	**20.0%**
Caring, leisure and other service occupations	6.8%	8.6%	8.9%
Sales and customer service occupations	5.2%	7.3%	7.4%
SOC 2010 major group 6-7	**12.1%**	**16.0%**	**16.4%**
Process, plant and machine operatives	2.8%	4.4%	6.3%
Elementary occupations	5.7%	8.7%	10.3%
SOC 2010 major group 8-9	**8.5%**	**13.2%**	**16.7%**

Source: 2018 ONS Annual Population Survey, Crown Copyright 2019

6.5 EARNINGS

6.5.1. Figure 6-4 shows the change in median workplace and resident earnings per week in Wokingham Borough between 2007 and 2018. It shows the slight upward trend in both workplace and resident earnings in Wokingham Borough. It also highlights that, in the majority of years, people residing in Wokingham Borough earned more, on average, than people working in Wokingham Borough.

Figure 6-4 - Wokingham Borough workplace and resident earnings, 2007-2018



Source: 2018 ONS Annual Survey of Hours and Earnings, Crown Copyright 2019

6.5.2. Table 6-3 details the gross median salaries earned by residents and workers in Wokingham Borough, its bordering local or unitary authorities, the South East, and England.

6.5.3. The table shows that Wokingham Borough resident earnings are higher than those earned in any of its bordering local or unitary authorities and are significantly higher than both the regional and national levels.

6.5.4. This highlights that the high skill level of residents in Wokingham Borough is translating into higher salaries for its residents.

6.5.5. Unlike all its bordering local or unitary authorities, workplace earnings in Wokingham Borough are broadly in line with resident earnings.

6.5.6. Also, like resident earnings, workplace earnings in the Borough are also higher than those of any of its bordering local or unitary authorities and are significantly higher than both the regional and national levels.

6.5.7. This highlights that, as well as providing highly paid jobs for its residents, Wokingham Borough is also attracting highly paid workers into the Borough.

Table 6-3 - 2018 gross median weekly resident and workplace earnings

Region or authority	2018 gross median weekly resident earnings (£)	2018 gross median weekly workplace earnings (£)
England	**574.80**	**574.80**
South East	**614.90**	**589.10**
Basingstoke and Deane	681.10	620.30
Bracknell Forest	608.90	682.80
Hart	669.20	622.20
Reading	613.00	657.00
South Oxfordshire	698.70	568.50
West Berkshire	633.30	683.00
Windsor and Maidenhead	718.70	651.90
Wokingham	737.60	720.00
Wycombe	651.00	622.90

Source: 2018 ONS Annual Survey of Hours and Earnings, Crown Copyright 2019

6.6 BUSINESS AND EMPLOYMENT

6.6.1. There were 87,000 employee jobs in Wokingham Borough in 2018, which represents an increase of 17,000 compared with 2009 (24.3%). Table 6-4 shows that the number of employee jobs in both the South East and England have risen at a much slower rate of 9.7% and 12.5% respectively.

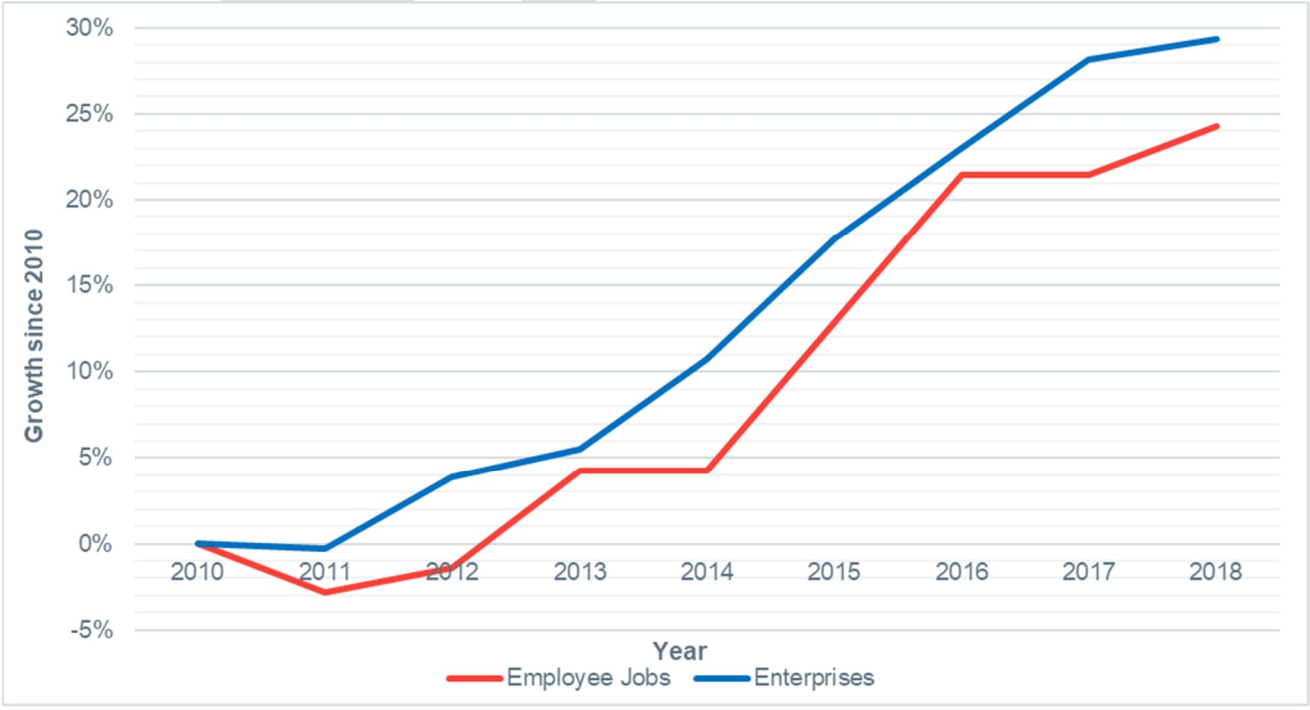
Table 6-4 - Number of employee jobs, 2010 to 2018

Year	Wokingham	South East	England
2010	70,000	3,783,000	23,085,000
2011	68,000	3,756,000	23,073,000
2012	69,000	3,780,000	23,256,000
2013	73,000	3,825,000	23,561,000
2014	73,000	3,908,000	24,286,000
2015	79,000	4,073,000	25,044,000
2016	85,000	4,147,000	25,477,000
2017	85,000	4,107,000	25,829,000
2018	87,000	4,151,000	25,976,000

Source: 2018 ONS Business Register and Employment Survey (BRES), Crown Copyright 2019

6.6.2. As shown in Figure 6-5, the growth in the number of enterprises since 2010 closely mirrors the growth in the number of jobs which these enterprises have created, suggesting that many of the new enterprises are relatively small in size, providing only a limited number of new employment opportunities.

Figure 6-5 - Growth in enterprises and employee jobs in Wokingham Borough since 2010



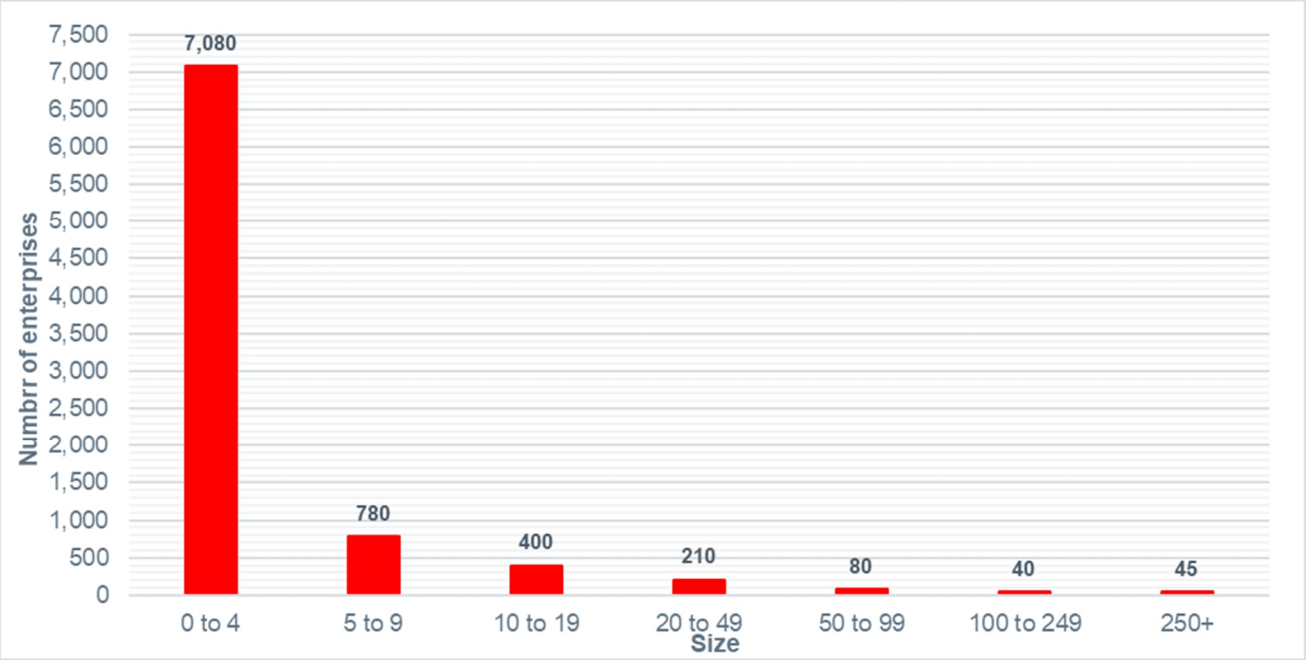
Source: 2018 ONS Inter-Departmental Business Register (IDBR), 2018 BRES, Crown Copyright 2019

6.7 BUSINESSES BY SIZE AND SECT0R

6.7.1. Wokingham Borough is principally a small business economy, with more than nine out of ten of the 8,635 enterprises registered for either VAT or PAYE employing fewer than 10 in 2018. As shown in Figure 6-6, more than 80% of enterprises (7,080) have four or fewer employees. Only 45 employers in the Borough have a workforce of 250 or more, and as such are not classified as small and medium sized enterprises.

6.7.2. Nationally and regionally, small enterprises also dominate, with those with fewer than 10 employees accounting for just under 90% of the total in both the South East and England.

Figure 6-6 - Number of business enterprises by size, 2018



Source: 2018 ONS IDBR, Crown Copyright 2019

6.7.3. The highly skilled nature of Wokingham Borough's economy is reflected in the 2018 breakdown of enterprises by sector, which shows 43.3% of all enterprises registered for PAYE and/or VAT are classified as either in the professional, scientific and technical sector or the information and communication sector[6]. This compares with just 27.8% regionally in the South East and 23.9% nationally in England.

6.7.4. The two sectors with the most employees in Wokingham Borough in 2018 are also the professional, scientific and technical sector and the information and communication sector. The next two sectors

[6] ONS, IDBR, UK Business: Activity, Size and Location, 2018

with the most employees are the business administration and education sector, and together these four sectors account for half of all jobs in the Borough[7].

6.8 BUSINESS START-UPS AND CLOSURES

6.8.1. Table 6-5 shows that 1,140 new businesses were established in Wokingham Borough in 2018, with only 905 businesses closing. The number of active businesses in the Borough has increased each year steadily from 8,230 in 2013 to 9,735 in 2018. As a percentage of the total number of active businesses, the start-up rate in Wokingham Borough is 11,7%, which matches the percentage in the South East but is lower than the national percentage of 13.1%.

6.8.2. Business closures rates are, however, lower in Wokingham Borough than regional and national averages, at 9.3% in 2018, compared with 10.0% regionally and 11.5% nationally, highlighting the lower business churn rate in the Borough.

Table 6-5 - Business demography, 2018

	Wokingham	South East	England
Business start-ups	1,140	52,795	340,045
Business closures	905	44,785	297,895
Active businesses	9,735	449,605	2,586,645
Start-ups as % of active businesses	11.7%	11.7%	13.1%
Closures as % of active businesses	9.3%	10.0%	11.5%

Source: 2018 ONS Business Demography, Crown Copyright 2019

6.9 BUSINESS SURVIVAL RATES

6.9.1. Table 6-6 shows that, of all businesses established in Wokingham Borough in 2013, over 94% were still operating a year later. However, by the end of year three, just under two-thirds were still trading, and after five years, just over half had ceased operations.

6.9.2. When compared to regional and national survival rates, businesses established in the Borough in 2013 showed stronger rates of survival at the one, four and five-year marks than their regional counterparts and in each of the five years compared to national rates.

[7] ONS, BRES, 2018

Table 6-6 - Survival rates of businesses founded in 2013.

	% of Businesses Surviving after 1 year	% of Businesses Surviving after 2 years	% of Businesses Surviving after 3 years	% of Businesses Surviving after 4 years	% of Businesses Surviving after 5 years
Wokingham	94.5%	76.3%	63.0%	53.9%	46.6%
South East	94.0%	76.9%	63.2%	53.4%	44.6%
England	93.6%	75.1%	60.9%	51.2%	42.5%

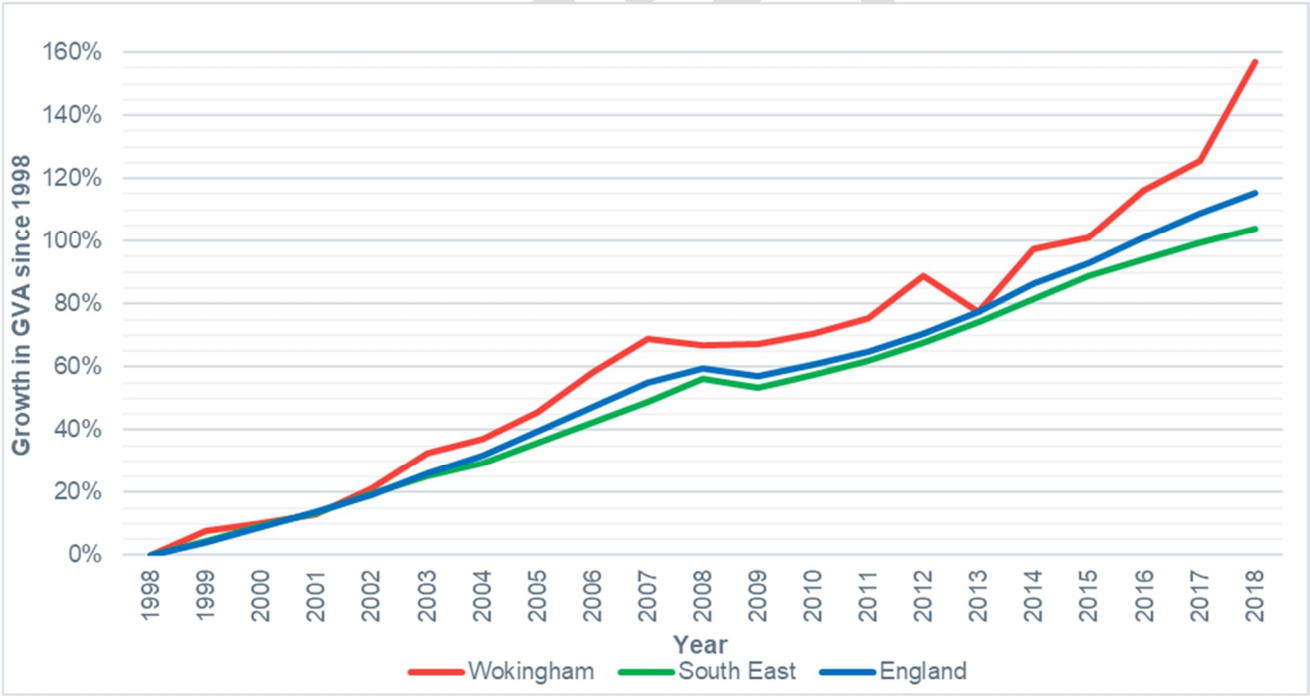
Source: 2018 ONS Business Demography, Crown Copyright 2019

6.10 GROSS VALUE ADDED

6.10.1. Figure 6-7 shows the long-term growth trend in Gross Value Added (GVA) since 1998 in Wokingham Borough, the South East and England. It shows that regional and national growth in GVA since 1998 has been broadly similar but below that observed in Wokingham Borough.

6.10.2. In 2018 GVA in Wokingham Borough was £7,429 million, which represented a 14.0% increase from 2017 This increase was significantly higher than the 2.3% observed regionally and the 3.1% observed nationally.

Figure 6-7 - Growth in GVA since 1998



Source: 2018 ONS Regional GVA by Local Authority in the UK, Crown Copyright 2019

6.11 GVA BY SECTOR

6.11.1. The relatively high GVA in Wokingham Borough is influenced by the types of industries which make up the Wokingham Borough economy. The two main sectors are information and communication

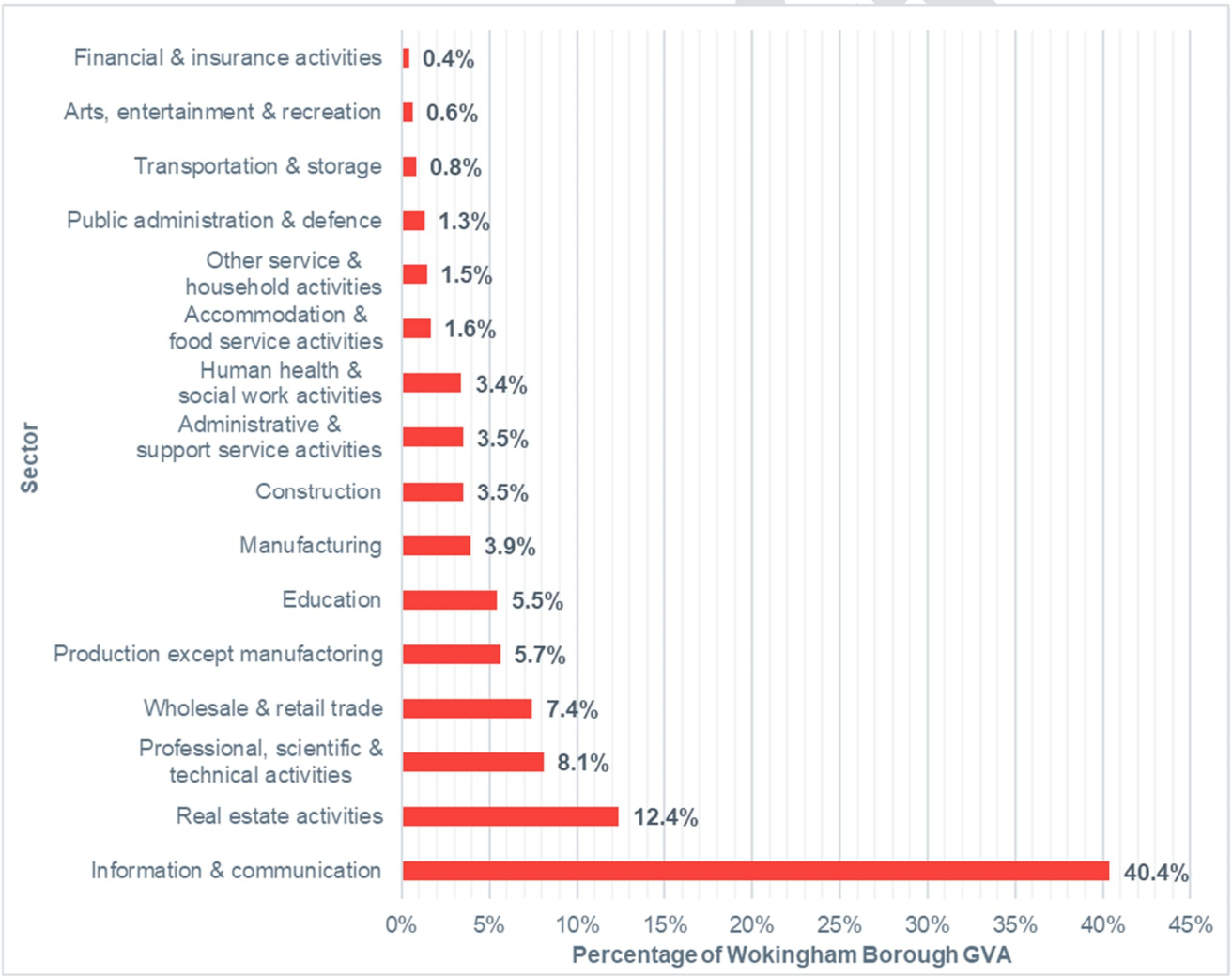
and real estate which together account for more than 50% of all GVA generated in Wokingham Borough in 2018.

6.11.2. The fastest growing sectors in Wokingham Borough, in terms of GVA generation, in the 10 years to 2018 were:

- Information and communication (+173.1%)
- Production except manufacturing (+169.2%)
- Transportation and storage (+117.2%)
- Professional, scientific and technical activities (+113.1%)

6.11.3. In contrast, the finance and insurance activities have declined by 96.2% over this period.

Figure 6-8 - Breakdown of Wokingham Borough GVA by sector, 2018



Source: 2018 ONS, Crown Copyright 2019

6.12 ECONOMIC INACTIVITY

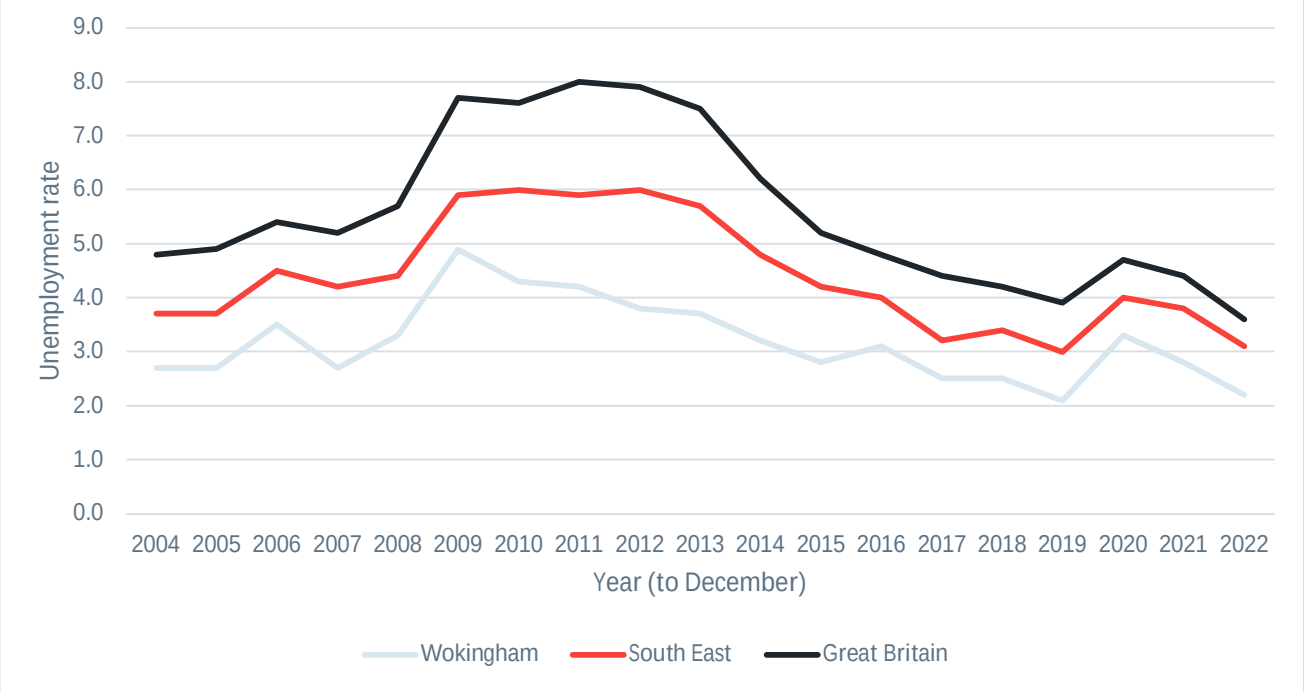
6.12.1. According to the 2018 ONS Annual Population Survey, there were 17,400 (17.5%) Wokingham Borough residents aged 16 to 64 who were not part of the labour force in 2018. The two main

reasons for economic inactivity were studying (29.9%) and looking after a family or home (24.7%). Of those people that were economically in 2018, only 2,400 people (13.8%) would like to work.

6.13 UNEMPLOYMENT

6.13.1. Estimated unemployment rates since 2004 are shown in Figure 6-9 for Wokingham Borough, the South East and England.

Figure 6-9 - Unemployment rates since 2004



Source: 2018 ONS Annual Population Survey, Crown Copyright 2019

6.13.2. Figure 6-9 shows that estimated unemployment rates in Wokingham Borough peaked in 2009 at 4.9% (4,100 people). However, since 2004, the estimated unemployment rate in Wokingham Borough has broadly followed the same trend as that observed in the South East and England, while remaining lower, except in 2009.

6.13.3. In 2020 and 2021, a significant increase in unemployment rates was observed, and this can be attributed to the impact of the COVID-19 pandemic.

6.13.4. In 2022, unemployment rates fell to their lowest level, with an estimated 2.2% of the Wokingham Borough population aged 16 years and older (1,900 people) unemployed[8].

[8] The International Labour Organisation defines the unemployment rate as the percentage of the population who are not in employment but who are seeking work and are available to work. They do not necessarily claim benefits.

7 ACCESSIBILITY

7.1 ACCESS TO SERVICES

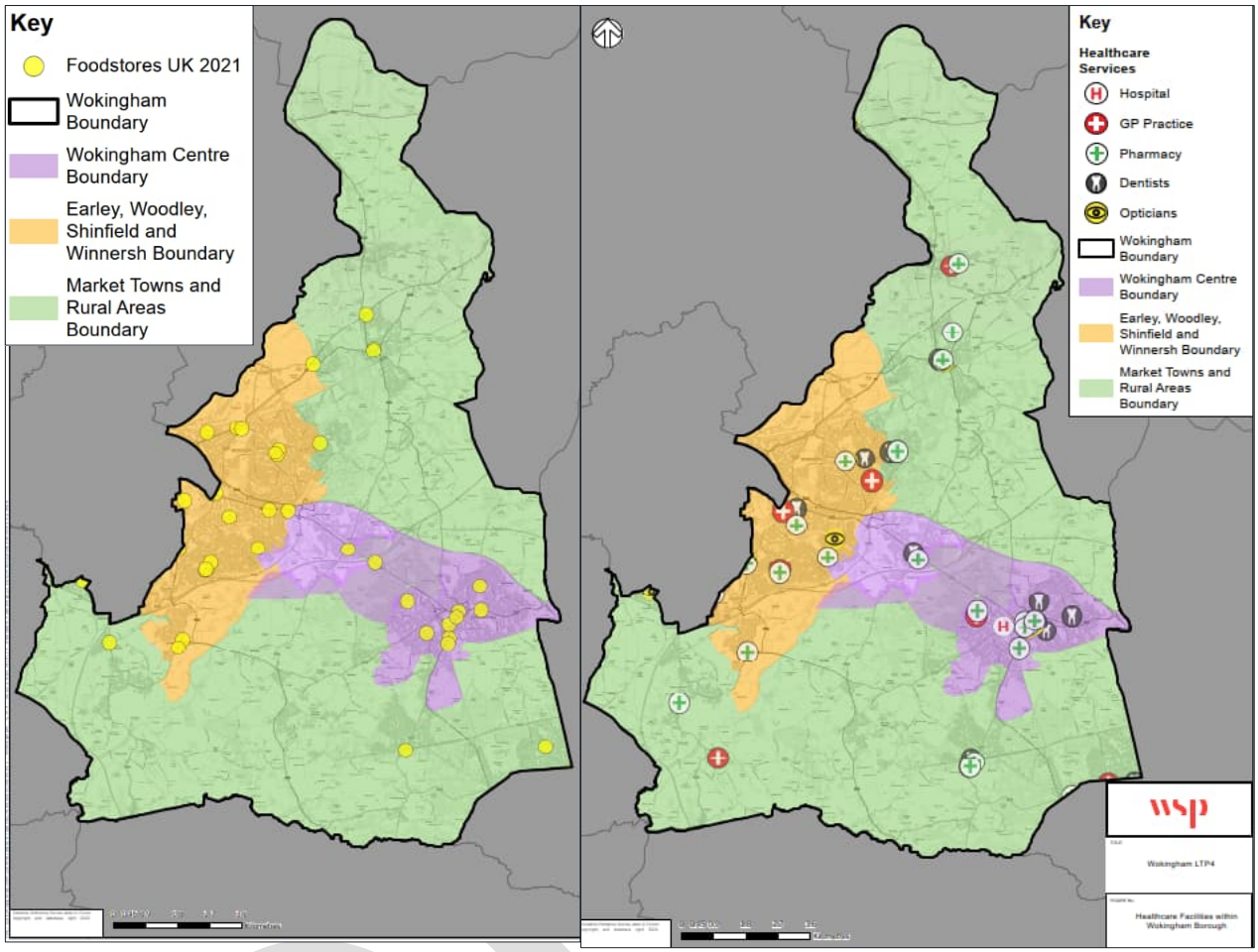
7.1.1. With a mix of urban and rural areas in the Borough, access to goods and services can vary significantly especially outside the main towns.

7.1.2. 'Geographical Barriers to Services' is a sub-domain of the 'Barriers to Housing and Services' domain, which is one of the domains that make up the Index of Multiple Deprivation (IMD). This sub-domain focuses on the travelling distances by road from selected facilities and services and shows that 20 of the 99 LSOAs in Wokingham Borough are within the top 10% most deprived nationally, a slight increase from 19 in 2015[9]. Just over a fifth of the Wokingham Borough population live in these 20 LSOAs and consequently do not have easy access to facilities, services or employment.

7.1.3. Figure 7-1 below shows the local facilities within Wokingham Borough. Food stores are shown on the left-hand side as yellow circles and healthcare facilities are show on the right-hand side with symbols to represent hospitals, GP Practices, Pharmacies, Dentists and Opticians.

[9] IMD 2015 and 2019, Ministry of Housing, Communities & Local Government

Figure 7-1 - Foodstores (Left) and Healthcare Facilities (Right) in Wokingham Borough



7.1.4. The figure above shows that there are many local facilities within Wokingham town and Winnersh, as shown by the purple boundary. Within this area there are a total of 11 food stores and 15 health care services. There is also relatively good coverage within the Earley, Woodley and Shinfield, as indicated by the orange boundary. Within this area there are a total of 19 food stores and 17 healthcare facilities.

7.1.5. In the more rural areas to the north and south, indicated by the green boundaries, there are a much lower number of services available. In the north of the borough, Twyford and Wargrave are the only two areas that hold local services. In the south of the borough, there are three food stores identified, these are south of Wokingham town in Finchampstead and Crowthorne as well as south of Shinfield in Three Mile Cross. Healthcare facilities are in Finchampstead, Three Miles Cross and Swallowfield. With a lower range of services, potentially accessibility problems could include.

- Access to employment not available on the required days or at the required times of day.
- Access to shopping, leisure and tourism opportunities in evenings and on Sundays.
- Access to health services when times of transport services do not coincide with appointments.
- Increased journey times for educational services

7.2 ACCESS TO EDUCATION

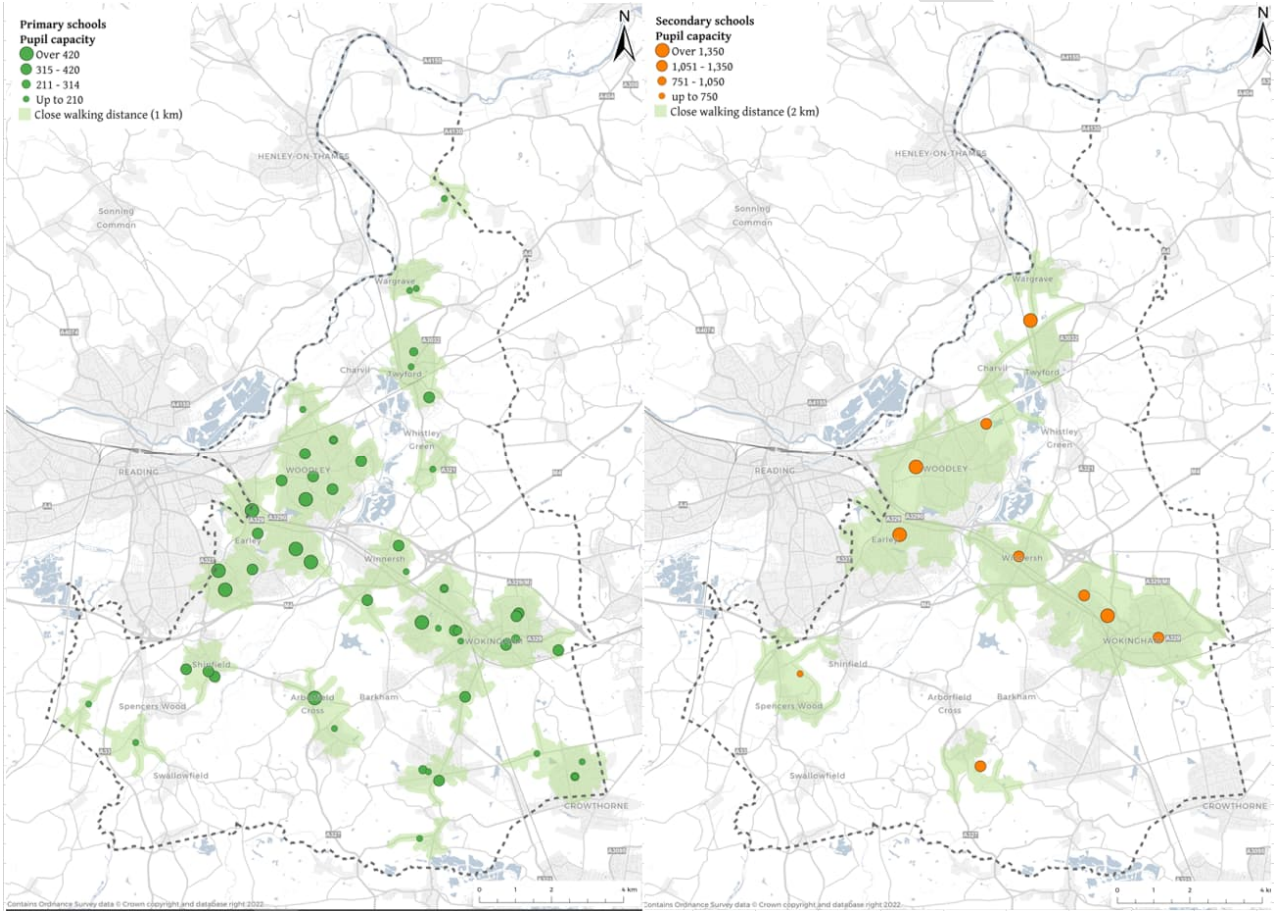
7.2.1. On the left, **Figure 7-2** below shows the close walking (1-2km) (green area) and 2mile (pink area) catchment of primary schools within the borough.

7.2.2. The majority of Wokingham town, Winnersh, Woodley, Earley and Shinfield are within close catchment of primary schools. However, the majority of the rural areas in the north and south of the borough are in the wider catchment of primary schools but not within walking distance.

7.2.3. Similarly, the right-hand side of the figure shows the close walking (green area) (1mile) and 3mile (pink area) catchment of secondary schools within the borough. This shows there is a higher proportion of students within close walking distance of a secondary school. However, as seen with the primary schools, residents of rural areas in the north and south of the borough are less likely to live within an easy walkable distance to a school.

7.2.4. Parts of Remenham and Aston in the north of the borough and Riseley in the south of the borough fall out of the wider catchment for both primary and secondary schools.

Figure 7-2 – Residents distance to Primary Schools (left) and Secondary Schools (right)



7.3 CHILDREN AND YOUNG PEOPLE

7.3.1. Poor accessibility for children and young people can limit their independence and opportunities.

7.3.2. In most cases, parents are responsible for making arrangements for their child to get to school and schools are encouraged to promote sustainable travel to parents and students. Schools are also encouraged to develop travel plans in consultation with parents and children. The My Journey Wokingham platform works with Modeshift STARS to provide a step-by-step platform for schools to create this travel plans and many schools in Wokingham have them in place.

7.3.3. School buses can be a common method to increase sustainable travel. However, students that travel to school by dedicated school bus can be limited in taking part in extra-curricular activities or extra study before or after school.

7.3.4. The safety of walking routes and availability of public transport to and from school is also an important consideration. Where a child attends their nearest school (where a place is available) then where there does not exist a suitable walking/public transport route then the Local Authority provides free transport.

7.3.5. For young people of working age, the high costs of car ownership and limited public transport in the more rural areas of the Borough can limit their options for training and work. It also places a restriction on their independence, as they are often dependent upon lifts for any non-school travel, due to either the lack of alternatives or the safety and security concerns of their parents.

7.3.6. More limited evening and Sunday bus service provision across the Borough can also restrict young people's access to leisure activities and work opportunities outside the school/college day.

7.4 ACCESS TO A CAR

7.4.1. Table 7-1 shows that car ownership is very high across Wokingham Borough with just 9.0% of households in the Borough without access to a car. This compares with just under a fifth (16.9%) of households in the South East and just over a quarter of households (23.5%) in England[10].

Table 7-1 - Household car ownership in Wokingham Borough

Classification	Households with access to car	Households without access to car	% of households without access to car
Wokingham	62922	6242	9%
South East	3165868	642098	16.9%
England	17919987	5516098	23.5%

Source: ONS (2021) Census, QS416EW, Crown Copyright 2019

[10] ONS (2011) Census

7.4.2. The 2018 National Travel Survey data, detailed in Table 7-2, shows a strong link between income and car ownership in England. This is shown by 46% of households in the lowest income quintile not having a car, while 49% of the highest income quintile have two or more cars and vans.

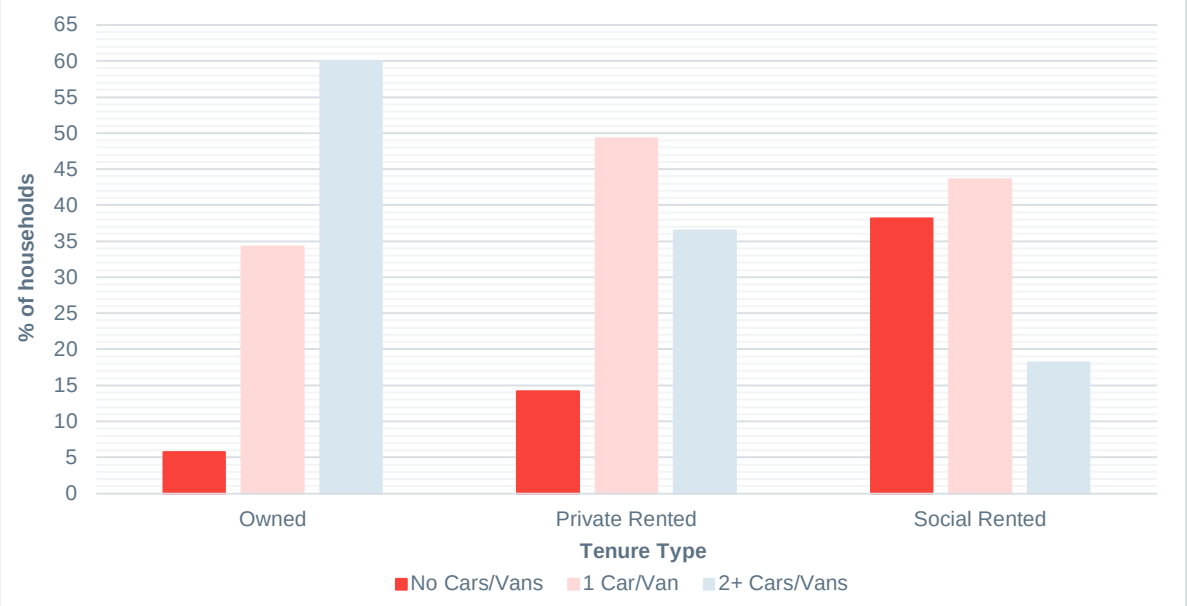
Table 7-2 - 2018 household car ownership by household income quintile, in England

Income quintile	No car / van	One car / van	Two or more cars / vans
Lowest real income level	46%	38%	16%
Second level	28%	47%	25%
Third level	17%	46%	37%
Fourth level	15%	36%	49%
Highest real income level	13%	37%	49%
All households	24%	41%	35%

Source: DfT, National Travel Survey 2018 (NTS0703)

7.4.3. Figure 7-3 demonstrates the relationship between household tenure type and car ownership in Wokingham Borough. This shows that 60% of privately owned households own two or more cars / vans. This compares to only 18% of socially rented households owning two or more cars and vans. The proportion of households with no cars also shows a clear correlation between the two variables, with just 6% of privately owned households not owning a car, compared to 14% and 38% for privately rented and socially rented households respectively.

Figure 7-3 - Car ownership by household tenure type in Wokingham Borough



Source: ONS (2011) Census, Crown Copyright 2019

8 DIGITAL ACCESSIBILITY

8.1 INTRODUCTION

8.1.1. Despite not always being front and centre of transport strategies, the growth in digital access is arguably the single largest change to transport over the last twenty years. Growth in smarter/hybrid working practices or the ability to use technology to allow faster and more efficient access to goods and services have fundamentally changed the need to travel.

8.1.2. 97% of the population have access to superfast broadband. There is however a distinction between digital connectivity and digital accessibility. Connectivity relates to the digital infrastructure (e.g., a fast and reliable connection to the internet), whereas accessibility relates to an individual's ability to use that infrastructure, such as whether users have the capability to use digital solutions to support their needs. Similar to how accessibility is considered in public transport, a similar approach should also be considered to digital accessibility.

8.2 CHANGING THE NEED TO TRAVEL

8.2.1. An overview of changing travel patterns can be obtained from the National Travel Survey. This provides a guide of the total number of trips for a range of different journey purpose, and shown in the following Table, and shows a fall of 12% of trips per person between 2000 and 2019.

TRIP PURPOSE	2000	2010	2019	1995-2019 % DIFF
Commute and business	211	179	168	-21%
Personal Business and other escort	190	193	171	-13%
Shopping	228	197	181	-24%
Other leisure	134	149	177	28%
Visiting friends	188	150	130	-32%
Education	122	114	125	8%
Total	1073	982	952	-12%

8.2.2. Since 2000, there has been a particularly large decrease in visiting friends and shopping ships, representing 1 in 4 shopping trips and 1 in 3 trips to visit friends.

8.2.3. Other leisure trips are the only purpose where a clear increase is present and Education trips have increased slightly, alongside population growth.

8.3 IMPACT OF DIGITAL ON JOURNEY PURPOSE

8.3.1. Internet sales have been steadily increasing over the last 15 years, accounting for 20% of all sales by 2019. There was a significant uplift during the COVID-19 pandemic, although the early indications are that the percentage of internet sales is reverting to the pre-pandemic trend with 25% of sales made online in November 2021. Alongside this shift, there has also been an increase in LGVs, likely reflecting an increase in home delivery.

8.3.2. Online banking has also seen a significant surge, with the proportion of people undertaking online banking increasing from 32% in 2005 to 93% in 2022.

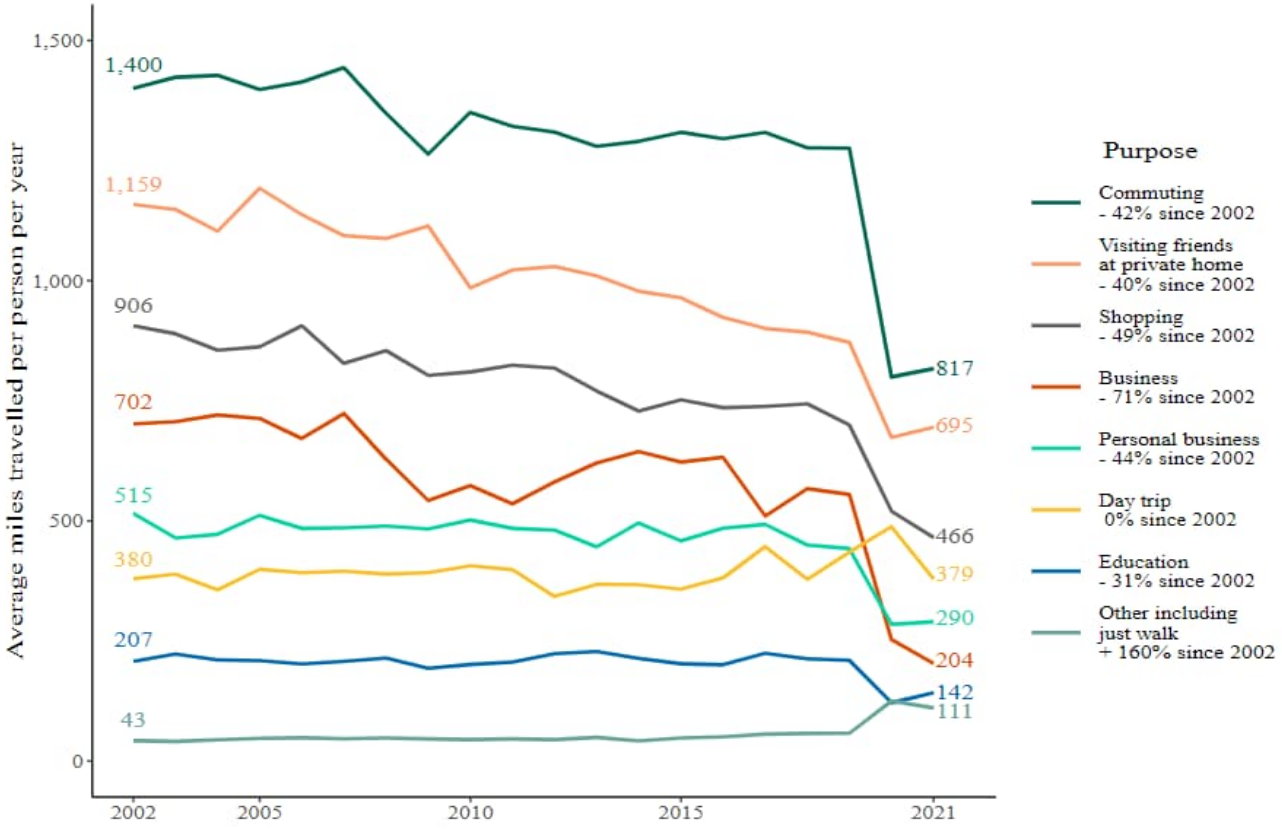
8.3.3. NHS Digital found that around 200,000 appointments and repeat prescriptions arranged through the NHS App between April and December 2021 which would previously have been made by people driving to their local surgery." The implementation of the NHS app saves over 20 thousand journeys a month across the UK, lowering congestion and saving residents time and money.

8.4 IMPACTS OF COVID-19

8.4.1. The change in 2019 to 2020, reflecting the COVID-19 pandemic was even more stark, with commuting and business showing the largest change of any trip purpose.

8.4.2. To further the information above, Figure 8-1 below shows travel in all types of sectors are down a significant amount from the turn of the century.

Figure 8-1 - Change in Average Trips per Person for Different Journey Purposes Between 2002 and 2021

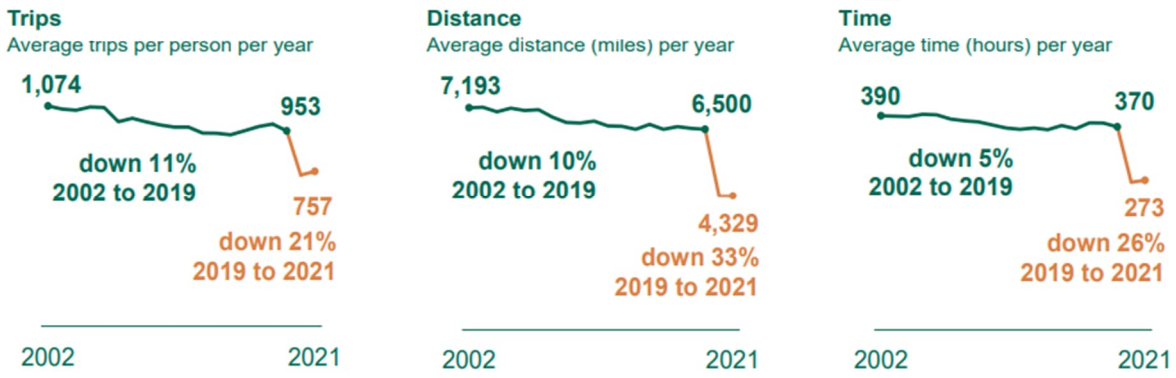


Source: National Travel Survey, 2022

8.4.3. Despite the main percentage decrease being a result of COVID-19, there was an existing downward trend occurring. Day trips and other walking trips are the only travel reasons that are up from 2002.

8.4.4. Figure 8-2 shows the change in trips, distance and time of trips between 2002 and 2021. Trips, distance travelled, and time are all down following COVID-19. These trends were all originally coming down, but the restrictions imposed forced a major drop in trips, distance travelled and time. The drop in distance was greater than the drop in number of trips – possibly inferring that longer distance trips are those that are most likely to be being made digitally.

Figure 8-2 - Change in Trips, Distance and Time of Trips Between 2002 and 2021



Source: National Travel Survey Fact Sheet, 2021

9 TRAVEL PATTERNS

9.1 BOROUGHWIDE COMMUTING PATTERNS

9.1.1. Census Travel to Work data provides a valuable insight into how people travel to, from, and within an area. This information can be used to recognise how a particular place operates and the factors that influence travel choices.

9.1.2. The analysis in this section primarily uses 2011 Census Travel to Work data, with some comparisons of the Census 2021 data. Although COVID-19 has changed travel volumes and Census data is now over a decade old, the data provides a useful guide of the pattern of commuting trips.

9.1.3. The 2021 census data, although more recent is heavily impacted by the COVID-19 pandemic (which was ongoing at the time of the census) and as such atypical of travel patterns. It is recognised that the 2021 census does give a unique insight a time of extreme behavioural change towards travel, and the way in which people can live and some further analysis around those changes is included in this section.

9.1.4. Overall, the following trend in commuting was broadly observed across the borough.

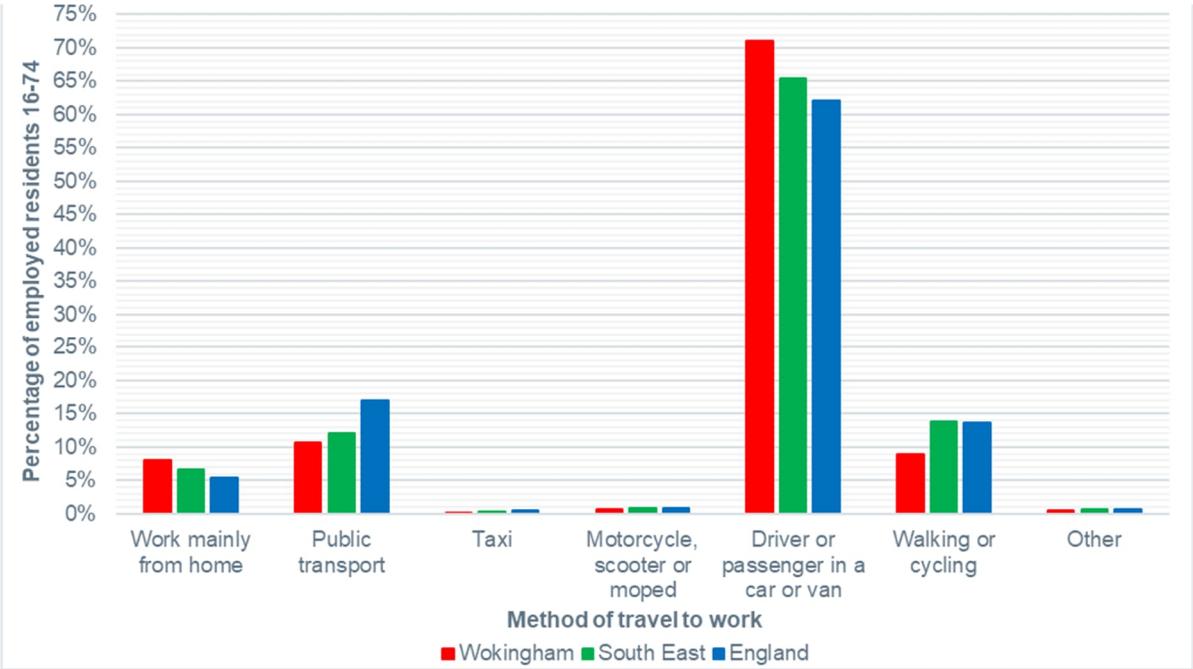
- **35% within the borough**. For trips originating in the same within the area, in towns the majority are made on foot or by cycle with car dominant in more rural areas.,
- **35% to key destinations within 10 miles**, including Reading, Bracknell, Slough, Maidenhead and Windsor.
- **30% elsewhere**, comprising.
    - 10% work in London where public transport is the most common mode of travel.
    - 20% work elsewhere. Car is typically accounts for over 90% of these trips.

9.2 TRAVEL TO WORK – MODE CHOICE

9.2.1. Reflecting the high levels of car ownership, Figure 9-1 shows that, in 2011, 71% of trips to work were made by a car or van (either as a driver or passenger). This is higher than the average of 65.5% regionally and 62.0% nationally.

9.2.2. Public transport usage levels by workers in the Borough was 10.6% in 2011, compared with 16.9% nationally. The percentage of workers walking or cycling to work in Wokingham Borough is also low at 8.9% in 2011, compared with almost 14% regionally and nationally.

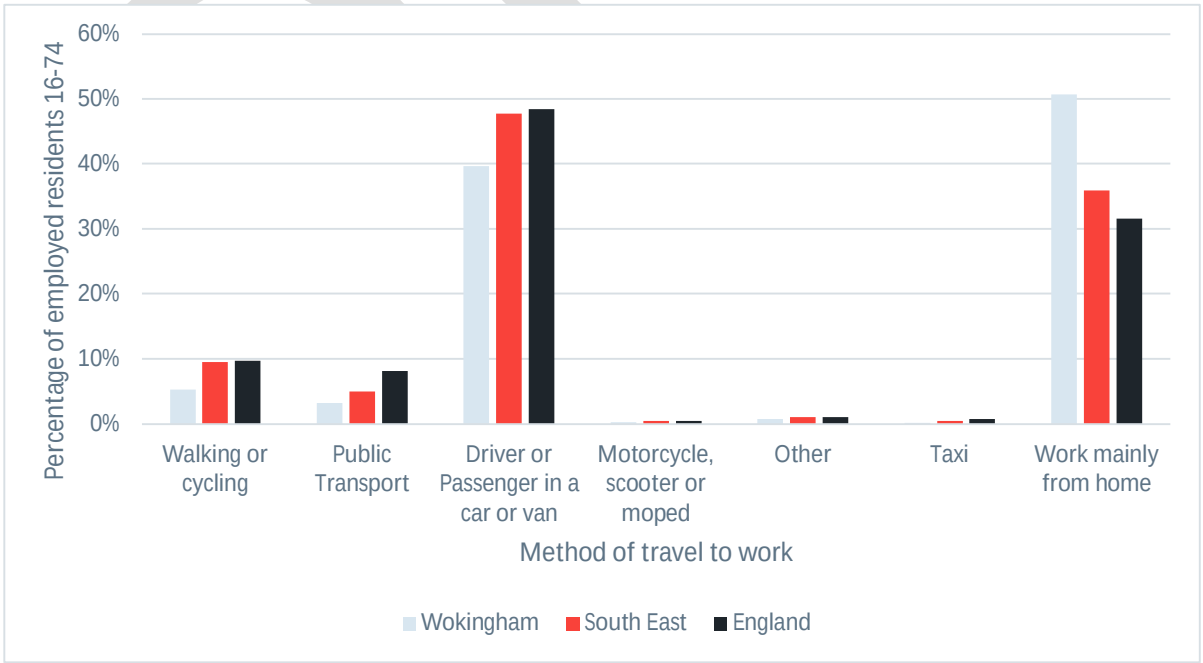
Figure 9-1 - Method of travel to work for resident adults aged 16 to 74 (Acc. Census 2011)



Source: ONS (2011) Census, Crown Copyright 2019 (QS701EW)

9.2.3. In Figure 9-2, which depicts the method of travel to work based on the census data from 2021, a clear trend emerges regarding the impact of COVID-19 on commuting habits. The data reveals a significant increase in the proportion of people working from home compared to the 2011 figures. This shift can be attributed to the widespread adoption of remote work arrangements prompted by the pandemic.

Figure 9-2 Method of travel to work for resident adults aged 16 to 74 (Acc. Census 2021)



Source: ONS (2021) Census, Crown Copyright 2019 (QS701EW)

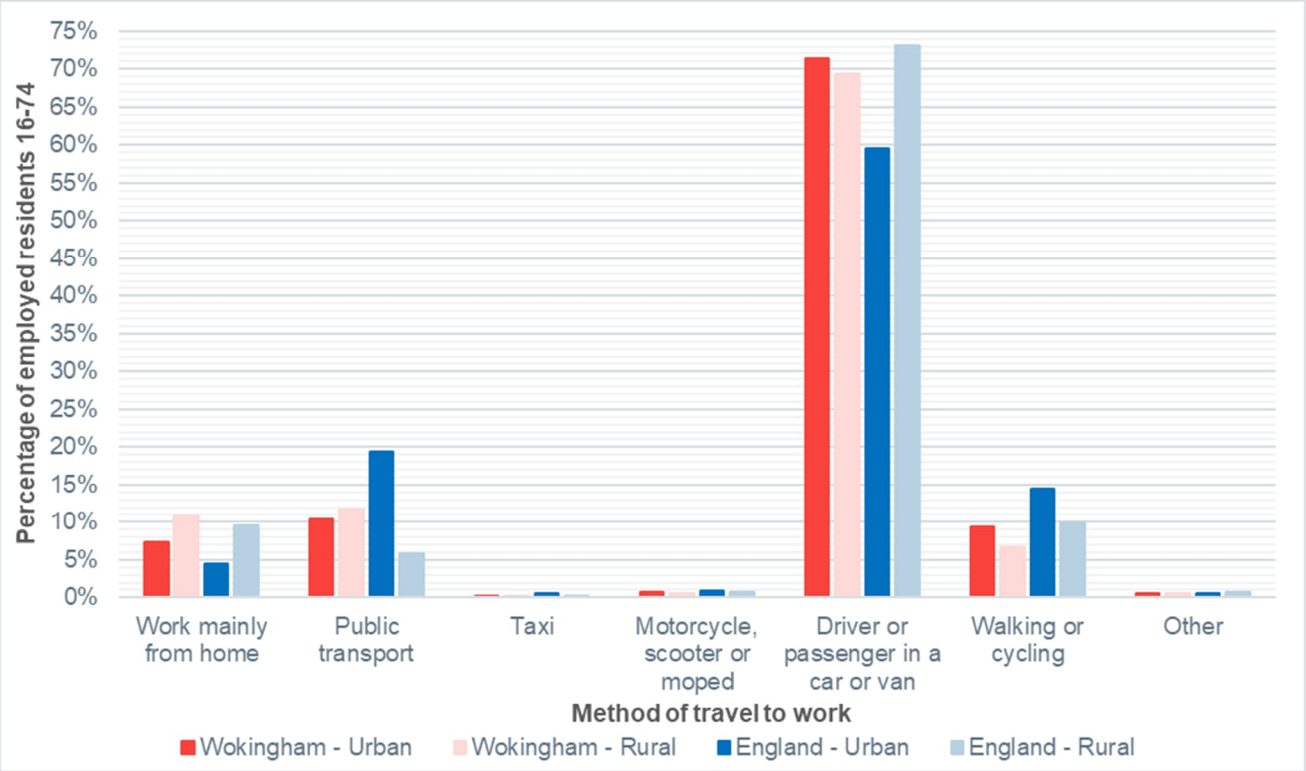
9.2.4. Furthermore, the data indicates a decrease in the share of individuals using cars and public transport for their daily commute. This suggests a decline in car dependency and a potential shift towards alternative modes of transportation. However, it is noteworthy that the figures for active transport, such as walking and cycling, have also decreased to 5 % in Wokingham compared to the overall South East region and England as a whole which has 10% of active transport mode share.

9.2.5. Figure 9-3 shows the method of travel to work for resident adults aged 16 to 74 for urban and rural residents. It shows that locally and nationally, a higher percentage of rural based commuters work from home and a lower percentage of rural based commuters' cycle or walk to work. Notably, there is.

- a higher percentage of driving from those living in urban areas in Wokingham than nationally
- a higher car mode split for those living in urban areas than rural areas.
- a higher percentage of rural residents use public transport to work than the national average.
- the proportion of residents using public transport is higher in rural areas than urban areas.

9.2.6. These are typically the opposite of commuter behaviour nationally, where public transport use is more than three times higher amongst urban based commuters and private car/van use is 13.5% higher amongst rural based commuters.

Figure 9-3 - Method of travel to work for resident adults aged 16 to 74, by area of residence.



Source: ONS (2011) Census, Crown Copyright 2019 (QS701EW)

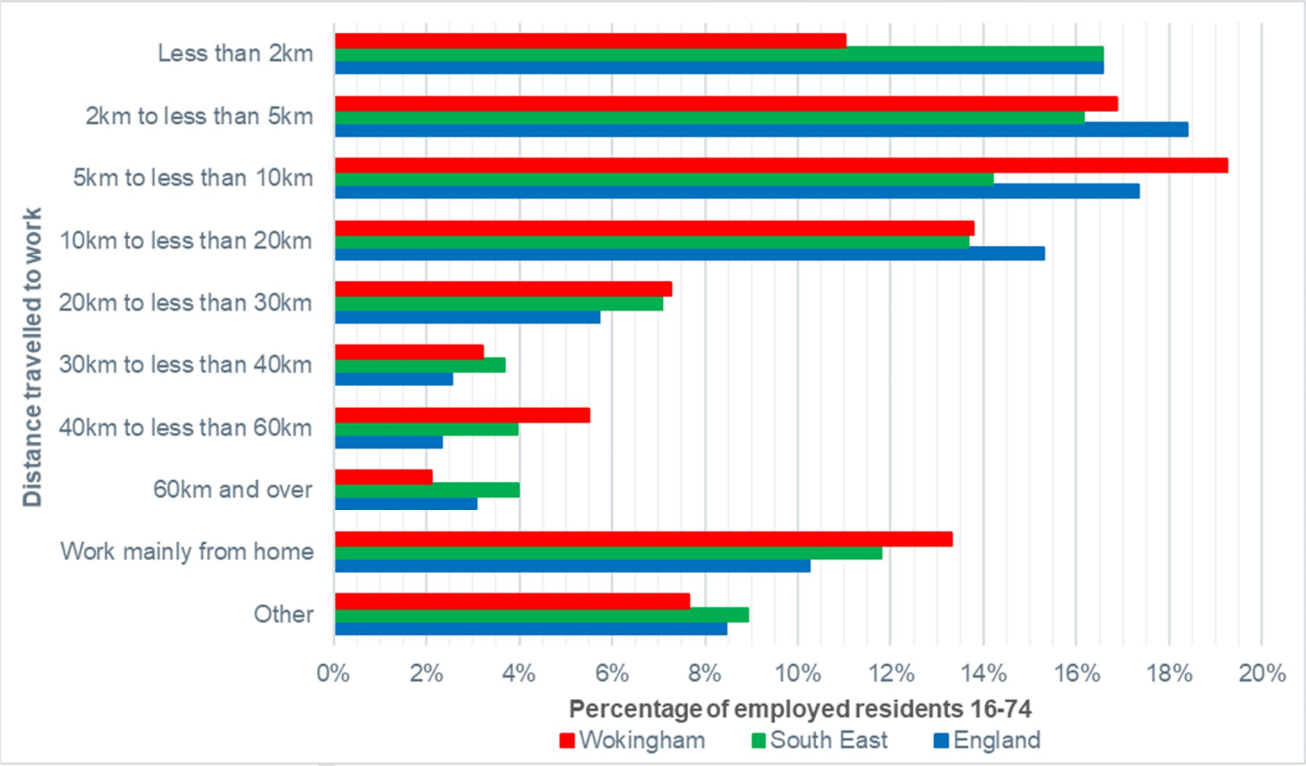
9.3 TRAVEL TO WORK – DISTANCE

9.3.1. The average distance travelled to work by residents of the Borough is 15.4km, similar to both the regional average of 16.6km and 14.9km nationally[11].

9.3.2. Figure 9-4 illustrates the average distance travelled to work for residents of Wokingham Borough, the South East and England, and highlights that.

- The most common commuting distance in the Borough is between 5km and 10km (representing almost 20% of commute trips).
- The next most common is 2-5Km (17%)
- Over 1 in 4 commutes (28%) is less than 5km.
- The Borough has significantly less very short (less than 2km) and very long (60km and over) distance commuters when compared with regional and national levels.

Figure 9-4 - Distance travelled to work for resident adults aged 16 to 74.



Source: ONS (2011) Census, Crown Copyright 2019 (QS702EW)

9.3.3. This also includes work from home, representing 13%, which is above the national and regional average. It should however be noted that the number of people working mainly from home is calculated differently for different ONS datasets. For Figure 9-4, Census respondents were specifically asked how they travel to work, with working mainly from home one of the given options.

[11] ONS (2011) Census, QS702EW - Distance travelled to work

For Figure 9-4, the distance travelled to work did not constitute a specific Census question; instead, ONS statisticians calculated the distance based on home postcode and workplace postcode. This means that the number and proportion of the population who are reported to work primarily from home do not always correlate.

9.3.4. Table 9-1 shows the distance travelled to work for resident adults aged 16 to 74 in Wokingham Borough, by mode. Of particular note

- Driving is the most common mode for all of the different trip distances.
- For journeys to work under 2km in length, despite the short distance, walking accounts for just over a third of trips, compared to almost a half of commuters who drive.
- For journeys to work between 2km and 5km over 70% choose to drive, with only 11.4% choosing to cycle or walk and only 9.1% using public transport.
- The highest use of public transport was for journeys between 40km and 60km, typically reflecting commuting by rail from the Borough's stations to the London area.

Table 9-1 - Distance travelled to work for resident adults aged 16 to 74 in Wokingham Borough, by mode.

Distance travelled to work	Public transport	Driving a car/van	Cycle	Walk	Other
Less than 2km	3.1%	47.9%	6.9%	36.7%	5.4%
2km to less than 5km	9.1%	71.5%	6.1%	5.3%	8.0%
5km to less than 10km	9.4%	79.0%	3.0%	2.1%	6.4%
10km to less than 20km	6.4%	86.3%	1.1%	1.5%	4.6%
20km to less than 30km	7.1%	87.2%	0.7%	1.6%	3.4%
30km to less than 40km	11.2%	83.2%	0.8%	1.1%	3.7%
40km to less than 60km	21.4%	73.7%	0.8%	1.5%	2.7%
60km and over	14.4%	72.0%	1.5%	7.1%	5.0%
No fixed place	8.8%	79.6%	0.9%	2.2%	8.4%

Source: ONS (2011) Census, Crown Copyright 2019 (WP7701EW)

9.4 TRAVEL PATTERNS BY WARD

9.4.1. An overview of the main destinations from each area, and propensity to make these trips by car is shown below in Table 9-2. These have typically been considered by settlement. For larger settlements, such as Wokingham town, multiple MSOAs have been included in order to capture the full extent of the area. MSOAs. Only those settlements where the MSOA is suitably reflective are listed below.

9.4.2. The destinations were grouped by distance with 'Internal' (relating to the local area within the typology) and the 'Rest of Borough' being the first area. Reading, Bracknell and Slough / Maidenhead / Windsor were group as they are within a 10miles / 16km distance. London was grouped with Other as it fell outside of the 10miles radius.

9.4.3. The colour of the text represents the proportion of trips that are made by car, with green reflecting a low propensity (<50% of trips by car) and red showing a high propensity (>80%).

Table 9-2 – Key Destinations for Work Drips from different parts of Wokingham Borough

Origin	% Of Residents Travelling to Each Destination from Origin Town / Area						
	Internal	Rest of Borough	Reading	Bracknell	Slough / Maidenhead / Winsor	London	Other
Borough Wide	15%	20%	15%	10%	10%	10%	20%
Wokingham town	25%	15%	10%	15%	5%	10%	20%
Earley	10%	20%	30%	5%	5%	5%	20%
Woodley	15%	25%	25%	5%	5%	5%	20%
Shinfield	5%	25%	30%	5%	5%	5%	20%
Winnersh	10%	30%	20%	10%	10%	10%	20%
Twyford	10%	20%	15%	5%	15%	15%	25%
Rural Areas	15%	20%	10%	10%	10%	10%	25%
%Trips (approximate)	35%		35%			30%	

9.4.4. Table 9-2 above shows that broadly, the number of people who both live in and work somewhere in the Borough are relatively consistent across the area, accounting for approximately 1 in 3 people commuting trips.

9.4.5. Wokingham town has the highest retention of people that both live and work within the area compared to any other ward in the Borough.

9.4.6. In the towns, there is a moderate level of self-containment of 15-25% within the centre of the larger towns of Wokingham and Woodley, and to a lesser extent Earley. A large proportion of these trips are made by walking and cycling. This is especially prominent in Wokingham and Woodley Town Centres, with approximately 50% of people who live and work in the town walk or cycle to work.

9.4.7. In more rural areas, there is still a moderate number of people who work within the ward they live, albeit a higher proportion of these trips are made by car.

9.4.8. There are however clear differences between the volume of movements to nearby settlements, particularly in relation to Bracknell and Reading.

9.4.9. For Earley, Shinfield and Woodley have a high draw to Reading, and high proportion of these trips are made by sustainable modes. Conversely, just 5% draw to Bracknell. However, in Wokingham town, Bracknell is the most common place to travel to for work outside the Borough.

9.4.10. For travel to Bracknell over 80% of trips are made by car. The majority of trips to Reading are also made by car, although there are comparatively higher levels of sustainable travel. In part this is due to some areas being within walking and cycling distance to Reading, although the higher sustainable travel to Reading compared to Bracknell is consistent across the Borough.

9.4.11. The proportion of trips to London and other areas remains reasonably consistent across the Borough and does not largely fluctuate based on where the residents live. For trips to London sustainable modes account for the majority of trips, especially rail. To other destinations, car accounts for over 80% of trips.

9.5 SELF-CONTAINMENT AND COMMUTING PATTERNS

9.5.1. At the time of the 2011 Census[12], a significant proportion of people both lived and were employed in Wokingham Borough (21,690 people). 33.6% of Wokingham Borough residents working within the Borough (origin containment) and 41.3% of all employee jobs in Wokingham Borough were filled by people who also lived in the Borough (destination containment).

9.5.2. There were 52,545 people aged over 16 that had jobs in Wokingham Borough and 64,539 people aged 16 and over living in Wokingham Borough were in employment. This meant that the Borough had more workers than it had filled jobs in 2011, with net out-commuting standing at approximately 12,000.

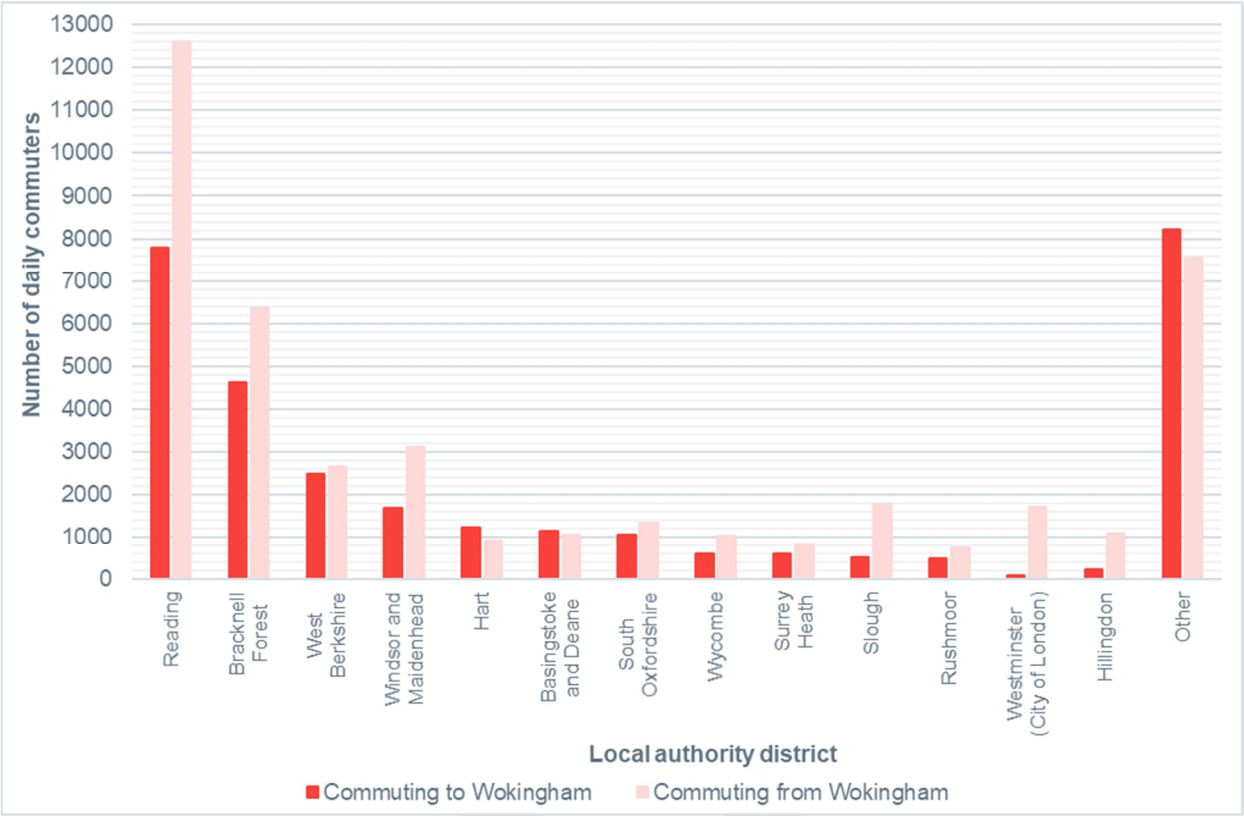
9.5.3. The top eleven local authority origins of workers commuting into Wokingham Borough are the eight local authority districts bordering Wokingham Borough along with Surrey Heath, Slough and Rushmoor.

9.5.4. The top eleven local authority destinations for Wokingham Borough residents commuting out of the Borough again include those eight bordering local authority districts, along with Slough: Westminster (City of London) and Hillingdon.

9.5.5. The levels of cross boundary commuting to and from these local or unitary authority districts are shown in Figure 9-5. Cross boundary commuting is at its highest between Wokingham Borough and Reading Borough with 7,778 inbound commuters and 12,616 outbound commuters, giving a net number of out-commuters of 4,838. Although on a smaller scale, net out-commuting also occurs from the Borough to most of the other local authority districts shown, with the exception of Hart and Basingstoke and Dean which both show small levels of in-commuting.

[12] ONS (2011) Census, WU03UK - Location of usual residence and place of work by method of travel to work

Figure 9-5 - Cross boundary commuting to and from Wokingham Borough in 2011



Source: ONS (2011) Census, WU03UK, Crown Copyright 2019

9.6 WORKING FROM HOME AND CHANGES IN 2021

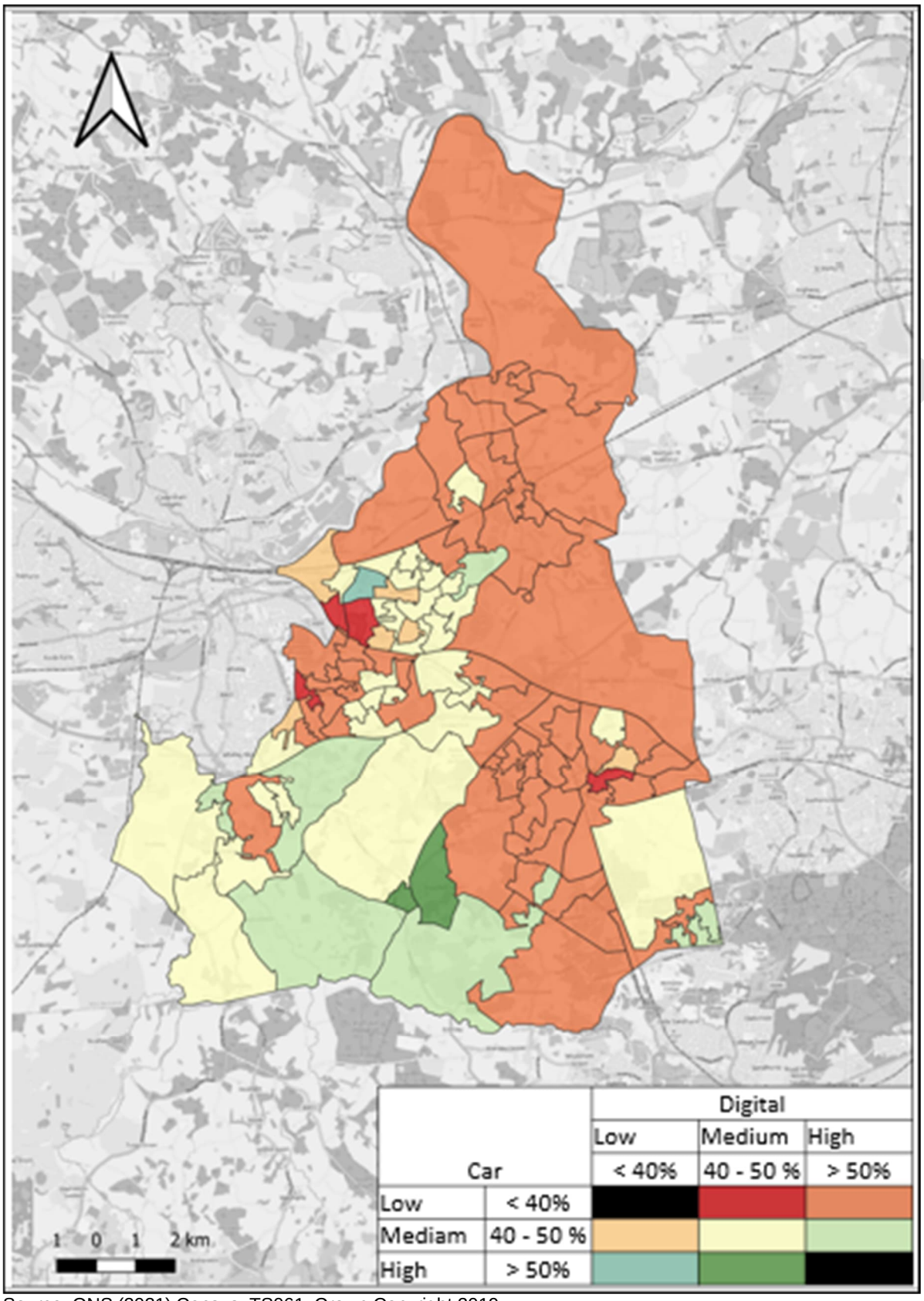
9.6.1. At the time of the 2011 Census[13], a significant proportion of people both lived and were employed in Wokingham Borough (21,690 people). 33.6% of Wokingham Borough residents working within the Borough (origin containment) and 41.3% of all employee jobs in Wokingham Borough were filled by people who also lived in the Borough (destination containment).

9.6.2. In the 2021 Census, it was found that 62% of the population aged 16 years and over in Wokingham were employed (excluding full-time students). This figure represents a decrease of 2.1% compared to the proportion recorded in the 2011 Census.

9.6.3. In **Figure 9-6**, a comparison is presented between the proportion of people working digitally without traveling to work and the proportion of people using cars as their mode of travel to work, based on their location. The data indicates that throughout Wokingham, there has been an increase in the proportion of people working digitally, which has consequently led to a reduction in the reliance on cars for commuting to work.

[13] ONS (2011) Census, WU03UK - Location of usual residence and place of work by method of travel to work

Figure 9-6: Comparison of Work from home (Digital) and proportion of Car as mode of travel to work.



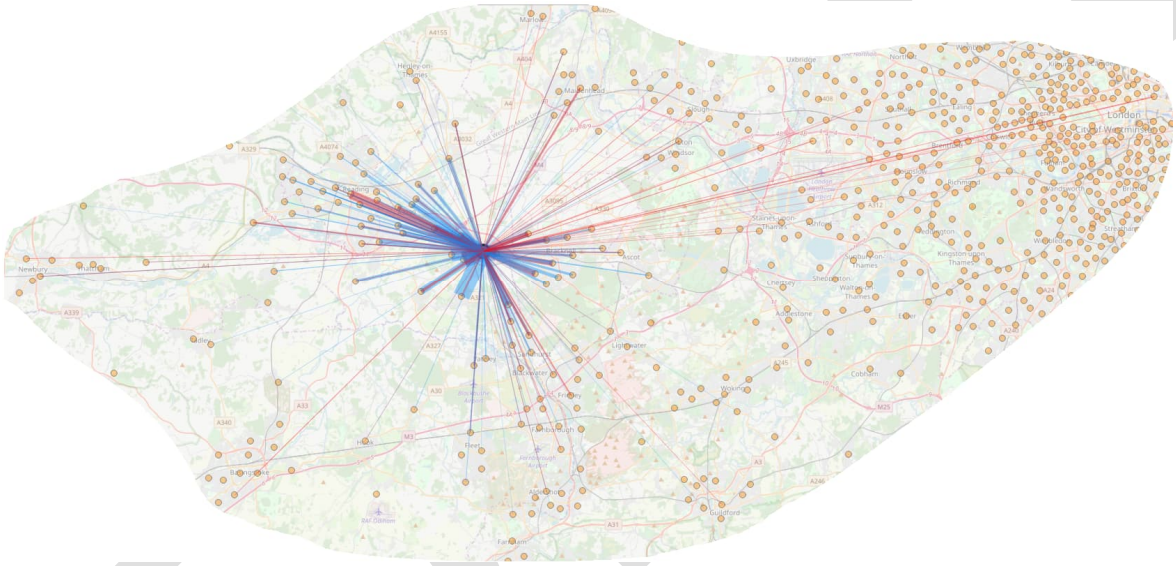
Source: ONS (2021) Census, TS061, Crown Copyright 2019

9.7 SETTLEMENT COMMUTING PATTERNS

WOKINGHAM TOWN

9.7.1. As shown in Figure 9-7, Wokingham town experiences more inbound commuting, with trip origins across Wokingham and Reading Borough and also Bracknell Forest. Outbound commuters are mainly destined for nearby destinations along the A329 corridor between Bracknell and Reading along with a limited amount of longer distance commuting to London, Maidenhead, Basingstoke, Newbury, Theale and the Blackwater Valley.

Figure 9-7 - Commuting patterns in Wokingham town



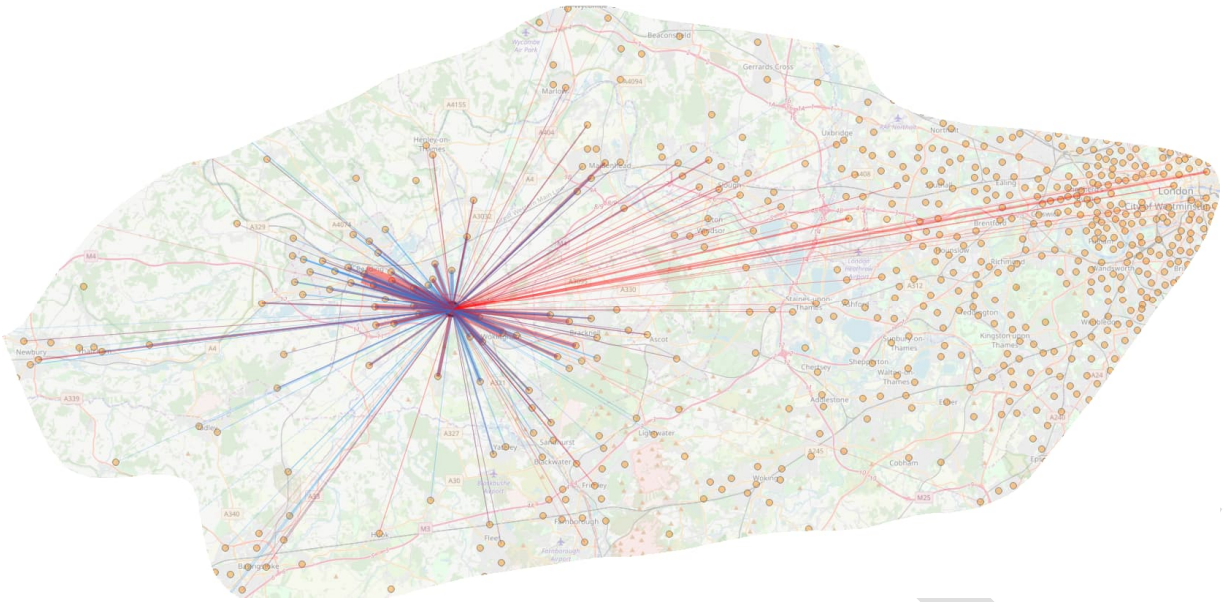
Source: 2011 Census Mapping, DataShine Commute, Oliver O'Brien and James Cheshire

WINNERSH

9.7.2. As shown in Figure 9-8, Winnersh has a relatively even split between in and outbound commuting. The majority of inbound commuting originates in Wokingham and Reading Borough, although there is also some longer distance inbound commuting from Maidenhead, Basingstoke and Newbury.

9.7.3. The majority of outbound commuting is destined for Wokingham and Reading Borough, along with Bracknell Forest. There is also some longer distance outbound commuting to London, Maidenhead, Heathrow, Basingstoke, Newbury, Theale and the Blackwater Valley.

Figure 9-8 - Commuting patterns in Winnersh

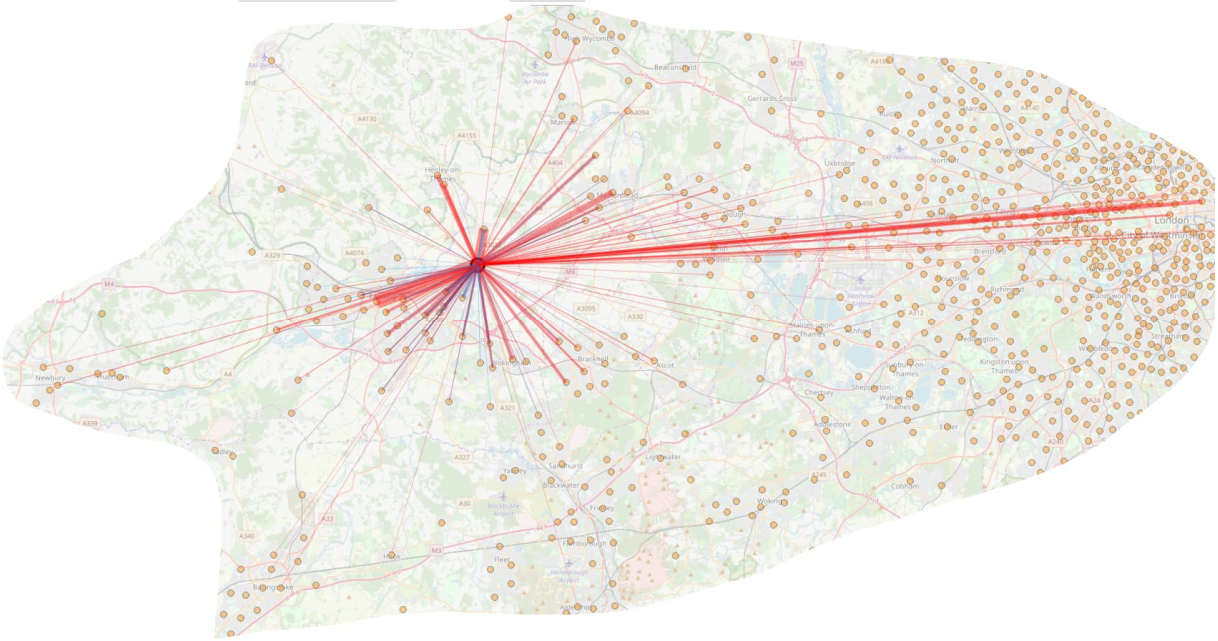


TWYFORD

9.7.4. Commuting patterns in Twyford are shown in Figure 9-9. Predominantly Twyford experiences outbound commuting with the main destinations being the nearby areas of Reading, Wargrave, Earley, Woodley, Henley and Maidenhead. In addition, due to its location on the railway line to London Paddington, it also sees significant outbound commuting to Central London.

9.7.5. There is a limited amount of inbound local commuting from Wargrave, Earley and Woodley.

Figure 9-9 - Commuting patterns in Twyford



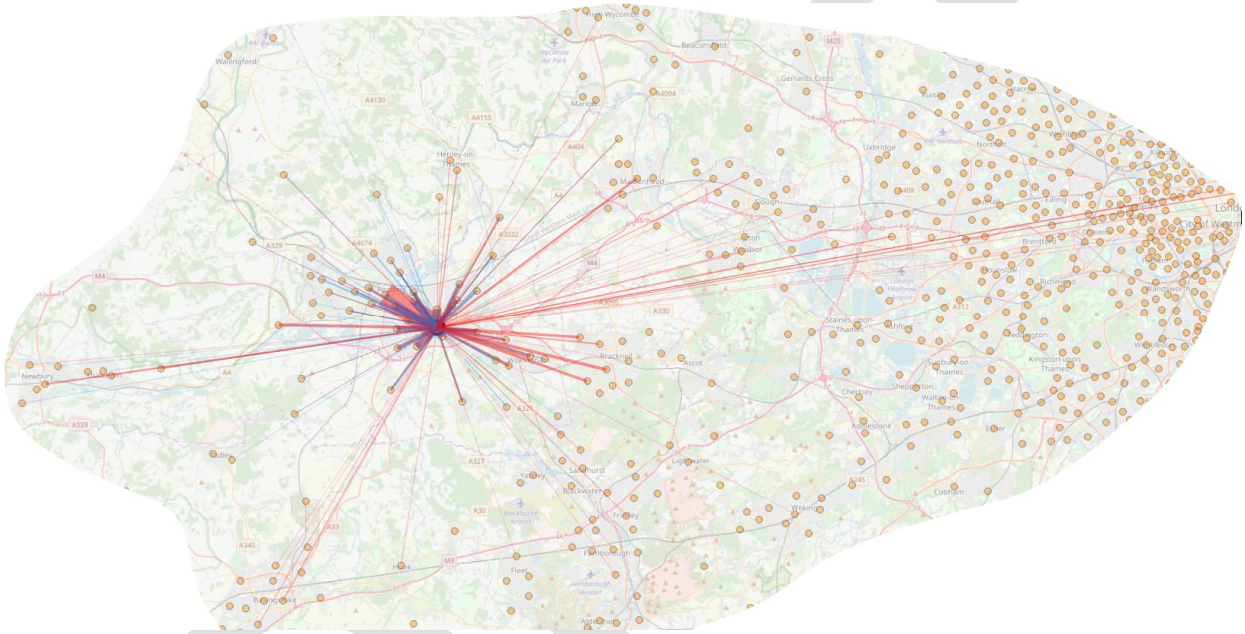
Source: 2011 Census Mapping, DataShine Commute, Oliver O'Brien and James Cheshire

LOWER EARLEY

9.7.6. Commuting patterns in Lower Earley are shown in Figure 9-10. Like Twyford, it also experiences predominantly outbound commuting with the main destination being central Reading. In addition, commuters are mainly destined for other parts of Wokingham and Reading Boroughs although there are some longer distance commuters destined for London, Maidenhead, Basingstoke, Newbury, Theale and the Blackwater Valley.

9.7.7. There is a limited amount of inbound very localised commuting from mainly from areas within Wokingham and Reading Boroughs that lie to the north of the M4.

Figure 9-10 - Commuting patterns in Lower Earley



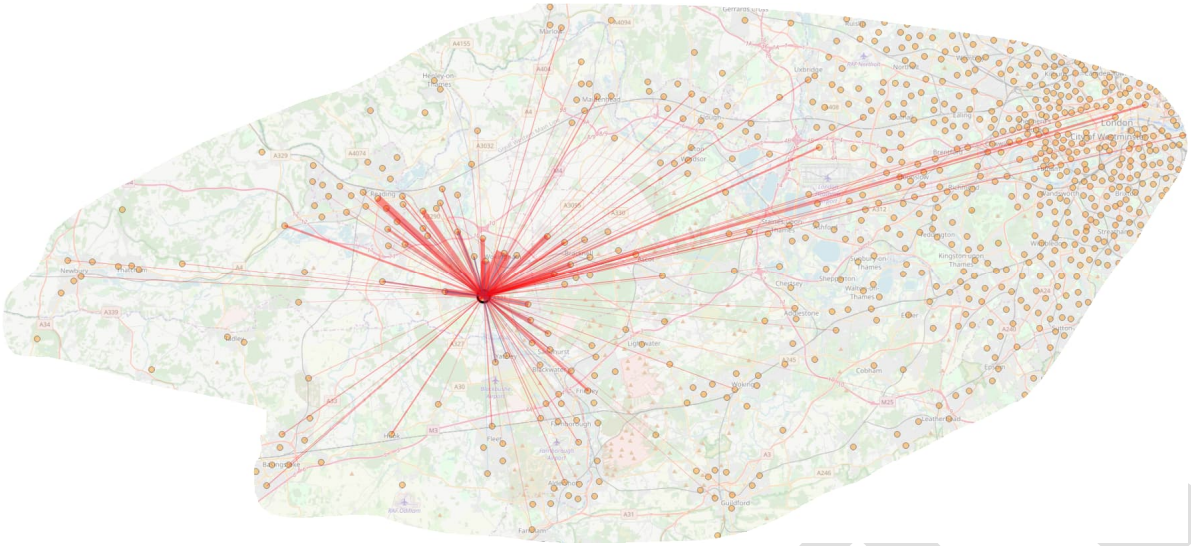
Source: 2011 Census Mapping, DataShine Commute, Oliver O'Brien and James Cheshire

FINCHAMPSTEAD

9.7.8. Commuting patterns in Finchampstead are shown in Figure 9-11that highlights that almost all commuting is outbound with commuters destined for locations across Wokingham and Reading Borough and also Bracknell Forest. There is also a limited amount of longer distance commuting to London, Maidenhead, Heathrow, Basingstoke, Newbury, Theale and the Blackwater Valley.

9.7.9. The is a very limited amount of inbound local commuting from nearby parts of the Borough, along with nearby parts of Bracknell Forest and Yateley.

Figure 9-11 - Commuting patterns in Finchampstead



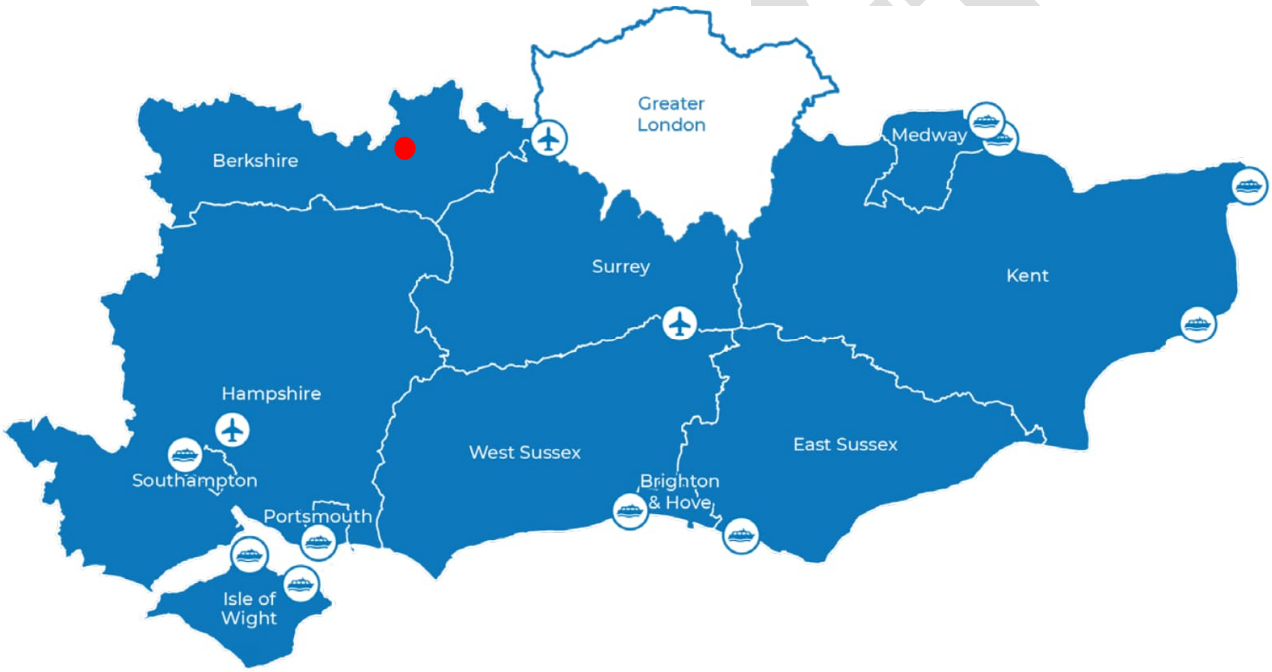
Source: 2011 Census Mapping, DataShine Commute, Oliver O'Brien and James Cheshire

10 REGIONAL AND NEIGHBOURING AUTHORITY TRANSPORT PLANS

10.1 INTRODUCTION TO TRANSPORT FOR THE SOUTH EAST

10.1.1. Transport for the South East (TfSE) is the Sub-National Transport Board (STB) that covers Wokingham Borough and surrounding areas in the South East. as shown by the areas in blue in Figure 10-1 below, the red dot shows the approximate location of Wokingham. TfSE covers 16 local transport authorities, five local enterprise partnerships, 46 district and brough councils and a wide range of stakeholders from transport, business and the environment.

Figure 10-1 - The Areas Covered within Transport for the South East



Source: TfSE Transport Strategy, 2020

10.1.2. TfSE is a key region outside of London adding more to the UK economy than any other region outside of London. Its ports, airports and railway links provide a key gateway for Britain into Europe and the rest of the world, whilst the roads and railway network help to tie the local area together. This helps to provide key transport links for the people and businesses that are helping to drive innovation across a wide range of growing industries. However, there are parts of the transport network under strain at certain times and interventions that could further support the regions priorities.

10.1.3. TfSE have produced a Transport Strategy, Strategic Investment Plan (SIP) and a Future Mobility Strategy for the area, all which detail interventions and measures for the area. Interventions set out within its Transport Strategy can be adapted to meet the specific needs of places within the area.

10.2 TRANSPORT STRATEGY

10.2.1. The TfSE Transport Strategy sets out its ambitious vision for the region, which is underpinned by three goals, a set of priorities to achieve these goals and a further five principles.

10.2.2. The vision for the Transport Strategy for TfSE is as follows:

"By 2050, the South East of England will be a leading global region for net-zero carbon, sustainable economic growth where integrated transport, digital and energy networks have delivered a step change in connectivity and environmental quality. High quality, reliable, safe, and accessible transport network will offer seamless door-to-door journeys enabling our business to compete and trade more effectively in the global marketplace and giving our residents and visitors the highest quality of life".

10.2.3. The goals and principles have been set around three areas: Environment, Economy and Society and include supporting sustainable economic growth, protecting the environment, creating great places to live, putting people first, and planning regionally for the short, medium and long-term.

10.2.4. In regard to developing the strategy and directing potential future investment, TfSE have considered the opportunities and challenges around different journey types. This has been done through considering how and why a wide range of people travel and goods are moved. A total of six types of journeys have been identified, these are listed below based on how applicable they are to Wokingham:

- **Radial Journeys (Wokingham to London and the rest of the South) –** Longer journeys using major road and motorway networks as well as main line railways to/from central London. These included journeys within the South East and to the South West and South Midlands. The big challenges to be addressed are congestion and overcrowding, and the subsequent air and noise pollution were major routes pass through urban areas.
- **Inter-Urban Journeys (Wokingham to Bracknell / Reading) –** Medium-distanced journeys between main towns and cities in the region, most commonly to Bracknell and Reading. Bus is the primary means of public transport, but growing congestion could harm its viability. Bus sector support is key because it has better integration with active travel.
- **Local Journeys (Within Wokingham) –** Short distance journey to destinations within the same village, town or city, and includes walking and cycling. They also include first/last stage of longer distance journeys. Better connected and low-cost public transport is key to reducing congestion and pollution as well as improving safety in urban areas and connectivity in rural areas.
- **Future Journeys (Within Wokingham) –** These are any journeys using emerging technology – including e-scooters, car club schemes and smart ticketing. This is a rapidly developing area. TfSE have commissioned a separate Future Mobility Strategy to consider this further.
- **Orbital and Coastal Journeys –** Longer east-west passenger journeys across the South East region. There are fewer roads and railways to facilitate this movement, so the routes have a lower capacity than radial corridors. Investment here needs to focus on speeding up journey times, especially by rail, as it's currently faster and easier to travel via London.
- **Internal Gateways and Freight Journeys –** The South East's ports, airports and international rail links are vital to the UK economy, jobs and commerce. Investment is needed for new public transport links to airports alongside road and rial links to ports. TfSE also supports investment into freight schemes to move goods from lorries/vans to rail and other lower carbon modes.

10.2.5. The next steps for TfSE are to carry out area and thematic studies to identify specific schemes and policy initiatives that will be needed in different parts of the region, as well as developing a Strategic Investment Plan based on the outputs of the area and thematic studies. The next steps will be getting statutory status and securing funding for the region. This will all be developed in future engagement in conjunction with key stakeholders from across the region.

10.3 TRANSPORT STRATEGY AND WOKINGHAM BOROUGH

10.3.1. Wokingham Borough is positioned on one of the identified strategic corridors between Reading and Bracknell, both areas are considered Major Economic Hubs – see below for more information. In 2018, TfSE published the Economic Connectivity Study Review which provided an overreaching view of the economic geography and potential up to 2050 in the South East. It identified key priority industrial sectors which Wokingham Borough falls within both IT and Advanced Engineering and Manufacturing.

10.3.2. Key information identified within the Transport Strategy in relation to Wokingham Borough are:

- Key Priority Industrial Sectors: IT and Advanced Engineering and Manufacturing.
- Household Increase (2014-2041): 7500-15,000
- Job Increase (2014-2041): 7500-10,000
- Journey time by public transport to Central London – 60-90 minutes, with parts of the borough taking less than 60 minutes (Twyford and Wokingham Station)
- AQMA and Localised AQMAs identified – Wokingham town Centre, Twyford Crossroads and Wokingham M4
- Road Noise Decibels – M4 and A329 (M) are high, and to a lesser extent the A329 and the A321.

10.4 STRATEGIC INVESTMENT PLAN FOR THE SOUTH EAST

10.4.1. TfSE have produced a draft Strategic Investment Plan (SIP) for the South East which covers a 30-year period and sets out 24 regional packages of complementary, multi-modal interventions that aim to deliver the vision and objectives of the STB. These have been developed through workshops and discussions with partners, stakeholders and technical advisors to deliver the STBs vision and objectives as well as supporting wider local, regional and national policies and priorities.

10.4.2. Wokingham sits within the Wessex Thames region and TfSE have developed an Active Travel Rail Package, Mass Transit and Highways packages of interventions for the area. The total expected capital investment into the area is £10.4billion. Table 10-1 below summaries the aims and objectives of each package for the Wessex Thames Area.

Table 10-1 – Summary of aims for each package within the Wessex Thames Area

Active Travel Package	Rail Package	Mass Transit Package	Highway Package
270,000 more active travel trips a day	At least 90,000 additional trips each weekday	Almost 450,000 more bus and mass transit trips each weekday	Improve air quality in urban areas
240,000 fewer car journeys each weekday	More than 3700 new jobs created	At least 250,000 fewer car journeys each weekday	Additional £90million of Gross Value Added a year by 2050

30,000 tonnes less CO_2 equivalent emitted a year	More than 3000 new residents accommodated	1300 more jobs supported	
	15,000 tonnes less of CO_2 equivalent embittered a year	At least 50,000 fewer tonnes of CO_2 equivalent emitted a year	

Source: TfSE Draft SIP, 2022

10.4.3. Table 10-2 below summaries the interventions for each package that are relevant or related to Wokingham.

Table 10-2 – Summary of each intervention within Wokingham for each package

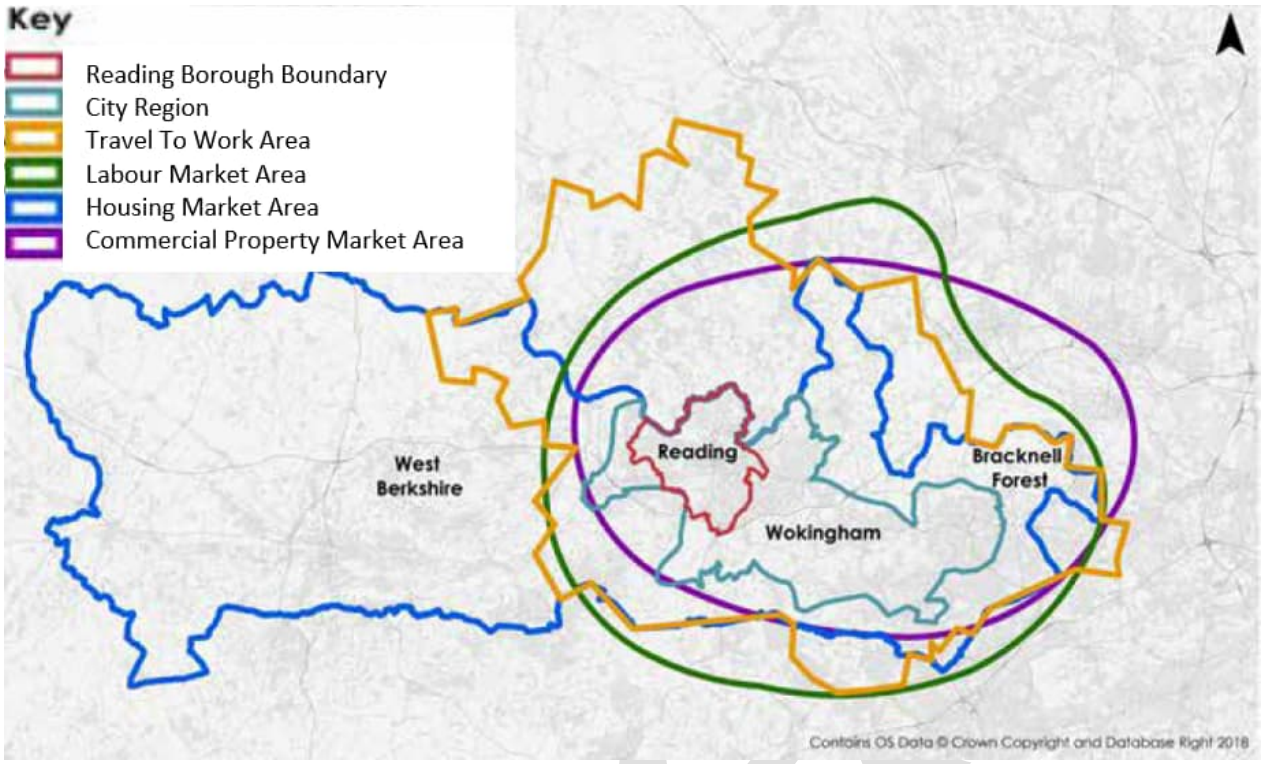
Active Travel Package	Rail Package	Mass Transit Package	Highways Package
Berkshire, Hampshire and Surrey Urban and Inter-urban cycleways	Reading to Waterloo Service Enhancements	Bracknell / Wokingham Bus Enhancements	M4 Junction 10 Safety Enhancements
		A4 Reading - Maidenhead – Slough – London Heathrow Airport Mass Rapid Transit	A329 (M) Smart Corridor
		A329 / B3408 Reading – Bracknell / Wokingham Mass Rapid Transit	M4 Junction 3 to Junction 12 Smart Motorway (SMP)

TfSE Draft SIP, 2022

10.5 READING TRANSPORT STRATEGY 2036

10.5.1. The draft Reading Transport Strategy 2036 sets out a plan for developing the area's transport network to 2036 and beyond. The strategy also includes cross-boundary schemes and initiatives. Figure 10-2 below shows the different areas within Reading and neighbouring authorities that are captured within different areas. Wokingham is factored into the strategy within Readings wider city region, travel to work area, commercial property market area and labour market area. This highlights that Wokingham is fully within eh Reading TTW.

Figure 10-2 - Reading Transport Strategy Region and Surrounding Areas



10.5.2. The strategy sets out a vision which is to "deliver a sustainable transport system in Reading that creates an attractive, green and vibrant town with neighbourhoods that promote healthy choices and wellbeing. Future mobility options will enable everyone in Reading to thrive, enjoy an exceptional quality of life and adapt to meet future challenges and opportunities". Five strategic objectives have been developed to help achieve this vision, these are:

- Creating a clean and green Reading.
- Supporting healthy lifestyles.
- Enabling sustainable and inclusive growth.
- Connecting people and places; and
- Embracing smart solutions.

10.5.3. The Reading strategy identifies car congestion as having a negative impact on the public transport network and services, especially during the peak periods. Figure 10-3 below shows the key public transport corridors that are negatively impacts by car congestion during the PM peak. This highlights the A329 and routes with Earley, Woodley and into Shinfield are negatively impacted.

10.5.4. The draft LTP strategy highlights an opportunity to improve these routes where there are movement conflicts and bus delays. An example of measures to improve this is introducing 'Red Routes' which aims to keep buses moving and reduce delays for passengers, whilst improving safety for pedestrians and cyclists. Following on from this the strategy sets out a proposed strategic public transport network as shown in Figure 10-4, with both rail and bus connection that run into / through Wokingham.

10.5.5. Two identified measures include ‘Quality Bus Corridors’ with improvement measures including road space reallocation, red routes, bus priority, bus gates and many more. The A329 from Reading to Winnersh Triangle, A327 connecting the university, Shinfield and Arborfield, and Woodley are identified as Quality Bus Corridors. The second is ‘Fast Track Public Transport Corridors’ which includes designing to meet the needs of buses and future public transport modes. These routes include the A329 from Reading to Coppid Beech Park and Ride and the B3270 Lower Earley Road.

Figure 10-3 - PM Peak Car Congestion Impacting Bus Services

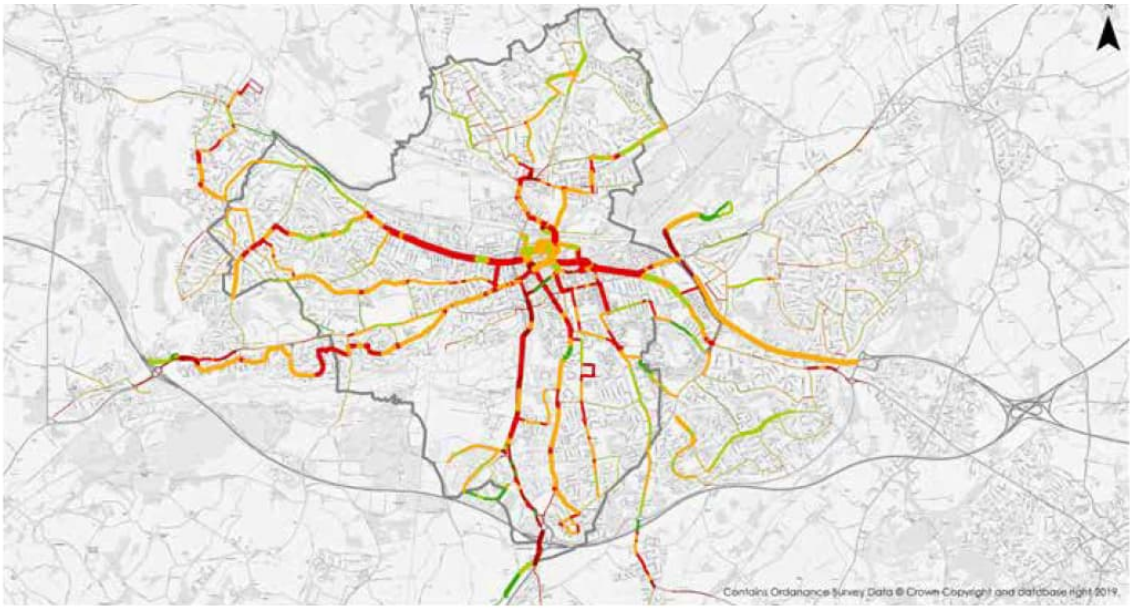
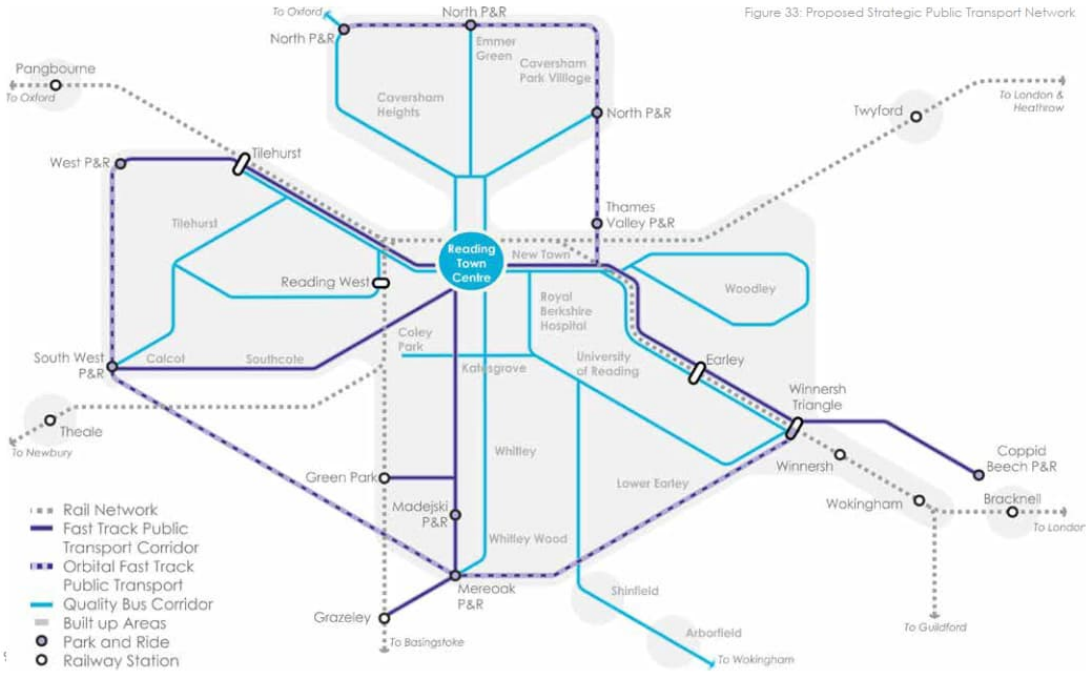
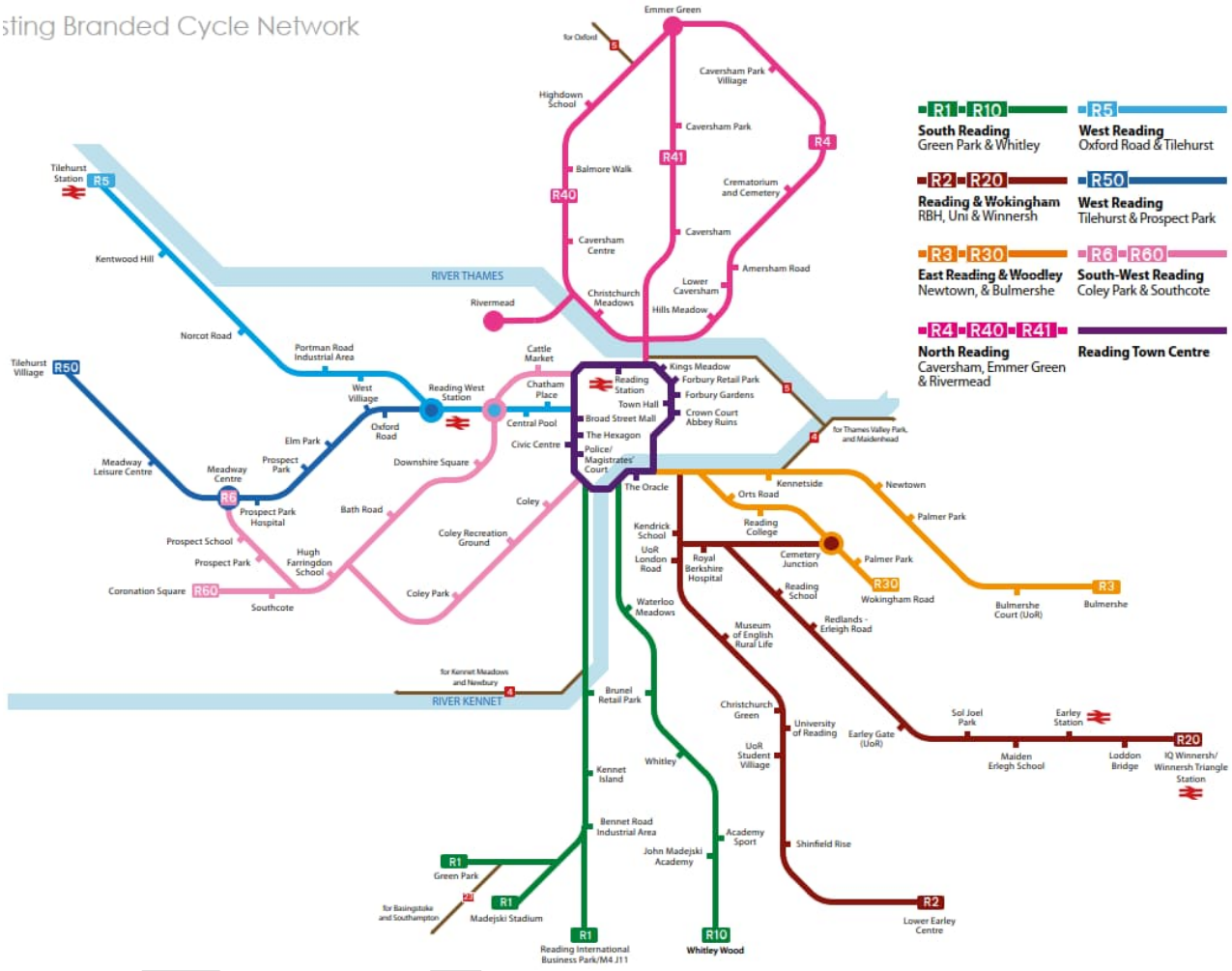


Figure 10-4 - Proposed Strategic Public Transport Network for Reading



10.5.6. Reading is developing a series of branded and colour coded local cycle networks, as shown below in Figure 10-5. There are three routes that connect into Wokingham which are the R3 / R30 route connecting into Woodley, the R20 connecting into Winnersh and the R2 connecting in Earley. The route R10 connects into Whitely Wood which can also impact Wokingham residents.

Figure 10-5 - Existing Local Cycle Network in Reading



10.5.7. The strategy identifies a list of different schemes and measures for Reading. Table 10-3 below summaries the schemes that relate to Wokingham.

Table 10-3 – Schemes relating to Wokingham within the Reading Transport Strategy

Scheme	Description	Delivery Partners	Timescale
Mereoak Park and Ride Expansion	Increased parking provision, EV charging points and facilities hub	Wokingham Borough Council (WBC)	2020 - 2025
Thames Valley Park and Ride	A new 260 space P&R west of Thames Valley Park. Served by the	WBC	2020 - 2025

Scheme	Description	Delivery Partners	Timescale
	existing shuttle bus services between the P&R and Reading.		
Green Park Station	New railway station serving Green Park and wider southern Reading area.	NR, GWR, West Berkshire Council	2020 - 2025
Cycle Hire Scheme	New cycle hire scheme to serve Reading and key destinations across wider area.	Private sector, WBC, OCC, West Berks Council	2020 - 2025
East Reading FTPT Corridor	FTPT corridor in the eastern area of Reading linking Thames Valley P&R and the Town Centre	WBC, Public transport operators	2020 – 2030
Winnersh Triangle Park and Ride Enhancements	Increase parking capacity and improve P&R services including the provision of more electric charger points.	WBC	2020 - 2030
Cycle Parking Hubs and Facilities	Provision of secure & covered cycle hubs at transport interchanges, electric charging points and bicycle repair facilities	NR, GWR, SWR, local community	2020 - 2030
South Reading Fast Track Public Transport Corridor	Staged delivery of FTPT route along the A33 linking Mereoak P&R - South Reading business parks - Kennet Island - Madejski Stadium - Reading town centre	WBC, Public transport operators, Royal Berkshire Hospital, University of Reading, Private sector	2020 – 2030
Orbital Fast Track Public Transport	Delivery of orbital FTPT corridors, linking key transport hubs, residential areas and employment areas	WBC, West Berkshire Council, Public transport operators	2020 – 2036+
Third Thames Crossing East of Reading	New multi-modal river crossing with bus priority and segregated walking and cycling facilities linking eastern Caversham and the northern end of the A3290. Links to other proposed schemes including the East FTPT route, North Reading P&R facilities and the North Reading Orbital Route.	WBC, OCC, DfT South Oxfordshire District Council Local Parish and Town Councils Highways England	2020 – 2036+

10.5.8. Reading Borough Council has identified the following priority investment schemes to enhance the connectivity of Reading. The schemes relating to Wokingham are:

- Comprehensive M4 smart motorway and enhancements to the major road network.
- Measures to improve rail through the Elizabeth Line, electrification, and other measures to de-carbonise the railway network.

10.5.9. The strategy recognises the need to work with neighbouring authorities and the following schemes relate to Wokingham and help connect Reading with the wider region:

- Enhance the FTPT network through the southeast public transport corridor proposed within Wokingham's current strategy which includes proposals for high-quality express bus services along the A329 corridor.
- Comprehensive Park and Ride network complemented by other Park and Rides in the region including Coppid Beach Park and Ride. The Coppid Beach P&R facility will serve people travelling to Reading from Bracknell and eastern parts of Wokingham. This will link to the overall network through the East and South FTPT corridors providing an attractive alternative to the private car for those travelling to Reading from the east.

11 FUTURE DEVELOPMENT

11.1 OVERVIEW

11.1.1. Future development in the borough is currently outlined in the adopted Core Strategy (January 2010) and sets out the key elements of the vision for the development of the borough until March 2026. It includes 21 policies and strategies to provide new housing, schools, roads, places to work and other services. The strategy planned for at least 13,230 new dwellings being delivered over the plan period (2006 – 2026).

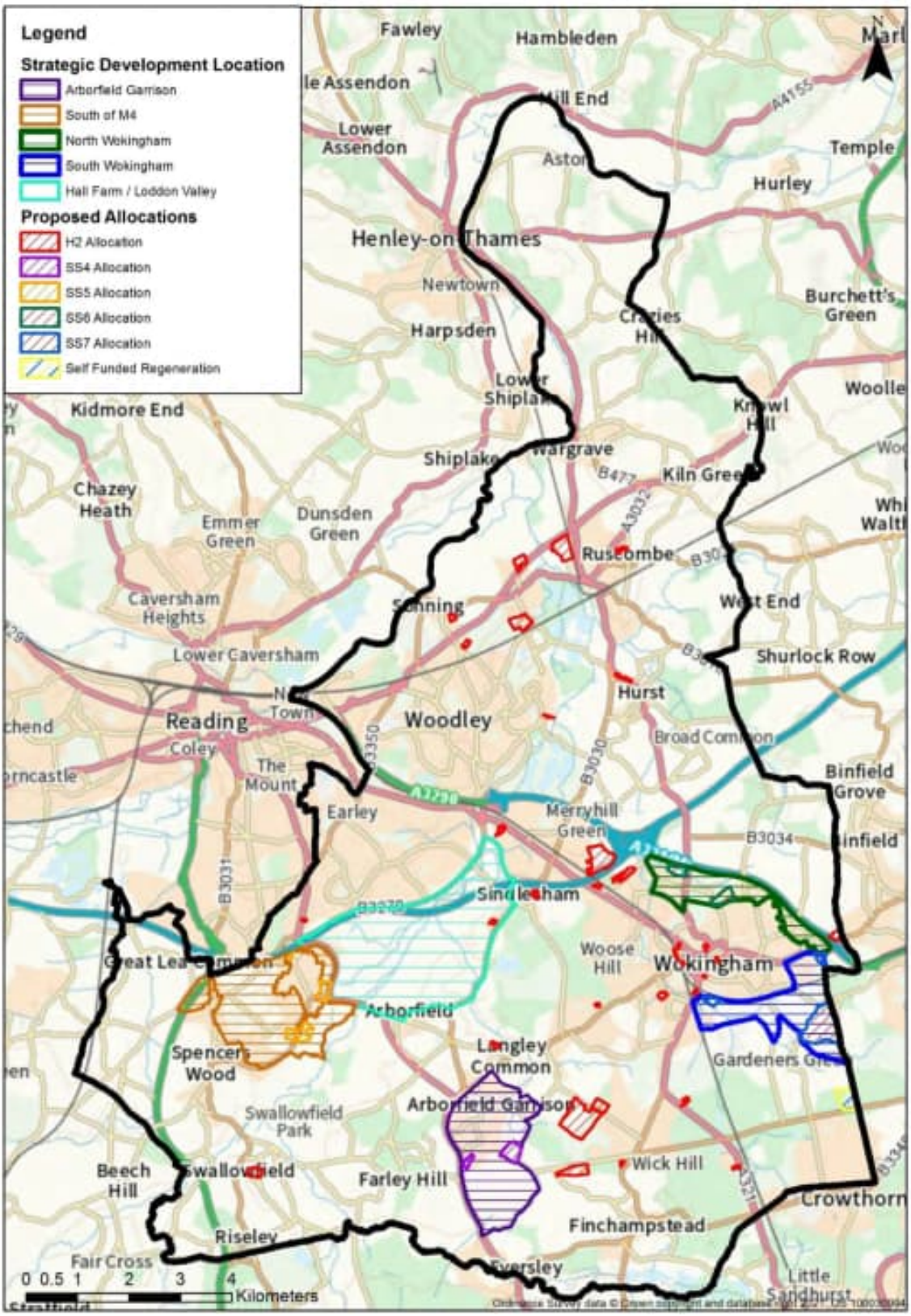
11.1.2. Following the Core Strategy, the Managing Development Delivery Local Plan (February 2014) was developed to build on the Core Strategy and includes more detailed policies for the development of the borough. It was adopted on 21 February 2014 and sets out the planning criteria to be used to determine applications for planning permission in the borough. The document includes specific development allocations towards the housing requirement of at least 13,230 new dwellings.

11.1.3. Wokingham Borough Council is currently developing an updated Local Plan which will shape the future of Wokingham Borough. The updated local plan will guide where and how growth will take place in the borough in the years up to at least 2038. It is expected that the Local Plan Update will be completed ('adopted') by 2025.

11.1.4. Figure 11-1 below shows the Local Plan Update proposed allocations which are required to achieve the delivery of approximately 14,000 dwellings over the plan period 2018-2038. This includes a proposed strategic development in the Hall Farm / Loddon Valley area. It also identifies the location of the four existing SDLs, these are: Arborfield Garrison, South of the M4, North Wokingham and South Wokingham which will continue to deliver housing and infrastructure during the new plan period.

11.1.5. It should be noted that the Local Plan Update is a draft document and subject to change. A further consultation on the local plan update was planned in summer 2022, however changes to the council's political administration resulted in this not going ahead. An updated Local Development Scheme will be published in due course.

Figure 11-1 – Local Plan Update proposed spatial strategy



11.2 STRATEGIC DEVELOPMENT LOCATIONS (SDLS)

11.2.1. Figure 11-1 above shows the SDLs identified within the borough as part of the emerging Local Plan Update, which includes the four existing SDLs and the proposed Hall Farm / Loddon Valley development. Two of these sites are located near Wokingham town (North Wokingham and South Wokingham). For North Wokingham, roughly 1,600 dwellings have been completed. The Northern Distributor Road has been built to support these developments and provide access through the site.

11.2.2. Improvements to transport capacity along the A321 and A329 including the delivered Northern Distributor Road (NDR) from the A329 (near the M4 over-bridge) to the Coppid Beech roundabout are planned to facilitate development. Measures to improve accessibility by forms of active travel along the A321 and A329 corridors are also planned. Cycle and pedestrian movements will be supported by an internal network of Greenways to connect to Wokingham town centre and the Toutley Industrial Estate.

11.2.3. For South Wokingham, the development north of the railway line has already been completed which includes a primary school and food store. The area south of the railway has been granted planning permission with construction to take place in the next few years. This southern section includes a major new road, a second primary school and a neighbourhood centre. Future plans include the development of the land south of Waterloo Road for 835 dwellings, land to the west of St Anne's Drive and south of London Road for 54 dwellings and Gray's Farm for outdoor and indoor sports and community uses. Additional area for housing at land south of Gipsy Lane are proposed to provide 17 dwellings. Plans also include continued improvements to transport capacity along the A321 and A329 including the provision of the Southern Distributor Road and measures to continue to improve accessibility by forms of active travel along the A321 and A329 corridors.

11.2.4. Another SDL, South of the M4, is located near to Shinfield and the other Reading facing towns. At this site, around 2,200 dwellings have been built with many still under construction. To support this development, the Eastern Relief Road was constructed in 2017. The Alder Grove CofE Primary School opened in 2020, this was the first of two planned new schools. Work to deliver a new supermarket as part of the Shinfield neighbourhood centre is also underway. The identification of land north of Arborfield Road, Shinfield, for 191 dwellings and land east and west of Hyde End Road for 175 dwellings will be proposed alongside Lane End House for 5 dwellings. Improvements to the highway capacity along the A327 (on routes to Reading and the M3), the A33 (route to Reading) were identified as necessary through a Transport Assessment alongside measures to improve accessibility by active travel along the A327 and A33 corridors and routes to the stations at Green Park and Winnersh Triangle.

11.2.5. The fourth SDL is located within the rural area in the south of the borough at Arborfield Garrison where around 1,200 dwellings are already complete. The Arborfield Cross Relief Road (Observer Way) opened in 2020 to facilitate the development and connect it the A327 towards Shinfield which helps to remove traffic from Eversley Road and Reading Road. Two new schools have opened on site which will help to reduce the need for car travel at peak times. Future plans include retail and social facilities, a second primary school, employment land (up to 12,000sqm) and 150 new dwellings. There are planned improvements for transport capacity along Barkham Road and Barkham Bridge, the A327 (to both the M3 and Reading) and routes towards Bracknell and Wokingham (including the extension of Nine Mile Ride to the A327). Measures to improve active travel facilities include improvements to the frequency of public transport services along the A327,

B3030, B3349 and B3430 routes to Bracknell, Reading, Winnersh and Wokingham. An internal network of Greenways to connect existing and new communities at Arborfield SDL to Finchampstead North and Crowthorne will prioritise cycle and pedestrian movements through the site.

12 ACTIVE TRAVEL

12.1 INTRODUCTION

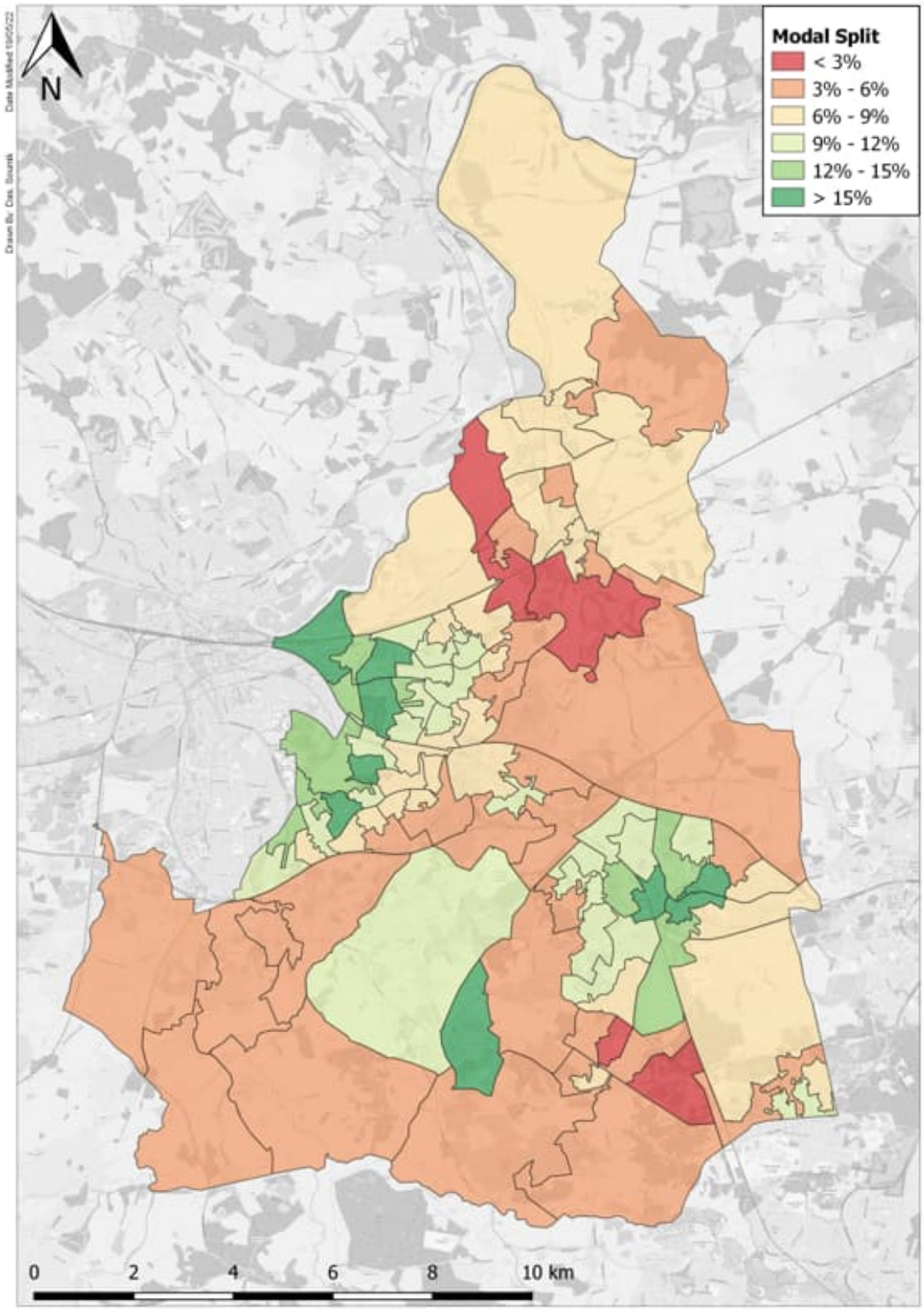
12.1.1. This section details the existing active travel network across the Borough of Wokingham. This includes information on the walking and cycling infrastructure currently available, including Public Rights of Way (PRoW) and level current levels of walking and cycling in the borough.

12.1.2. Active travel directly aligns with the goals of the Climate Emergency Action Plan (CEAP) which includes a target to increase active travel by 10% to assist in reducing carbon emissions. Increased physical activity also helps improve public health and support a shift away from car dependency and foster healthier, more connected communities.

12.2 ACTIVITY LEVELS ACROSS THE BOROUGH

12.2.1. Figure 12-1 below shows the mode share of walking and cycling across the borough, with green areas representing the highest areas of use/adoption. Although the mode splits are based on commuting trips, it is likely to provide a suitable proxy for other trip purposes, such as education, shopping and leisure. This figure highlights that walking and cycling is more common in town / urban centres such as Wokingham town Centre and Reading facing towns such as Earley, Woodley and Shinfield. Other rural areas and Market Towns in the borough generally have lower walking and cycling levels.

Figure 12-1 - Walking and Cycling Mode Share of Commuter Trips

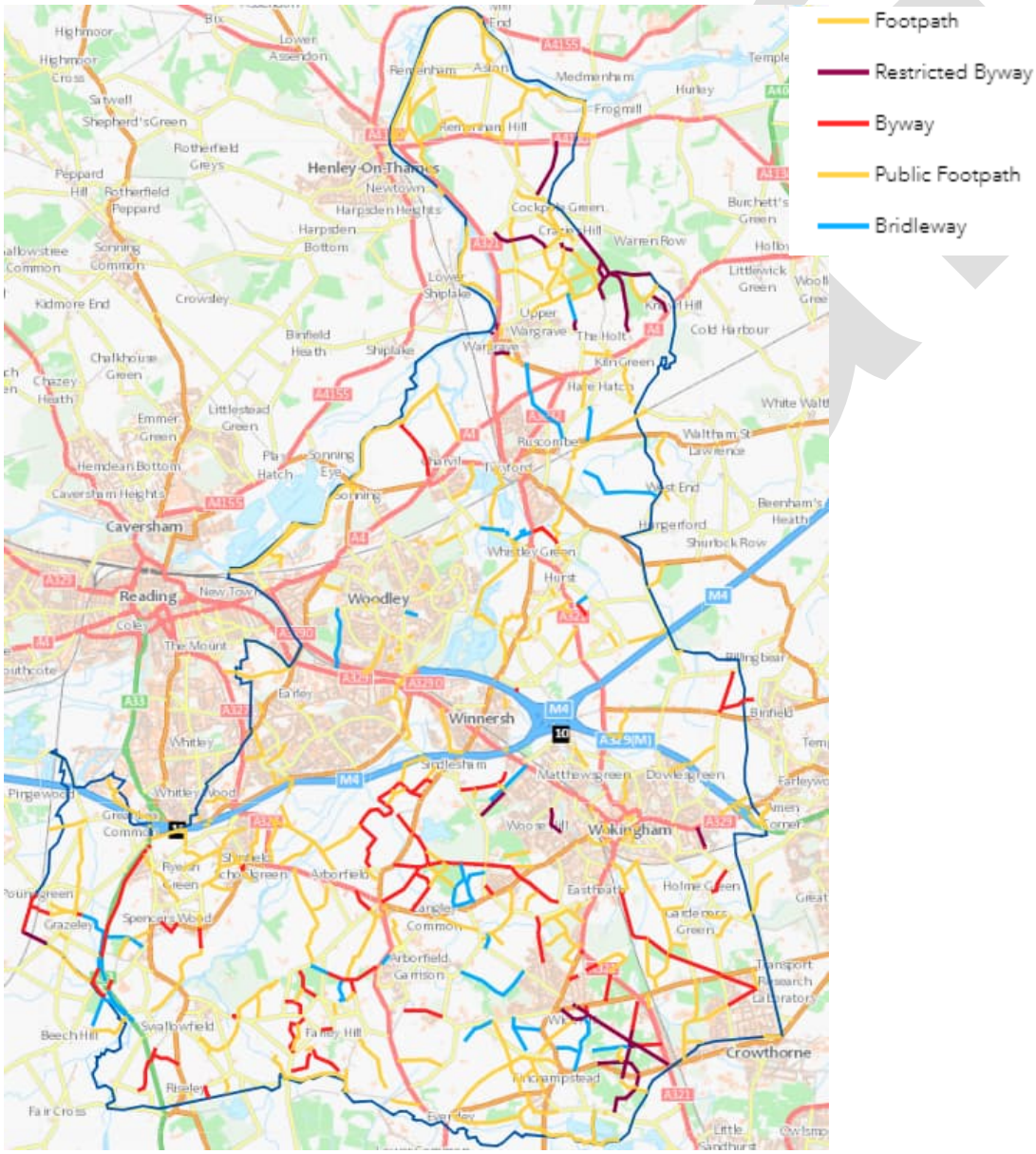


12.3 PUBLIC RIGHTS OF WAY

12.3.1. Public Rights of Way (PRoW) are areas of land, commonly tracks or path, that allow people to walk, cycle, ride and drive along. PRoW is made up by different types, including, byways open to all traffic, restricted byways, bridleways, footpaths and footpaths with limitations.

12.3.2. There is a network of PRoW across Wokingham Borough which make up a total of 164km, as shown below in Figure 12-2, and accounting for 18% of the total network of highway maintained at public expense (HMPE). The PRoW network consists of 69% public footpaths, 14% byways open to all traffic, 11% bridleways, 5% restricted byways and 1% footpaths with limitations.

Figure 12-2 - Public Rights of Way in Wokingham Borough



Source: Wokingham.gov.uk My Nearest, 2020

12.3.3. The parishes of Wargrave, Finchampstead and Shinfield, with approximately 20 kilometres each, have the greatest amount of PRoW within the area, by comparison Twyford, Charvil, Ruscombe and Sonning have the least (all with less than 5km).

12.3.4. The Borough currently has different plans and strategies to help improve the walking and cycling networks, including the PRoW network. This includes the Public Rights of Way Improvement Plan which was adopted in March 2020. The plan seeks to improve information; create new links and fill in network gaps; increase usage of the network; provide access for all; improve and maintain the network, and plan for future improvements and developments. It also aligns closely with the 10-year Local Cycling and Walking Infrastructure Plan (LCWIP) that the Council is currently finalising in partnership with Reading Borough and West Berkshire councils.

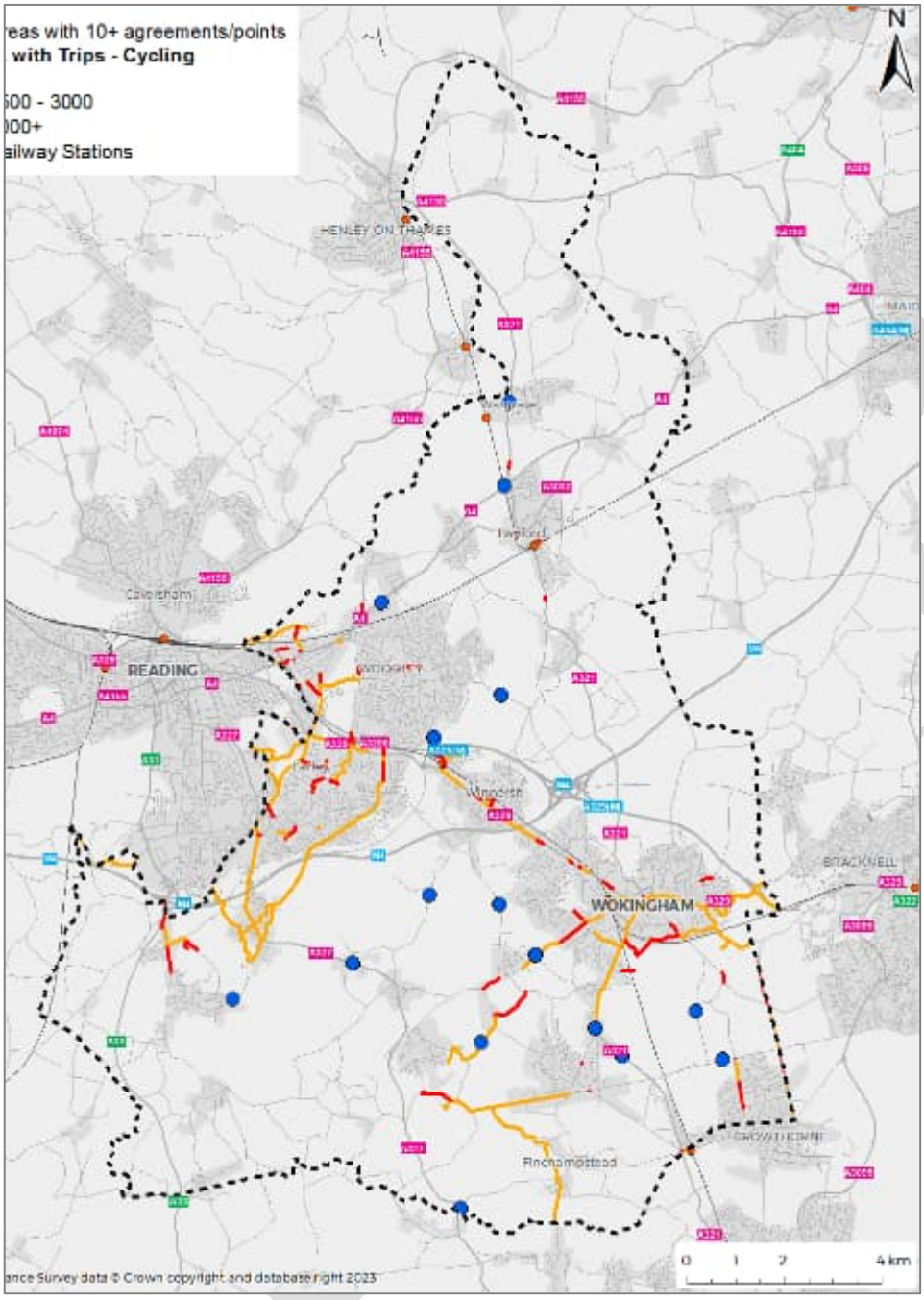
12.4 WALKING

12.4.1. Throughout the Borough of Wokingham there are a variety of urban and rural walking routes available which amounts to over 500km of footways available.

12.4.2. In urban areas footways are generally surfaced, well-lit and connected by a range of crossing points. However, the walking infrastructure available in the market towns and more rural parts of the borough is more varied with inconsistent provision of footways, some areas being poorly lit and the travel distances to local services, employment hubs and schools not conducive to walking.

12.4.3. Figure 12-3 below shows a borough wide extent of the most commonly used routes and highest levels of demand. Red represents routes that have a high level of use down to green and blue which have the lowest level of use. The green dots are destinations / walking trip generators within the borough and the pink polygons are major development areas.

Figure 12-3 - Common Walking Routes across Wokingham Borough



12.4.4. Figure 12-3 above shows that Wokingham town Centre and Reading facing towns (Earley, Woodley and Shinfield) having routes with the highest density of walking demand within the borough.

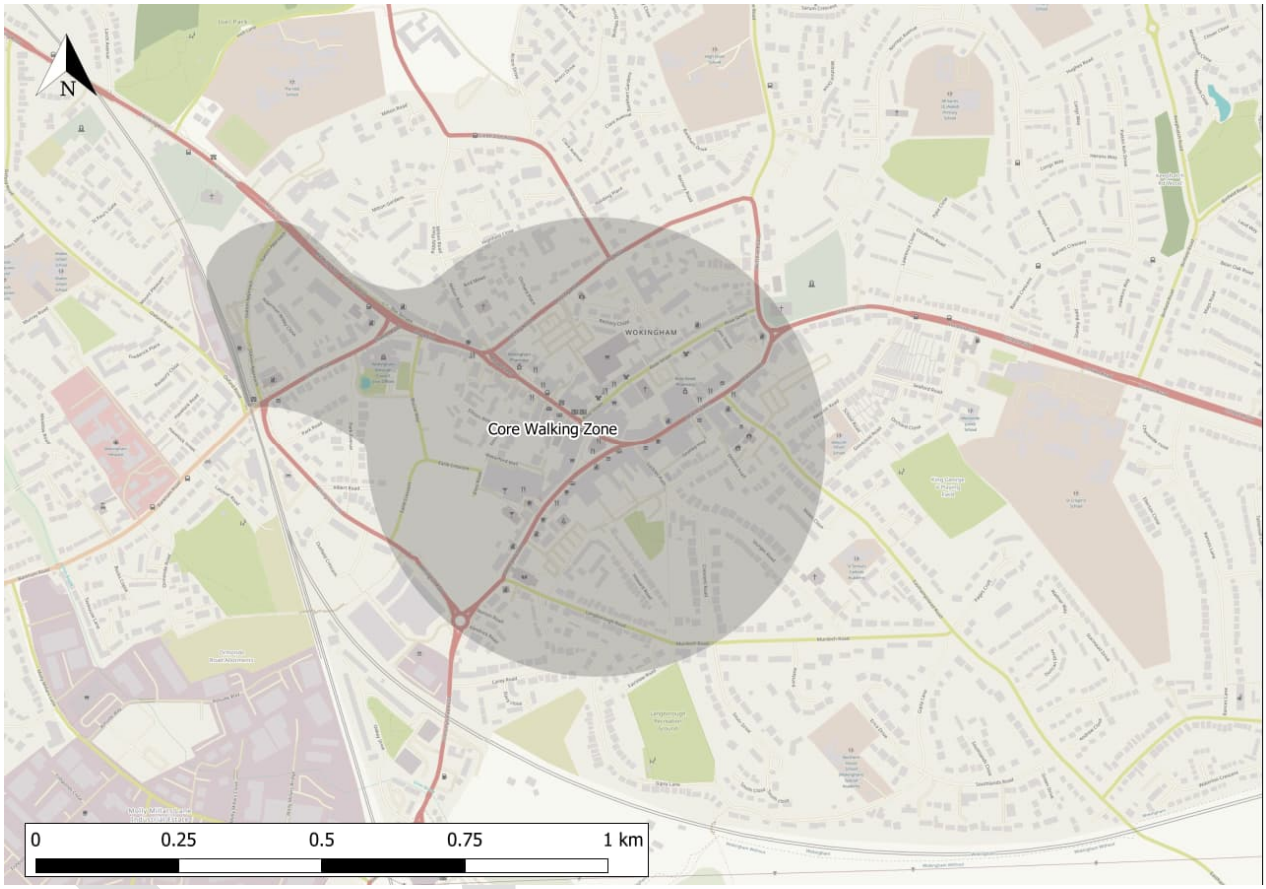
12.4.5. Outside of these areas, smaller market towns such as Twyford and Winnersh have some walking routes evident with a relatively high level of use.

12.4.6. Wokingham Borough Council is currently developing a Local Walking and Cycling Infrastructure Plan (LCWIP) to identify the priorities for improving walking and cycling facilities within the borough.

As part of this work, Core Walking Zones (CWZs) of approximately 5-minute walking distance from walking trip generators, are identified.

12.4.7. Figure 12-4 below shows the initial core walking zone identified within Wokingham town Centre. This incorporates much of the town centre including Broad Street, Peach Street, Denmark Street, parts of Rectory Road and extends west up Shute end and station road to include Wokingham Rail Station.

Figure 12-4 - LCWIP Core Walking Zone - Wokingham town Centre



12.5 GREENWAYS

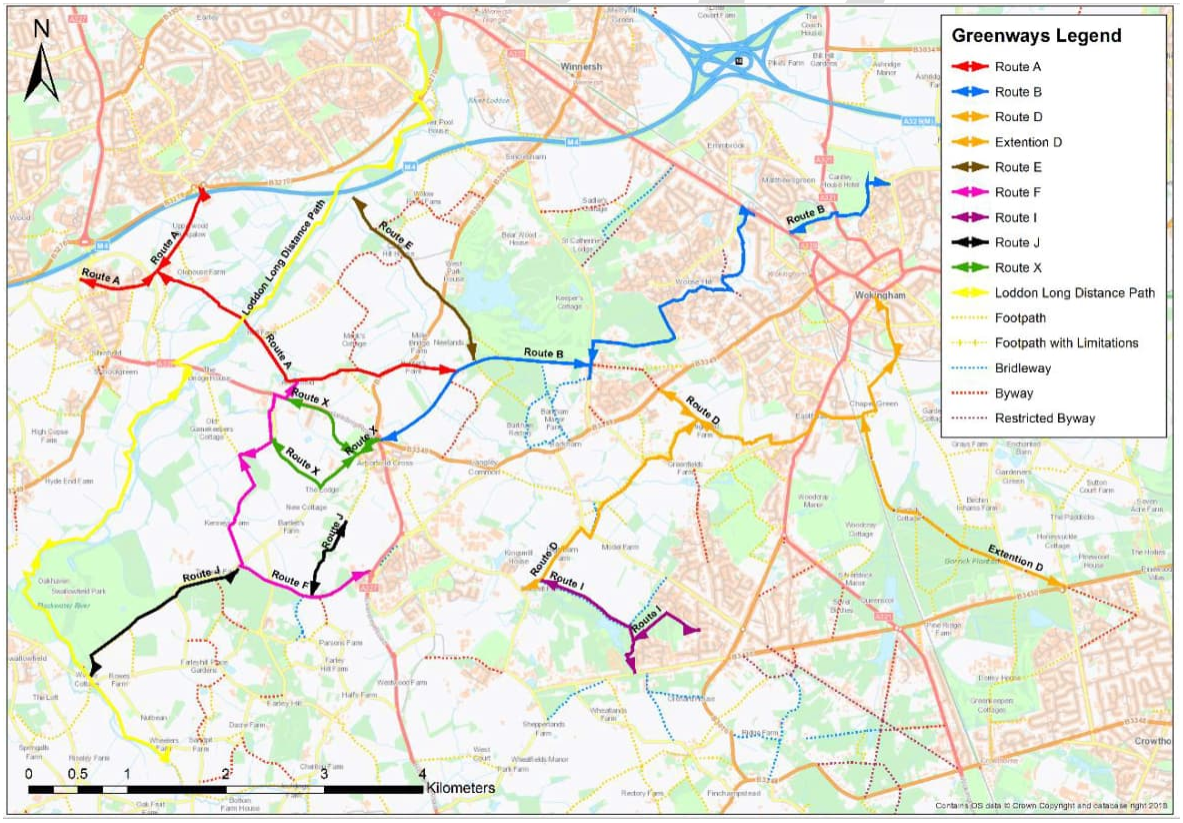
12.5.1. Greenways are continuous, generally traffic-free multiuser routes. Wokingham Borough Council aspires to have greenways linking new / existing developments to places of interest / employment. The proposed greenways in Wokingham Borough are detailed below in Table 12-1 and shown below in Figure 12-5.

Table 12-1 - Proposed Greenways Network routes

Route	Description	Length (km)
A	South of M4 SDL - Arborfield – Barkham	5.5
B	Arborfield SDL - Barkham – Wokingham	7.6
D	Arborfield SDL – Barkham – South Wokingham SDL – Wokingham	7.0
E	River Loddon – Arborfield	2.1
F	Arborfield – Arborfield SDL	4.0
I	Arborfield SDL – Finchampstead	1.9
J	Arborfield SDL – Blackwater Valley	2.9
K	Arborfield Cross	2.5
LSP	Blackwater Valley Path, Swallowfield to River Thames	30.61

Source: Wokingham Borough Council Greenways Strategy and Project Implementation Plan, 2019

Figure 12-5 - Proposed Wokingham Borough Greenway Routes

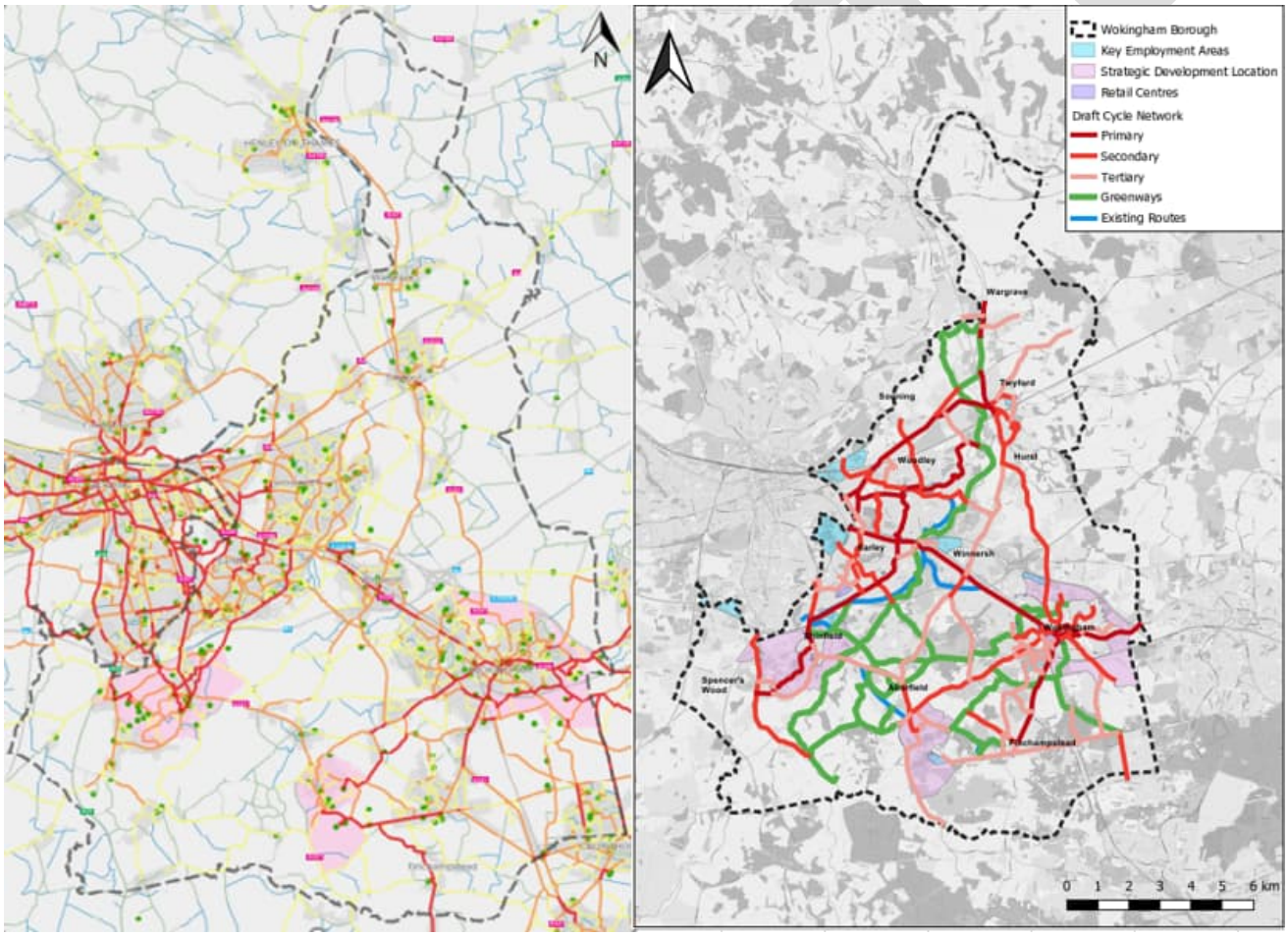


12.6 CYCLING

12.6.1. The existing cycle network consists of a mixture of 'on' and 'off' carriageway facilities. There are two National Cycle Network routes that run through the Borough. National Cycle Network route 4 runs through the heart of the Borough connecting Reading to Maidenhead, broadly following the route of the A4. In addition, National Cycle Network route 422 was completed in 2019 and provides a cross-boundary cycle route linking Newbury, Reading, Wokingham, Bracknell and Ascot.

12.6.2. Key cycle routes are being identified as part of the ongoing LCWIP preparation. Figure 12-6 below shows the existing cycle demand in the borough (left) and the proposed LCWIP network (right). The existing cycle demand is highest in the urban areas of Wokingham town and edge of Reading. The A329 corridor connecting Wokingham – Winnersh – Earley / Woodley – Reading reflects high demand for cycling, as similarly shown with walking. Another high demand corridor is the A321 between Wokingham and Finchampstead, this corridor also branches of to connect to Sandhurst.

Figure 12-6 – Cycle Demand (Left) and LCWIP proposed Cycle Network (right)



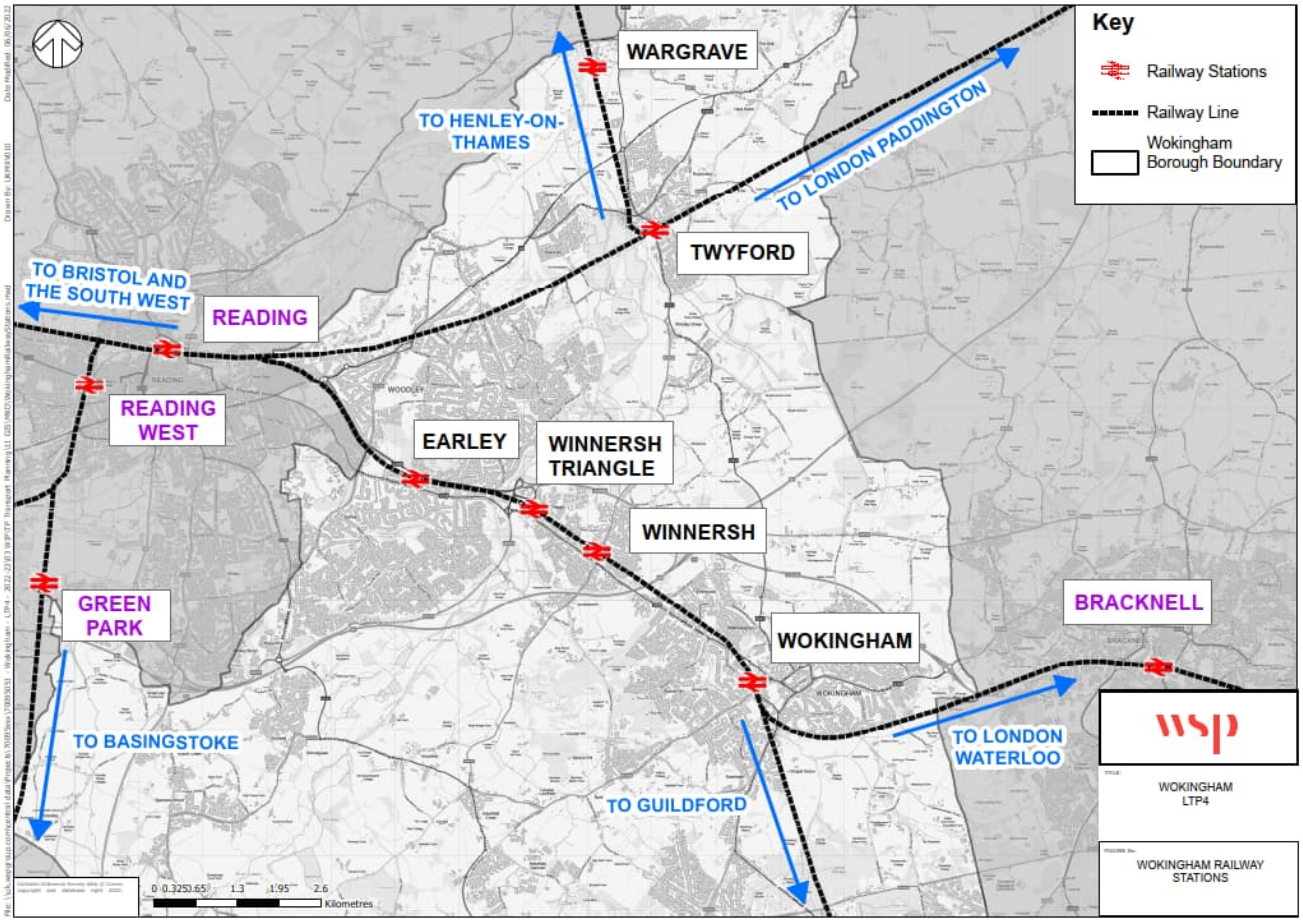
13 PUBLIC TRANSPORT – PROVISION AND USE

13.1 RAIL – WOKINGHAM BOROUGH

13.1.1. Wokingham Borough is well connected by rail with six stations located within the borough. These are Wargrave, Twyford, Earley, Winnersh Triangle, Winnersh and Wokingham.

13.1.2. Figure 13-1 shows the location of each railway station in the borough (black text) as well as local stations outside of the borough (purple text). The figure also shows the onward connection that each railway line provides (blue text). Twyford is located on the Great Western Main Line to London Paddington. Wargrave is located on the branch line between Henley-on-Thames and Twyford. There are three stations located on the line between Reading and Wokingham with services running to London Waterloo and Guildford. Bracknell is located outside of the borough on the London Waterloo line. Reading West and Green Park Station are located outside of the borough on the Basingstoke line. Reading station provides and interchange to services to Bristol and the South West as well as the rest of the country. A new station at Green Park opened in 2023.

Figure 13-1 - Railway Stations in Wokingham Borough



WOKINGHAM STATION

13.1.3. Wokingham sits on the South Western Line between Reading and London Waterloo. This service runs every 30minutes each day, with additional trains provided during the weekday peak times.

Journey times between Wokingham and London Waterloo are usually between 65-75 minutes. Journey times between Wokingham and Reading are typically 10-15minutes.

13.1.4. Wokingham also lies on the North Downs Line between Reading, Guildford and Gatwick Airport. During off peak periods there are two trains an hour, one calling at most stations and one limited stop service. A number of extra slow services are provided during the peak period at irregular intervals. Journey times between Wokingham and Guildford are around 30-40 minutes and to Gatwick Airport are around 70-80 minutes. Services on the North Downs line are formed of two or three coaches due to rolling stock and platform length issues at stations along the line and subsequently often suffer from overcrowding during peak periods.

13.1.5. As detailed in the Network Rail Wessex Route Strategic Plan 2019 to 2027, there is an aspiration to increase the service frequency on the North Downs line from two trains per hour to three trains per hour, as well as introduce new rolling stock. The proposal is currently under consideration, but it would need to be accompanied by level crossing safety improvements as well as performance modelling across impacted route areas.

TWYFORD STATION

13.1.6. Twyford is located on the GWR main line. This provides a direct service to London Paddington. London is one of the key employment destinations outside of the borough. Journey times between Twyford and London Paddington vary between 20-50 minutes.

13.1.7. Twyford is also served by trains on the newly opened Elizabeth Line (Crossrail) that is operated by Transport for London (TfL) and runs from Reading into London with direct links to Stratford, Abbey Wood, Docklands and Shenfield. In addition, these services will also serve the proposed Old Oak Common station on the HS2 line being built between London, Birmingham and the North.

13.1.8. In addition to its London to Reading services, Twyford is also served by GWR branch line trains providing a half hourly link between Twyford, Wargrave, Shiplake and Henley-on-Thames.

13.1.9. Twyford is served by up to eight trains an hour during weekday peak periods and four trains an hour during weekday off peak periods. London Services have various calling patterns with the TfL Elizabeth Line service being a slower service that stops are most stations. The GWR service has limited stops and is subsequently a faster service to London.

13.1.10. In the last two years, new electric trains have replaced almost all services from Twyford to London. Electric trains provide additional seating capacity compared to traditional diesel trains, which helps to address issues of overcrowding on services.

EARLEY STATION

13.1.11. Earley is located on the South Western Railway line between Reading and London Waterloo, which also passes through Wokingham. This provides a half-hourly service during off peak and weekends, additional trains run during the weekday peak hours. The journey time is approximately 80 minutes to London Waterloo and calls at multiple stations including Winnersh Triangle, Winnersh and Wokingham. The journey time to Wokingham is approximately 8 minutes.

13.1.12. GWR trains running between Reading and Gatwick Airport via Guildford pass through the station without stopping.

WINNERSH TRIANGLE STATION

13.1.13. Similarly with Earley, Winnersh Triangle is located on the South Western Railway line between Reading and London Waterloo. Up to four trains run per hour during peak periods, this reduces to two trains during the off-peak period and on Sunday's.

13.1.14. The journey time to Wokingham is approximately 6minutes.

WINNERSH STATION

13.1.15. Similarly with Earley and Winnersh Triangle, Winnersh is located on the South Western Railway line between Reading and London Waterloo. Services run every 30 minutes with additional trains during peak weekday times. The journey time to Wokingham is approximately 4 minutes.

13.1.16. The station is also located on the North Downs Line between Gatwick Airport and Reading via Guildford. GWR provides one service per hour in each direction on this line.

13.2 RAIL – READING AND BRACKNELL

READING

13.2.1. Reading railway station, located in the town centre, is a key interchange hub in the south and the second busiest interchange outside of London. The station is managed by Network Rail and is served by Great Western Railway, CrossCountry, TfL and South Western Railway.

13.2.2. The station sits on the GWR Main Line which connects Bristol Temple Meads to the west and London Paddington to the east. Services from the GWR Main Line also connect to the South Wales Main Line which enables connectivity to Newport, Cardiff and Swansea. Services from the GWR Main Line also connect onto the Bristol to Exeter Line which enables an onward connection from Reading to the West Country. To the west of the station is the Reading to Taunton Line which enables Reading to be connected to Taunton and onwards into Cornwall. Services from Reading also run to the north including Birmingham, Newcastle and Manchester and to the south including Bournemouth and Southampton.

13.2.3. The TfL Elizabeth Line opened in May 2022 and provides a regular connection into London Paddington. This is a slightly slower service the GWR service to London Paddington as it calls at more stations. The opening of the Elizabeth Line will provide greater capacity to travel to London Paddington from Reading.

13.2.4. CrossCountry services connect Reading to the North, including Manchester Piccadilly, and to the South, including Bournemouth.

13.2.5. South Western Rail services operate between Reading and London Waterloo and call at Wokingham and the other local railway stations within the borough as discussed above.

13.2.6. Green Park Railway Station is currently under construction in the south of Reading and sits on the Basingstoke to Reading line. The construction of this station is aimed to serve and improve connectivity for the Green Park business area, Reading FC stadium as well as the proposed development of the Green Park residential development.

BRACKNELL

13.2.7. Bracknell is located to the southeast of Wokingham and has a population of approximately 85,000. The railway station is located in the centre of the town. The station is located on the Reading to

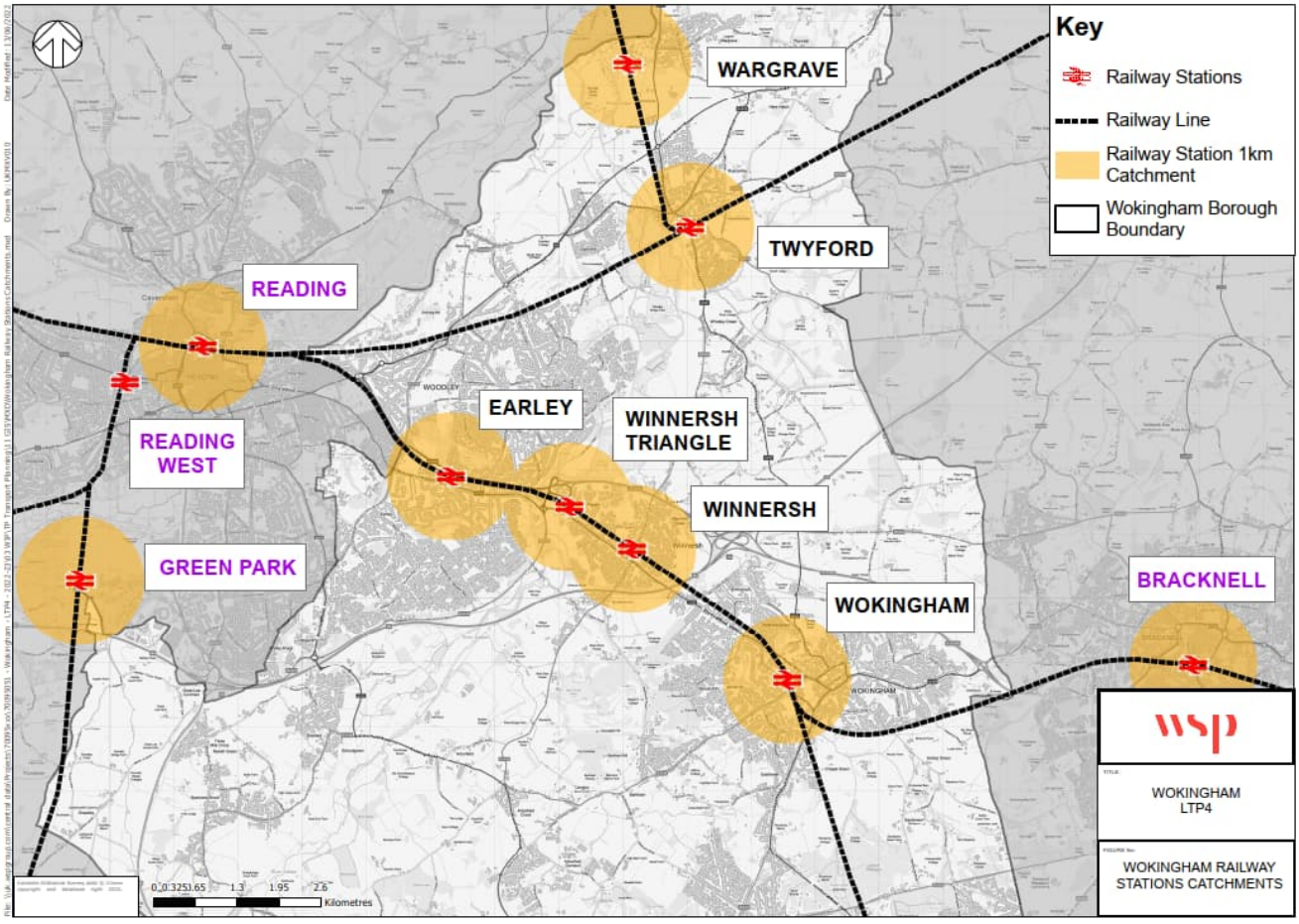
London Waterloo Line. Both the station and the train services are operated by South Western Railway.

13.2.8. Trains that run through Bracknell connect Reading in the northwest and London Waterloo to the east. These services stop at Bracknell station approximately every 30 minutes. The journey time to Reading is approximately 20 minutes and the journey time to London Waterloo is approximately 60 minutes. The journey time to Wokingham is approximately 7minutes.

13.3 RAILWAY STATION CATCHMENTS

13.3.1. Wokingham Railway Station is the largest station within the borough and is located within the town centre, therefore there is a large catchment that fall within a 1km radius of the station. Subsequently, it has the largest patronage level out of all six stations within the borough. Figure 13-2 below shows the 1km catchment for each station. This highlights the areas that fall within walking distance of each station.

Figure 13-2 - 1km Railway Station Catchments



13.3.2. Figure 13-2 above shows the 1km catchment of all six stations within Wokingham and the three key stations that are local to Wokingham. This shows that the six railway stations within Wokingham give relatively good coverage across the borough, including in the rural areas in the north. Green Park Station is also key as it has the potential to provide the rail connectivity to more rural communities in the south / southwest of the borough, notably Three Cross Miles, Spencer's Wood and Shinfield.

Outside of the borough, Bracknell and Reading are key employment destinations so rail can have a key role to supporting employment related trips.

13.3.3. **Railway Station Patronage**

13.3.4. Table 13-1 below shows the patronage levels for six railway stations in the borough and the local external stations. Due to the impact of the COVID-19 pandemic on public transport usage, data from 2020/21 shows a sudden dip in patronage, although additional comment on this is provided below. The green text indicates an increase in patronage levels from the previous year, red indicates a reduction.

Table 13-1 – Rail Patronage Levels for Rail Stations across Wokingham Borough and Reading Station and Bracknell Station

Railway Station Name	2010/2011 Patronage Levels	2014/2015 Patronage Levels	2018/2019 Patronage Levels	2021/2022 Patronage Levels	% Change 2010/11-2018/19	% Change 2010/11 – 2021/2022
Winnersh Triangle	0.32 million	0.491 million	0.402 million	0.121 million	**25.6%**	-62.3%
Twyford	1.233 million	1.369 million	1.508 million	0.801 million	**20.3%**	-35.0%
Wokingham	2.098 million	2.345 million	2.465 million	1.281 million	**17.5%**	-38.9%
Winnersh	0.442 million	0.521 million	0.513 million	0.262 million	**16.1%**	-40.7%
Earley	0.531 million	0.64 million	0.609 million	0.28 million	**14.7%**	-47.3%
Wargrave	78,180	95,910	87,760	40,916	**12.3%**	-47.7%
Reading	14.4 million	16.34 million	17.081 million	8.818 million	**18.6%**	-38.8%
Bracknell	1.977 million	2.315 million	2.328 million	1.191 million	**17.8%**	-39.8%

Source: Office for Rail and Road, Table 1415

13.3.5. The table above shows that overall, across the borough, rail patronage has decreased by approximately 46% from 2010/11 to 2021/22. The strict lockdown measures, travel restrictions, and work-from-home policies implemented to curb the spread of the virus have resulted in a sharp decline in the number of people using trains for commuting and leisure purposes. Winnersh Triangle Railway Station has seen the greatest decrease in patronage levels of 62.3% compared to patronage levels of 2010/11.

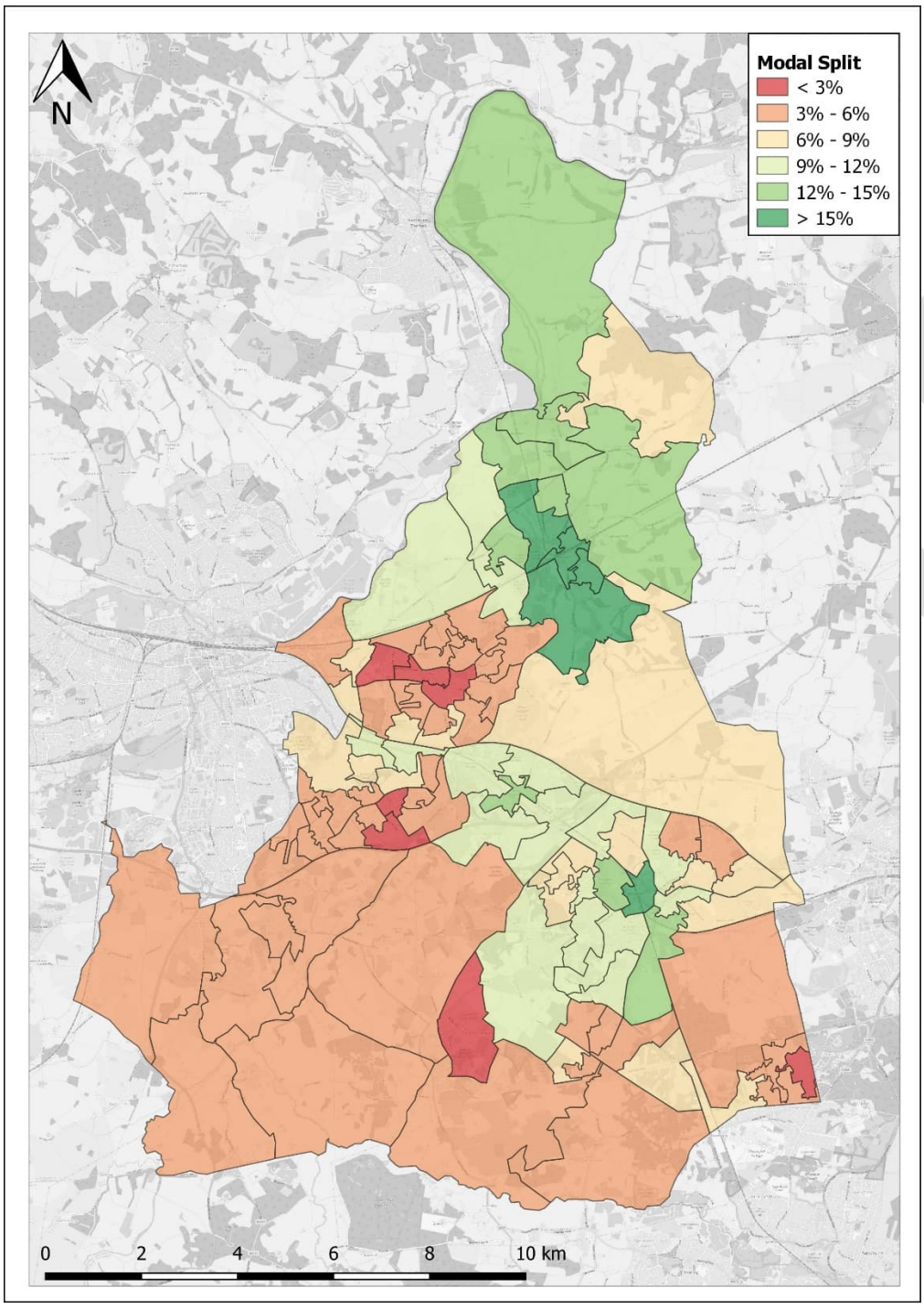
13.3.6. Also, From the above table it is evident that, across the borough, rail patronage has increased by approximately 20% from 2010/11 to 2018/19. Wokingham Station has the highest patronage level throughout the borough across the timeframe. However, the largest increase in patronage levels between 2010/11-2018/19 is at Winnersh Triangle at 25.6%. It is worth noting that the growth is relative to the size of the train station. Wargrave has seen the smallest growth in patronage at 12.3%. Outside of Wokingham Borough, Reading Railway Station has seen the greatest increase in patronage levels at 18.6% between 2010/11-2018/19.

13.4 TRAVEL TO WORK DATA

13.4.1. To gain a better understanding of how people travel to work throughout different parts of the borough, census data for the different wards have been assessed. This was to see how many people travelled to work within the town, within the borough and then to other areas outside of the borough such as Bracknell, Reading and London and by which mode of transport.

13.4.2. Figure 13-3 below shows the modal split for rail for each of the MSOAs in Wokingham Borough. This shows that most of the borough has a less than 9% mode share with rail. It also shows that Twyford has the highest rail mode share. This is likely to be reflective of the high level of service that is available at Twyford Station to London Paddington and other parts of central London.

Figure 13-3 - Rail Mode Split Across Wokingham Borough



13.4.3. In terms of mode choice for commuting, when travelling to London, public transport was generally the most common mode choice, with approximately 40-50% travelling to work via train. This compares to only 23% of trips to Reading being made by rail of those that work in that area. Only 5% of commuter trips to Bracknell are made by rail despite there being trains running between Wokingham and Bracknell every 30 minutes.

13.5 RAILWAY STATION SUSTAINABLE MOBILITY PLANS

13.5.1. Wokingham Borough Council (WBC) and South Western Railway (SWR) have worked together to produce 'Sustainable Mobility Plans' for all SWR managed stations within the borough. These are: Wokingham, Winnersh, Winnersh Triangle and Earley Railway Station.

13.5.2. The plans set out a five-year plan for collaborative delivery between WBC and the rail operator to improve sustainable travel to and from the stations. They also give more detail on the desired mode share targets for sustainable modes, a description of the measures required to achieve these targets and associated timeframes. Table 13-2 below summaries the key areas for improvement identified within the railway station mobility plans.

Table 13-2 – Summary of Areas for Improvement in Railway Station Mobility Plans

Station	Areas for Improvements
Wokingham	Lack of dedicated cycle route to station Lack of secure cycle parking at the station. Lack of morning, evening and weekend bus services. Either seek to improve co-ordination of bus and rail services and/or provide shared mobility choices Lack of Electric vehicle charging points, consider phased introduction of charge points to reflect increasing demand.
Winnersh	Quality of pedestrian and cycle infrastructure in/around station. Limited cycle parking - part-sheltered and unsecured. Lack of early morning and late evening bus services. No car park at the station and limited interchange choices. Seek to formalise taxi rank and/or provide shared mobility choices.
Winnersh Triangle	Long pedestrian and cycle waiting times to cross Wharfedale Road. Minimal cycle parking provision. Not accessible by wheelchair and concern about user security. Seek to improve dropped kerbs, tactile paving, lighting and surveillance along Cavendish Gardens. No bus stop shelters, shared mobility or demand responsive bus services. Consider improving interchange between rail and the park and ride services. Low car parking prices. Consider adjusting and introducing a phased increase of electric vehicle spaces in response to growing demand.
Earley	Poor pedestrian facilities on Station Road. Consider improving to making walking more appealing in the local area. Consider improving security of cycle parking. Low bus frequencies and no shared mobility options. Consider introducing micro/ shared mobility options and/or coordinating bus and rail services. No electric vehicle charge point provision.

13.5.3. Twyford station on the GWR line has also been the subject of accessibility studies and its significance has increased due to opening of the Elizabeth Line. There is poor bus interchanging with no space or facilities for buses and passengers to wait. Car parking has restricted supply and car passengers identified buses as having the greatest potential as an alternative to the car. Barriers for bus use are poor frequencies, no buses from Woodley and uncertainty of where to catch a bus.

13.6 BUSES& COACHES

13.6.1. . There are several commercial routes delivered by Reading Transport Limited (which includes Reading Buses and Thames Valley Buses). The borough endeavours to reduce congestion on these routes and work closely with the operator to provide attractive services. The Council does not provide vehicles and has limited influence on commercial operators' use of vehicles.

13.6.2. The Council has an important role in delivering bus services as many services require subsidies to be operational Service contracts for supported services are an important means of provision of services and are an opportunity to ensure services are of high quality in terms of safety, passenger environment and environmental sustainability.

13.6.3. The dominant operators are Reading Buses and Thames Valley Buses, who are the same company. So, while this has advantages in terms of coordination of routes and fares, there is limited direct competition. Coach services also deliver some of the routes.

13.6.4. Bus operations in the Borough can be split into three groups: Key corridors, urban areas and rural low-density areas. These are considered below:

Key Corridors:

13.6.5. **A329** – the main east-west corridor through the Borough which connects Wokingham Town, Winnersh and Earley to Reading and Bracknell. The corridor follows the London Waterloo rail line and provides connections to local stations. There are also several secondary schools and the route is branded with Reading Buses "Lion".

13.6.6. **A329(M)** – accommodates the park and ride service from Winnersh Triangle Business Park to Reading Town Centre. It includes an existing bus lane and priority on the approach to Sutton Business Park. The services are branded with the Park and Ride livery. The Park & Ride bus service is withdrawn until summer 2023 due to a decking of the car park.

13.6.7. **A327** – connects Wokingham Town to Reading Town via the communities of Barkham, Finchampstead, Arborfield and Shinfield. The corridor is currently being enhanced to better service new development at Shinfield, Arborfield and Thames Valley Science Park. The corridor is branded with Reading Buses "Leopard".

13.6.8. **A33/ B3349** –.Currently bus services connect Reading Town Centre, with Thames Valley Science Park and Spencers Wood, as well as to the more rural villages of Swallowfield and Riseley. The busiest sections of the corridor are between Spencers Wood and Reading Town Centre. This corridor was remodelled in 2021 to extend the 600 services from Mereoak Park and Ride and corridor has the potential for growth due to development in the Shinfield area.

13.6.9. **A4/A321** –between Reading Town Centre and High Wycombe linking the communities of Woodley, Sonning, Charvil, Twyford and Wargrave. Thames Valley Business Park and Sutton Business Park are also located along this corridor. Twyford Station with the improved Elizabeth line and Wargrave

station with the Henley branch service are served by local bus services. There is no uniform branding on this corridor.

Urban Areas:

13.6.10. There are three main urban areas in Wokingham Borough with town services.

13.6.11. **Earley/ Lower Earley/ Maiden Erleigh** is a large residential area with a high proportion of family homes and range of local services including a secondary school, primary schools, shops, doctors' surgeries, and a supermarket. There are significant numbers of secondary age students using bus services to access schools in Reading, along the A3290 and in Woodley. The area is branded with Reading Buses "Claret" Service.

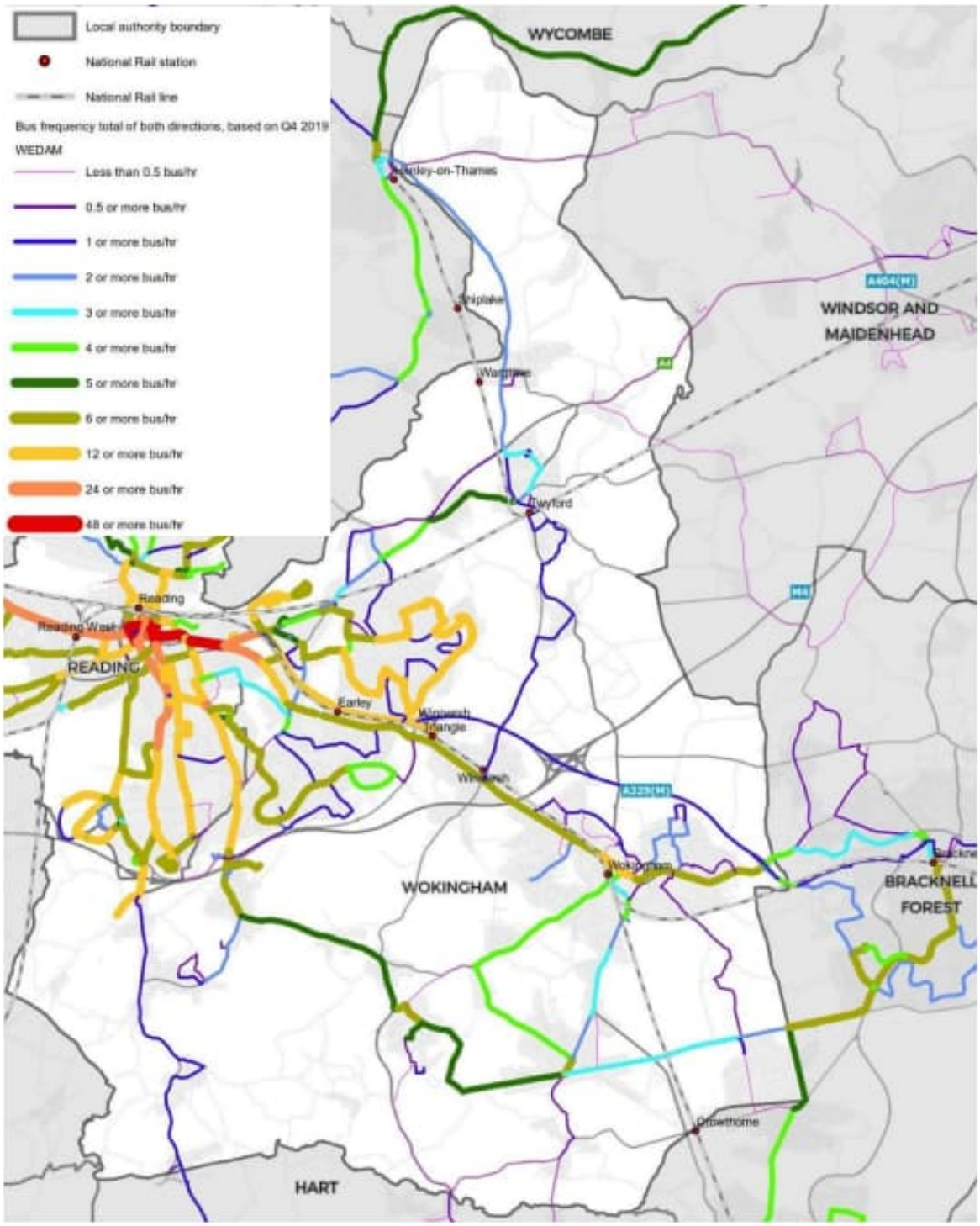
13.6.12. **Woodley and North Earley** – Woodley town centre has a good range of shops and is the main interchange for local bus services. Local bus services serve the surrounding residential areas with local orbital bus services. There are several primary schools and doctors' surgeries in the town. The area is branded with Reading Buses "Orange" brand.

Wokingham town and surrounding areas. The A329 and A327 corridors serve the town centre and the recently regenerated Wokingham Station. Local link bus services provide access from the surrounding communities of Emmbrook, Woosehill, the Norreys Estate, Easthampstead, Finchampstead and Barkham. There are also the areas of new development to the north and south of the Town along with a new park and ride site on the east of the town, boarding with Bracknell Forest Borough.

13.6.13. Rural and lower density areas are located to the north, south and east of the borough. The provision of rural area services is a challenge as serving a small, sparse population with very high levels of car ownership leads to low levels of patronage and high operating costs.

13.6.14. 5 below shows the frequency of buses along the bus routes within the borough during the AM peak (07:00-09:00). This shows that along routes within Wokingham town Centre and the Reading facing towns (Earley, Woodley and Shinfield) services run at a relatively high frequency with 6 or more buses an hour. Outside of these areas this rapidly falls to much lower frequency services with up to a maximum of four buses per hour and this decreases to 1 bus per hour connecting the most rural areas.

Figure 13-45 - Bus Frequency Map - AM Peak (07:00-09:00)



13.6.15. Frequencies on key corridors vary based on time of day and the day of the week and are summarised on Table 13-4. Turn up and go frequencies are in place on the A327 and A4 corridors on their busiest sections. Frequencies reduce as the routes serve less dense areas to the east. The A329 corridor frequency is 3 buses an hour throughout the day, reduced in 2021 from 4 per hour. Evening and Sunday services are provided in part on all key corridors.

Table 13-4 – Key Corridors – Local Bus Frequencies (buses per hour)

Corridor	Routes	Destination	Peak (M-Fri)	Off Peak (M-Fri)	Sat	Evening (M-Fri)	Sun
A329 Reading Wokingham - Winnersh- Bracknell	4, X4	Wokingham	3	3	3	1	2
		Winnersh	3	3	3	1	2
A327 Reading-Shinfield-Arborfield - Wokingham	3	Shinfield	6	5	5	2	2
		Arborfield	4	3	3	2	2
		Wokingham	1	1	1	0	0
A4/A321 Reading-Twyford-Wargrave-Henley	13/14	London Rd	6	6	6	2	2
	128/129/127, 850	Twyford	2	2	2	1	0
		Wargrave	1	1	1	1	0
		Henley	1	1	1	1	0
A329 (M) Winnersh-Reading	500	Reading	Service withdrawn until mid-2023, when work is completed on P & R				
A33/B3349	600	Mereoak P & R	2	2	2	2	0
A33/B3349	600	Spencers Wood, Shinfield Swallowfield & Riseley	1	1	1	1	0

13.6.16. The main urban areas have a higher frequency urban corridor service which are complemented by less frequent local urban link services. Table 14-5 summarises the service levels by bus per hour.

13.6.17. Earley and Reading the 21 provides a constant 3 buses per hour frequency into Reading, increasing in frequency at Reading University which lies on the Reading / Wokingham boundary. The 19a/b/c local link services provide local access from residential areas to local amenities and the Royal Berkshire Hospital. Resident feedback is that the direct link to the hospital is welcomed, but more frequent and direct services to Reading and Wokingham towns are desirable. Pre-pandemic monitoring of vehicle capacity during the morning travel period indicated that all services running out of Earley were at or over capacity. In some cases, passengers were unable to board the service they wanted

13.6.18. In Woodley the 13/14 circular services provide the main services into Reading on a half hourly frequency in each direction. The 13/14s are complemented by the Thames Valley Buses 128 service and the circular 19a/c services from Woodley Centre to Reading creating a 15-minute frequency,.

13.6.19. Selected parts of south and east Woodley experience a 20-minute frequency towards Reading and Woodley Centre through a combination of 13/14 and 19a/c services. More remote residential areas experience less frequent local bus services provided solely by the 19a/c bus service.

Table 14-5 – Urban Areas – Local Bus Frequencies (buses per hour)

Urban Area	Routes	Area	Peak (M-Fri)	Off Peak (M-Fri)	Sat	Evening (M-Fri)	Sun
Earley/Lower Earley /Maiden Erleigh	21	Earley	4	4	4	2	3
	19a/c,	Maider Erleigh	2	2	2	0	0
	19b	Lower Earley	1	1	1	0	0
Woodley and North Earley	19a/c	North Earley	2	2	2	0	0
	13/14 19a/c 128/127	Woodley Centre	7	7	7	2	2
	13/14 19a/c	East Woodley	6	6	6	0	0
	13/14 19a/c	South Woodley	6	6	6	0	0
Wokingham Town Centre and Surrounding Area	4/X4, 3 121, 122/3 124, 128/127/ 128, 151/A	Wokingham Town Centre	9	12	10	3	3
	121,151/A	North Wokingham	3	2	02-Jan	0	0
	124	South Wokingham	0	1per day	0	0	0
	125/A/B	Finchampstead	1	1 every 2 hours	1 per day	0	0
	3	Barkham	1	1	1	0	0
	122/3	Woosehill and Emmbrook	1	1	1	0	0

13.6.20. Local bus services along the A329 and A327 corridors travel into Wokingham town. Several local town link services provide access from surrounding residential areas into the Town Centre (Wokingham Broad Street) where they connect with the higher frequency services. Generally, the frequency of services from surrounding residential areas into Wokingham town is low, as in many cases, but not all, the bus competes with alternative travel choices such as walking and cycling.

13.6.21. Evening and Sunday services are only provided on the urban corridor routes which are provided through each of the urban areas.

13.6.22. Frequencies in low density and rural areas are generally reduced and are summarised on Table 14-6 below. The frequency of fixed line rural services is reflective of the lower populations living in these areas. Community transport providers and volunteer driver services operate across all the rural and low-density areas and facilitate travel for those without access to any alternative transport.

13.6.23. Apart from the rural corridor service which runs between Reading Town Centre and Riseley, no fixed route local bus services are provided during evenings or at weekends.

Table 15-6 – Rural / Low Density Areas – Local Bus Frequencies

Urban Area	Routes	Area	Peak (M-Fri)	Off Peak (M-Fri)	Sat	Evening	Sun
Northern Parishes	152, 127	Wargrave	0	1 / week	1	0	0
	127	Remenham	0	0	1	0	0
	128, 127	Sonning	1	1	1	0	0
	850, 128	Charvil	2	2	2	1	0
Southern Parishees	600, 145	Spencers Wood	1	1	1	1	0
	600, 145	Swallowfield	1	1	1	1	0
	600, 145	Riseley	1	1	1	1	0
	145	Finchampstead Village	0	1 / week	0	0	0
	125/A/B	Wokingham Without	2	0.5	1 day	0	0
Eastern Parishes	128 in part	Hurst	1	1	1	0	0
	127	Ruscombe	0	0	1	0	0

13.6.24. In terms for vehicles, Reading Buses lead the way with one of the youngest and most environmentally friendly fleets in the UK. 100% of the Reading Buses fleet is rated Euro 6 or ultra-low emission due to the reduced CO2 emissions that bio-gas buses produce compared to a normal diesel bus.

13.6.25. In regard to longer distance coach travel, National Express are they main coach provider in Wokingham Borough. National Express provide regular coach services to Brighton, London, Gatwick Airport, Heathrow Airport, the South West and South Wales from the Mereoak Park and Ride site. This is located just to the south of the M4 Junction 11.

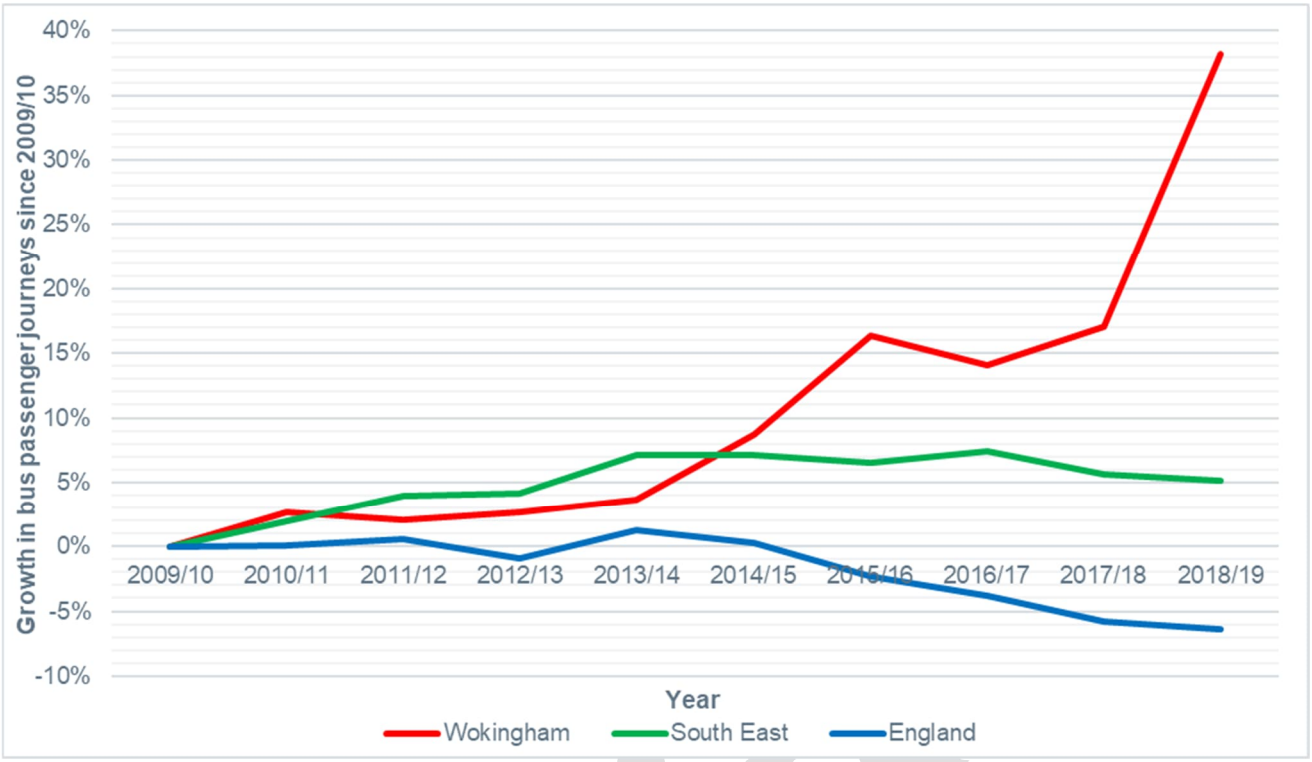
13.6.26. A Bus Service Improvement Plan 2 (BSIP2) was published in January 2023 which contains extensive details on bus operations and how these can be improved. An Enhanced Partnership is being set up with the operators that aims to bring the operators and borough closer together in delivering improved services.

13.7 BUSES – USAGE

13.7.1. Based on the DfT Local Bus Passenger Journey data, there has been a general increase in bus patronage over time within Wokingham Borough. This particularly evident when comparing this change to both the national and regional change in bus patronage. Figure 13-5 below shows that since 2013/14, there has been a relatively steep increase in bus patronage numbers in Wokingham Borough. This compares to a slight downward trend in the national and regional bus patronage numbers. Before 2013/14, Wokingham Borough was generally in line with the national and regional trends in that there is a steady increase in usage over time.

13.7.2. Table 13-3 shows that data that feeds into Figure 13-5 below. Green text indicates in increase in patronage levels from the previous year, red indicates a reduction.

Figure 13-5 - Percentage change in bus passenger journeys since 2009/10



Source: DfT Local Bus Passenger Journeys 2019 (BUS0109a)

Table 13-3 – Change in Bus Patronage – 2009/2010 – 2017/2018

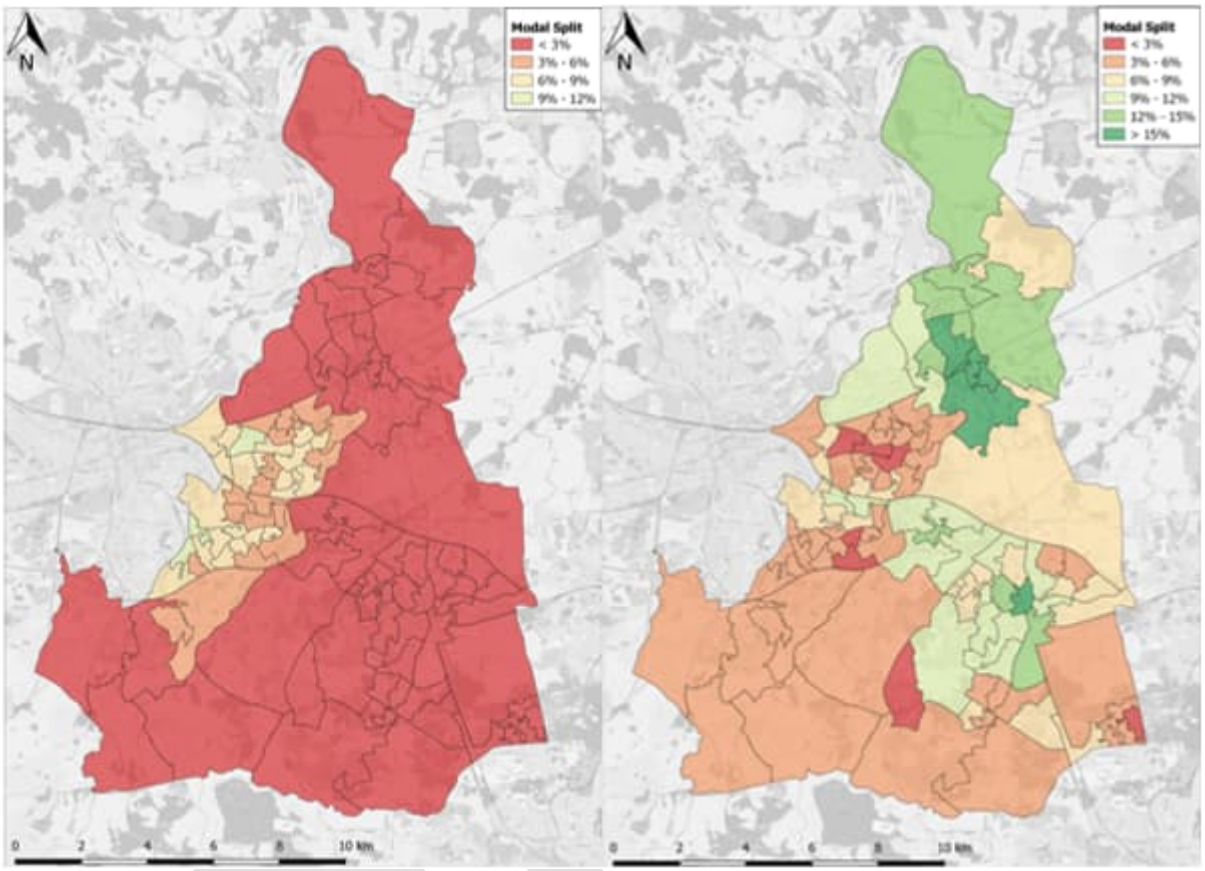
Location	2009/2010 Patronage Levels	2011/2012 Patronage Levels	2013/ 2014 Patronage Levels	2015/2016 Patronage Levels	2017/2018 Patronage Levels	% Change 2010/11 – 2018/19
Wokingham	**2.050 million**	**2.092 million**	**2.124 million**	**2.386 million**	**2.399 million**	**17.0%**
South East	**331.7 million**	**344.7 million**	**355.3 million**	**353.2 million**	**349.1 million**	**5.2%**
England	**4611.4 million**	**4638.0 million**	**4670.1 million**	**4507.5 million**	**4348.1 million**	**5.7%**

Source: DfT Local Bus Passenger Journeys 2019 (BUS0109a)

13.7.3. Both Figure 13-5 and Table 13-3 above show a greater increase in bus patronage from 2013/2014 and again from 2017/2018. The change from 2013/2014 is likely part of general annual increase in bus patronage that was further accelerated from 2015 with the opening of both Mereoak Park and Ride and Winnersh Triangle Park and Ride. The second increase in 2017/2018 is likely attributed to the introduction of electronic ticket purchasing on Reading bus services. Reading bus services cover most of the Borough and operate along the A329, A327, part of the A4, across most of Woodley and Early and both park and ride services.

13.7.4. Figure 13-6 shows the mode share to bus on the left-hand side and the mode share to rail on the right-hand side.

Figure 13-6 - Bus and Rail Modal Split Comparison



13.7.5. Figure 13-6 This highlights that bus usage above more than a few percent only occurs in the areas closest to Reading, such as Woodley, Earley and Shinfield. By comparison, rail usage more dispersed across the Borough, with the highest concentration of rail trips observed in and around Twyford and Wokingham town centre.

13.8 COMMUNITY TRANSPORT

13.8.1. The main provider of community transport services across Wokingham and Bracknell Forest is Keep Mobile. They operate a fleet of vehicles capable of transporting those in wheelchairs or who have difficulty in negotiating steps found on other forms of public transport. They provide a door-to-door service and enable over 14,000 passenger trips covering 1115,000km annually[14]. Fares for Borough residents start at £1.90 for a single 3km trip and increase with distance.

13.8.2. Additional community transport services are provided by other local operators including Readibus, EarleyBus, Wokingham Community Transport Scheme, and Twyford, Wargrave and District Volunteer Centre.

[14] http://www.keep-mobile.org.uk/

13.9 TAXIS AND PRIVATE HIRE VEHICLES

13.9.1. Taxis and private hire vehicles (PHVs) play an important role in enhancing accessibility for people without access to a car to get to places not served by public transport. They are used in Wokingham Borough to transport small numbers of school pupils and social services clients as they can prove more economical than deploying a bus.

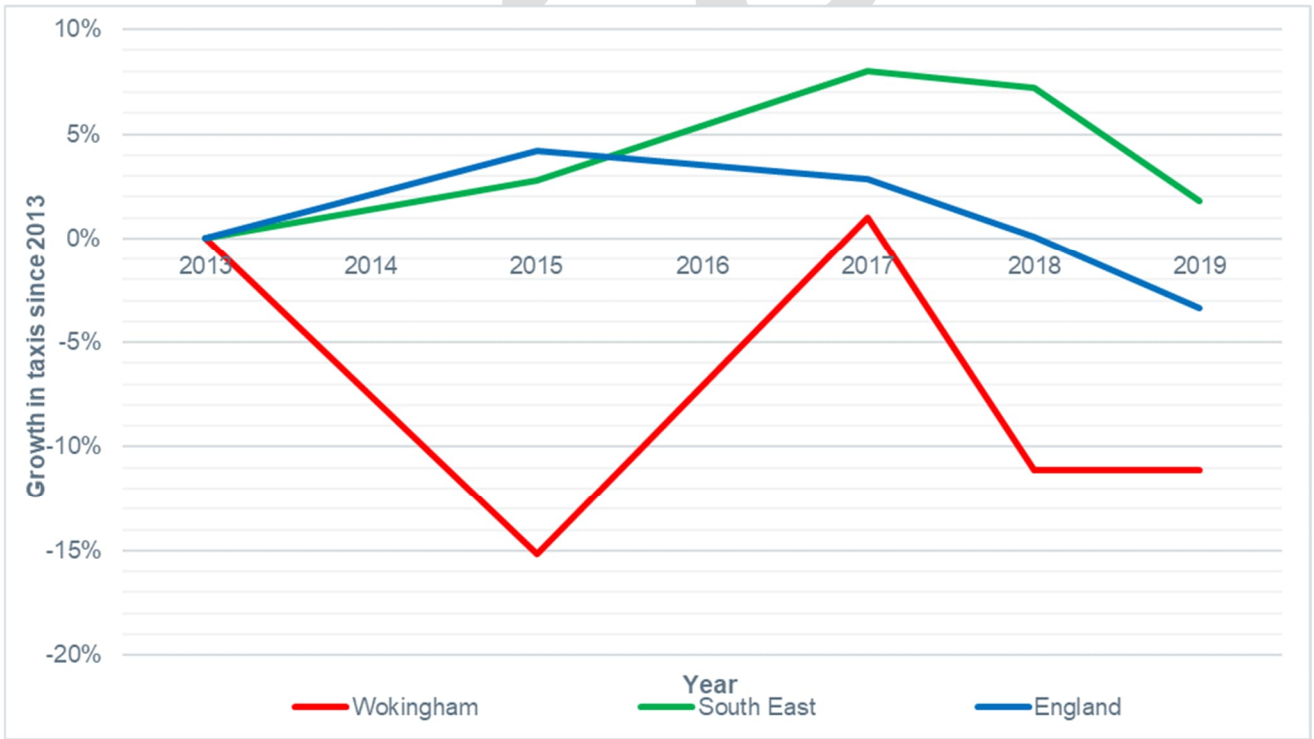
13.9.2. Taxis are also important for disabled people, younger people and for providing transportation during the evening and overnight period. As well as during periods when the alternative public transport service does not operate in parts of the Borough, such as Sundays.

13.9.3. Taxis and PHVs in Wokingham Borough are governed by the Wokingham Borough Private Hire School and Community Services Licensing Policy and the Hackney Carriage and Private Hire Licensing Policy, which sets out requirements for vehicle standards and disabled access.

13.9.4. Figure 13-7 and Figure 13-8 present the change in the number of taxis and PHVs in Wokingham Borough, the South East and England since 2013. They show that taxi and PHV numbers in Wokingham Borough have not followed regional or national growth trends.

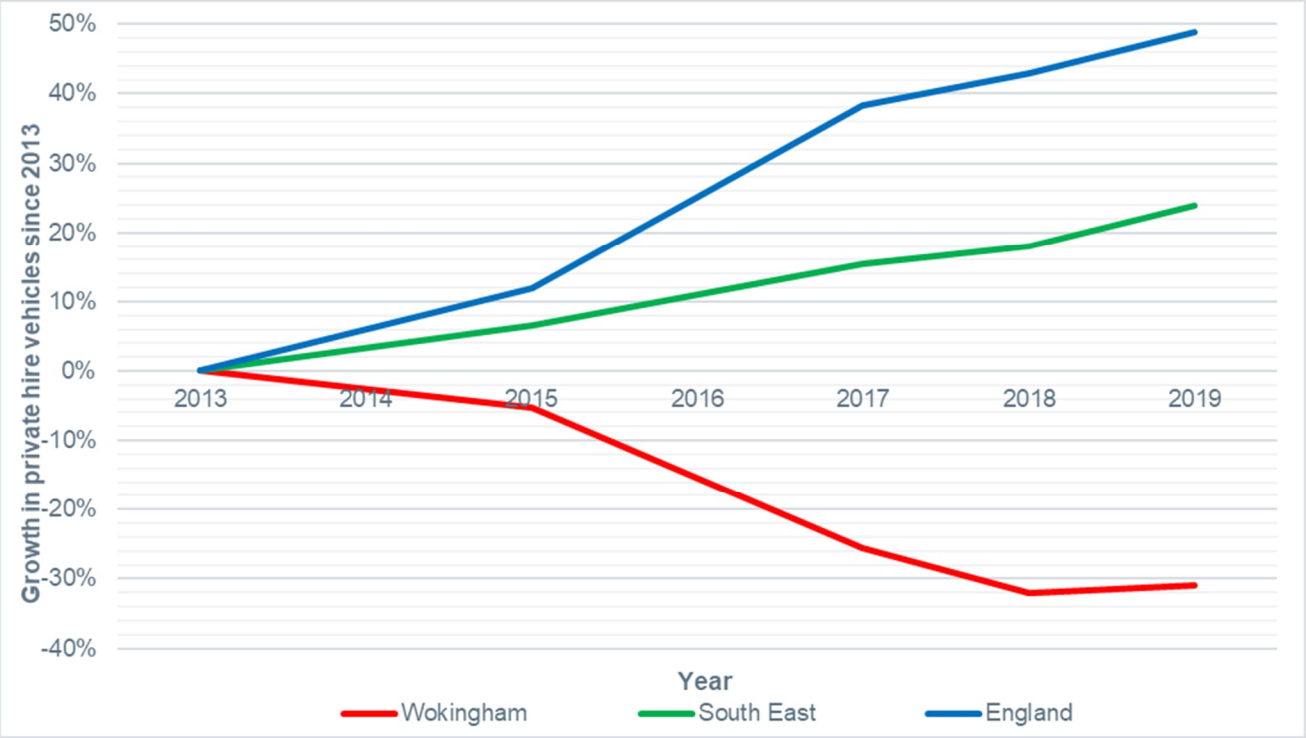
13.9.5. The number of taxis in Wokingham Borough has decreased by more than 10% since 2013 compared with a slight increase regionally and a slight fall nationally. The number of PHVs in the Borough has decreased by more than 30% since 2013, compared with an increase of almost 25% regionally and 50% nationally. The total number of taxis and PHVs in the Borough in 2019 was 217, compared with 286 in 2013.

Figure 13-7 - Growth in taxis



Source: DfT Taxi and Private Hire Vehicle Statistics 2019 (TAXI0105)

Figure 13-8 - Growth in registered private hire vehicles



Source: DfT Taxi and Private Hire Vehicle Statistics 2019 (TAXI0105)

13.10 AIR

13.10.1. Heathrow Airport is approximately 40km from Wokingham town and is the main airport serving the Borough. It is easily accessible by road via the M4 or by coach from Mereoak Park and Ride or Reading station. By rail it can be accessed from Earley, Winnersh, Winnersh Triangle and Wokingham stations by changing at Staines onto the airport bus link. It can also be accessed from Twyford Station changing onto connecting bus or rail services at Hayes and Harlington station.

13.10.2. Gatwick airport is approximately 75km from Wokingham town. It is easily accessible by road via the M4, M25 and M23 or by coach from Mereoak Park and Ride. By rail it can be accessed directly from Wokingham station with an hourly service provided.

13.10.3. Birmingham and Southampton Airports are also both accessible from the Borough by rail with hourly services to both provided from Reading station.

14 SHARED AND FUTURE MOBILITY

14.1 TRANSPORT FOR THE SOUTH EAST FUTURE MOBILITY STRATEGY

14.1.1. Transport for the South East (TfSE) have published their Future Mobility Strategy which sets out an action plan for the area to take advantage of new and developing technologies. The strategy has been developed around a place-and-people based approach accounting for how different communities vary across the area. In terms of place, four broad types of places have been identified across the Southeast, these are:

- Major Economic Hubs (MEHs)
- Urban Areas
- Rural Settlements, and
- Remote Rural Areas

14.1.2. Areas have then been subdivided further based on their geographic position, scale, relationship to London and relationship to the coast. For each of the four place types listed above, bundles of future mobility modes, services and infrastructure have been developed. These bundles are flexible based on the unique characteristics of an area.

14.1.3. Parts of Wokingham Borough sit within each of the four areas: MEH including London Commuter and London Orbital Towns (Wokingham), Urban (Twyford), Rural (Finchampstead), and Remote Rural (Arborfield).

14.1.4. The Future Mobility Bundles relevant to Wokingham are shown below in Table 14-1. This shows the list of interventions against each place and the level of priority for the intervention within the area (Very High to Very Low).

Table 14-1 - Transport for the South East Future Mobility Place-Based Bundles for Wokingham

Interventions	Wokingham (MEH Bundle)	Twyford (Urban Bundle)	Finchamp-stead (Rural Bundle)	Arborfield (Remote Rural Bundle)
Hubs (mobility / community asset / service)	**VH**	**VH**	**VH**	**VH**
Digital-as-a-mode communications / services	**H**	**VH**	**VH**	**VH**
Shared mobility – digital demand responsive transport (DDRT)	**H**	**H**	**VH**	**VH**
Shared mobility - business to customer vehicle sharing (e.g., car clubs)	**H**	**H**	**H**	**H**
Shared mobility - peer to peer vehicle sharing / ride-sharing platforms	**H**	**H**	**H**	**M**
Shared mobility – ride sourcing – 'on-demand private hire/taxi'	**H**	**H**	**M**	**M**
Business to business freight capacity exchanges	**H**	**H**	**M**	**M**
Business to customer freight capacity exchanges	**H**	**H**	**M**	**M**
MaaS platform (mobility credits / gamification)	**H**	**H**	**M**	**L**
Shared mobility – e-cargo bikes	**H**	**H**	**L**	**L**
Shared mobility - powered two-wheeler	**H**	**M**	**M**	**L**
EV charging infrastructure (all modes)	**H**	**M**	**M**	**L**
Shared mobility - e-bike / e-scooter	**H**	**M**	**L**	**L**
Consolidation Centres (regional / urban / micro)	**H**	**M**	**L**	**VL**
Flexible streetscape	**H**	**M**	**L**	**VL**
Road space reallocation to future mobility modes e.g., lanes, kerb space	**H**	**M**	**L**	**VL**

Source: TfSE Future Mobility Strategy, 2021

14.1.5. Social population segments have been established that reflect the key characteristics of an area. A total of 11 segments are evident with Wokingham Borough, the most common are as follows:

- Traditional Towns – People that are more likely to have older, non-dependent children and live in semi-detached or terraced properties. Their level of qualifications tends to be lower than average with jobs typically in wholesale and retail, energy and transport related industries.
- Village Life – People that live in areas that are less densely populated, typically in a village or small town. They tend to be older, well-educated, and live in owned detached properties, although an above average proportion live in retirement homes. Households have multiple cars, with these being the most common method of transport to places of work.
- School-Run Suburbia – a growing segment of suburban families who, within their means, try to take action to reduce their environmental impact including reducing the impact of their travel choices.

14.2 WOKINGHAM BOROUGH LOW EMISSION TRANSPORT STRATEGY

14.2.1. The strategy was published by Wokingham Borough Council in June 2022 after declaring a climate emergency in July 2019 and in response to the DfT's 'Decarbonising Transport: A Better, Greener Britain' in July 2021. The strategy sets a list of potential measures to decarbonise transport within the Borough at a greater level of detail than typically provided in the LTP.

14.2.2. A key measure is to decarbonise road vehicles and cleaner vehicles. Since the government announced the 2030 deadline to end the sale of new petrol and diesel cars / van, this has sent a clear message to local governments, markets and consumers to shift to EVs. The provision of EV charge points is key for both the public and industry to be able to shift to EVs. Some of this provision will come through home and workstations, however 20-30% of motorists do not have access to off-street parking which creates a gap in the infrastructure available to charge EVs.

14.2.3. Table 14-2 below shows the measures identified to decarbonise road vehicles and the timescales associated with their delivery.

Table 14-2 – Identified Measures and Timescales to Decarbonise Transport in Wokingham Borough

Measure	Timescale (Years)
Define requirements for EV charge points in new developments to ensure high levels of charging provision	0-3
Establish EV awareness through social media, delivery webinars/forums, set up an EV experience centre or recurring event	0-3
Transition the council vehicle fleet over to low emission vehicles	0-3
Develop a long-term EV uptake strategy (see section below)	0-3
Establish low emission car club scheme	0-3
Introduce requirements for low emission vehicles as part of construction and logistics implementation plans	0-3
Comprehensive on-street charging infrastructure on origin, at key destinations and on strategic routes	4-7
Introduce a phased requirement for low emission vehicle taxis and private hire with supporting charging infrastructure	4-7
Support the introduction of low emission buses	4-7
Introduce emissions-linked parking charges and other EV incentive measures	4-7
Introduce low/zero emission zones	8-9
Explore the introduction of hydrogen refuelling stations	8-9
Introduce local scrappage scheme for older, more polluting vehicles	8-9
Ensure low emission vehicle requirements are mandated as part of procurement exercises	-
Establish a framework for business with ‘try before you buy’ scheme	-
Review local barriers to charge point deployment and undertake targeted enabling works	-
Secure and sheltered bike parking provisions as part of planning permission	-

Source: Low Emission Transport Strategy, 2022

14.3 WOKINGHAM BOROUGH COUNCIL SHARED MOBILITY AND CAR CLUBS STRATEGY

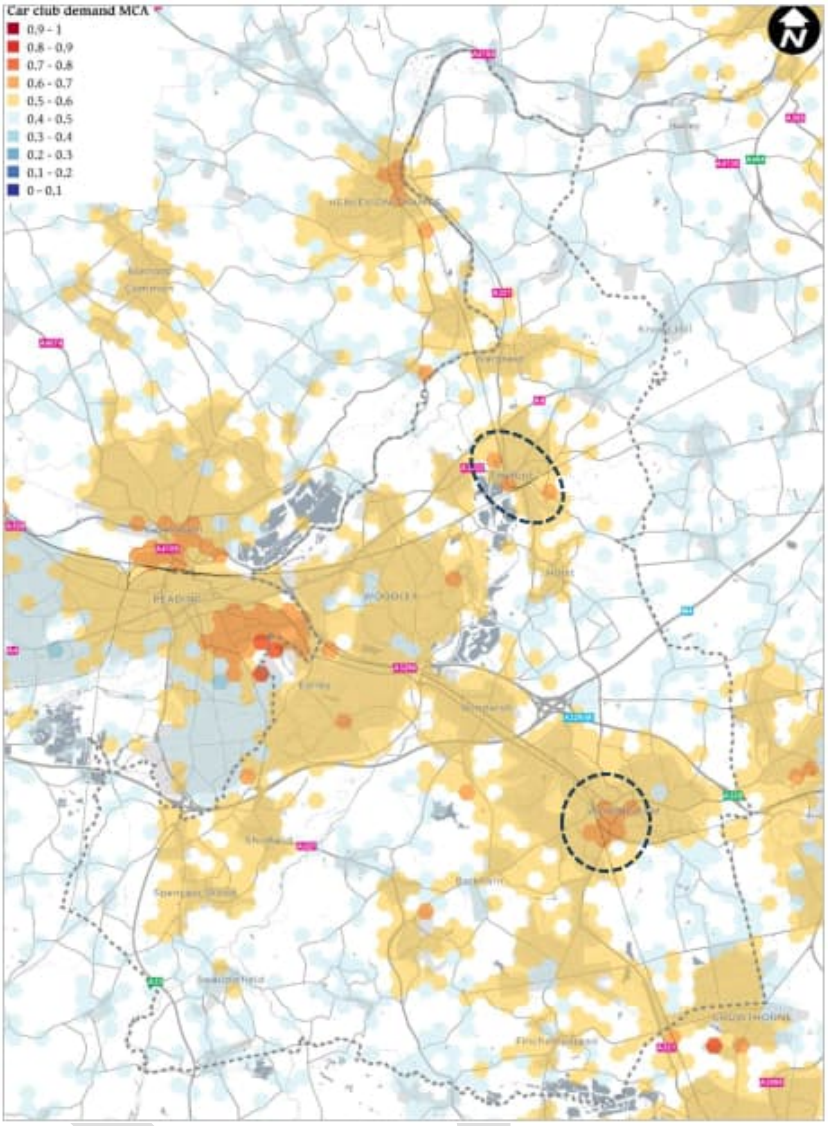
14.3.1. A car club strategy considers demand, car club models, current usage in the Borough and stakeholder feedback. In recent times car club and car share schemes are becoming a more common. This is shown by the growing increase in memberships at UK car clubs, in 2020 there was more than 630,000 members which is more than double than in 2018.

14.3.2. Baselining work was carried out to assess and understand the car club market and how effectively car clubs align with local and national policy. Based on this, six objectives for car clubs have been identified as follows:

- To widen travel choice and improve connectivity with public transport.
- To reduce emissions in the borough, ensuring that operators use low emission vehicles, or have a percentage of the fleet that is low emission.
- To provide affordable and flexible transport to areas of lower-than-average incomes, improving equality and opportunities for all.
- To support mode shift away from private car use and reduce dependency on private cars. The aim is for car clubs to be a 'steppingstone' away from private cars, and second cars.
- To provide alternatives to private car ownership, particularly targeting areas where there is high car ownership in relation to the on-street parking capacity.
- To future proof Wokingham borough, ensuring that they are integrated with parking-limited developments and transport hubs.

14.3.3. To better understand car club demand in the borough, a multi-criteria approach was used, this included nine factors such as: (i) population density per hectare, (ii) distance to town centre, and (iii) car / van availability. The spatial analysis split the borough into hexes, and each was coloured with low scores for car clubs in blue (0-0.5), an average score in yellow (0.5-0.6) and a higher score in orange / red (0.6-1). This figure is shown below in Figure 14-1. The strategy notes that demand is challenging to predict and therefore a small pilot of car clubs could be a better approach.

Figure 14-1 - Predicted Car Club Demand in Wokingham Borough



14.3.4. Figure 14-1 above shows that Twyford and Wokingham town Centre are two areas where predicted demand is higher. This algins with the TfSE Future Mobility Strategy that identifies Wokingham town, Twyford, Finchampstead and Arborfield as areas where car clubs are a high priority.

14.3.5. Operator feedback suggests that providing car club parking bays in on-street locations is more desirable than being incorporated into new developments. This is because on-street parking bays are more visible and secure which helps increase awareness of the car club scheme.

14.3.6. The strategy identified three recommendations that should be taken forward in order to achieve the objectives identified above. There are:

- Collaboratively develop the business case for a Wokingham Borough Council subsidised trial, open to the public and Wokingham Borough Council staff with neighbouring authorities.
- Consider what disincentives could be used to reduce reliance upon personal car use.
- Raise customer awareness of car clubs in the area and continue to engage with operators to understand how they can be incentivised to operate in Wokingham Borough.

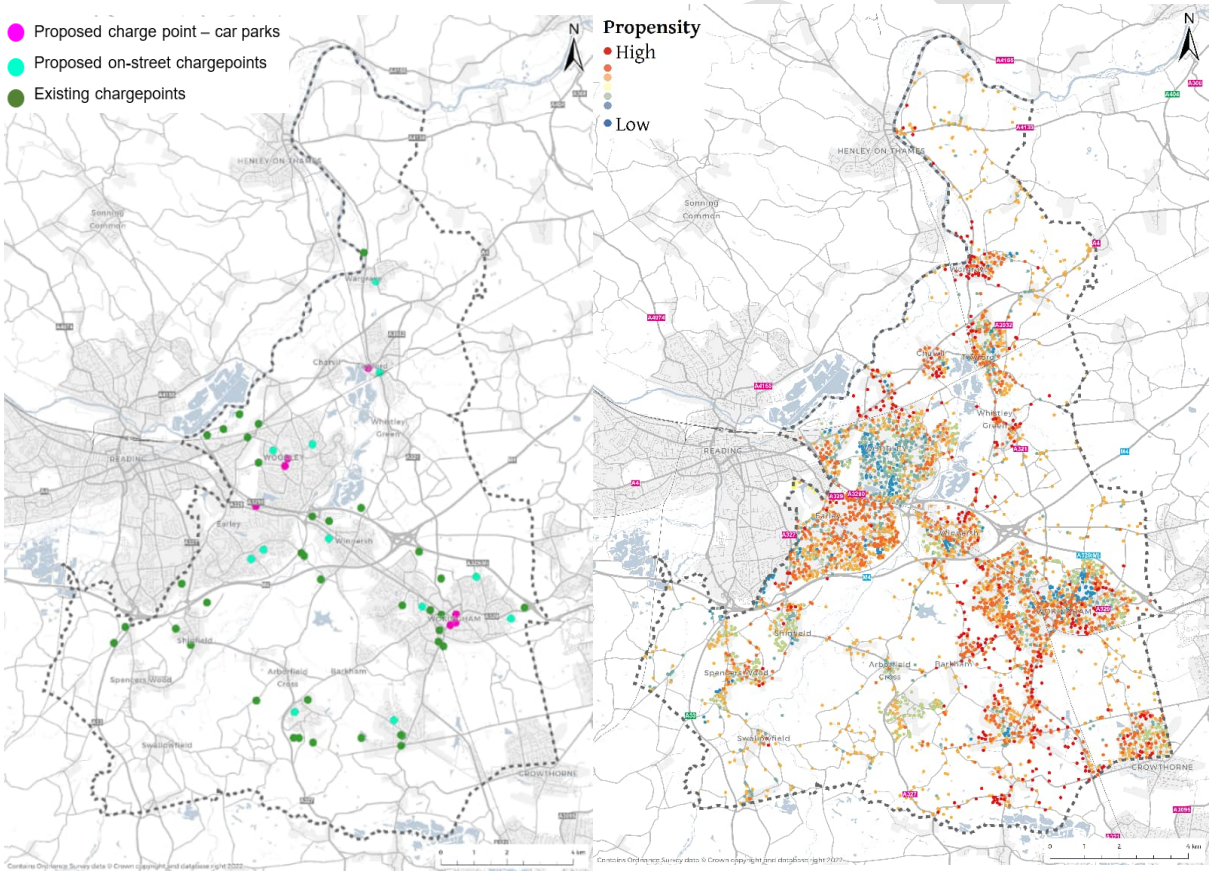
14.4 WOKINGHAM BOROUGH COUNCIL ELECTRIC VEHICLE STRATEGY

14.4.1. The strategy is being developed by the council in order to help ensure there is adequate electric car charging facilities available to facilitate the growth in the EVs in the borough. The information below has been extracted from the draft strategy.

14.4.2. Wokingham Borough Council currently has 70 publicly available charge points, 35 of which are rapid chargers. This equates to approximately one publicly accessible charge points for every 26 EVs – this is the same as the national average (1:26) and above the UK average (1:25). The council is currently planning to expand its network with more charge points available in car parks and some on-street charge points.

14.4.3. Figure 14-2 below shows the known locations of the existing and planned charge points on the left and the forecast of the propensity for residents to switch to EVs on the right. This is based on socio-demographic factors such as income, education and lifestyle.

Figure 14-2 - Existing and Planned Electric Vehicle Car Parking Spaces (left) and Forecast of the Propensity for Residents to Swith to EVs (right) across Wokingham Borough

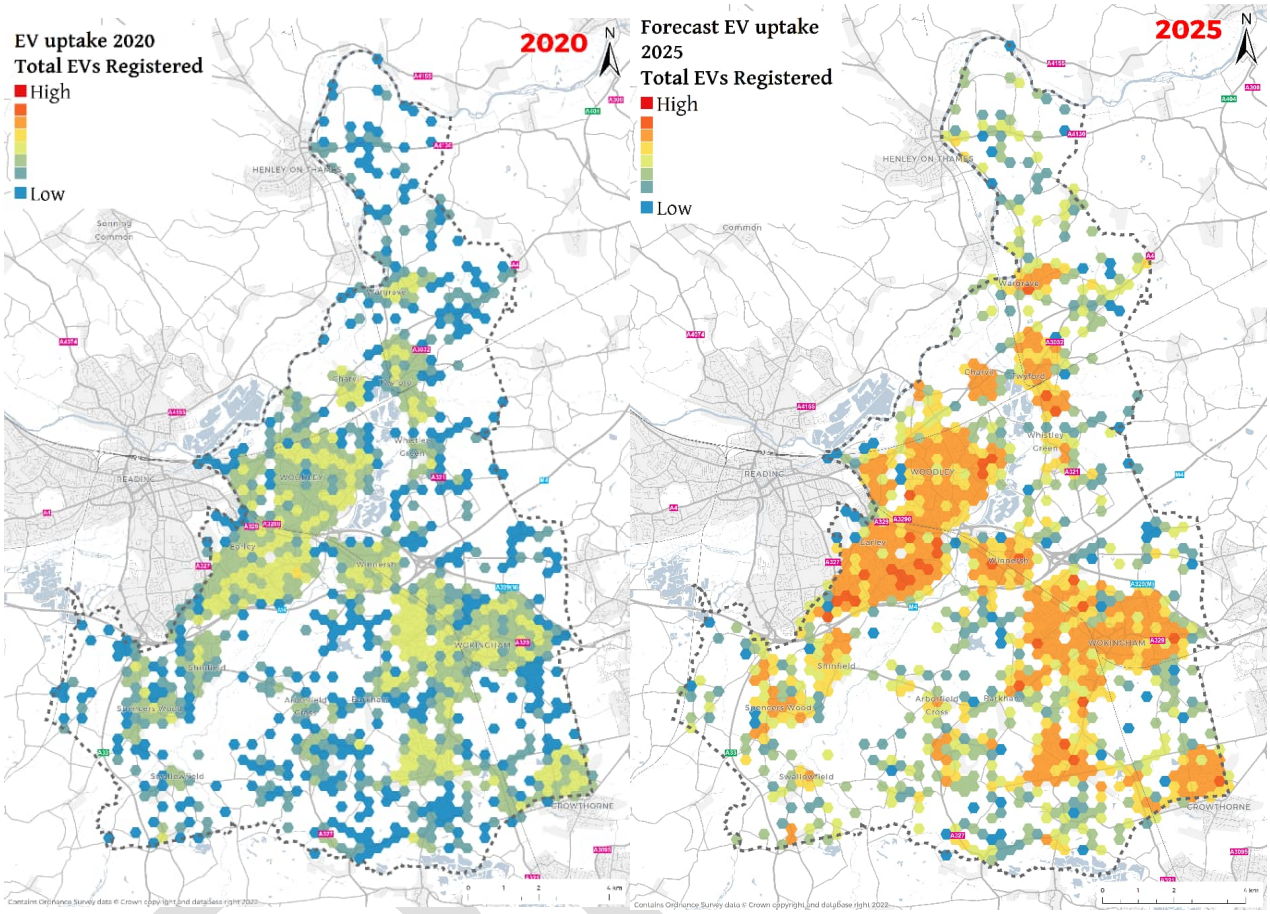


14.4.4. The figure shows that there is a higher propensity to change to EVs in all major hubs including Wokingham town, Winnersh and Earley. The exception to this is Woodley, Shinfield and Arborfield which reflect a lower propensity to switch.

14.4.5. There are other factors that can influence this transition public transport provision and off-street parking availability. Therefore, when comparing the existing and forecasted uptake of EVs that factor

in all these different elements is shows a slightly different output as shown below in Figure 14-3. This shows that by 2025, a larger proportion of the borough will have a higher propensity to switch to an EV in both urban and rural areas.

Figure 14-3 - Existing and Forecast Uptake of Registered EVs in Wokingham Borough



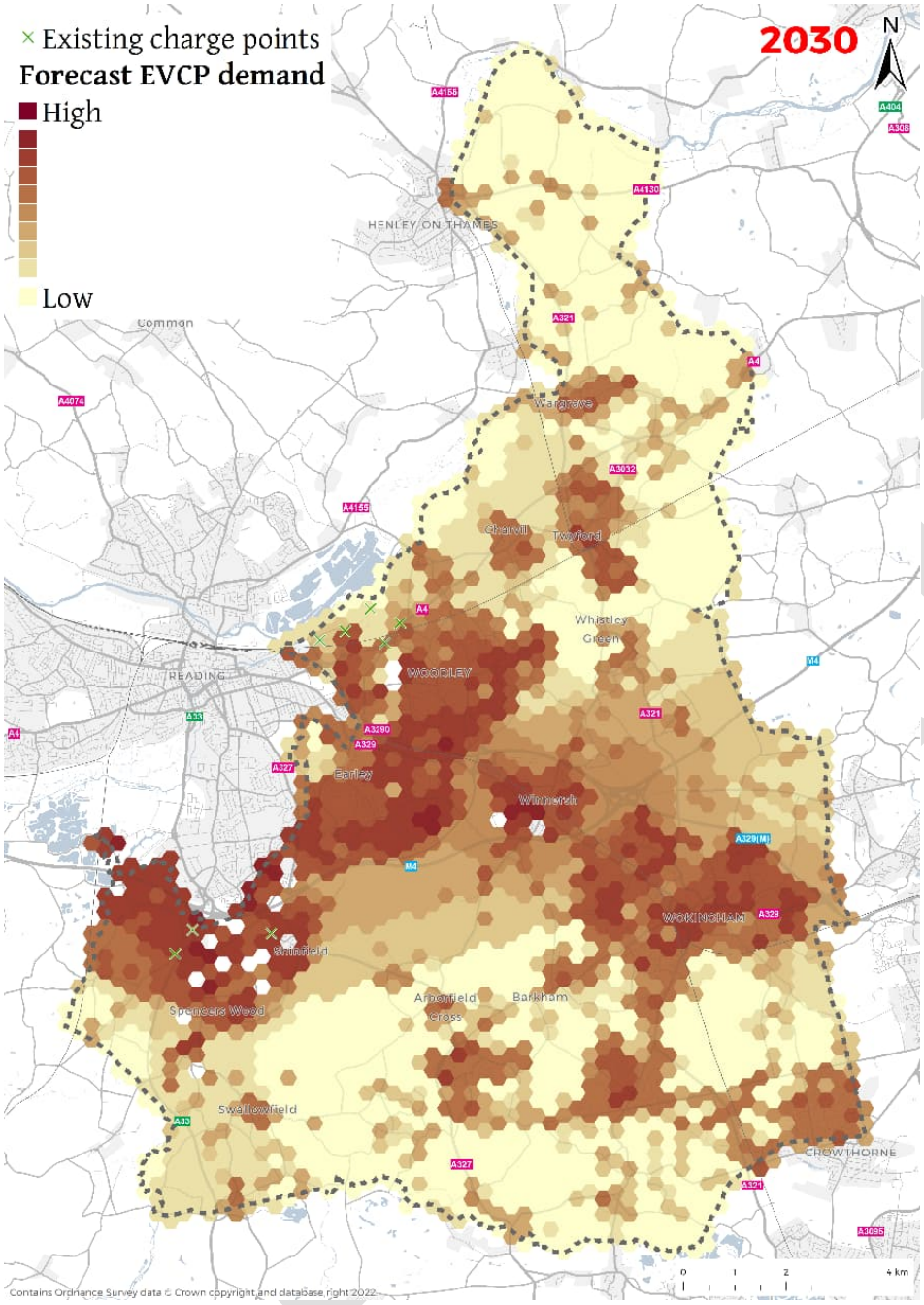
14.4.6. The electricity distribution operator local to Wokingham Borough Scottish and Southern Electricity Networks (SSEN). There are 11 substations in or within close proximity to the borough with power the local electricity grid.

14.4.7. Figure 14-4 shows a heatmap of the network capacity of these substations in terms of their additional headroom availability. This information gives an indication of the capacity on the local network for additional EV chargers. The figure shows that all the substations that have more the 5MVAs capacity and suitable for additional EV chargers. The substations in orange have 2-3MVAs and the red substations have less than 2MVAs so minimal capacity to deal with additional EV chargers.

Figure 14-4 - SSEN Network Capacity at Substations in / near to Wokingham Borough

14.4.8. Based on supply and demand forecasts around EVs, this can be used to determine where there will be high demand for EV charging. Despite this, the private sector is unlikely to provide chargers and therefore a gap analysis was done to determine where infrastructure gaps are likely to occur. Figure 14-5 below shows this gap analysis with dark red points showing where there are mostly likely to be gaps in infrastructure availability and yellow shows where this is least likely. This shows that the urban areas, especially towards Reading, are more likely to have gaps.

Figure 14-5 - Gap Anaylsis of EV Charging Provision across Wokingham Borough



14.4.9. EV charging also needs to be included within new developments, both for residents and visitors. Wokingham Borough Council have already detailed this need within their policies; however, it is key that provision is installed in line with future forecasts and building regulations for EV charging.

15 FREIGHT

15.1 INTRODUCTION

15.1.1. Freight is key for delivering goods and services and is it key that they are delivered in a safe, reliable and efficient way into urban centres whilst reducing the air quality and carbon impacts on the area. The following section covers the national policy relating to freight as well as the existing conditions around road and rail freight movement within the borough.

15.2 NATIONAL POLICY

FUTURE OF FREIGHT: A LONG-TERM PLAN, 2022

15.2.1. In June 2022, the Department for Transport (DfT) published 'Future of Freight: a long-term plan'. This sets out the plan to overcome the challenges and opportunities relating to transitioning to a net-zero future as well as contributing to levelling-up and strengthening the UK's global impact. This plan helps to build an enhanced partnership between government and industry to set the direction and strategic priorities for the sector. In working together, a vision, set of priorities, actions and themes to meet the challenges and opportunities have been identified.

15.2.2. The vision of this plan is "a freight and logistics sector that is cost-efficient, reliable, resilient, environmentally sustainable and valued by society". The five priorities of the plan are as follows:

- **Cost efficient –** supporting the sector to deliver globally competitive costs and support the broader UK economy with access to low-cost goods transport.
- **Reliable –** facilitating the sector delivering consistently good performance for its customers, providing reliable access to the goods that businesses and consumers need.
- **Resilient –** Bolstering the freight network's capacity to anticipate absorb, resist or avoid disruption and recover when disruption does occur. Maintaining the smooth flow of goods throughout.
- **Environmentally sustainable –** Achieving a net zero freight and logistics sector by 2050, whilst supporting broader environmental objectives of air quality and noise reduction.
- **Valued by society –** Ensuring freight is valued by the public and decision makers across sectors reflecting its critical importance to the wider economy, and the lives of everyone in the UK.

15.2.3. Five key themes are identified within the plan that have challenges, goals and actions associated to them. These key themes are: (i) a National Freight Network, (ii) Transition to Net Zero, (iii) Planning, (iv) People and Skills, and (v) Data and Technology.

15.3 REGIONAL POLICY

TRANSPORT FOR THE SOUTH EAST FREIGHT, LOGISTICS AND GATEWAYS STRATEGY, MAY 2022

15.3.1. This strategy sets out a vison for developing the sector going forward up to 2040. It identifies investment to help better connect ports, airports and rail links within the region to help support sustainable economic growth both in the region and across the UK. Following on from this, the strategy includes an action plan that details how the strategy will be delivered.

15.3.2. Whilst developing the strategy, a Freight Forum between many key stakeholders, including Wokingham Borough Council, has been created. Key actions of the Freight Forum are as follow:

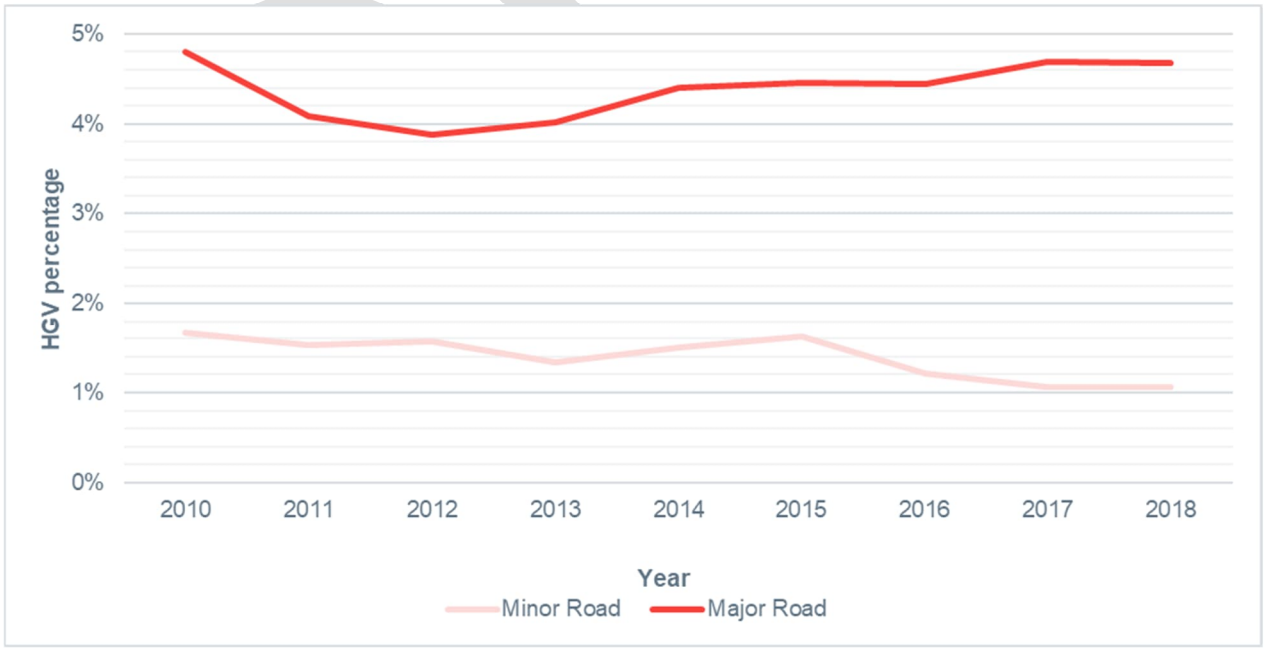
- Help develop the strategic vision and goals for the strategy.
- Develop guidance for businesses on best practice approaches to procurement achieving cost savings and reducing environmental impacts.
- Develop guidance for individuals on online purchasing explaining the impact it can have on the local environment.
- Create a green purchasing programme to incentives sustainable behaviour.
- Create subgroups within the forum – including Local Authority Office Subgroup
- Develop guidance from the subgroups for local authorities on the industry needs and how local authority policies and process can help achieve this.

15.3.3. In terms of specific freight corridors recognised within the strategy, the M4 is a key corridor that runs through Wokingham. In particular, junction 11 is recognised as in need of upgrade in order to improve access to Heathrow Airport.

15.4 ROAD FREIGHT

15.4.1. Road freight is the most dominant method for transport freight. As a result, heavy good's vehicles (HGVs) are a common means of transport freight within the area. Figure 15-1 below shows the percentage of HGVs on Wokingham Borough's major and minor road network between 2010 and 2018. Over the time period shown, freight movement has reduced on the minor road network and steadily increased on the major road network. According to the 2018 DfT Road Freight Statistics, 52% of all inbound freight to the Berkshire, Buckinghamshire and Oxfordshire area originated from within these three counties. Similarly, 59% of all outbound freight from the Berkshire, Buckinghamshire and Oxfordshire area was delivered to destinations within these three counties. This reflects the predominantly short-haul nature of road freight in the local area.

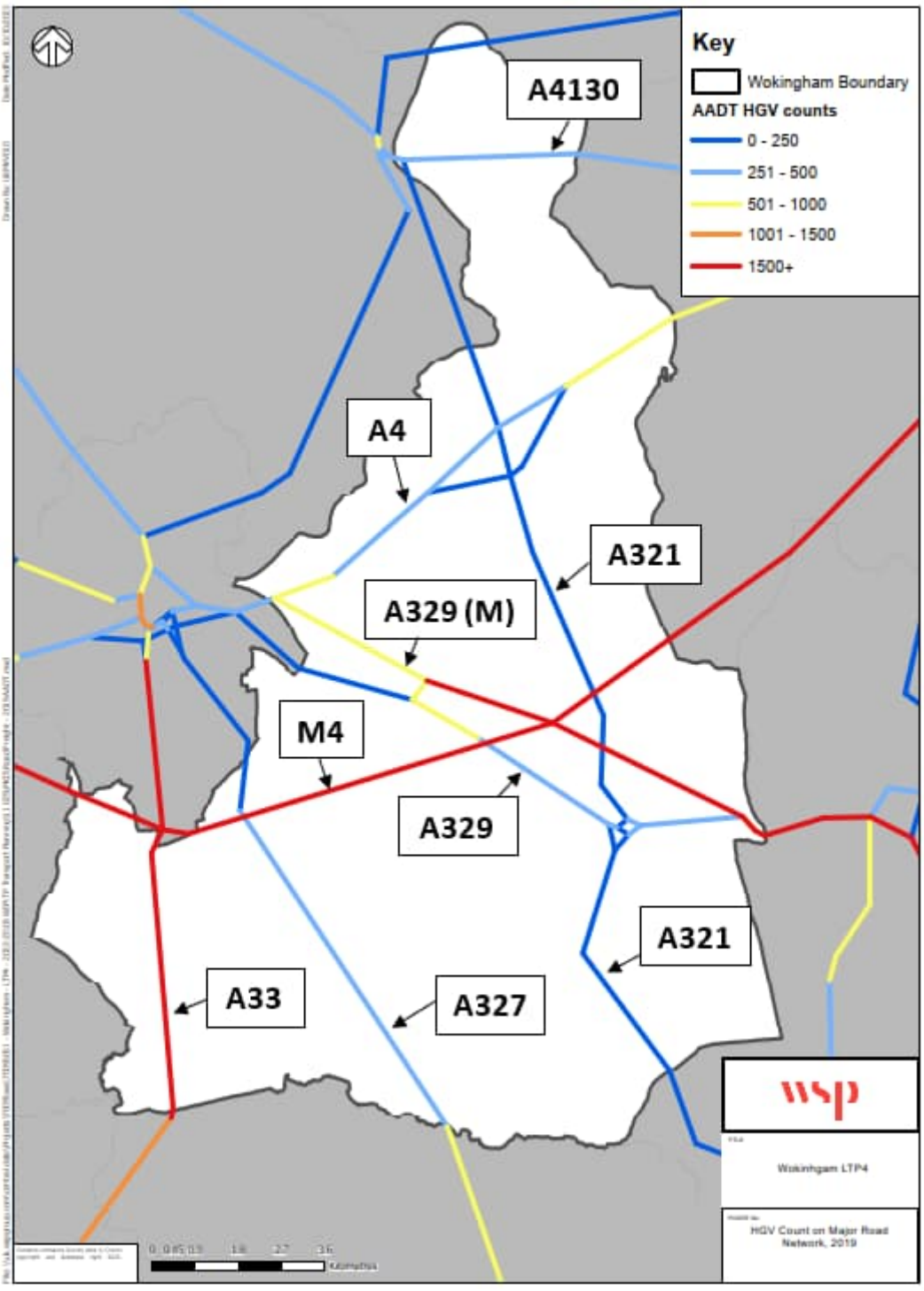
Figure 15-1 - Percentage of HGVs on Wokingham Borough's major and minor road networks



Source: DfT Road Traffic Counts, 2018

15.4.2. Figure 15-2 below shows the annual average daily traffic (AADT) flow for HGVs on the major network in 2019. This gives an indication of the most common freight corridors used within the Borough. Based on this, the busiest routes other than the motorways the A329 (Winnersh to Wokingham), A327 and the A4. The A321 and the A329 (Reading to Winnersh) are less common routes.

Figure 15-2 - 2019 AADT for HGVs on Major Roads in Wokingham



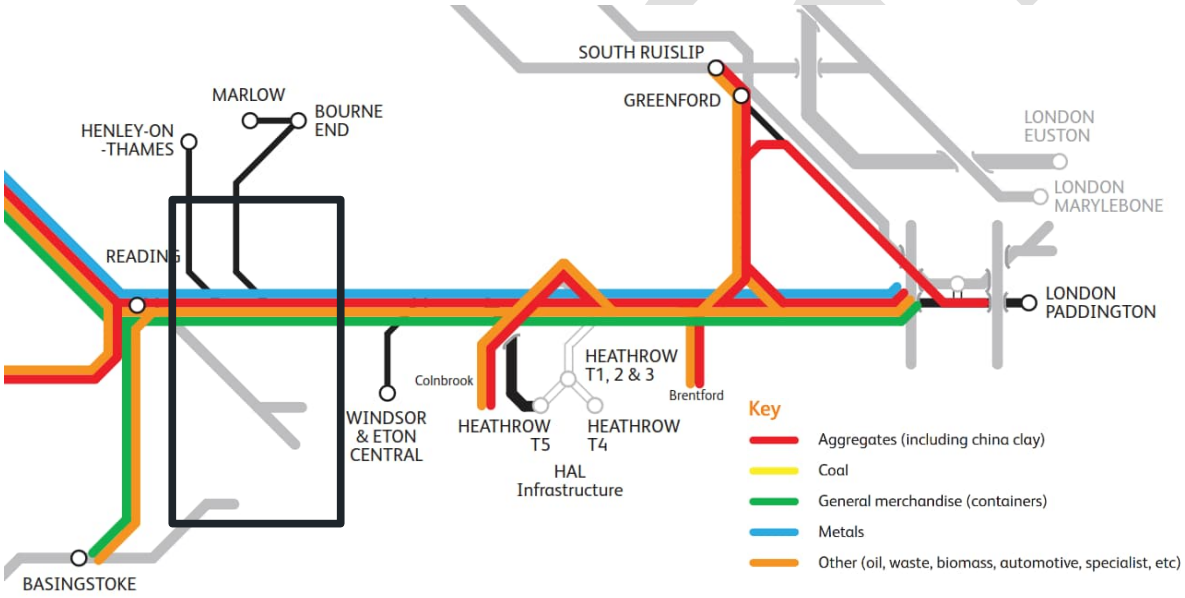
15.4.3. Light goods vehicles (LGVs) are the only motor vehicles that have seen an increase in flows within the borough over the last 15 years. This is likely attributed to the growth in online shopping and individual trips being replaced by a single van making multiple deliveries. It is likely that flows in LGVs are unlikely to be reduced as a result of increased digital accessibility.

15.5 RAIL FREIGHT

15.5.1. There are two rail freight routes that pass-through Wokingham Borough. These are the Western route and the Wessex route.

15.5.2. The Western route is the second busiest route into London for UK freight and significantly contributes to the UK economy and major industries. Across the route there are approximately 45 freight terminals which handle at least 12 different commodities. The major commodities are aggregates, coal, containers and steel. Freight forecasts have been produced for this route and show a substantial growth in intermodal freight from ports, a gradual decline in coal traffic and a modest growth in other commodities. However, it is worth noting that the aggregate market is currently growing faster than previous forecasts due to government policy, so the forecasts are relative. Figure 15-3 below shows the 2019 forecast freight flows and the black box indicates the Wokingham area.

Figure 15-3 - Western Route through Wokingham - 2019 Forecast Freight Flows

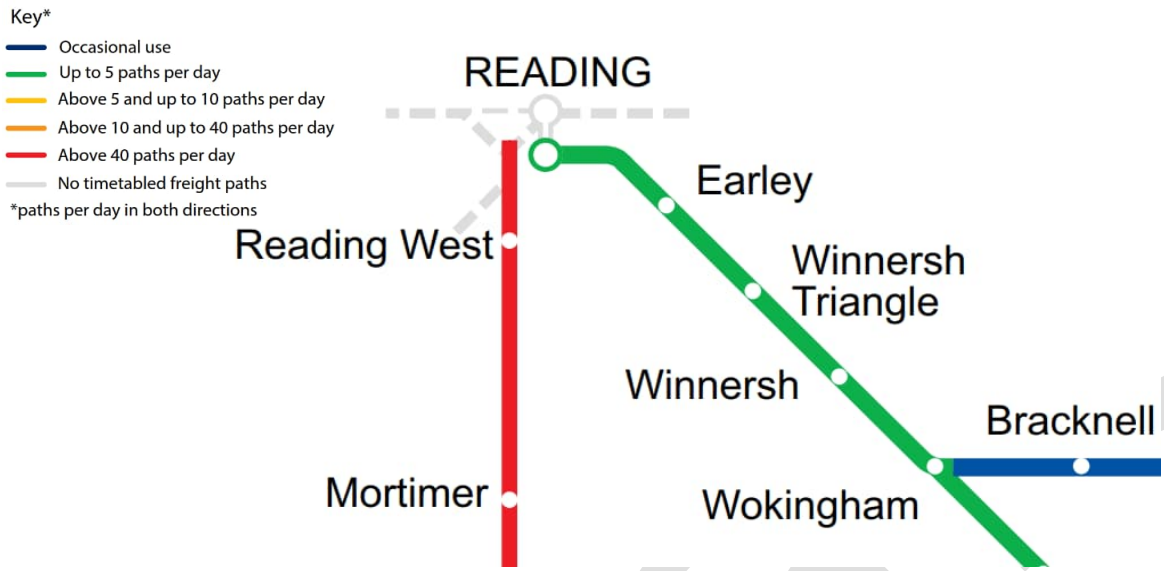


15.5.3. There are proposals for a new freight terminal being considered on the Western Route near Theale.

15.5.4. The Wessex route is a very busy and commonly congested route on the railway network and covers areas between Reading and London Waterloo, and down to the south to Weymouth, Southampton and Portsmouth. There are significant freight flows across the Wessex route and the route handles different commodities from Southampton docks, Southampton Maritime Terminal and Millbrook Freightliner Terminal. Commodities transferred along this route include automotive, aggregates and petroleum. **Figure 15-4** below shows the freight routes running through Wokingham and how often

the route is used on a daily basis. This shows that the line through Wokingham a low level of freight movements compared to mainline.

Figure 15-4 - Key Freight Routes through Wokingham and along the Wessex Route



16 TRAFFIC AND ROAD NETWORK

16.1 ROAD NETWORK

16.1.1. Wokingham Borough Council is responsible for managing 8.2km of principal motorway, 76.4km of 'A' roads, 59.1km of 'B' roads and 627.2km of 'C' and unclassified roads[15]. Wokingham Borough is criss-crossed by the following key roads. In addition, 12.7km of trunk roads (M4) are managed by Highways England.

16.1.2. Prominent routes in the borough include.

- The M4 motorway crosses east to west through the centre of the Borough, linking it with London, Heathrow Airport, the Southwest and South Wales.
- The A329(M) runs north-west to south-east providing links to Reading, Bracknell and the M3 via the A322. It is one of the few sections of motorway in England that are managed by the local highway authority.
- The A4 runs largely parallel to the M4 linking it with London, Heathrow Airport, Bristol.
- The A33 runs north to south along the western edge of the Borough, linking Reading with Basingstoke and the M3.
- The A321 runs north to south along the eastern edge of the Borough, linking Henley-on-Thames with Blackwater and the M3.
- The A327 runs north to south through the centre of the Borough, linking Reading with the M3 and Farnborough; and
- The A329 runs north-west to south-east linking Wokingham town with Ascot, Bracknell, Reading, Wallingford and the M40.

16.2 ROAD MAINTENANCE

16.2.1. The Borough has over 300 traffic-sensitive streets, 30,000 road gullies and 61 pedestrian crossings. It also has responsibility for 249 structures, including 166 bridges. The Borough also has responsibility for 16,000 streetlights. Between 2016 and 2019 the Borough, 70% funded by the DfT Challenge Fund, replaced 8,000 ageing streetlight columns and installed over 13,000 LED lanterns across the Borough.

16.2.2. Table 16-1 indicates that the number of roads requiring maintenance in Wokingham Borough is significantly below the English average. Furthermore, and unlike the national trend, the number has reduced in all categories since 2015/16.

Table 16-1 - Percentage of network where maintenance should be considered.

	2015/16			2016/17			2017/18			2018/19		
Road type	A	B&C	U	A	B&C	U	A	B&C	U	A	B&C	U

[15] Total road length (kilometres) by road type and local authority in Great Britain, DfT 2019 (RDL0202a)

Wokingham	5%	5%	n/a	4%	5%	13%	3%	4%	13%	2%	3%	10%
England	3%	6%	16%	3%	6%	17%	3%	6%	16%	3%	6%	16%

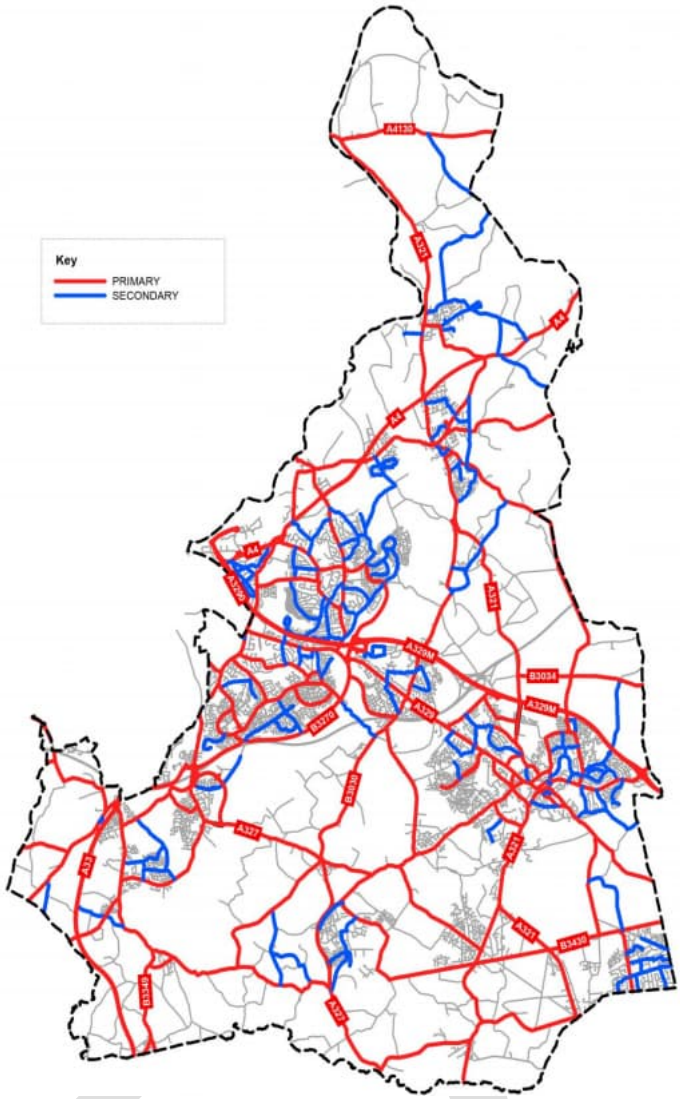
Source: DfT Road Conditions in England: 2019 (RDC0120 and RDC0130)

16.2.3. As maintenance budgets are tightened, preventative maintenance is focussed primarily on the A and B roads and so C roads and unclassified roads, in general, are not routinely maintained. This could lead to lower classified roads road deteriorating faster and eventually requiring more significant measures.

16.2.4. The 2019/20 Wokingham Borough Highway Maintenance Management Plan contains its Winter Service Plan which aims to ensure, as far as is reasonably practical, the safe movement of traffic on all Borough managed motorways, all strategic routes, the majority of the main distributor roads and other well-trafficked roads. This Primary precautionary salting network comprises approximately 260km of roads and represents 37% of all the boroughs publicly maintained highways.

16.2.5. In addition, a Secondary salting network has also been defined by the Borough comprising the main routes leading to schools, bus routes, some residential roads and lightly trafficked rural roads which become hazardous if left untreated during prolonged periods of particularly severe weather conditions. Figure 16-1 shows the Primary and Secondary salting networks.

Figure 16-1 - Wokingham Borough Resilient Road Network

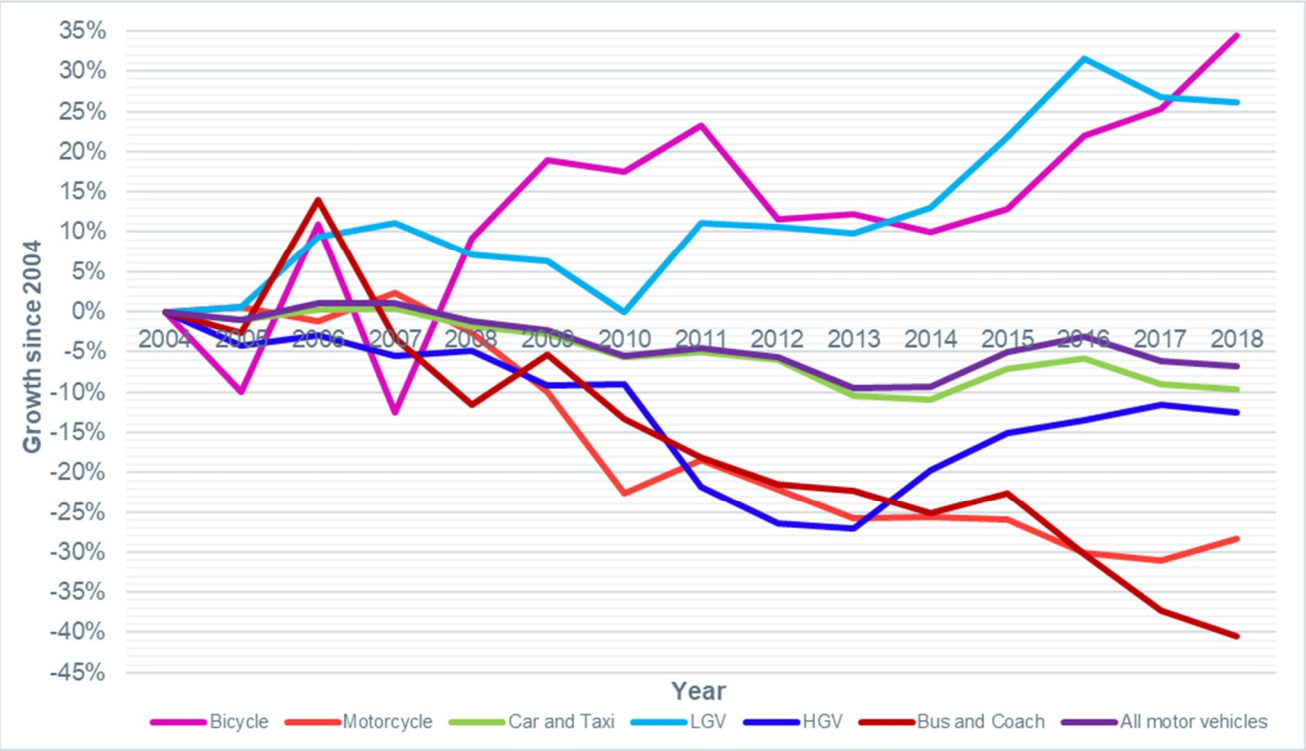


16.2.6. This Secondary network is 94km and represents 14% of all the boroughs publicly maintained highways and will be cleared when deemed necessary, following completion of the clearance of the Primary network.

16.3 CHANGES IN TRAFFIC VOLUME BY VEHICLE TYPE

16.3.1. The Department for Transport collects traffic data annually from 46 count sites located on major roads throughout Wokingham Borough. Figure 16-2 presents the growth, by vehicle type, of the combined annual average daily flow (AADF) passing through these 46 sites since 2004.

Figure 16-2 - Traffic growth on Wokingham Borough's major roads since 2002, by mode



Source: DfT Road Traffic Counts 2018

16.3.2. The figure above shows that only bicycles and Light Goods Vehicles (LGVs) have shown any growth in 2017/2018. In 2018 34% more bicycles passed the 46 sites compared to 2004. Similarly, with LGVs, 26% more LGVs passed through the 46 sites than in 2004. The strong growth in LGV flows could reflect the growth in online shopping and home delivery, particularly given parts of Wokingham Borough have limited local facilities nearby.

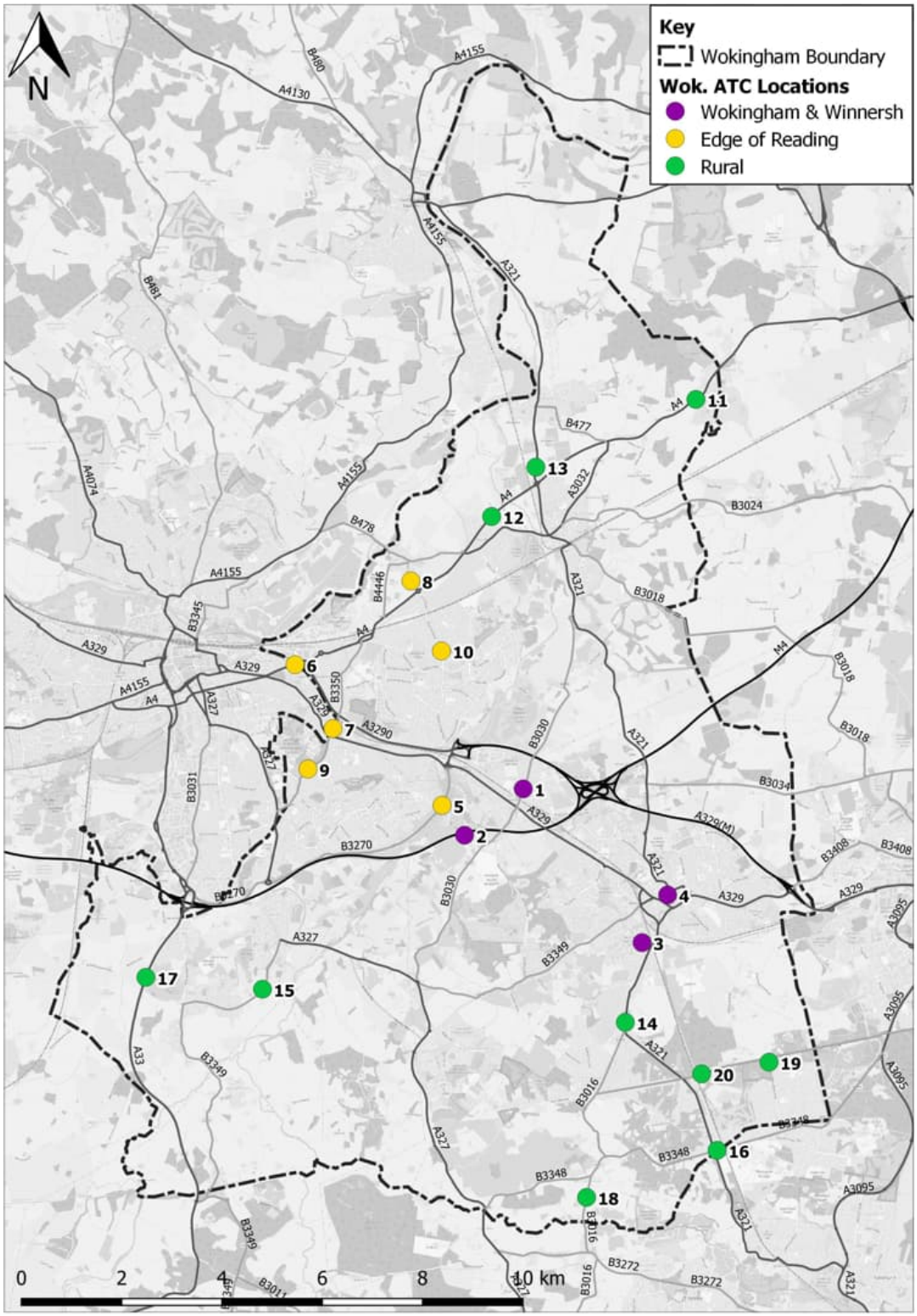
16.3.3. The modes experiencing the biggest falls since 2004 were buses and coaches and motorcycles with flows in 2018 passing the 46 sites being 40.5% and 28.4% lower respectively.

16.3.4. Heavy goods vehicle (HGV) flows also experienced a significant decline between 2004 and 2013 falling 27.1%. However, since 2013 flow levels have recovered somewhat and in 2018 were only 12.6% below 2004 levels.

16.4 CHANGES IN TRAFFIC VOLUMES ACROSS THE BOROUGH

16.4.1. Data has been collected from a range of automatic traffic counters across the borough to identify how traffic volumes have been changing over the last 10- 20 years. Where data is available, analysis has been undertaken to identify annual trends and traffic flow profiles for different types of routes. Figure 16-3 below shows the automatic traffic count (ATC) locations within Wokingham Borough.

Figure 16-3 - Location of the ATC counters in Wokingham Borough



16.4.2. The traffic analysis carried out below has been split into the following groups for the for better identification of the traffic characteristics of the roads across the borough:

- Wokingham and Winnersh (noted Wok & Win below)

- Edge of Reading
- Rural (North and South)
- Rural (North)
- Rural (South)

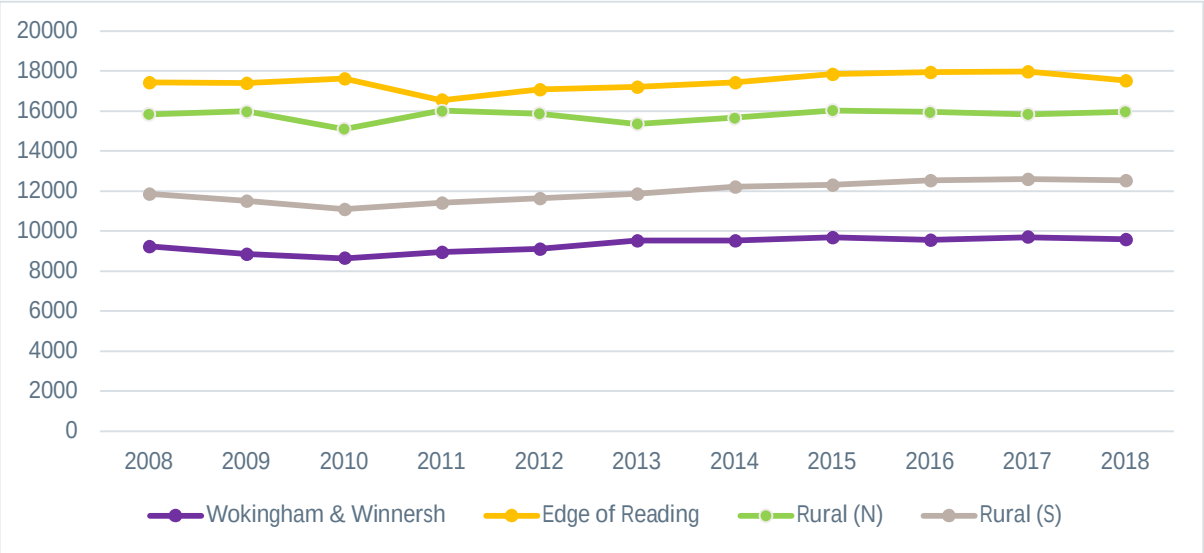
16.4.3. Figure 16-4 below shows that despite a steady increase in population growth in recent years, traffic volume has been largely flat. Overall, there has been an increase between 2008-2018 of 2.8%, although from 2003 to 2018 flows fell by 1.9%.

Figure 16-4 - Change in AADT Flows between 2003 – 2018

No.	Typology	Description	Annual Average Daily Traffic (AADT) Flows				Overall Change
			2003	2008	2013	2018	(2008 -2018)
1	Wok & Win	B3030 Robin Hood Lane, Winnersh	7776	7747	7531	7340	-5.30%
2	Wok & Win	Mill Lane, Sindlesham	-	10163	10088	9933	-2.30%
3	Wok & Win	Molly Millars Lane, Wokingham	-	10118	11527	11757	16.20%
4	Wok & Win	A329 Rectory Road, Wokingham	-	8912	8898	9377	5.20%
	Wok & Win	Typology Average – Wok & Win	-	9235	9511	9602	3.50%
	Wok & Win	A329 (M)	-	-	-	33356	
5	Reading	B3270 Lower Earley Way North,	24653	24567	24321	25809	5.06%
6	Reading	Sutton Seeds West	34624	30861	34397	32521	5.38%
7	Reading	B3350 Church Road, Earley	14242	14204	12212	12427	-12.51%
8	Reading	Pound Lane, Sonning	-	5984	6105	6658	11.26%
9	Reading	B3350 Wilderness Road, Earley	-	19167	16846	18419	-3.90%
10	Reading	Butts Hill Road, Woodley	-	9838	9436	9294	-5.53%
	Reading	Typology Average – Edge of Reading		17437	17220	17521	-0.04%
11	Rural (N)	A4 Knowle Hill, Knowle Hill	21727	19909	18735	19200	-3.56%
12	Rural (N)	A4 Bath Road, Charvil	21218	19419	18676	19919	2.57%
13	Rural (N)	A321 Wargrave Road, Twyford	8601	8183	8648	9288	13.50%
	Rural (N)	Typology Average – Rural (N)		15837	15353	16136	4.17%
14	Rural (S)	A321 Finchampstead Road,	18364	17759	17109	16616	-6.44%
15	Rural (S)	B3349 Hyde End Road, Spencers Wood	-	6922	6083	7490	8.21%
16	Rural (S)	B3348 Dukes Ride, Crowthorne	9416	8978	9463	9350	4.14%
17	Rural (S)	A33 Swallowfield Bypass, Reading	27465	27194	28460	31369	15.35%
18	Rural (S)	B3016 Eversley Cross, Eversley	4840	4560	4725	4885	7.13%
19	Rural (S)	New Wokingham Road, Crowthorne	5971	6443	6193	6061	-5.93%
20	Rural (S)	B3430 Nine Mile Ride, Crowthorne	12112	11136	11041	11892	6.79%
	Rural (S)	Typology Average – Rural (S)		11856	11868	12523	4.36%
	Rural	Typology Average – Rural		13847	13610	14329	4.27%

16.4.4. Figure 16-5 below also indicates the slight change in traffic flows within the borough. This shows the average AADT flow for each typology and there is a steady annual increase in traffic flows. Between 2008 and 2018 there has been a change of 6% in flows.

Figure 16-5 - Average AADT flow for each typology area



16.5 DAILY ATC TRAFFIC PROFILE BY TYPOLOGY

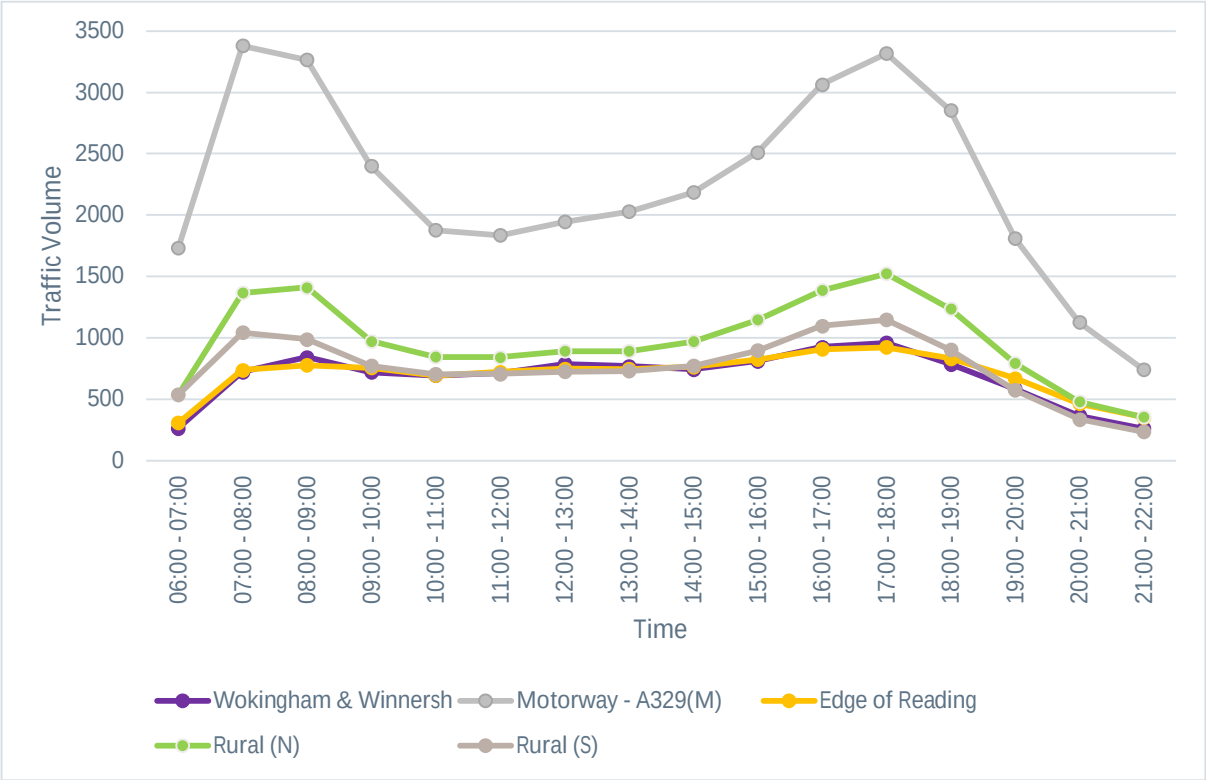
16.5.1. There are two typical traffic flow profiles, these are a flat profile or an M profile and are shown below in Figure 16-6. Both of these profiles are evident within the daily profiles that have been produced and analysed for each of the typologies.

Figure 16-6 - Typical traffic flow profiles

16.5.2. A flat profile rises during the morning peak and stays at similar levels throughout the day until flows decrease after evening peak. An M profile has distinctive peaks in the morning typically at around 08:00 or 09:00 and again in the evening at around 16:00 or 17:00 with lower flows during the day between the peaks.

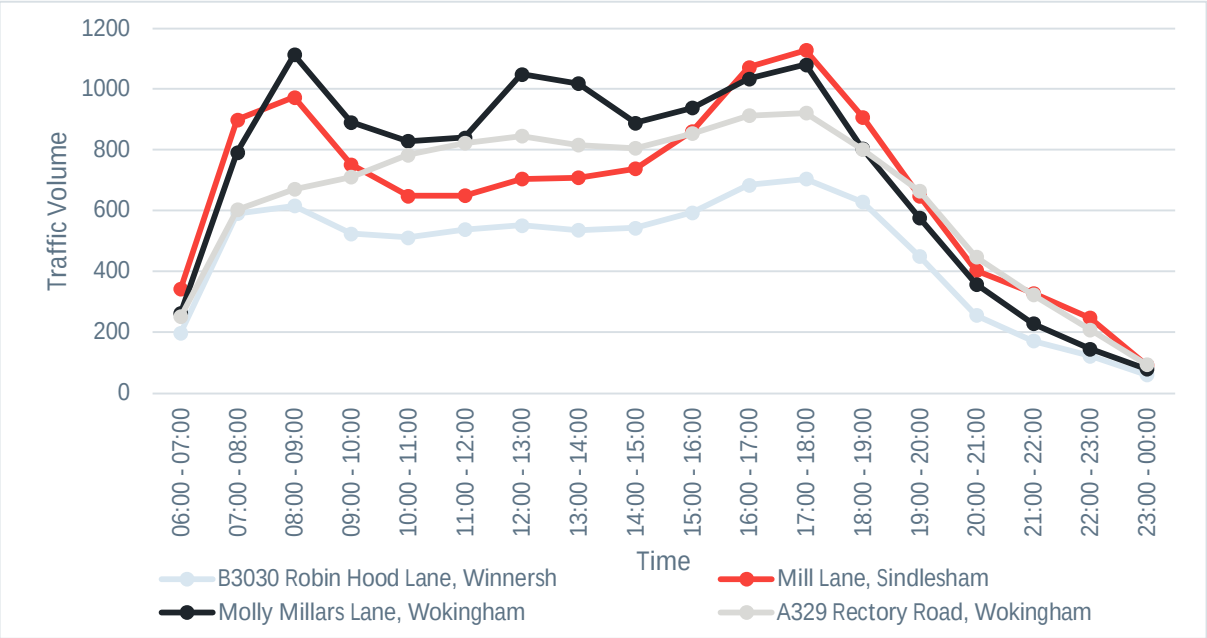
16.5.3. From Figure 16-7 below, it is observed that the average workday profile for most of the typologies can be categorised as M type with distinct peaks between 07:00 – 09:00 and 16:00 – 19:00. This is most distinct for A329 (M). The traffic profile for Edge of Reading appears to be almost flat between 07:00 – 19:00 with traffic flowing at capacity throughout the day. This is a similar trend observed Wokingham town and Winnersh to a lesser extent.

Figure 16-7 - Average workday profile for each typology



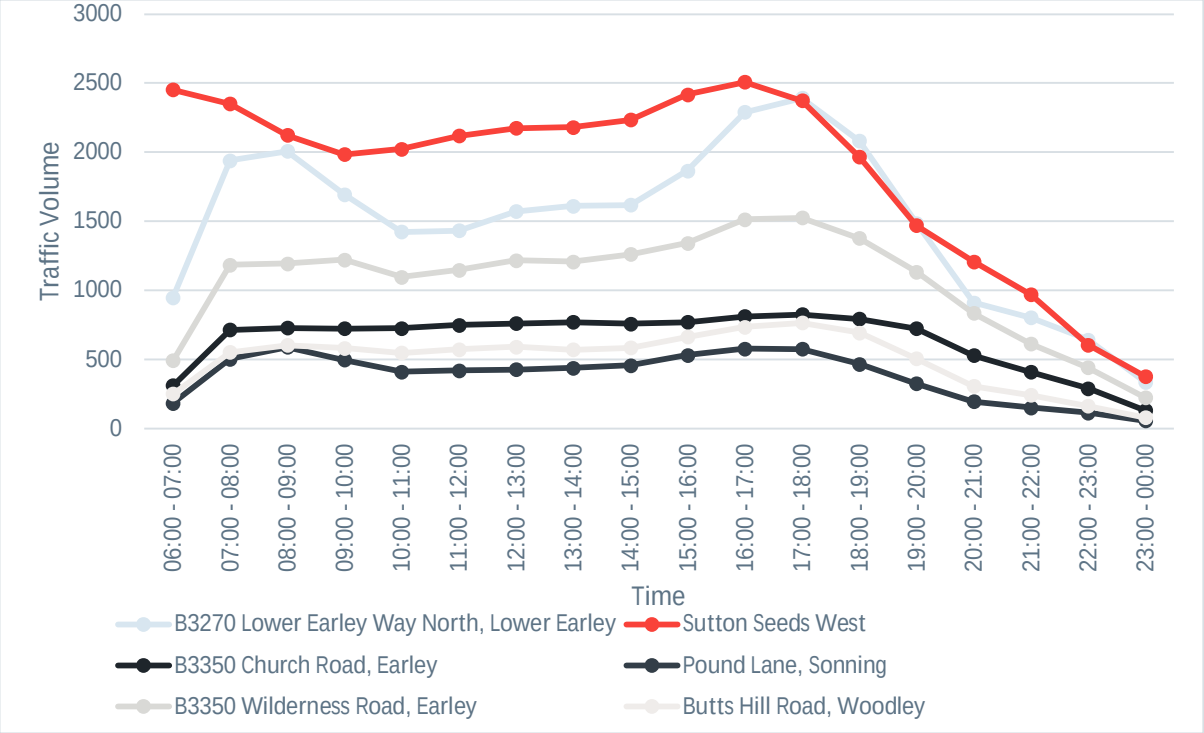
16.5.4. Figure 16-8 shows that all the ATC counters within Wokingham and Winnersh show typical M profile. However, the A329 Rectory Road Wokingham show the traffic increasing between 07:00 – 18:00 before subsiding. Molly Millars Lane in Wokingham shows an increase in traffic volume between 12:00 – 14:00.

Figure 16-8 - Average workday profile for Wokingham and Winnersh Typology



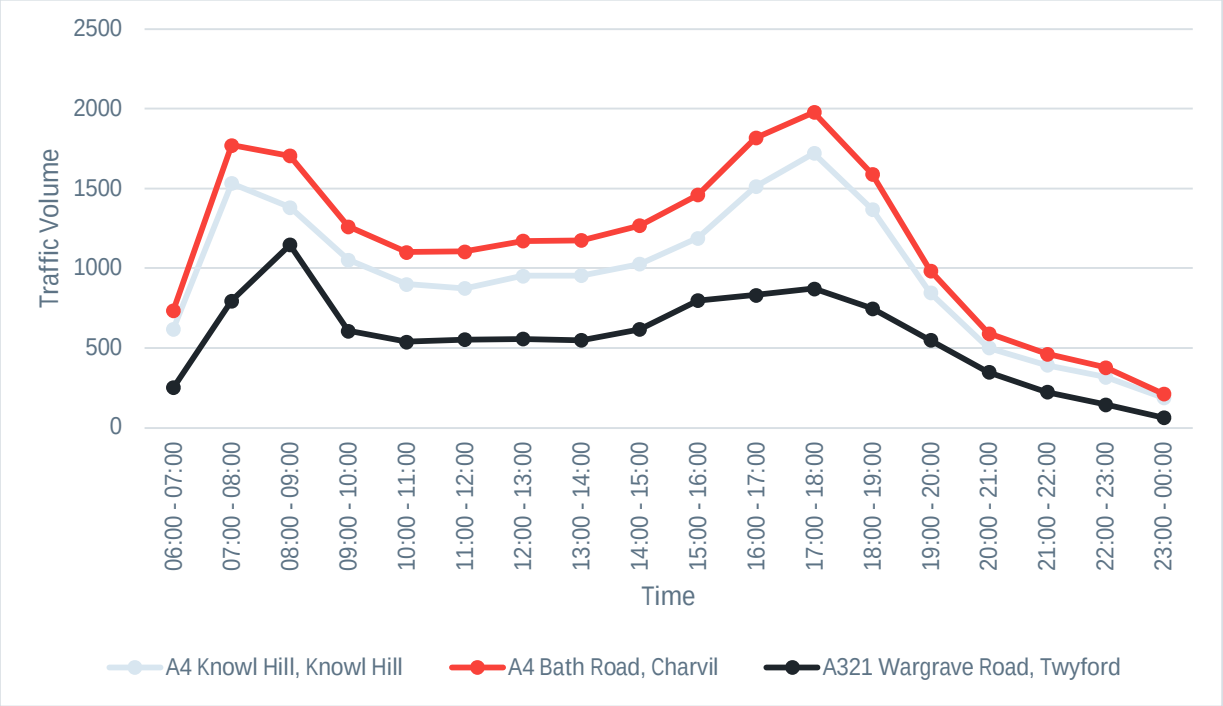
16.5.5. Figure 16-9 shows the traffic profiles within the Edge of Reading typology area. This shows a mixed pattern with most of the roads showing almost flat profile except the B3270 Lower Earley Way North.

Figure 16-9 - Average workday profile for Edge of Reading Typology



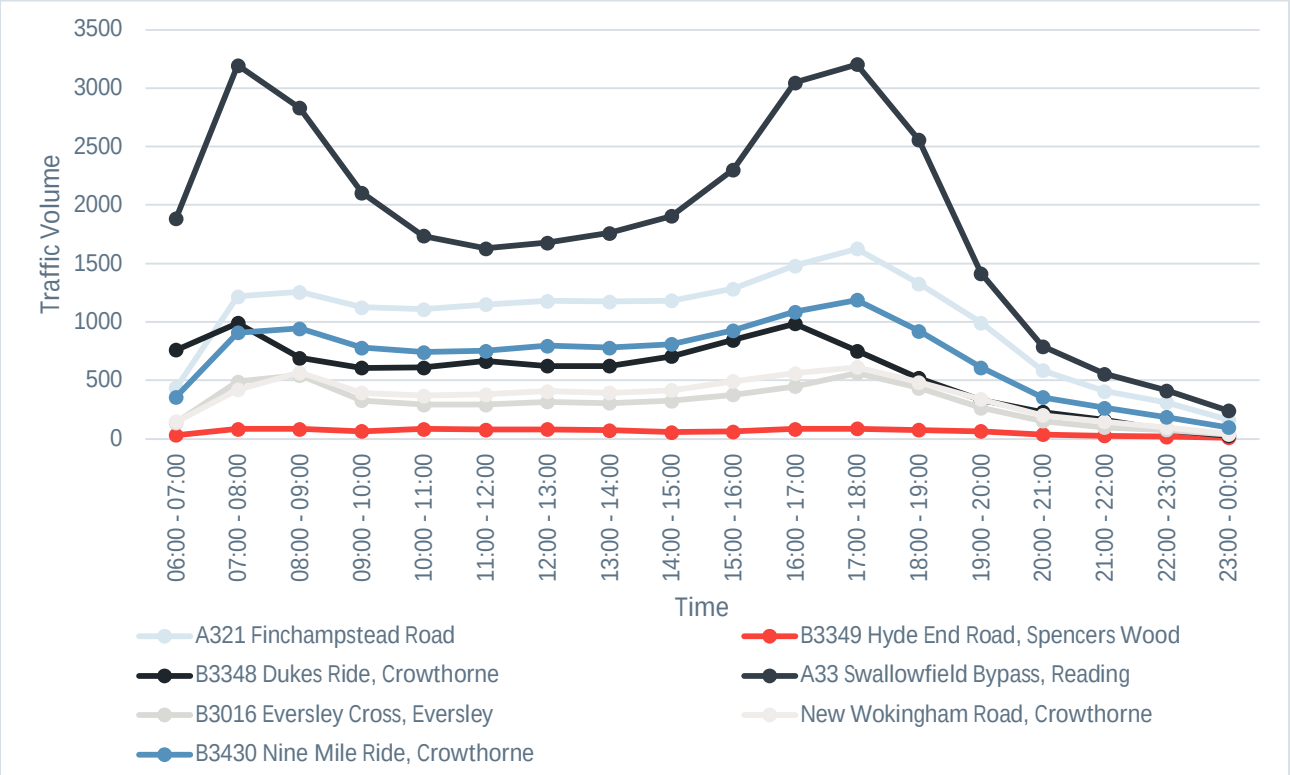
16.5.6. Figure 16-10 shows the traffic profiles within the Rural North. The A4 Knowle Hill Road, A4 Bath Road in Charvil and A321 Wargrave Road in Twyford show typical M profiles with a flatter PM peak for A321 Wargrave Road as compared to the other two roads.

Figure 16-10 - Average workday profile for Rural (N) Typology



16.5.7. Figure 16-11 shows the traffic profiles for the Rural South area. Similar to Edge of Reading typology, Rural (South) also exhibits a mix of M and flat profiles. Among all the roads under this typology, the most conspicuous profile is exhibited by A33 Swallowfield Bypass connecting M4 & Reading to Basingstoke. A33 Swallowfield Bypass serves as an important link for travel to work between Spencer's Wood, Swallowfield and Grazeley in southwest Wokingham to south and central Reading.

Figure 16-11 - Average workday profile for Rural (S) Typology



16.6 CONGESTION AND DELAYS

16.6.1. Table 16-2 below shows that, whilst average delays on locally managed A roads in the South East and England have increased every year since 2015, on locally managed A roads in Wokingham Borough average delays increased from 2015 to 2016 but decreased from 2016 to 2018. Average delays on locally managed A roads in Wokingham Borough, however, remain above regional and national levels.

16.6.2. Average speeds on locally managed A roads in the South East and England have generally been slowly falling since 2015 and in 2018 were 28.0mph in the South East and 24.9mph across England. In Wokingham Borough, however, average speeds have been rising since 2016 and in 2018 were 28.4mph, which was above both the regional and national levels.

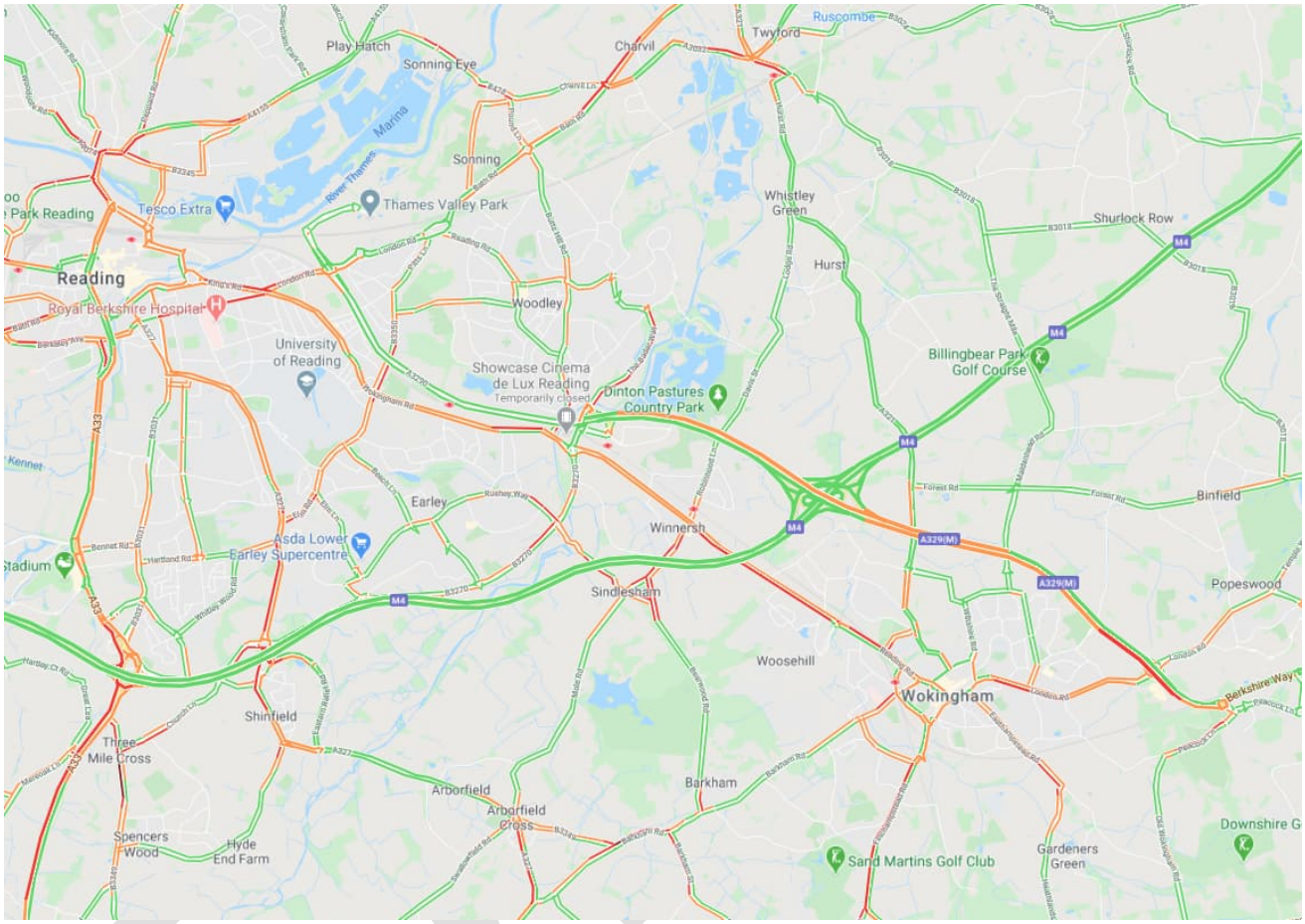
Table 16-2 - Average delays and speeds on locally managed A roads

Area	Average delay (seconds per vehicle per minute)				Average speed (mph)			
	2015	2016	2017	2018	2015	2016	2017	2018
Wokingham	38.8	41.3	42,1	40,5	28.6	27.8	28.0	28.4
South East	35.4	36.6	37.5	37.6	28.5	28.1	28.2	28.0
England	44.6	45.9	46.9	47.1	25.5	25.2	25.2	24.9

Source: 2018 DfT Road Congestion Statistics (CGN0501b and CGN0502b)

16.6.3. Figure 16-12 shows the congestion levels across the Borough on a typical Tuesday during the AM peak, as reported by Google Traffic.

Figure 16-12 - Map showing AM peak congestion levels across Wokingham Borough



Source: Google Maps traffic data (typical Tuesday 08:30)

16.6.4. Figure 16-12 above shows that, during a typical AM peak, very slow-moving traffic can be expected in the following locations:

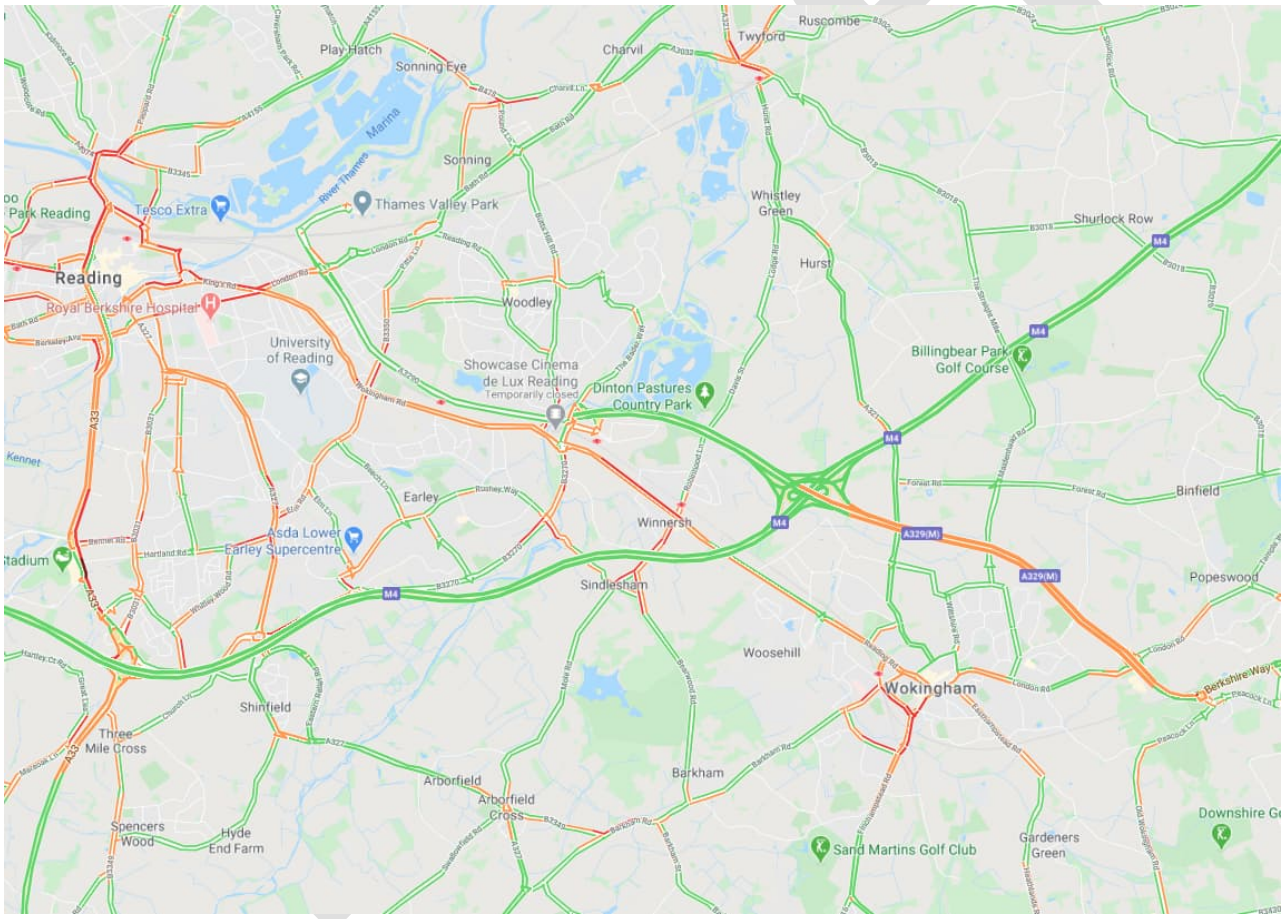
- Approaching Wokingham town centre on the A321 Finchampstead Road, A329 Reading Road, B3349 Barkham Road, A329 London Road and Easthampstead Road.
- The A329 northbound approach to the A329/Binfield Road and Winnersh Crossroads.
- Southbound/westbound approaches to the A329 Reading Road/Loddon Bridge junction.
- The A329(M) northbound in vicinity of the Coppid Beech Roundabout.
- All routes passing through Sindlesham, Arborfield Cross, Black Boy Roundabout in Shinfield and Twyford crossroads.
- The B3270 Lower Earley Way eastbound and Rushey Way southbound approaches to the B3270/Rushey Way/Mill Lane roundabout.
- The Bader Way southbound towards Winnersh Triangle.
- The B3350 Church Road southbound approach to Three Tuns crossroads in Earley.
- The northbound A327 Shinfield Road approaching the junction with Whitley Wood Road.

- The northbound A33 and northbound B3349 Basingstoke Road approaching Three Mile Cross.
- The westbound B3349 approaching the A33 roundabout in Riseley.
- The B478 Playhatch Road in both directions at Sonning Bridge; and
- The A3032 Old Bath Road/A4 Bath Road/B478 Charvil Lane roundabout.

16.6.5. In addition, one other location (not shown on Figure 16-12 above) where very slow-moving traffic can be expected is at the junction of the A321 Wargrave Road and the A4130 White Hill near Henley-on-Thames.

16.6.6. Figure 16-13 below shows the congestion levels across the Borough on a typical Tuesday during the PM peak period, as reported by Google Traffic.

Figure 16-13 - Map showing PM peak congestion levels across Wokingham Borough Map showing PM peak congestion levels across Wokingham Borough



Source: Google Maps traffic data (typical Tuesday 17:30)

16.6.7. Figure 16-13 above shows that congestion during the PM peak is generally not as severe as during the AM Peak, although very slow-moving traffic can be expected in the following locations:

- Approaching Wokingham town centre on the B3349 Barkham Road.
- Leaving Wokingham town centre on the A321 Finchampstead Road.
- Both directions of Wellington Road in Wokingham town centre, between Finchampstead Road and Barkham Road.
- Eastbound along Molly Millars Lane approaching the Finchampstead Road roundabout.

- The A329 Reading Road southbound and the B3030 Robinhood Lane westbound approaching Winnersh crossroads.
- The B3350 Church Road southbound and A329 Wokingham Road eastbound approaches to Three Tuns crossroads in Earley.
- All routes passing through Sindlesham and Twyford crossroads.
- The B3270 Lower Earley Way eastbound and Mill Lane northbound approaches to the B3270/Rushey Way/Mill Lane roundabout.
- Beeston Way southbound in Lower Earley, approaching the B3270 roundabout.
- The southbound and westbound approaches to the A329 Reading Road/Loddon Bridge Road junction.
- The northbound A327 Shinfield Road approaching the junction with Whitley Wood Road.
- The westbound B3349 and the southbound A33 approaching the A33 roundabout in Riseley; and
- The B478 Playhatch Road in both directions at Sonning Bridge.

16.6.8. As in AM peak, one other location (not shown on Figure 16-13 above) where very slow-moving traffic can be expected is at the junction of the A321 Wargrave Road and the A4130 White Hill near Henley-on-Thames.

16.6.9. In addition, in September 2019 Reading Buses provided the Borough with their top ten congestion locations affecting bus routes in the Borough which support the Google Traffic data.

16.6.10. Away from the areas of congestion highlighted above, significant journey delays can still occur due to temporary factors such as road traffic accidents, road works, poorly parked vehicles and slow-moving vehicles.

16.7 WOKINGHAM BOROUGH COUNCIL PERMIT SCHEME

16.7.1. To improve management of roadworks and reduce unnecessary disruption to road users, Wokingham Borough Council implemented a permit scheme in January 2015. The scheme allows the Borough greater control over works taking place on its network and ensure that works are expedited and are undertaken in the most efficient manner. The increased discipline required under permitting has improved existing processes within works promoter organisations, which has enhanced the quality of information relating to proposed works received by the permit authority.

16.7.2. The permitting rules have also served to highlight the importance of providing early and detailed information concerning planned works to assist in the coordination process. The permit authority has made effective use of the new powers and have worked closely with the utility companies and their own highway authority promoters to ensure that those powers have been applied in a reasonable and competent manner. The combined effect of these powers has contributed to improved network coordination and reduced disruption, key to the Borough fulfilling its Network Management Duty.

16.7.3. In addition, there was increased discipline amongst highway promoters, improved planning and scheduling of works, a shift to larger scale works, improved public perception and an improved relationship between the Council and all activity promoters.

16.8 PARKING

16.8.1. Wokingham Borough currently have responsibility for managing and enforcing all on-street parking, and off-street parking in Council owned off-street car parks and Park & Ride sites. It also has a level of influence over privately owned and operated off-street car parks through planning controls.

16.8.2. Currently, across the Borough, there are 23 public car parks run by the Council providing up to

- 1,223 spaces with 70 spaces specifically designated for Blue Badge holders in Wokingham town centre.

- 547 spaces in Woodley (12 spaces for Blue Badge holders).

- 50 spaces in Finchampstead (2 spaces for Blue Badge holders)

- 40 spaces in Shinfield without any designated spaces for Blue Badge holders.

- 45 spaces in Earley (2 spaces reserved for Blue Badge holders)

; 39 spaces in Twyford (2 spaces specifically designated for Blue Badge holders)

and 32 spaces in Wargrave and 1 space is reserved for Blue Badge holders.

16.8.3. The Borough also has two Park & Ride sites. Winnersh Park & Ride has 378 spaces is located on the edge of Winnersh Triangle Business Park and provides bus services to Reading every 15 minutes. Parking costs £4 a day but is included within the price of the bus ticket.

16.8.4. Mereoak Park & Ride has 573 parking spaces and two rapid vehicle electric charging points. It is located off the A33, just south of M4 Junction, and provides a bus service to Reading approximately every 15 minutes. The £1 daily parking cost is included as part of the bus ticket.

16.8.5. A third Park & Ride site under construction that will provide 258 parking spaces located south of the River Thames and west of the Thames Valley Business Park at Thames Valley.

17 ROAD SAFETY

17.1 OVERALL COLLISION TRENDS

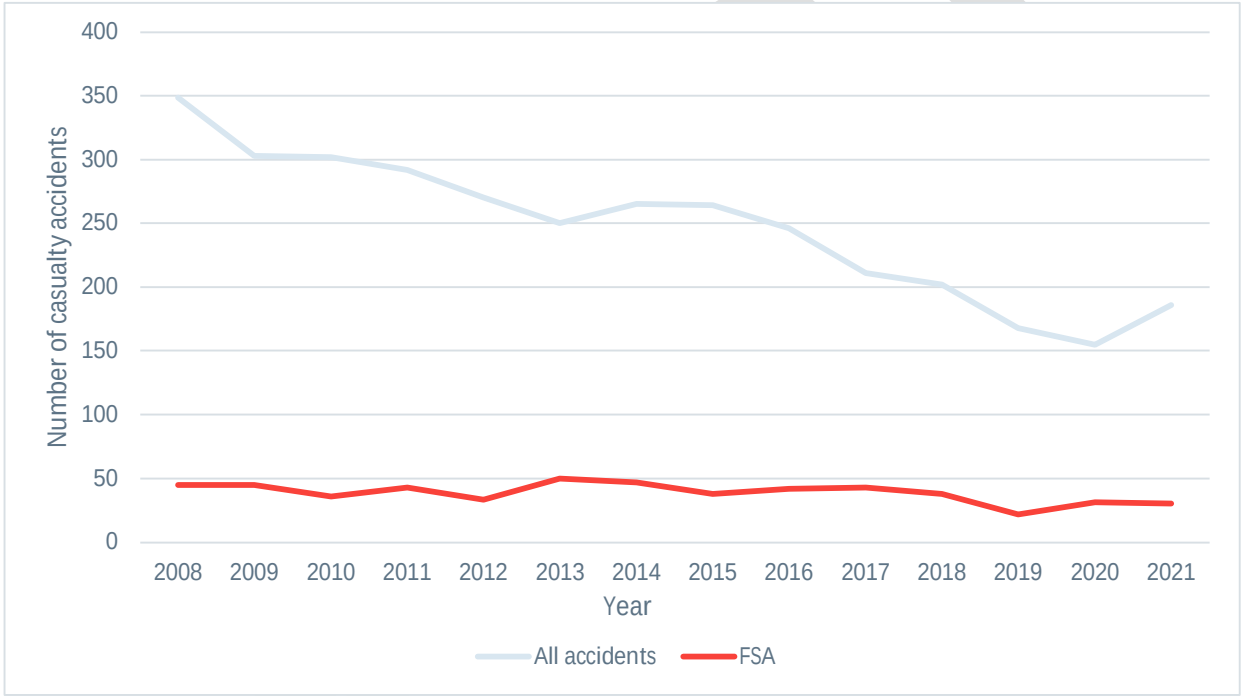
17.1.1. The number of casualties of any severity and the number of casualties involving death or serious injury (KSI) in Wokingham Borough since 2008 are plotted in Figure 17-1.

17.1.2. This figure shows that the number of road traffic collisions resulting in casualties of any severity on Wokingham Borough roads has generally been falling year-on-year. In 2008 there were 349 accidents involving casualties of any severity, but in 2021 this number had fallen to 186, a drop of 47%.

17.1.3. The number of traffic accidents on Borough roads that resulted in a fatality or serious injury (FSA) has fallen, albeit with at a slower rate, with 30 FSA in 2021 compared with 45 in 2021.

17.1.4. The number of collisions tends to fluctuate, with a low of 22 in 2019 and a high of 50 in 2013. The number of fatalities has been between 1 and 5 for each of the last 10 years.

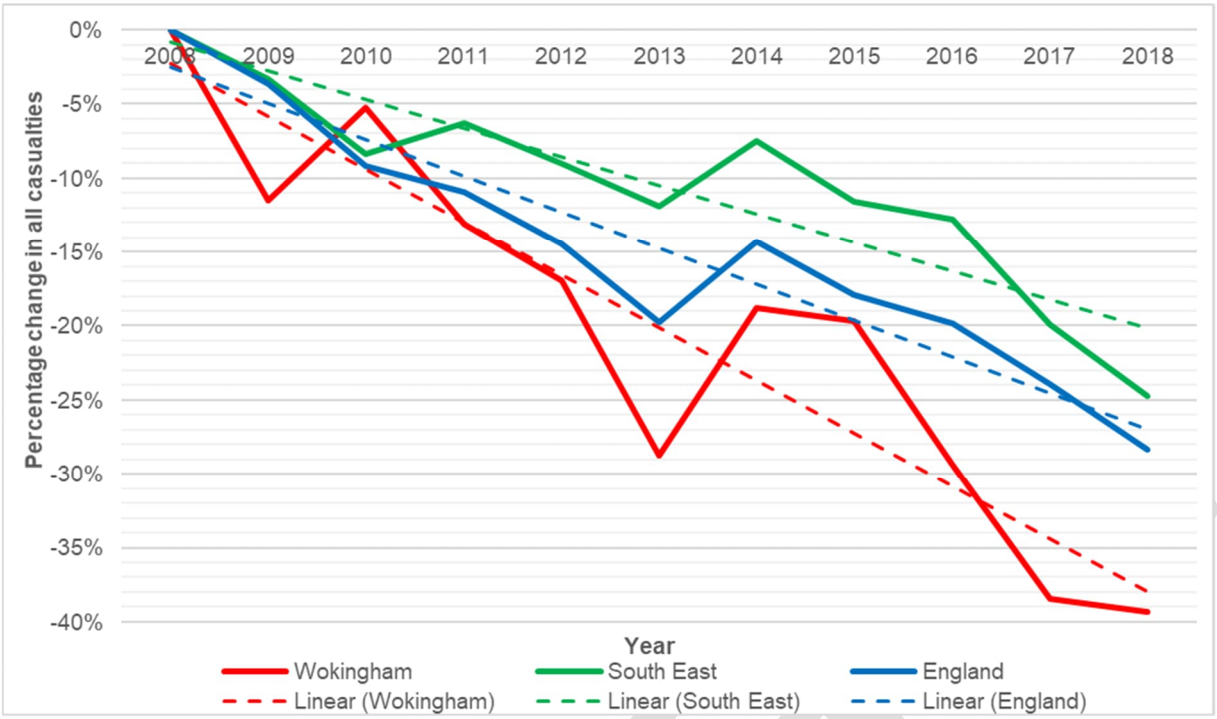
Figure 17-1 - Number of casualty road traffic accidents in Wokingham Borough



Source: DfT Road Safety Data 2021

17.1.5. Figure 17-2 below provides a comparison of the casualty reduction rates achieved for all casualties and KSI casualties since 2008 in Wokingham Borough compared with the South East and England, respectively. This shows that rate of reduction in all casualties on Wokingham Borough roads since 2008 was greater than both the regional and the national rate, with the 39% reduction achieved in Wokingham exceeding the 25% and 28% reductions achieved regionally and nationally respectively.

Figure 17-2 – Comparison of percentage change in all casualties since 2008



Source: DfT Road Safety Data 2019 (RAS30038)

17.1.6. Table 17-1 compares the 2018 road casualty data for Wokingham Borough with regional, national and the five other unitary authorities that govern Berkshire. The Borough comes in the top three in all eight measures with Wokingham Borough at or below the regional and national average.

Table 17-1 - 2018 casualty rates for the six unitary authorities that govern Berkshire

Unitary authority	Casualty rate per billion vehicle km	Casualty rate per million population	Casualty rate per thousand licensed vehicles	Km of road per casualty	Km of road per fatality	Km of road per serious casualty	Km of road per slight casualty	Fatalities as % of all casualties
Reading	605	2,016	15.1	1.2	396.3	8.8	1.4	0.3%
Slough	422	2,455	3.9	0.9	46.3	7.0	1.0	1.9%
Bracknell Forest	172	1,044	4.9	3.7	157.0	33.6	4.3	2.4%
Wokingham	**163**	**1,595**	**8.0**	**2.9**	**257.1**	**21.4**	**3.4**	**1.1%**
Windsor and Maidenhead	156	1,895	9.5	2.4	137.2	15.6	2.9	1.7%
West Berkshire	93	1,836	7.1	4.9	177.2	27.8	6.1	2.7%
South East	285	2,786	13.3	1.9	187.0	11.1	2.3	1.0%
England	321	2,616	14.1	2.1	200.1	13.3	2.5	1.0%

Source: DfT Road Safety and Traffic Data 2019 (RAS30038, RAS30040, RAS30045, RDL0202 and VEH0105)

17.1.7. Long term casualty trends are influenced by a number of factors, some outside the control of the Council (including vehicle technology, in car safety features and weather conditions) and factors where the Council can exert more influence including:

- Driver behaviour - targeted education, publicity and training work targeted at both high-risk groups (i.e., motorcyclists and young drivers) and high-risk behaviours (drink driving).
- Road conditions - maintenance practices such as road surface quality/traction, drainage, vegetation impacting visibility and time to react to faults.
- Highway design and speed limits – changes to road character/design, lower speed limits, or new facilities such as pedestrian crossings or enhanced street lighting.

CHANGE IN CASUALTY REPORTING SYSTEM

17.1.8. In January 2018, Thames Valley Police introduced online reporting of collisions through the Single Online Home project. This is also being progressively adopted by some other forces. Following the adoption of online reporting, Thames Valley Police saw a 48% increase in the number of casualties in self-reporting accidents from 742 in 2017 to 1,099 in 2018.

17.1.9. This suggests that online reporting is leading to more accidents being reported in the Thames Valley. Whilst it is too early to draw firm conclusions on its impact, the potential influence on collision statistics of online reporting should be borne in mind.

17.2 CASUALTIES BY AGE AND GENDER

17.2.1. Figure 17-3 shows the breakdown of casualties from road traffic accidents in Wokingham Borough by gender and age grouping in 2008 and 2018 respectively.

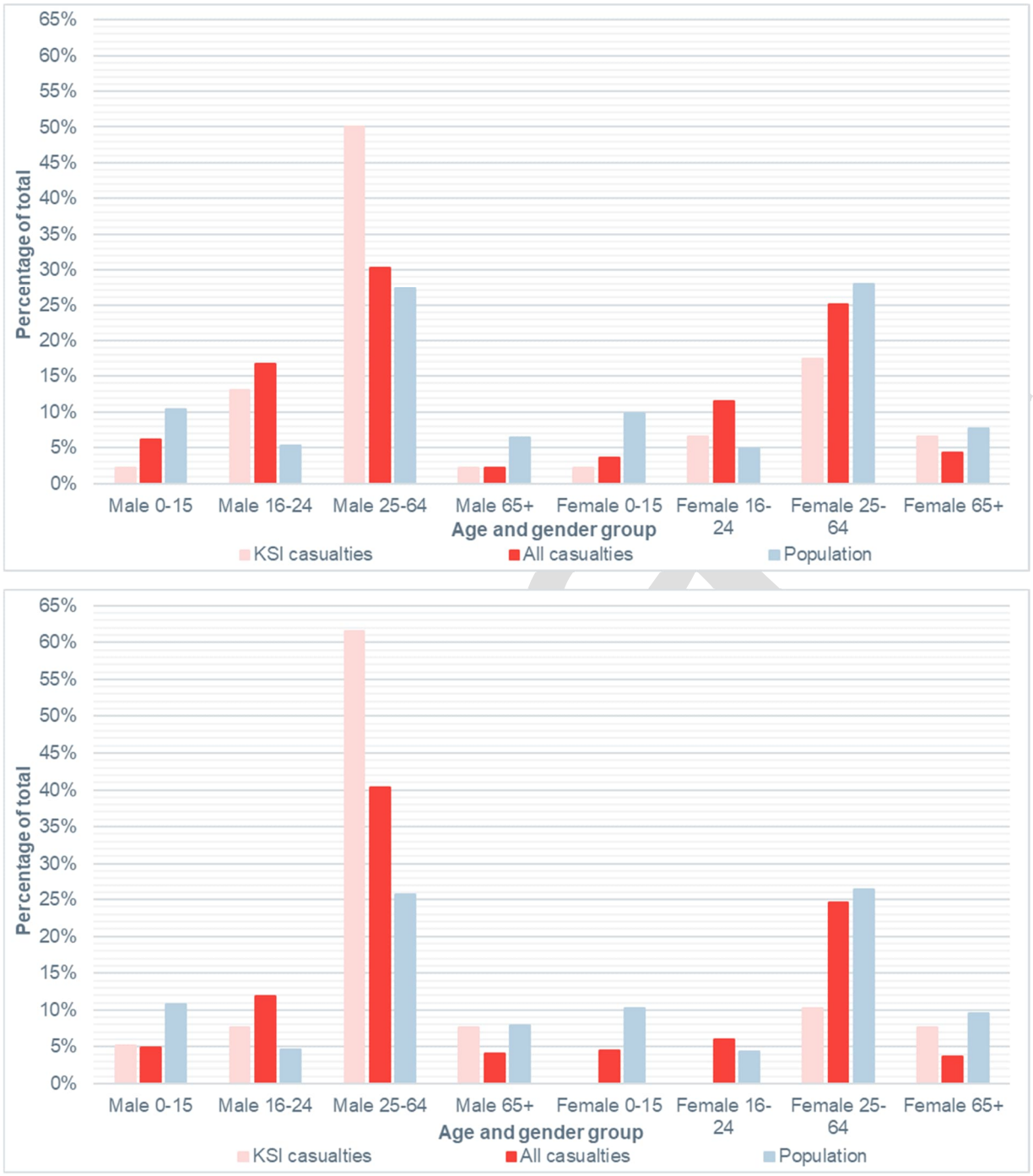
17.2.2. Analysis of all road accident casualties by gender and age group shows that since 2008, between 55% and 62% of all casualties have been male. The proportion of males in that are KSI casualties is even higher, at between 63% and 84% of all KSI casualties.

17.2.3. The figure also shows that males aged 25 to 64 experienced the highest proportion of all and KSI casualties of any age and gender group in both years. In 2008, 50.0% of KSI casualties and 30.3% of all casualties were male aged 25 to 64. In 2018, these figures rose significantly to 61.5% of KSI casualties and 40.3% of all casualties, despite the percentage of the population in this age and gender group falling from 27.3% to 25.7%. Conversely, there were approximately 5% falls in the proportion of all and KSI casualties in males aged 16 to 24 between 2008 and 2018, despite the population in this age and gender group falling less than 1%.

17.2.4. The proportion of all casualties in females aged 25 to 64 showed little change between 2008 and 2018 and the proportion of KSI casualties fell from 17.4% in 2008 to 10.3% in 2018. There were also falls in the proportion of all and KSI casualties in females aged 16 to 24 with the proportion of all casualties falling from 11.5% in 2008 to 6.0% in 2018 and the proportion of KSI casualties falling from 6.5% in 2008 to zero in 2018.

17.2.5. People aged 65 and over accounted for 7.8% of all casualties and 15.4% of KSI casualties in 2018. This represents an increase compared with 2008, when they accounted for only 6.6% of all casualties and 8.7% of KSI casualties. However, this is a lower increase than the increase in the population of people over 65 from 14.1% in 2008 to 17.6% in 2018.

Figure 17-3 - Casualties by age and gender group from collisions in Wokingham Borough in 2008 (above) and 2018 (below)



Sources: DfT Road Safety Data 2019 and ONS 2018 mid-year population estimates, Crown Copyright 2019

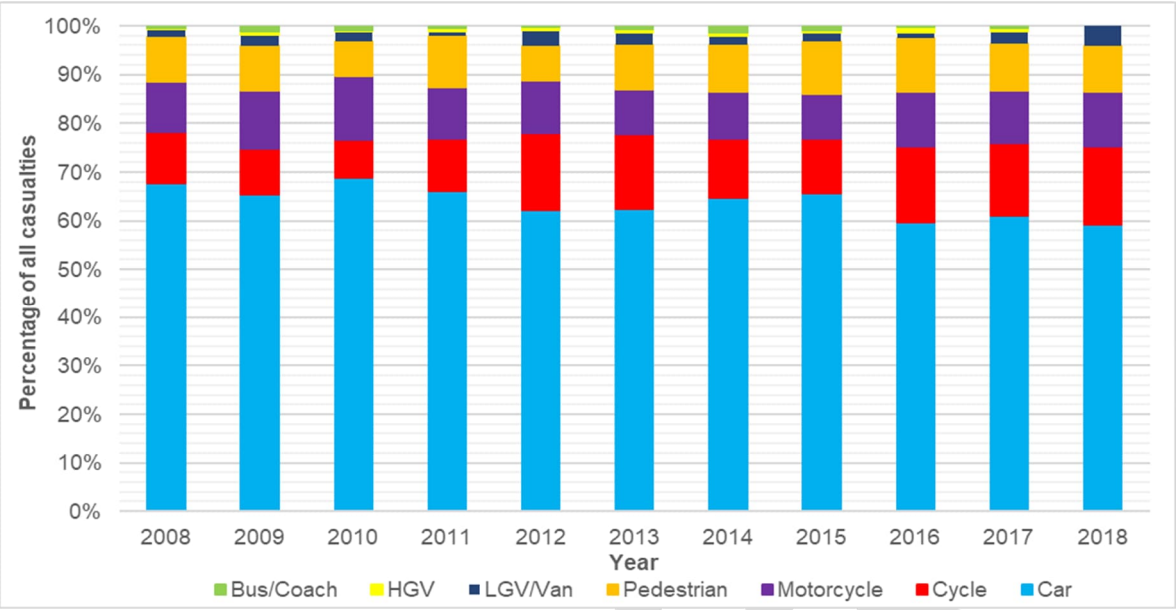
17.3 CASUALTIES BY MODE

17.3.1. Figure 17-4 below shows the breakdown by road user type of all casualties from road traffic accidents in Wokingham Borough between 2008 and 2018.

17.3.2. Whilst total casualty numbers have fallen significantly since 2008, the proportion of all casualties by road user type has generally shown little change. The two exceptions are car user casualties which

have fallen from 67.7% of all casualties in 2008 to 59.2% in 2018 and cycle casualties which have risen from 10.5% of all casualties in 2008 to 16.1% in 2018.This is broadly consistent with the change in car and cycle trips observed over the period.

Figure 17-4 - All casualties from collisions in Wokingham Borough by user type

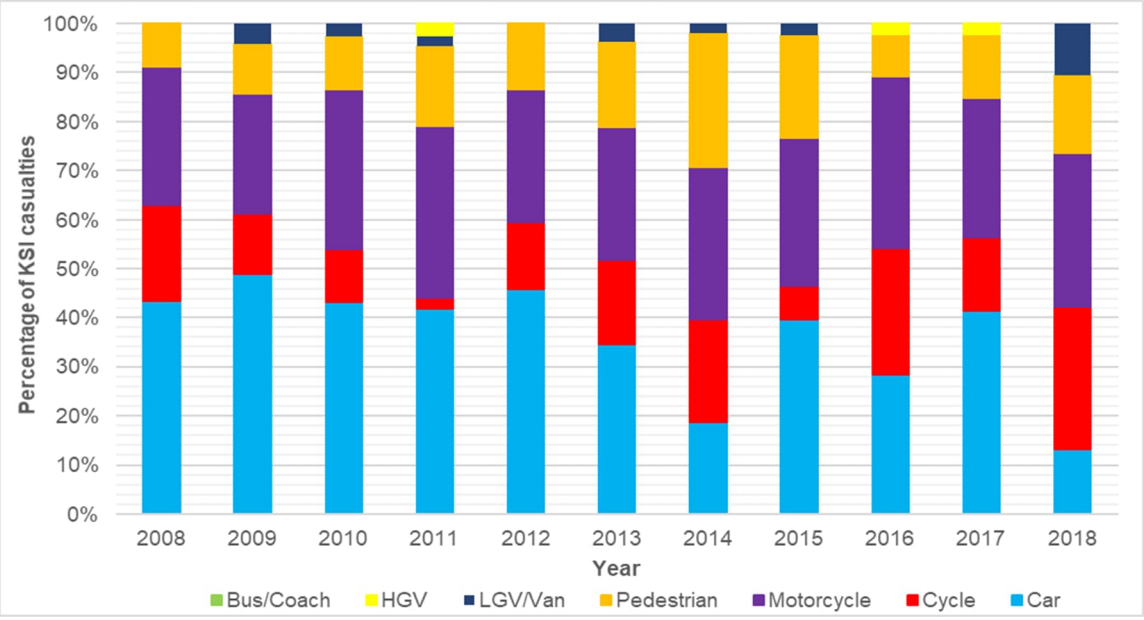


Source: DfT Road Safety Data 2019 (RS30043)

17.3.3. Although car users experience the highest proportion of all casualties, approximately 82% of all traffic in the Borough is by car and so car is not the highest risk mode.

17.3.4. Figure 17-5 below shows the breakdown by road user type of KSI casualties from road traffic collisions in Wokingham Borough between 2008 and 2018.

Figure 17-5 - KSI casualties from collisions in Wokingham Borough by user type



Source: DfT Road Safety Data 2019 (RS30043)

17.3.5. The proportion of KSI casualties attributed to car users was 43.5% in 2008 and fell to its lowest level in 2018 of 13.2%. Conversely, the proportion of KSI casualties attributed to cyclists was 19.6% in 2008, and this rose to its highest level in 2018 of 28.9%.

17.3.6. In 2018, approximately 75% of KSI casualties were pedestrians, cyclists or motorcyclists. The highest risk mode is motorcycle, as although less than 1% of traffic is by motorcycle, motorcyclists accounted for 11.2% of all casualties and 31.6% of KSI casualties.

17.3.7. There were no bus or coach user KSI casualties in any year and HGV user KSI casualties were only recorded in 2011, 2016 and 2017.

17.4 VULNERABLE ROAD USERS

17.4.1. Table 17-2 presents a comparison between 2008 and 2018 of the key pedestrian, cyclist and motorcyclist casualty statistics in Wokingham Borough.

17.4.2. It shows that whilst the number of all pedestrian casualties has fallen significantly since 2008, the proportion of the total in each of the groupings above has shown little change. The exception to this is for the fall in the proportion of all pedestrian casualties on non-dry roads which more than halved from 25% to 12%. The casualties split by gender is broadly even.

17.4.3. Between 2008 and 2018, the number of all cyclist casualties fell slightly from 46 to 43. There was again a reduction in the proportion of all cyclist casualties on non-dry roads which fell from 26% in 2008 to 16% in 2018. The biggest change was in the proportion of all cyclist casualties affecting children under 16, which fell from 35% in 2008 to just 9% in 2018.

17.4.4. The number of all motorcyclist casualties has also fallen since 2008. However, the proportion of all male casualties has increased from 78% in 2008 to 97% in 2018. The only significant fall was in the proportion of all motorcyclist casualties on non-dry roads which more than halved from 63% in 2008 to 27% in 2018.

Table 17-2 - Comparison of pedestrian, cyclist and motorcyclist casualty statistics

All casualties	Pedestrian		Cyclist		Motorcyclist	
	2008	2018	2008	2018	2008	2018
Total number	40	25	46	43	46	30
Male	21 (53%)	13 (52%)	37 (80%)	37 (86%)	36 (78%)	29 (97%)
Children under 16	9 (23%)	6 (24%)	16 (35%)	4 (9%)	0	0
In urban areas	33 (83%)	19 (76%)	30 (65%)	29 (67%)	21 (46%)	11 (37%)
On roads with speed limit over 40mph	3 (8%)	2 (8%)	5 (11%)	2 (5%)	14 (30%	8 (27%)
On slip roads or at junctions, driveways or entrances	15 (38%)	8 (32%)	36 (78%)	32 (74%)	29 (63%)	21 (70%)
In dark and unlit locations	1 (3%)	1 (4%)	0	2 (5%)	4 (9%)	4 (13%)
On non-dry roads	10 (25%)	3 (12%)	12 (26%)	7 (16%)	19 (63%)	8 (27%)

In roadworks	1 (3%)	3 (12%)	1 (2%)	2 (5%)	1 (2%)	4 (13%)

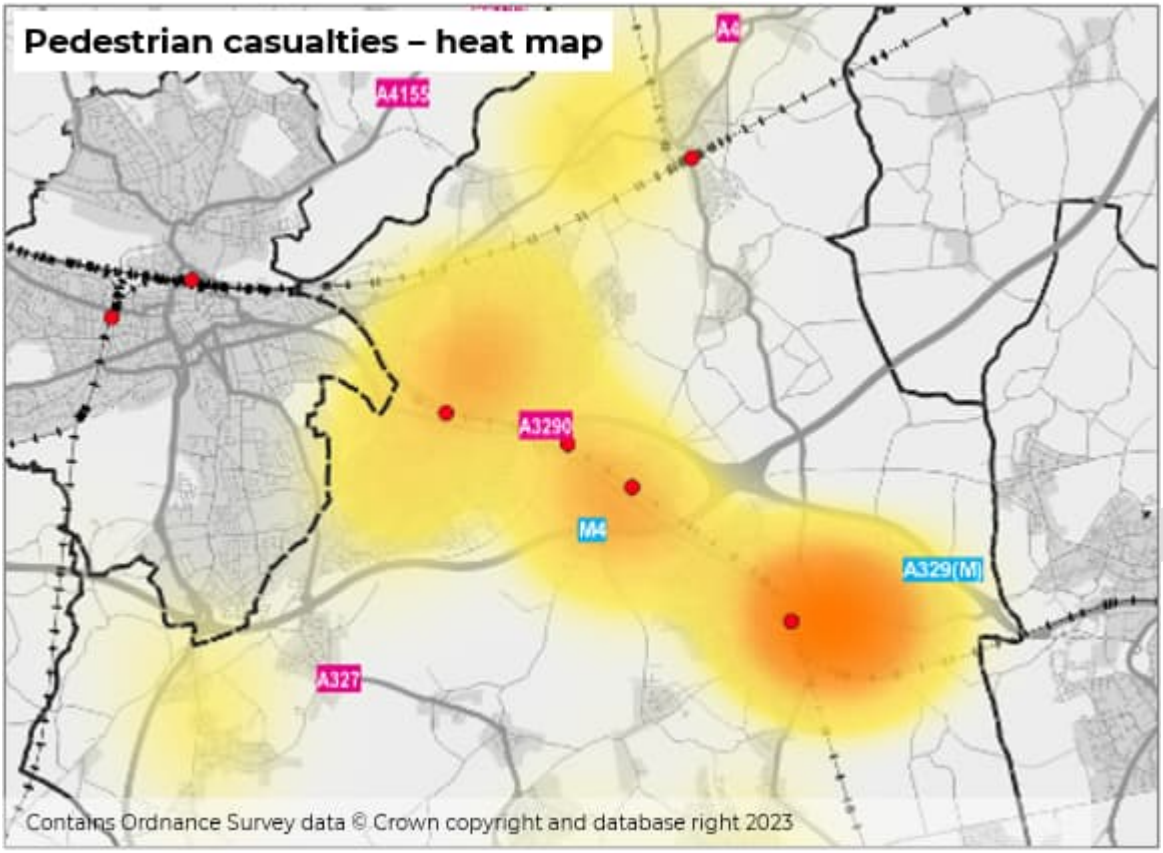
Source: DfT Road Safety Data 2019 (STATS19)

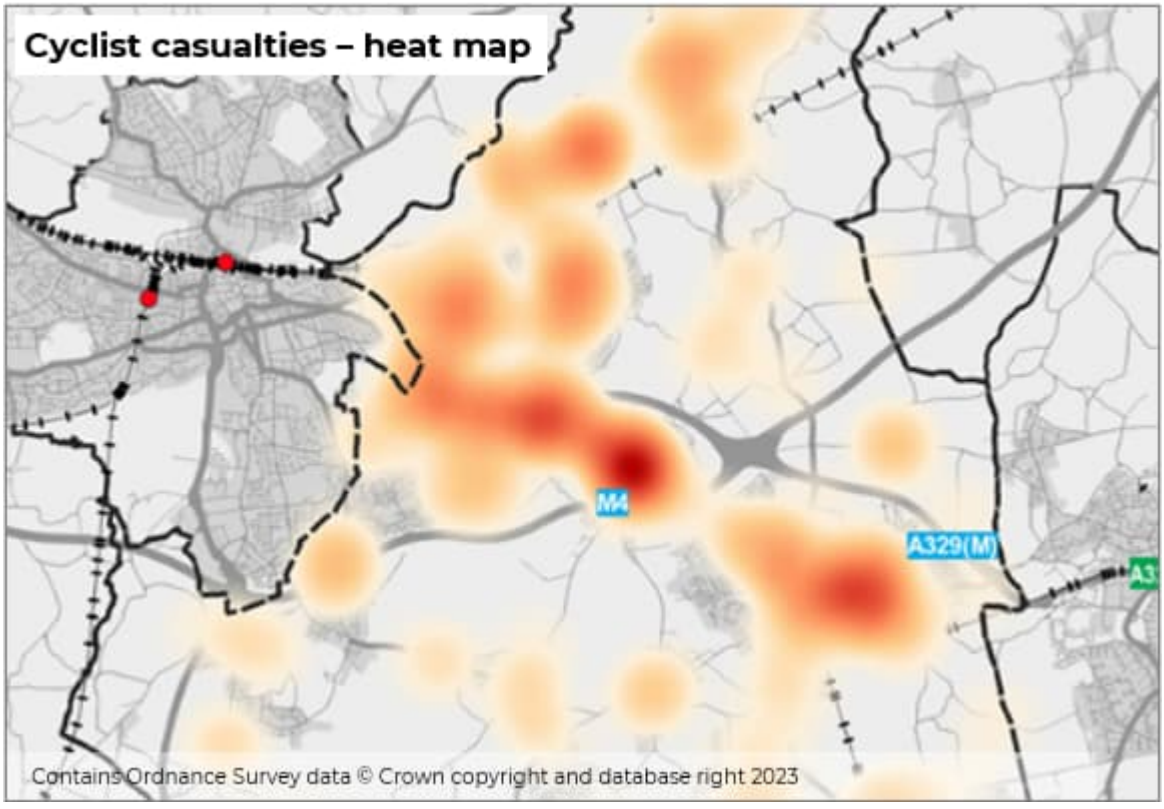
17.4.5. An overview of the areas of higher density of collisions involving pedestrians and cyclists is shown in Figure 17-6.

17.4.6. This figure highlights the highest number of pedestrian collisions being focused around Wokingham Town Centre, Winnersh (A329 Winnersh Crossroads area and Robin Hood Lane), Lower Earley (A329 Showcase roundabout area), Charvil, Shinfield and within Woodley and Lower Earley. Cyclist casualties are also prevalent in Twyford (B3018) and the B3290 Black Boy Roundabout

17.4.7. This typically, but not exclusively, reflects the higher level of pedestrian and cycle activity in these

Figure 17-6 - KSI casualties from collisions in Wokingham Borough by user type





17.5 ROUTE ANALYSIS

17.5.1. Analysis of the comparative performance of different routes for the period from 2016 to 2021 has also been undertaken to identify the relative collision performance of different routes in Wokingham Borough. The routes were assessed by considering:

- Overall number of collisions
- Number of KSIs
- Fatally weighted injury (FWI) scoring
- Distance weighted FWI score (taking account length of route)

17.5.2. The Fatality weighted Injury (FWI) score is derived from the severity of each casualty in a collision, where a fatal collision I s 10, a serious casualty a5 and a slight casualty a 1.

17.5.3. Considering the four metrics above the number and severity of collisions could be assessed. This is summarised in Figure 17-4 below.

Table 17-4 - Comparison of road safety performance by route.

Route	Fatal	Serious	Slight	Total	KSI	FWI	Length (km)	Col/km	KSI/km	FWI (Distance-weighted)
A329	0	21	104	125	21	244	12.4	10	2	20
B3350	1	0	28	29	1	48	3.8	8	0	13
A4	1	6	61	68	7	135	14.8	5	0	9
B478	1	2	3	6	3	23	1.7	4	2	14
B3270	0	3	13	16	3	33	5.2	3	1	6
B3030	0	3	18	21	3	42	8.7	2	0	5
B3430	0	2	14	16	2	28	6.7	2	0	4
A3032	0	2	8	10	2	21	4.3	2	0	5
A327	0	8	19	27	8	68	11.7	2	1	6
A321	0	6	47	53	6	97	23.1	2	0	4
B3349	0	8	21	29	8	162	12.7	2	1	13
A4130	0	4	5	9	4	28	4.4	2	1	6
A329M	0	6	27	33	6	64	19.4	2	0	3
A329O	0	4	14	18	4	47	11.1	2	0	4
B3348	1	1	5	7	2	22	4.7	1	0	5
B3016	0	1	2	3	1	10	2.1	1	0	5
B3034	0	0	5	5	0	6	3.6	1	0	2
A33	0	3	10	13	3	29	12.7	1	0	2
B4446	0	0	1	1	0	1	1.2	1	0	1
B3024	0	0	2	2	0	2	2.7	1	0	1
B3018	0	0	1	1	0	2	2.2	0	0	1

17.5.4. Based on the results above, the following sections with the highest risk to road safety have been identified:

- A329 Winnersh to Reading
- A329 Wokingham to Winnersh

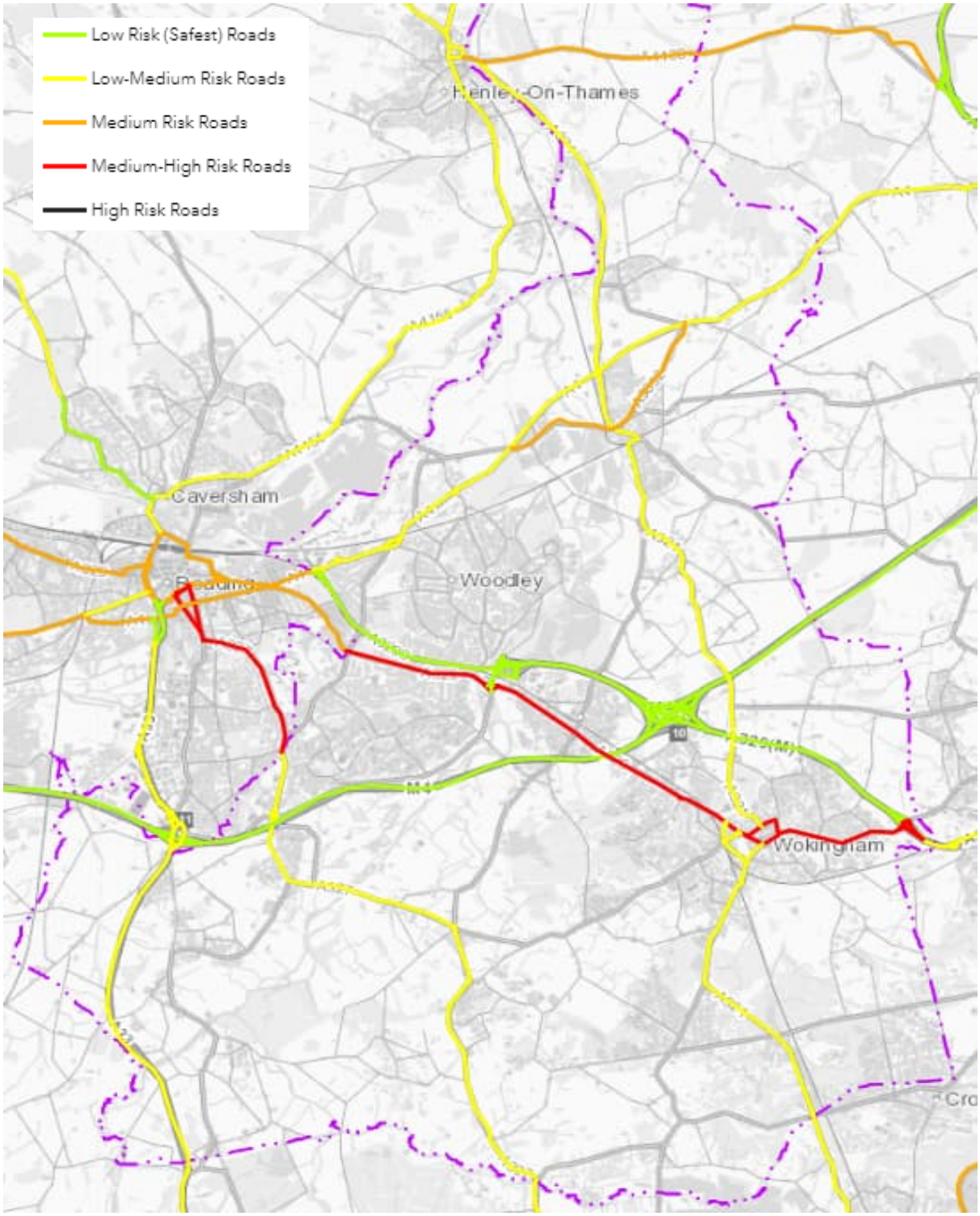
- B478
- A329 Coppid Beach Roundabout to Wokingham
- B3349
- A4 Charvil to Hare Hatch

17.5.5. The B3350 was identified as a high-risk route at the summary level, however the lower number of serious incidents gives it a lower collision severity.

17.5.6. A further indication is provided by the Road Safety Federation European Road Assessment Programme (EuroRAP). Within this, all motorways and A roads are given a risk rating representing the statistical risk of death or serious injury occurring by comparing the frequency of road crashes resulting in death and serious injury on every stretch of road with how much traffic each road is carrying. Figure 17-7 below shows the EuroRAP rating for the motorways and A roads in Wokingham Borough (2015-2017).

17.5.7. Figure 17-7 shows that Wokingham Borough has no high-risk road sections, but the entire section of the A329 within the Borough is classified as a medium-high risk road. In addition, the Borough has two medium risk road sections. These are the entire section of the A4130 within the Borough and the A3032 which passes through Twyford.

Figure 17-7 - EuroRAP risk rating of motorways and A roads in Wokingham Borough for 2015-2017



Source: RSF EuroRAP 2019 Results Data Portal and OS Data, Crown Copyright 2019

18 SUMMARY

18.1 LOCATION AND DEMOGRAPHICS

18.1.1. Wokingham Borough is an inland unitary authority located between the urban areas of Reading and Bracknell. It is made up of fourteen parish councils and three town councils.

18.1.2. In 2021, Wokingham Borough had a total population of 177,500. The population had increased by 15% since 2011 (23,000 extra people), more than double the national average. Net migration was a significant contributor to this, with approximately 1000 people per year migrating from Reading into Wokingham.

18.1.3. There are 992 people per square km in the borough, more than double the national average of 430 people per square km.

18.1.4. The population of the borough is centred around three main urban areas – Wokingham town Centre, Earley and Woodley and a large rural area including smaller settlements, such as Twyford, Finchampstead and Arborfield Green.

18.1.5. Wokingham town Centre is the largest urban settlement containing over a quarter of the total population of the borough and is the commercial, cultural and administrative centre.

18.1.6. The English Index of Multiple Deprivation (IMD) shows that Wokingham Borough is the second least deprived local authority in England (ranked 316 of 317). There are however some areas with greater levels of deprivation, with four LSOAs within the 4th most deprived decile in England.

18.2 TRANSPORT EMISSIONS

18.2.1. Based on government data and estimated using the Department for Energy Security and Net Zero (DESNZ) method, Wokingham Borough's carbon footprint is 505 $ktCO_2$. These figures exclude sectors outside the council's control, such as the M4 which creates 100.02 $ktCO_2$ and diesel rail trains which contribute 6.19 $ktCO_2$.

18.2.2. Transport emissions contribute 162.93 $ktCO_2$ to the overall carbon footprint of the Borough in 2020 (32.2%). A roads account for 61.2 $ktCO_2$, minor roads account for 94.15 $ktCO_2$ and other modes of transport account for the least at 7.55 $ktCO_2$.

18.2.3. Air quality has a negative impact on the health of those who live within close proximity to areas of poor air quality. Within Wokingham Borough and across the UK, vehicle emissions are the primary reason for air quality breeches and the two components of exhaust gases of most concern for human health are nitrogen dioxide (NO_2) and particulate matter (PM).

18.2.4. There are three Air Quality Management Areas (AQMAs) in Wokingham Borough; Wokingham town Centre (Peach Steet, Broad Street, Shute End, Denmark Street and London Road), Twyford Crossroads (A321) and Wokingham M4 (either side of the M4).

18.2.5. Significant changes to the road layout around the M4 AQMA have taken place in the last 3 years and no tubes on the M4 corridor exceeded the legal limit. However, the NO_2 legal requirement of 40 µg/m3 was exceeded at Shute End in Wokingham town Centre and at Twyford Crossroads in 2019, with highest volumes recorded on the A3032 eastbound approach to the junction.

18.2.6. For 2020 and 2021, when traffic levels had been reduced through lockdowns in the COVID-19 pandemic, and the most recent 2022 data, emissions levels at all locations in Wokingham Borough are below annual NO_2 limit.

18.3 ENVIRONMENT

18.3.1. The quality of streets and highway space in all towns and villages is important to quality of life and makes Wokingham Borough an attractive place for people to live in, work in, or visit. Wokingham Borough's historic environment is one of the county's greatest assets and Historic England's (HE) National Heritage List for England (NHLE) highlights some 650 listed buildings in the Borough.

18.3.2. Within the borough there are 5 sites of special scientific interest, 2 Regionally Important Geological and Geomorphological Sites (RIGS), 11 registered commons and 11 National Nature reserves. Together this covers approximately 180 hectares, 1% of the total area of the Borough.

18.3.3. There are a number of different types of flooding that does or could affect Wokingham, and in 2010 Wokingham Borough Council became a Lead Local Flood Authority, responsible for managing local flood risk from surface water, groundwater and ordinary watercourses in Wokingham.

18.3.4. There only navigable waterway in Wokingham Borough is the River Thames which runs from Lechlade near Swindon through Reading and London into the sea to the south of Essex. Paths adjacent to the River Thames offer excellent opportunities for cycling and walking, with the 294km Thames Path forming part of the National Trail network.

18.3.5. Traffic and transport have a significant impact upon the built and natural environment. Transport infrastructure is a key determinant of the form of our towns and villages and roads are often the only modern man-made features in large areas of open countryside and design of these, levels of traffic and parking affects the quality of streetscapes and local amenity.

18.4 HEALTH

18.4.1. Transport plays a significant role in people's health. This can include enabling access to services, enabling physical activity and the impact of emissions and noise on health.

18.4.2. According to the Office for Health Improvement and Disparities (OHID) Wokingham Borough has lower than average levels of health inequality. In the men the variation in life expectancy across the social gradient is 6.1 years and in women it's 4.5 years. This compares with 9.7 years for men and 7.9 years for women at the national level for 2018-2020.

18.4.3. Wokingham Borough was one of the top 20 local authorities in England for physical activity (73.5% of adults considered physically active). However, the borough was one of the bottom 20 for physical activity in children and young people (43.9% considered physically active).

18.4.4. Obesity is however a growing issue in England and within Wokingham Borough. In particular, obesity levels in year six aged children (14.7%) have also seen a dramatic increase compared to reception aged children (7.2%). Inequalities do also exist, with those living in the more deprived areas of the borough more likely to be obese than average.

18.5 ECONOMY AND EMPLOYMENT

18.5.1. In 2022 in Wokingham Borough, 84.8% of the population were considered economically active people (Aged 16-64), of those 83% were employed. Since 2015 the number of economically active people (aged 16-64) has increased more than regional and national changes. and in 2022

unemployment rates fell to its lowest yet with 2.2% of the Wokingham Borough working aged population being unemployed.

18.5.2. The ONS annual population survey shows that the working age residential population of Wokingham Borough are highly qualified and only 3.8% of the population have no qualifications. This aligns with the affluence of the borough as well as how economically prosperous it is. This is further highlighted in terms of occupations with Wokingham having a higher percentage of people in management / director / senior roles, professional occupations and associate professionals / technical occupations than the national and regional averages.

18.5.3. Workplace and resident earnings are broadly similar within the borough, this shows that the borough provides high paid jobs for its residents as well as attracts highly paid workers into the borough. Average salaries are higher in Wokingham compared to the bordering local and unitary authorities and are significantly higher compared to national and regional averages.

18.5.4. The two main sectors in Wokingham Borough's economy are information and communication and real estate. People working in professional, scientific and technical, information and communications, business administration and education make up 50% of all jobs in the borough. This reflects the highly skilled nature of the borough.

18.5.5. There is a relatively high level of retention of people living and working within the borough. Of those that travel elsewhere for work, the most common areas are Reading and Bracknell.

18.6 ACCESSIBILITY

18.6.1. Local facilities within Wokingham Borough are concentrated around the urban areas of Wokingham, Winnersh, Woodley, Earley and Shinfield. Outside of the main towns within Wokingham Borough, there are a more limited number of facilities in the rural parts of the Borough. 20 of the 99 LSOAs within Wokingham Borough are ranked within the top 10% most deprived nationally in terms of travel distances by road from selected facilities and services.

18.6.2. The majority of residents in the borough, particularly those living within Wokingham, Winnersh, Woodley, Earley and Twyford are typically within close walking distance of schools.

18.6.3. However, there are parts of the Borough, such as Remenham and Aston in the north of the borough and Riseley in the south of the borough, where some residents are outside typical walking distance from the nearest school.

18.6.4. There are very high levels of car ownership across the Borough, with only 9.0% of households in the borough without access to a car compared to 16.9% regionally and 23.5% nationally. Car ownership within the borough reflects household types, with 60% of privately owned houses having two or more cars and vans but only 18% of socially rented households owning two or more cars and vans.

18.7 DIGITAL ACCESSIBILITY

18.7.1. The growth in digital access has led to significant changes in travel. The National Travel survey shows that each individual now made 13% less trips in 2019 than they did in 2000.

18.7.2. Digital access has particular significant impact on certain trip purposes. For example, there has been a large decrease in visiting friends and shopping ships, representing 1 in 4 shopping trips and 1 in 3 trips to visit friends.

18.7.3. The change in 2019 to 2020, reflecting the COVID-19 pandemic was even more stark, with commuting and business showing the largest change of any trip purpose. It is too early to tell the long-term impacts of those changes, although the drop in distance was greater than the drop in number of trips – possibly inferring that longer distance trips are those that are most likely to be being made digitally.

18.8 TRAVEL PATTERNS

18.8.1. Overall, the following trend was broadly observed across all wards in the borough

- **35% within the borough.** For trips originating within the same area as residence, in towns the majority of trips are made on foot or by cycle with car dominant in more rural areas.,
- **35% to key destinations within 10 miles,** including Reading, Bracknell, Slough, Maidenhead and Windsor.,
- **30% elsewhere,** compromising 10% working in London, typically travelling by public transport and 20% work elsewhere, with private car used for over 90% of these trips.

18.8.2. In terms of mode of travel to work across Wokingham Borough, it is worth noting:

- A higher percentage of urban residents in Wokingham drive to work than nationally
- There is a higher car split for those in urban areas than rural areas
- The proportion of residence using public transport is higher in rural areas than urban areas,
- Driving is the most common mode for all the different trip distances
- For journeys to work under 2km in length, despite the short distance, walking only accounts for just over a third of trips, compared to almost half of trips being made by private car.

18.8.3. In terms of average distance travelled to work for residents within Wokingham Borough, this shows:

- 50% of people within the borough either work from home or travel less than 10km to work
- The most common distance to travel to work is 2-5km (17%)
- Over 1 in 4 commutes is less than 5km (28%)
- The Borough has significantly less very short (less than 2km) and very long (60km and over) distance commuters when compared with regional and national levels.

18.8.4. There is a relatively high level of self-containment of 15-20% in larger towns such as Wokingham and Woodley, and to a lesser extent Earley. A large proportion of these trips are made by walking or cycling, for example in Wokingham town Centre and Woodley almost 50% of commuter trips starting and ending in the town are made by walking or cycling.

18.8.5. Rail provides a relatively good level of service from Wokingham town Centre and within other more rural parts of the borough. There is a much lower percentage of people travelling by rail to Bracknell compared to Reading. For example, 32% of commuter trips to Reading from Wokingham town Centre are made by rail, this compares to 8% to Bracknell. Although there is an adequate rail service to both locations, car is still the dominant mode choice (60% to Reading, 84% to Bracknell). For travel to Slough, Maidenhead and Windsor car accounts for over 80% of trips.

18.8.6. Based on analysis of the travel patterns throughout the borough, three key typologies with different travel patterns have been identified. These are Wokingham town Centre, Reading facing towns (Woodley, Earley and Shinfield) and Market Towns & Rural Areas

18.8.7. For Reading facing towns, there is a relatively high level of walking and cycling of those that do work within the local town. In terms of travel to the rest of the borough, private car is the main mode making up 78% of trips, despite sustainable modes providing a feasible alternative. There is a large draw to Reading from Earley, Woodley and Shinfield with approximately 30% working in Reading. Although Readding is in close proximity and there is good public transport links to Reading, just 10% of trips are made by walking or cycling and approximately 20% are made by public transport.

18.9 REGIONAL AND NEIGHBOURING AUTHORITY TRANSPORT PLANS

18.9.1. Transport for the South East (TfSE) is the Sub-National Transport Board (STB) that covers Wokingham Borough and surrounding areas in the South East.

18.9.2. TfSE have produced a draft 30-year Strategic Investment Plan (SIP) for the South East which sets out 24 regional packages of complementary, multi-modal interventions. Schemes related to Wokingham include:

- Interurban cycleways
- Reading to Waterloo rail service enhancements
- M4 Mass Rapid Transit
- Reading/Wokingham/Bracknell A329 bus enhancements
- M4 J3 to J12 smart motorway
- M4 J10 safety enhancements
- A329 (M) smart corridor

18.9.3. The draft Reading Transport Strategy sets out aspirations for Reading and improving links into the town. Schemes relating to Wokingham within the strategy include:

- High quality bus and cycle corridors
- Green Park Station
- Winnersh Triangle, Mereoak and Thame Valley Park and Rides
- South Reading fast track public transport
- Third Thames Crossing

18.10 FUTURE DEVELOPMENT

18.10.1. Future development within the borough outlined in the adopted Core Strategy (January 2010) and sets most proposed new development of the borough until March 2026. The strategy planned for at least 13,230 new dwellings being delivered over the plan period (2006 – 2026). Most of the development sites within this sit just outside of the Reading facing towns / Wokingham town Centre or within the rural areas and Market Towns.

18.10.2. Wokingham Borough Council is currently updating the Local Plan which will also help to shape the future of Wokingham. It will give guidance on how and where growth will take place in the years up to 2038. This includes a proposed strategic development in the Hall Farm / Loddon Valley area. It

also identifies the location of the four existing SDLs, these are: Arborfield Garrison, South of the M4, North Wokingham and South Wokingham which will continue to deliver housing and infrastructure during the new plan period. It should be noted that the Local Plan Update is a draft document and subject to change

18.11 ACTIVE TRAVEL

18.11.1. Highest levels of active travel in the borough are in Wokingham town and the Reading facing towns such as Earley, Woodley and Shinfield. There are also relatively high levels in smaller settlements such as Twyford whereas in rural areas, where the distance between origins and destinations is much greater and facilities for pedestrians are inconsistent, walking levels are typically lower.

18.11.2. Cycling provision varies through the borough with a mixture of on and off carriageway facilities available. This includes existing greenways, public rights of way and National Cycle Network Routes. Again, there is a high demand for cycling in the larger town centres, albeit unlike walking it is less common in the smaller urban areas.

18.11.3. Active travel directly aligns with the goals of the Climate Emergency Action Plan (CEAP) which includes a target to increase active travel by 10% to assist in reducing carbon emissions. Initial steps have been made to begin producing a Local Cycling and Walking Investment Plan (LCWIP) for the borough. The initial stage of this work has included beginning to identify core walking zones, with Wokingham town Centre being the first, and a primary and secondary active travel network between the major development, employment and retail hubs within the borough.

18.11.4. Through the LCWIP development respective walking and cycling heat maps identify different corridors within the borough with highest demand for walking and / or cycling. The key corridor identified with the highest level of walking and cycling demand is the A329 which links Wokingham to Reading via Winnersh and Earley. Other key corridors include:

- A321 Finchampstead Road
- B3270 Lower Earley Way
- A4 Bath Road
- B3349 Barkham Road

18.11.5. There is a large network of Public Rights of Way (PRoW) which make up a large proportion of the walking and cycling facilities available outside of the town centres. Plans and strategies to help improve walking and cycling facilities, including PRoW, include the Public Rights of Way Improvement Plan, adopted March 2020, and the Greenways Strategy Plan.

18.12 PUBLIC TRANSPORT – PROVISION AND USE

18.12.1. Public transport use varies across the borough. The 2011 Census Data suggests that rail accounts for the vast majority of public transport trips for residents in Wokingham town centre and within rural communities, especially Twyford and Wargrave. However, in the Reading facing towns such as Winnersh, Earley and Shinfield bus is a more dominant choice in terms of public transport over rail.

18.12.2. There are six railway stations located through the borough. These are Twyford (on Paddington line with links to London and South West), Wargrave (on branch line between Twyford and Henley-on-Thames), and Earley, Winnersh Triangle, Winnersh and Wokingham on the London Waterloo to

Reading line. There are also stations close to the borough border at Crowthorne and Reading Green Park.

18.12.3. Rail patronage has decreased across the Borough over the last 10 years, with an average decrease across all railway stations of 46% between 2010 and 2021. However, there have been significant reductions in the last 2 years following the COVID-19 pandemic. Wokingham Station and Twyford Station are the busiest stations and had shown a steady annual increase in patronage up until 2019.

18.12.4. Wokingham Station has local services running to Reading and Bracknell, as well as services to Guildford and London Waterloo. Services from Wokingham also link to Guildford and Gatwick Airport. Reading Station offers interchange to destinations across England and a key employment destination for the borough. The opening of the new Elizabeth Line in May 2022 has further improved the level of service between Twyford and London.

18.12.5. Local train services run between Wokingham Winnersh Triangle, Winnersh, Earley and Reading approximately every 15 minutes. Bracknell Station, on the London Waterloo line, is another key employment destination outside of the borough and services run approximately every 30minutes from Wokingham to Bracknell.

18.12.6. Rail mobility plans have been produced for all stations in the borough to improve access and interchange to the stations. These plans include promoting and supporting the improvements outlined in the LCWIP as well as creating micro-mobility hubs, demand responsive transport and improved infrastructure at the stations such as secure cycle parking.

18.12.7. The level of bus service is varied, with high frequency services on the A327, A329, A33/B££$9 and A4/A421 corridors. There are also local town services in Woodley, Earley and Wokingham. Throughout the rest of the borough there is a much lower level of service with most routes having a frequency of 1-2 buses per hour. The Council has an important role in delivering bus services as many services require subsidies to be operational.

18.12.8. Bus patronage within the borough had been growing at a much greater rate than the regional and national increases, with particularly large increases in 2013/2014 and again 2017/2018.

18.12.9. National express is the main coach provider throughout the borough and provides regular services to Brighton, London Gatwick Airport, Heathrow Airport and many other locations. Mereoak Park and Ride is the main location where the coaches depart from in the borough.

18.12.10. Taxis and Private Hire Vehicles (PHVs) enhances accessibility for people without access to a car. Although nationally their usage has been growing, there has been a 10% decrease in the number of taxis and 30% decrease in the number PHVs operating in Wokingham Borough between 2013 and 2019.

18.12.11. Heathrow Airport is approximately 40km east from Wokingham town Centre and accessible by car, coach and rail from the Borough. Gatwick Airport is approximately 75km from Wokingham town Centre, it can also be accessed by car, coach and rail. Birmingham and Southampton airports are also accessible by rail from Wokingham.

18.13 SHARED AND FUTURE MOBILITY

18.13.1. Transport for the South East have published their Future Mobility Strategy which divides the region into four key areas each with a set of intervention ‘bundles’ attached to each order from high to low priority. High priority intervention bundles within the Borough include:

- Hubs (mobility / community asset / service)
- Digital-as-a-mode communications and services
- Shared mobility – digital demand responsive transport (DDRT)
- Shared mobility – business to customer vehicle sharing (e.g., car clubs)

18.13.2. Wokingham Borough Council have published a low emission transport strategy which sets out a list of measures to decarbonise transport within the Borough. Key measures include increase EV uptake through defining the requirements for EV charge points in new developments, increasing awareness and developing a long-term EV uptake strategy. The strategy also identifies creating a low emission car club scheme as an intervention that can be delivered in the short term.

18.13.3. Demand for a car club is likely to be highest in Twyford and Wokingham town Centre. Operator insight goes on to suggest that car clubs are more effective and secure in on-street parking bays than in new developments / car parks.

18.13.4. An electric vehicle strategy is also being developed for the borough. This shows that by 2025, EV uptake is predicted to be highest in Wokingham town and Winnersh, in the Reading facing towns, Finchampstead and Twyford. However, gap analysis in EV charging infrastructure shows that there is currently not enough EV charging infrastructure to provide for the predicted growth in demand.

18.14 FREIGHT

18.14.1. Road freight is the dominant method for transporting freight in Wokingham, within the majority of freight trips originating and ending within the local counties. In Berkshire, Buckinghamshire and Oxfordshire, 52% of the inbound freight into these areas originated from within these three counties. Similarly, 59% of all outbound freight from the Berkshire, Buckinghamshire and Oxfordshire area, was delivered to destinations within these three counties.

18.14.2. The three busiest road freight corridors through the borough are the M4, A329 (M) and the A33 with more the 1500 HGV flows per day. This significantly reduces on the local road network to below 500 HGV flows per day.

18.14.3. Rail freight also plays a role within the borough with significant amounts of rail freight movements on the Reading to London Paddington Line and Reading to Basingstoke line. There are however limited paths available to transport freight on the Reading to Waterloo line that runs through the Borough.

18.14.4. A freight forum has been created as part of the Transport for the South East Freight, Logistics and Gateways Strategy. This forum includes key stakeholders including Wokingham Borough Council. Key actions of this forum include developing guidance for individuals, businesses and local authorities on best practice for the industry.

18.15 TRAFFIC AND ROAD NETWORK

18.15.1. Wokingham has access to many key routes including the M4 (links to the South West and London), the A239(M) (links to Reading and Bracknell), the A4 (runs mostly parallel to the M4), the A329 (linking Ascot, Bracknell, Reading, Wallingford and the M40) as well as other key routes.

18.15.2. National data show that between 2004 and 2018 there was a 6% decrease in traffic volumes through 46 sites across the borough. Bicycles (26%) and Large Goods Vehicles (LGVs) 34% are the

only modes that have seen a growth since 2018. Alongside reducing traffic volumes, there has also been a decrease in average delays by 1.6 seconds per vehicle per minute since 2016.

18.15.3. Local Traffic counters however show traffic levels to have been broadly flat over the last 15 years, with a small increase of 2.8% from 2008 to 2018 and a small decrease from 2003- 2018 (1.9%).

18.15.4. Across the different typologies, routes within Reading have shown the smallest change, and reflecting this they typically have a flatter flow profile through the day. Rural routes and roads within Wokingham and Winnersh have more typical M profiles, indicating capacity for large parts of the day. Some of these routes, show highest flow volumes in the middle of the day, likely to reflect the greater amount of leisure and shopping trip purposes.

18.15.5. The 2018 DfT Road Traffic Forecasts (Using TEMPro version 7.2b) suggest future traffic is likely to grow at approximately 6% every five years for both principal and minor roads in the borough, with higher forecast rates are predicted for both trunk roads and motorways. These forecasts are however contrary to current local traffic trends and falling individual trip rates.

18.15.6. The borough is currently responsible for all on-street and off-street parking in Council owned off street car parks and Park & Ride (P&R) sites. There are currently 23 car parks providing 1223 spaces in Wokingham town Centre, 632 spaces in Reading facing towns of Woodley, Earley and Shinfield and 121 in the smaller market towns / rural areas. There are two P&R sites in the borough, Winnersh P&R located on the edge of Winnersh Triangle Business Park and Mereoak P&R located off the A33, south of the M4.

18.16 ROAD SAFETY

18.16.1. The number of traffic collisions resulting in personal injury has generally been declining year-on-year, from 349 collisions in 2008 to 186 in 2021 (47% decrease), and the number of fatality or serious injury collisions falling by 50% over the same period (30 in 2021). These reductions in Wokingham are greater than the national and regional trends.

18.16.2. Approximately 60% of all causalities were male, rising to 75% for fatal or serious injury collisions. People aged 65 and over accounted for 7.8% of all causalities and 15.4% of KSI casualties in 2018.

18.16.3. In relation to vulnerable road users, since 2008 there has been a significant fall in the number of pedestrian casualties. There has also been a slight fall in the total number of all cyclist and motorcyclist casualties, albeit the proportion of total collisions for involving cycles has grown.

18.16.4. The highest number of pedestrian collisions being focused around Wokingham Town Centre, Winnersh (A329 Winnersh Crossroads area and Robin Hood Lane), Lower Earley (A329 Showcase roundabout area), Charvil, Shinfield and within Woodley and Lower Earley. Cyclist casualties are also prevalent in Twyford (B3018) and the B3290 Black Boy Roundabout.

18.16.5. Between 2016-2021, routes were analysed to identify the relative collision performance of different routes within the borough. Based on this analysis, the worst performing routes were the A329, B478, A4 and B3349.

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Wokingham Borough Council

LOCAL TRANSPORT PLAN 4

Background Paper: Spring 2023 Engagement Report

v1
June 2023

Public

Wokingham Borough Council

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Background Paper: Spring 2023 Engagement Report

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1 Introduction

1.1 Overview of the LTP Project

1.1.1. A Local Transport Plan (LTP) is a statutory document. It contains the transport strategies and intervention plans of the local authority for future years and is an important component of transport planning in the UK.

1.1.2. WSP has been commissioned by Wokingham Borough Council to develop its next Local Transport Plan, LTP 4.

1.1.3. To inform the development of LTP4, WSP worked with the Council to develop an opinion survey to gain an early insight of the transport choices, views and priorities of Wokingham residents on various aspects of transport such as electric vehicles, provision of pedestrian space, air quality, etc.

1.1.4. Termed Principles Engagement, the survey results provide a valuable insight and assist in creating an LTP that addresses those issues that are most important to residents.

1.2 About the Principles Engagement

1.2.1. The Principles Engagement was hosted on the Council's engage.wokingham website. This 'all-in-one participation platform' is a Wokingham Borough Council initiative used for a number of functions, including public consultation processes. Information gathered through Engage Wokingham is used to help the Council make better decisions and tailor its services to the needs and desires of its residents and businesses.

1.2.2. The Principles Engagement was live for six weeks from Wednesday 1 February 2023 to 12 March 2023.

1.2.3. In addition, where requested, paper copies of the questionnaire were sent to residents and organisations such as Parish Councils in the Borough. The questionnaire is shown in Appendix A.

1.3 Number of respondents

1.3.1. In total 747 responses were received from the public, of whom 729 (98%) stated they were residents of Wokingham Borough. This includes responses received from a number of groups and organisations, which are reported in Section 7.

1.4 Age Profile of respondents

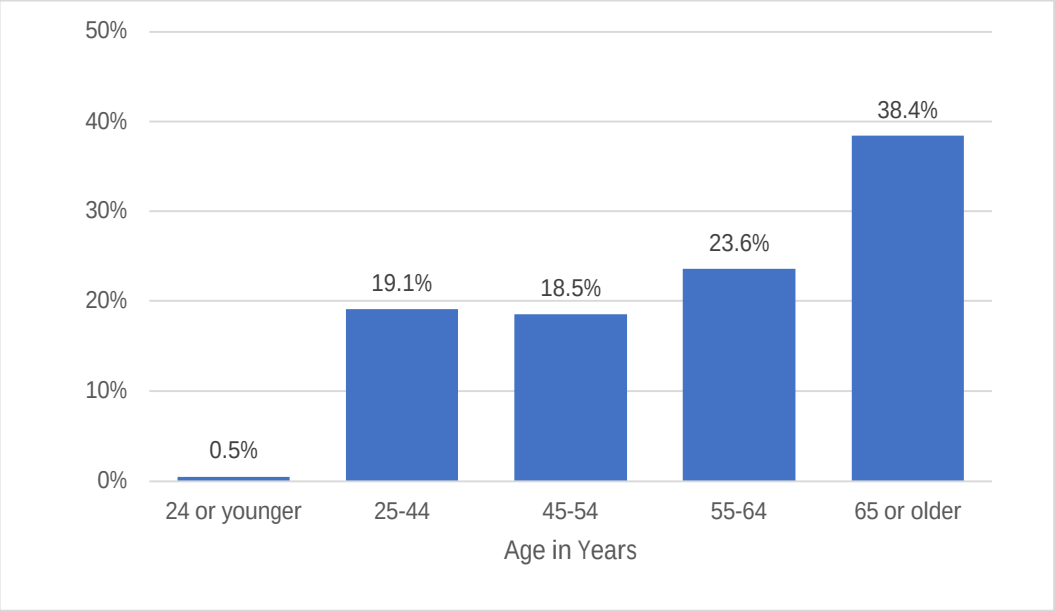
1.4.1. Figure 1 shows the proportion of the different respondents in accordance with their age groups.

1.4.2. The largest volume of responses, approximately 38%, were from those aged 65 years or older. This age group accounts for 17% of Wokingham Boroughs Population (2021 Census).

1.4.3. The proportion of responses received from age groups between 25 and 44years, 45-54 and 55- 64 years varied between 19% and 26%. The total of 61% of respondents in these age groups is comparable with the population breakdown of the Borough, where approximately 53% of residents are in the 25-64 years age groups.

1.4.4. There was however a low response rate from those aged 24 years and under. Despite accounting for 30% of the Borough's population, they accounted for just 0.5% of respondents. The Council did try to engage with younger adults by promoting the survey through the My Journey Wokingham webpage[1] and other social media sites.

Figure 1: Age profile of respondents

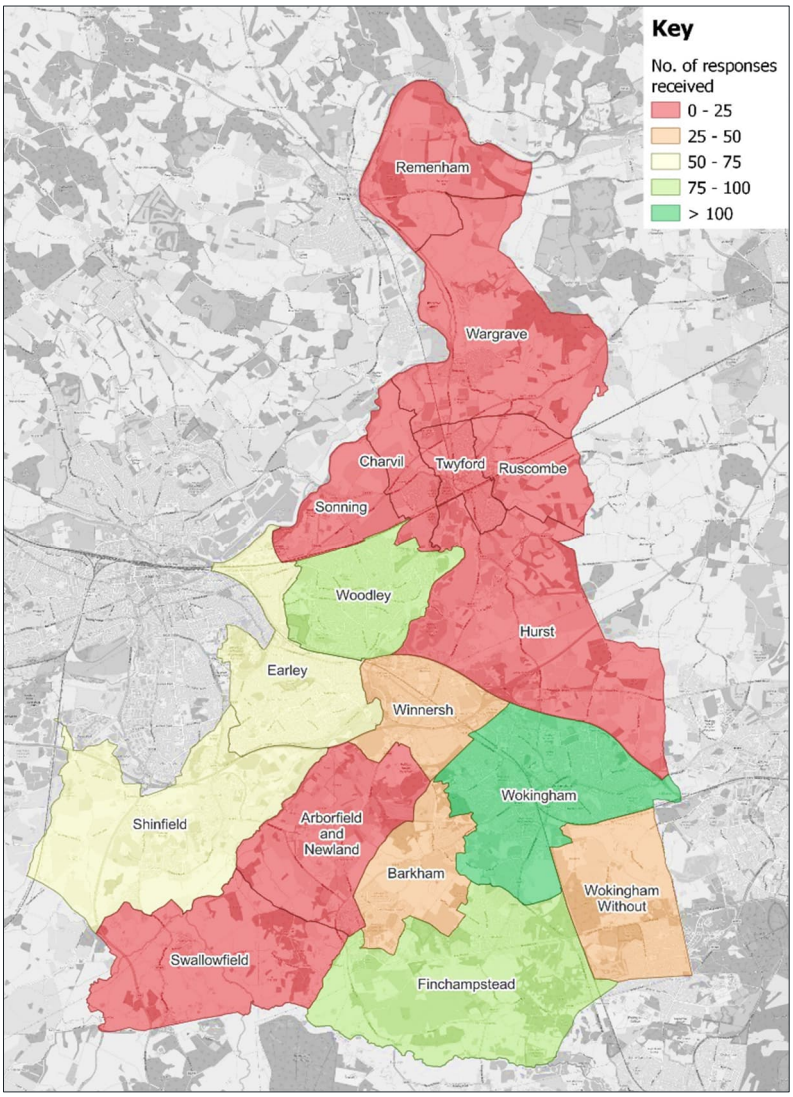


[1] https://www.myjourneywokingham.com/

1.5 Respondents by Area

1.5.1. Figure 2 shows the number of responses received from each town and civil parish within the Borough, where respondents provided location data. It shows the greatest number of responses were from the Wokingham town area, Finchampstead and Woodley, then Earley and Shinfield areas. Fewer responses were received from the more rural parts of the Borough.

Figure 2: Responses received from each town or civil parish area



1.5.2. Table 1 and Figure 3 presents further analysis carried out to identify how the responses correspond to the identified area typologies for the LTP. Typologies are used to understand the differences in demographic groups that live in Wokingham Borough and to identify similarities. Through understanding these variables, it gives valuable insight into how people travel within the area. For the purpose of this study, data was used to give insight into car ownership levels, likely travel habits and the willingness of people to change their travel patterns / mode.

1.5.3. From this analysis, four general typology areas were indicated in Wokingham: Wokingham Town and Winnersh; Woodley, Earley and Shinfield which are termed Reading-facing towns; and the respective villages and rural areas of North and South Wokingham. These four typology areas were used to simplify the reporting of travel patterns in the Borough by grouping areas with similar travel characteristics.

1.5.4. As not all respondents provided postcode/parish data, the dataset used in this area-based reporting is from a sub-set of all responses (706 responses, or 95% of all responses). However, it does show a fairly even spread of responses across the area when attributed to each of the four identified place types.

Figure 3: Responses received by Place Type

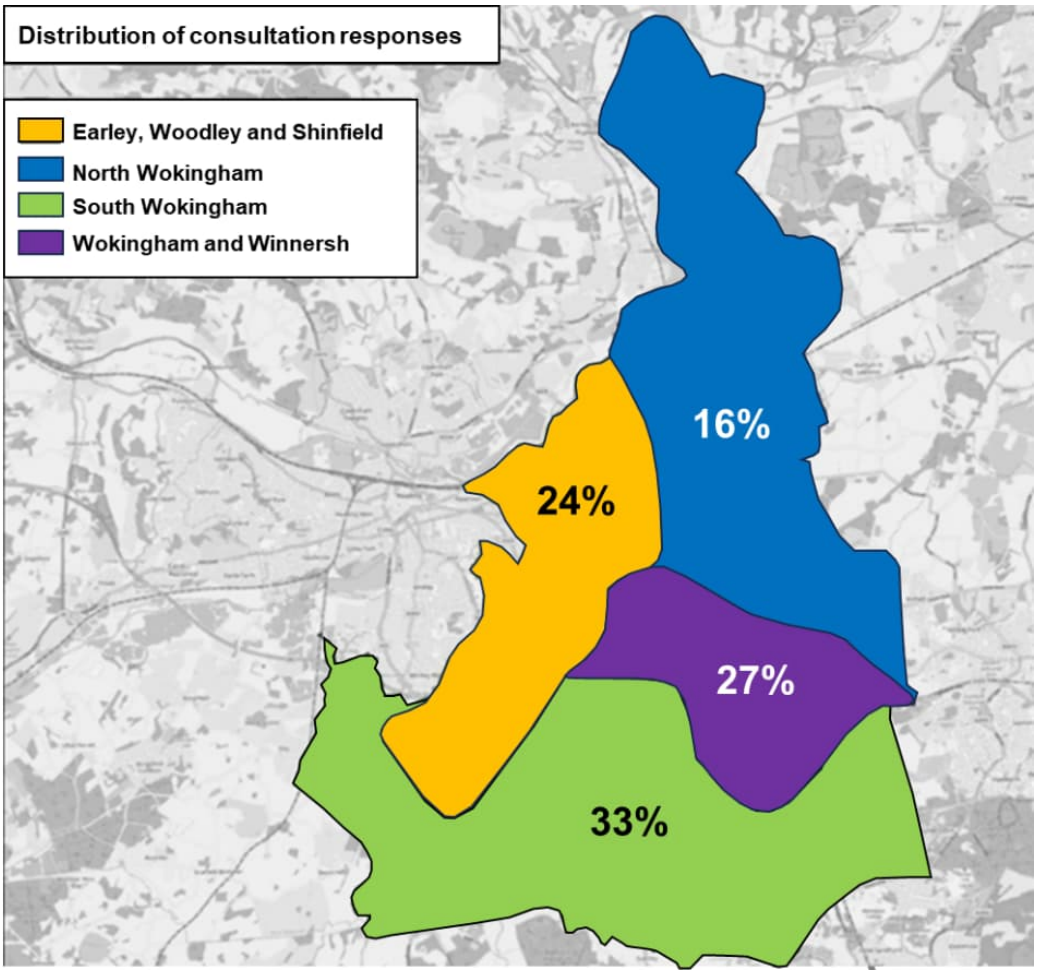


Table 1: Details of the respondents by place type

Place Typologies	Responses	Percentage
Reading-facing Towns	168	24%
North Wokingham	115	16%
South Wokingham	229	33%
Wokingham Town & Winnersh	194	27%
Total	706	100%

2 How do Respondents get around Wokingham?

2.1.1. Respondents were asked to indicate how they travel and how often for trips under and over five miles based on a list of travel modes.

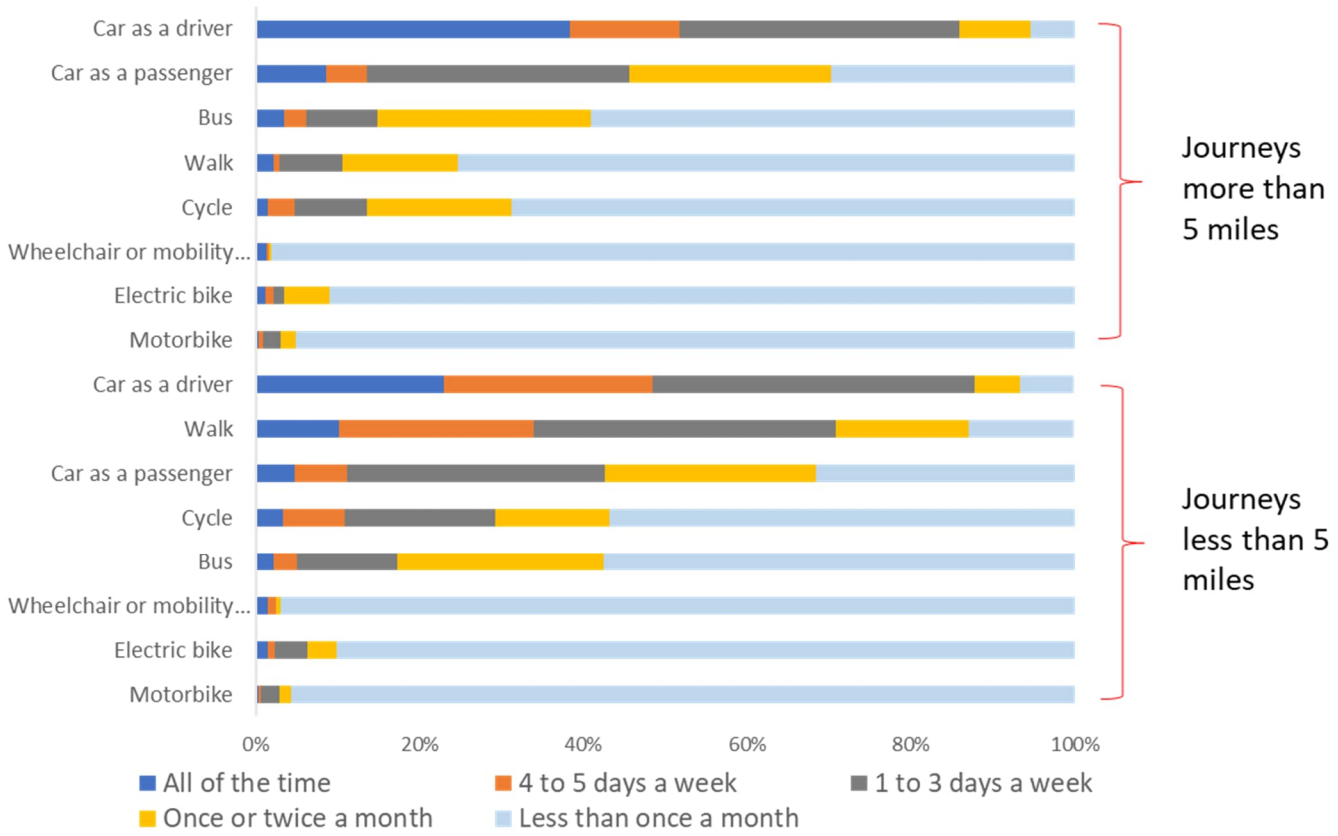
2.1.2. Figure 4 highlights that car is the dominant mode of travel for journeys over five miles, followed by car passenger for journeys undertaken regularly.

2.1.3. For those trips over five miles that are undertaken less frequently, i.e. twice a month or less, a higher number of these are made by other modes such as bus or cycling.

2.1.4. Similarly, for journeys under five miles, car is the most popular. However, walking, and to a lesser extent cycling, account for similar amounts of regular travel.

2.1.5. Approximately 100 respondents also identified train as a regular mode of travel.

Figure 4: Choice of mode for journeys less than 5 miles



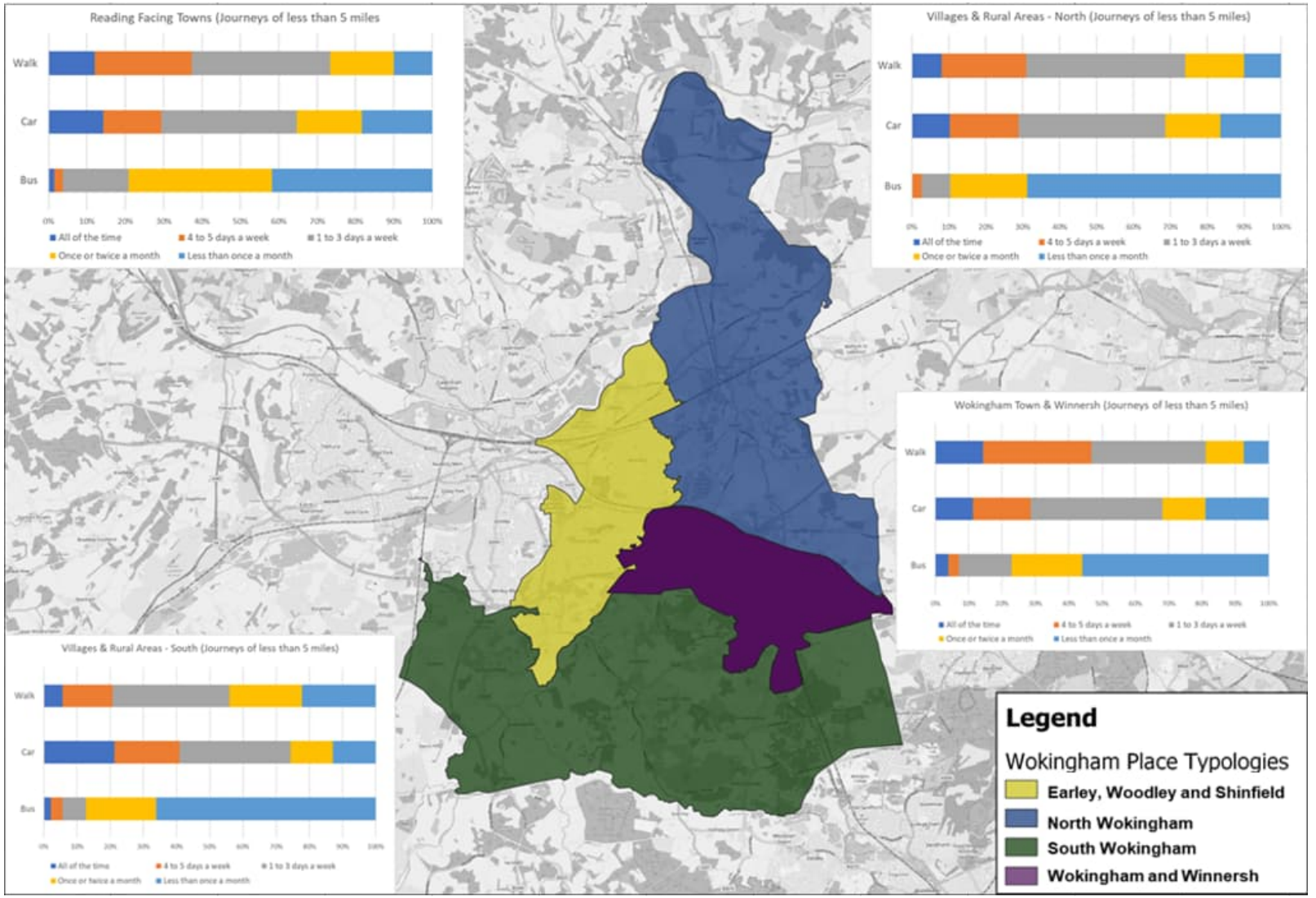
2.1.6. For shorter journeys of less than five miles, car driver remains the most common mode of travel. However, walking is a close second and ahead of car passenger.

2.1.7. Figure 5 shows the preference for travel by bus, on foot, and by car based upon the responses received from each place typology (as stated in Table 1).

2.1.8. Figure 5 highlights the differences in modal choices between the different place types. In particular, it highlights that walking is the most common mode choice in the more urban areas of Wokingham Town and Winnersh, and in the Reading-facing Towns such as Earley, Woodley and Shinfield.

2.1.9. The graphic also highlights that bus has the greatest role in the Reading-facing Towns followed by Wokingham Town and Winnersh.

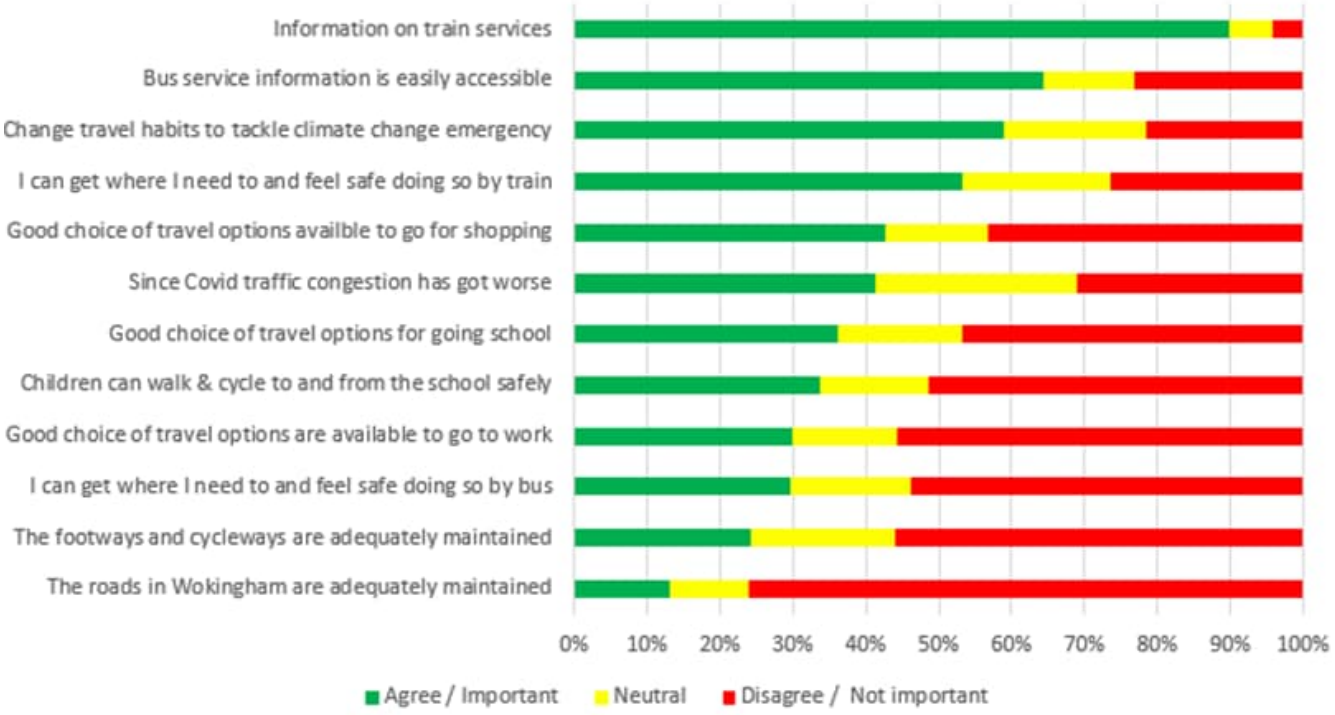
Figure 5: Choice of mode for journeys less than five miles by typology



3 Residents' Views on Local Transport

3.1.1. The views of the respondents on local transport provision was analysed and ranked according to the extent they agreed with statements. This is shown in Figure 6. Respondent's views on maintenance, asked under My Streets section, are also included within this figure.

Figure 6: Agreement on current travel options and facilities



3.1.2. The highest levels of agreement were regarding the availability of information on bus and train services.

3.1.3. 60% of respondents said they would be willing to change their travel habits to reduce carbon emissions, compared to 20% against.

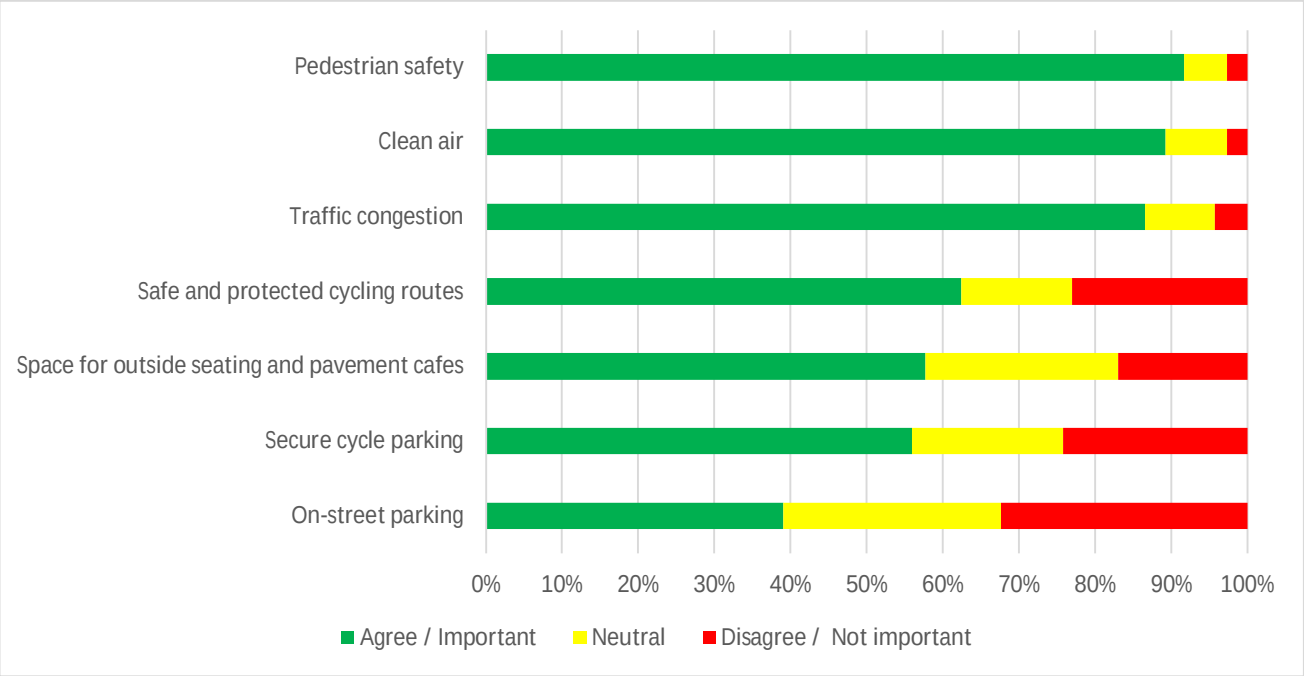
3.1.4. Respondents typically disagreed that they had a good range of travel options, albeit a view that travel options for shopping (45% agree) was better than the options for going to school or work, for which just 35% and 30% of people agreed with the statement.

3.1.5. Only a third of respondents felt that children can safely walk and cycle to school.

3.1.6. The most disagreed with statements were those around maintenance, with the majority of respondents stating that they did not feel that footways, cycleways or roads in Wokingham were adequately maintained.

3.1.7. Respondent's views on what is most important in urban centres are shown in Figure 7.

Figure 7: Agreement of attribute importance in urban centres



3.1.8. The responses to the priorities in urban centres highlighted three areas which approximately 90% of respondents felt were important, these are:

- Pedestrian Safety,
- Clean air, and
- Traffic Congestion.

3.1.9. Overall respondents also typically agreed that space for outside seating/pavement cafes and safe cycling routes were important, albeit a much larger proportion of people (20% disagreed with these. Outside space for business/pavement cafes was highlighted as being more important than on street parking.

3.1.10. On street parking was the only option where less than 50% agreed with its importance, although that may reflect that there are various off street parking options.

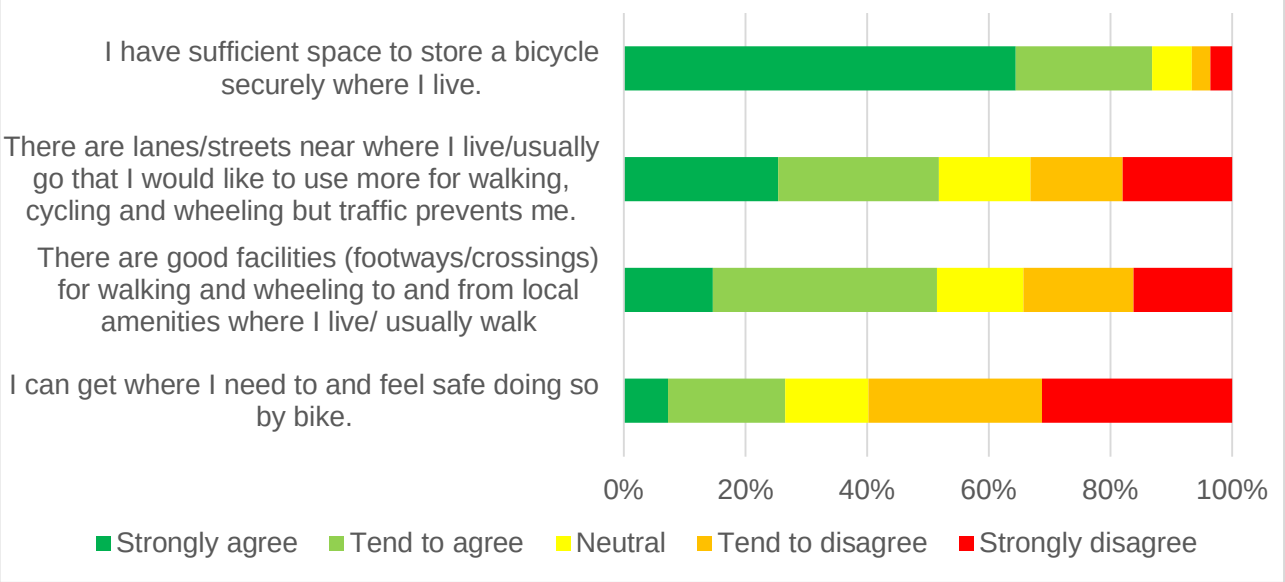
4 Walking, Cycling and Wheeling

4.1.1. Walking is the second most popular way of getting around and the number of people cycling has increased significantly since the COVID-19 pandemic. ‘Wheeling’, refers to anyone using a wheelchair or a pushchair as well as those travelling on a scooter. Many people rely on wheeled aids to access local services and amenities, while children and others cycle and scoot for local trips, fitness and leisure activities.

4.1.2. The walking, cycling and wheeling data was analysed to identify respondent’s level of agreement with statements regarding the current facilities for these modes in their area. Figure 8 shows the respondents level of agreement regarding the current facilities available for walking, cycling and wheeling.

4.1.3. The views on some potential improvements and/or changes which would likely promote the use of active travel are also considered later in this section.

Figure 8: Level of agreement with current facilities for walking, cycling and wheeling

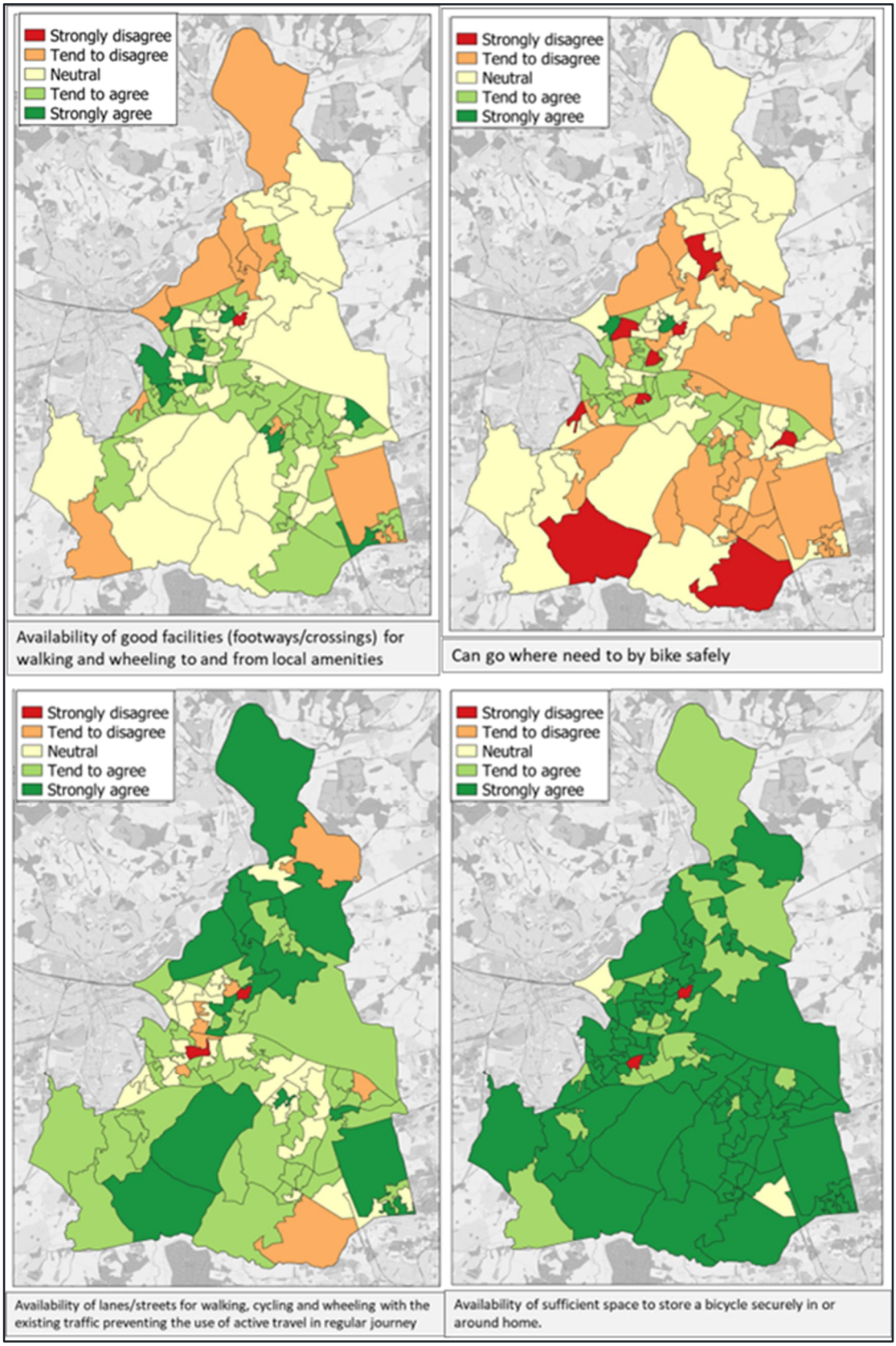


4.1.4. The majority of residents in the Borough (86%) agree that they have sufficient space available in or around their homes to securely store a bicycle.

4.1.5. There were mixed views on perceptions of safety, traffic and the condition of active travel routes in their local area with around 50% of the respondents agreeing that existing traffic conditions prevents the use of active travel for their local journeys. Equally, a similar percentage of respondents agreed there were good facilities such as footways and crossings for walking and wheeling near where they live . However, less than a quarter of respondents agreed they could get where they needed to safely by bicycle.

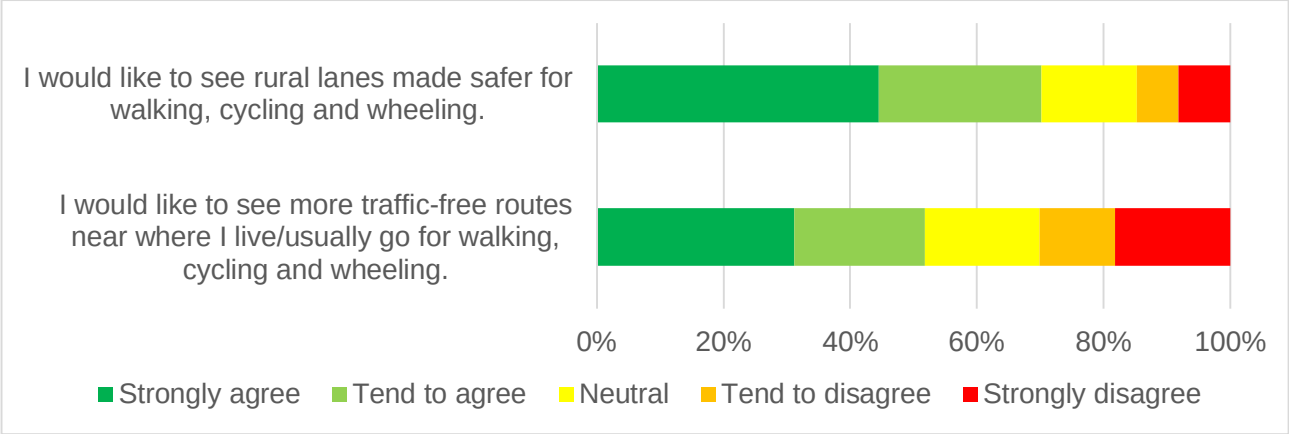
4.1.6. Figure 9 shows how the level of agreement with the current facilities available for cycling, walking and wheeling varies across the Borough. This typically highlights respondents in urban areas felt they had better facilities and were safer than those who live in rural areas.

Figure 9: Level of Agreement with Walking, Cycling and Wheeling Facilities Questions across Wokingham Borough



4.1.7. Figure 10 shows the respondents preference to potential active travel improvements along rural lanes in the local areas.

Figure 10: Level of agreement on potential active travel improvements



4.1.8. Safer rural lanes for walking, cycling and wheeling were highly supported, with around 70% in agreement. Around 52% of the respondents were also in favour of more traffic-free routes near where they live or usually walk, cycle and wheel.

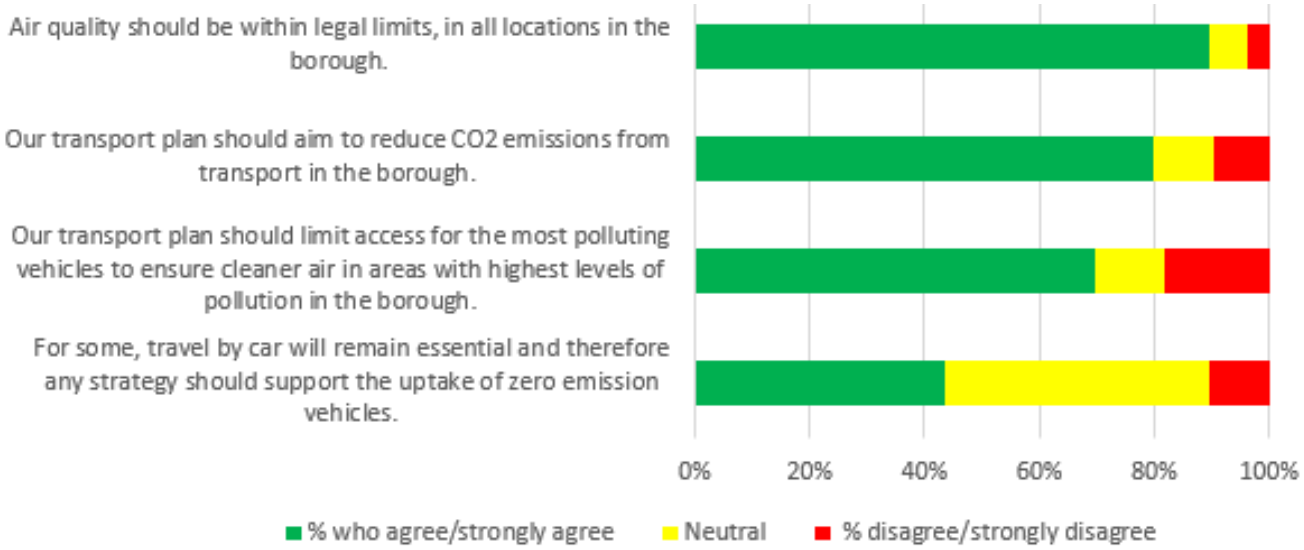
4.1.9. Further analysis only showed limited variation in these views by place type across Wokingham.

5 Environmental Impacts

5.1.1. Emissions from travel by car are a major cause of CO_2 emissions, air pollution and noise, all of which affect health and wellbeing.

5.1.2. The consultation included a number of questions relating to environmental factors. The level of agreement from respondents regarding the environmental questions, including those relating to air quality, electric vehicles and climate change, are shown in Figure 11.

Figure 11: Level of agreement regarding the environmental attributes



5.1.3. Respondents strongly supported improving air quality and reducing it to within legal limits across the Borough, with 90% in favour and 5% opposing the statement.

5.1.4. Similarly, there was support for reducing carbon emissions from transport, with over 80% of respondents agreeing or strongly agreeing compared to 10% who disagreed. By comparison, the responses in Section 3 of this report found that 60% of respondents were prepared to change their travel habits to reduce emissions, compared to 20% who disagreed.

5.1.5. There was comparatively lesser but still strong agreement on limiting access for the most polluting vehicles in areas with highest levels of pollution in the Borough - although two thirds expressed support, almost one in four people disagreed with the statement.

5.1.6. There were fewer respondents supporting the statement on measures to influence the uptake of zero emission vehicles - a significant proportion of the respondents were neutral regarding this aspect – but only around 1 in 10 did not agree with the statement.

6 Extent of Agreement with Statements of Change

6.1.1. The extent of agreement with a number of statements of change are shown in Figure 12.

6.1.2. Traffic management can reduce the use of local streets and direct traffic to the main roads in the Borough. Electrification of road transport is growing, with the number of electric cars and buses increasing. Zero emission vehicles will make travel cleaner and quieter. There is also shared mobility options, which include scooter and bike hire as well as access to car-hire clubs, ready for use on demand for as long as users need them. With fuel prices rising, "shared mobility" can offer a cheaper way for residents to have access to a car when they need it. In addition, financial measures can be used to support traffic management and to raise funding to support wider transport improvements that help mobility and reduce carbon emissions across the Borough.

6.1.3. Those statements of change which were **typically well supported**, with twice as many people agreeing than disagreeing included:

- I would accept slightly longer journeys by car to make it safer to use active travel modes to school;
- I would like there to be less traffic on the street where I live/tend to go;
- I would support redesignation of roads in my nearest town to provide more outdoor spaces for businesses, provided access was retained.

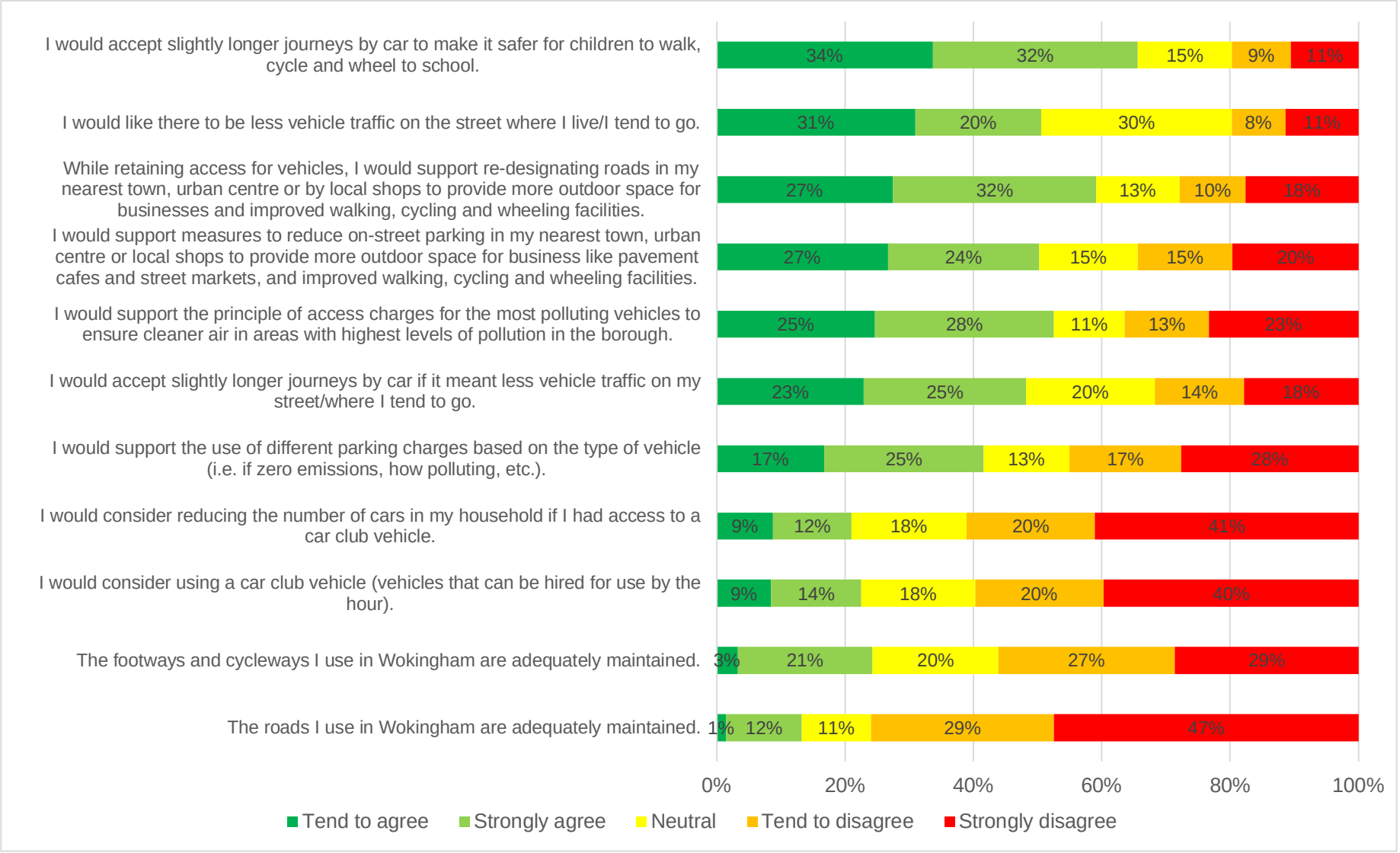
6.1.4. The following statements generated **mixed views,** with approximately 50% of respondents agreeing with the following statements and between 30-40% of respondents disagreeing:

- I would accept slightly longer journeys by car if it meant less traffic on my street/where I tend to go;
- I would support reducing on street parking in nearest town to provide more outdoor spaces for businesses;
- I support the principle of access charges for the most polluting vehicles to improve air quality;
- I support different parking charges based on vehicle emissions.

6.1.5. The following proposals had the lowest levels of agreement with a significantly large proportion of respondents disagreeing:

- Roads, footways and cycleways in Wokingham are adequately maintained.
- I would consider using a car club and/or reducing the number of cars in the household if access to a car club vehicle was provided.

Figure 12: Extent of Agreement with the proposals



7 Responses Received from Organisations

7.1 Arborfield and Newland Parish Council

7.1.1. The response from Arborfield and Newland Parish Council highlighted that walking as an option for travelling up to five miles is only available within the village of Arborfield Cross and the former Garrison area (referred to as the Arborfield Garrison Strategic Development Location (SDL)) and that, for most journeys of less than five miles, residents use cars with some of them additionally carrying passengers.

7.1.2. For journeys over five miles, the parish council stated that buses going into Reading or Wokingham are quite regular and are well supported by locals. Some of the residents also use cycles, electric cycles, motorcycles and mobility scooters.

7.1.3. According to the parish response, transport options such as “on demand” buses or electric scooter hire should be considered in the Local Transport Plan. In addition, secure cycle locking areas for cyclists along with provision of more footpaths and pavements in the busy roads of the parish are required.

7.1.4. Outside the centre of Arborfield Cross the limited number of pavements on busy roads makes safe walking difficult.

7.2 Cycling UK Reading

7.2.1. Cycling UK Reading is part of the national organisation, Cycling UK. The organisation mostly agreed with the statements of change in the consultation and expressed their support.

7.2.2. Cycling UK responses did however highlight concerns regarding the fast traffic movement on many of the 30mph roads which they feel would need to be limited to 20mph in all the urban areas. They also raised concerns about the amount of space currently available in their homes for secure cycle parking.

7.3 Great Western Railway

7.3.1. Great Western Railway identified Twyford station to be the major station it serves in the Borough and that its priorities were for more facilities at Twyford station. Its priorities included:

- **Car parking at Twyford station**. With good connectivity to London, the station has a large catchment, including both Wokingham town and surrounding rural areas, and parking remains busy even post-COVID. A scheme for 60 spaces has been designed.
- **Public realm/Forecourt at Twyford station:** Improving the passenger experience, door-to-door journeys, including interchange facilities for buses, and increasing passenger waiting areas away from the platform for safety.

- Provision of a **better pedestrian crossing of the branch line** between Twyford and Henley-on-Thames.
- **Future decarbonisation of the branch line** to Henley would be needed. How to achieve this goal is unclear since electrification of the line is unlikely to happen. There is a possibility of implementation of battery technology.

7.3.2. GWR also noted that due to constraints on the existing Paddington line it would be difficult to accommodate additional stops on this section of rail line.

7.3.3. The former GWR stopping service that called at all stations between Reading, Twyford and London Paddington is now operated by Transport for London Elizabeth Line services. GWR still provides limited stopping services between Didcot, Reading, Twyford, Maidenhead, Slough and Paddington, but these use the fast lines between Maidenhead and Paddington which are shared with long distance trains that operate non-stop and at speed between Reading and Paddington.

7.4 Reading Buses

7.4.1. Reading Buses is a bus operator mainly serving the towns of Reading, Wokingham and Bracknell, and extending to Newbury, Slough, Windsor, Maidenhead and the surrounding areas and parts of Greater London.

7.4.2. Reading Buses provided mixed views on the statements of change in the consultation. Although it agreed with some of the principles, it disagreed strongly with the suggestion of access charges for the most polluting vehicles in the Borough.

7.4.3. In addition, it has asked the Council to consider the approach to planned and emergency roadworks in LTP4 and the likely impact of roadworks on public transport services.

7.5 The British Horse Society

7.5.1. The British Horse Society (BHS) is the largest equine charity in the UK, with over 100,000 members.

7.5.2. The society observed that Wokingham's bridleway network is fragmented and fails to offer safe off-road links for the majority of journeys. Providing horse riders with full inclusion on the proposed Greenway and Public Rights of Way (PRoW) network would make horse riding a more feasible active travel choice. Upgrading footpaths to bridleways would also further enhance the bridleway network, recognising that this would likely require landowner agreement.

7.5.3. The society also felt that horse riders and the PRoW network were not considered in the survey. The recreational benefits of the PRoW were only recognised in relation to the COVID-19 pandemic and only walking and cycling were referenced within urban areas. This is despite the Rights of Way Improvement Plan (ROWIP) being one of the documents included in the Transport Plan list on the first page. The ROWIP highlights the inequality in the off-road network in Wokingham.

7.5.4. BHS also highlighted that although horse riders are able to use on road facilities, they are not permitted to use shared pathways. There are however some instances where shared use pathways are considered more appropriate than on carriageway facilities despite horse riders still needing to use the route. The BHS states that linking bridleways/ PRoW with shared use pathways or high vehicle corridors is not appropriate and consultation should take place before any new on road/shared use footways are created.

7.6 University of Reading

7.6.1. The University of Reading is a major employer, education provider and destination location on the edge of the Borough.

7.6.2. Overall, the University of Reading's responses suggested that the focus for improvement should be to ensure alternatives to driving are made as easy as possible.

7.6.3. The University also suggested that the park & ride parking charges at Thames Valley Park are too expensive which is discouraging its use. Reducing charges to £1 (in line with the Mereoak facility), it suggested, would encourage drivers to leave their cars at the edge of Reading and take the bus to the university.

7.6.4. The University would welcome further consultation with development of the LTP.

8 Analysis of Open Responses

8.1 Introduction

8.1.1. Respondents were able to provide comment via open text at the end of the survey on their experience and how they travel around the Borough. An overview of these, by theme and in alphabetical order, is provided in this section.

8.1.2. **All of the content in this section is taken from the questionnaire responses. They should not be interpreted as suggestions from the Council or that the views expressed are those of Wokingham Borough Council**.

8.2 Active travel (walking, cycling, and wheeling)

8.2.1. A few respondents mentioned that cycling around the Borough is generally challenging, that Wokingham is not a cycle-friendly town and that, specifically, cycling infrastructure from Twyford to neighbouring towns/villages is almost non-existent.

8.2.2. There were several comments suggesting an increased number of direct cycle routes. In particular, views that more classified (A, B &C) roads should have segregated cycle paths along them since these are often the most direct route between neighbourhoods and popular destinations (e.g. work/school/shopping/leisure). Also, these roads are fast and busy, and the footpaths are narrow and not designated as shared use.

8.2.3. Specific examples given by respondents included: A327 Shinfield Road; there are no safe, viable continuous walking/cycling routes from Arborfield Green to anywhere except via the California Greenway; and narrow cycle lanes along Wokingham Road and Reading Road, especially in Winnersh where school children ride along the pavements. Some respondents also gave suggestions for upgrading the quality of some local footpaths/ byways from being unpaved to paved.

8.2.4. Some respondents raised concern about existing cycle parking provision. They suggested that cycle racks tend to be open to the elements, are rarely spaced widely enough apart, and are not monitored making bicycles and property vulnerable to theft.

8.2.5. Maintenance of the roads was also raised as an issue for cyclists, especially where potholes can catch unwary cyclists off guard.

8.2.6. Similarly, comments were raised about footways and footpaths being restricted by:

- Vehicles parked over footpaths and footways.
- Vegetation overgrown onto footpaths restricting width and/or headroom.
- Fallen vegetation causing footpaths to be unsafe to walk on.
- Blocked or poor drainage causing water to stand on the footpath.
- Trip hazards and exposed tree roots, posing safety risks for pedestrians.

8.2.7. To improve accessibility for pedestrians with mobility impairments, it was suggested to implement raised pathways at road junctions. In particular, it was suggested in residential areas, to facilitate easy road crossings for pushchairs, wheelchairs and mobility scooters.

8.2.8. The suggestion also includes the addition of regular dropped kerbs and crossing points on busier roads, along with reducing the speed limit in residential areas to 20mph and enforced through physical means. This approach would create safer and more pedestrian-friendly environments in residential areas. Lower speeds, it was suggested, would reduce the likelihood and severity of collisions, and make walkers and cyclists feel more comfortable using the footways and roads respectively.

8.2.9. Several respondents said that giving more space/priority to cyclists and cycle routes does not help those with mobility issues but forces them further into more car use for reasons of safety and efficiency.

8.2.10. Along with improvements in facilities for walking and cycling, some respondents highlighted improving pedestrian and driver safety, and concerns about interaction between pedestrians, cyclists and e-scooter riders.

8.2.11. The Council should work to support residents and businesses that seek to use active travel modes on a regular basis. This means following current best practice (LTN1/20 guidance) and ensuring that cycle routes are coherent, direct, safe, comfortable and attractive. It was suggested that approaches of other countries that have rolled out extensive cycle paths successfully should also be considered.

8.2.12. Some respondents also suggested that much of Wokingham town centre should be pedestrianised with access only for public transport and delivery/maintenance vehicles (outside of core trading hours).

8.3 Electric Vehicles

8.3.1. Respondents expressed concerns that implementing "clean air" policies without addressing the affordability of electric vehicles could result in an unfair society, where those who cannot afford electric vehicles are penalised. Some respondents suggested that measures such as subsidies or other incentives to reduce the cost of electric vehicles may be necessary to encourage wider adoption and promote equitable access to clean transportation options.

8.3.2. Respondents expressed the view that solely encouraging the use of electric vehicles may not be effective in reducing congestion, as they can still contribute to pollution through factors such as particulate pollution from tyres, discouragement of active transportation, space consumption, congestion, and potential status anxiety.

8.3.3. Some respondents also believed that electric vehicles are not a comprehensive solution to environmental concerns. Those respondents expressed concerns that promoting larger, heavier electric vehicles could be short-sighted and environmentally counterproductive, as the pollution created during their manufacturing and charging infrastructure installation may not be fully offset until they have been driven for many tens of thousands of miles. Some

respondents suggested that smaller, lighter petrol cars, particularly mild hybrids, may be better for the environment. They also expressed concerns about imposing additional taxes and charges on owners of older, low-mileage internal combustion engine cars, viewing it as illogical by not taking into account their manufacturing.

8.3.4. Some respondents expressed their interest in switching to electric cars but cited concerns about cost and limited range as barriers. They also highlighted the need for more widespread availability of charging infrastructure, including fast charging (super chargers), to support the adoption of electric vehicles.

8.3.5. Additionally, some respondents suggested that local authorities should take the lead by implementing a strategy to transition to hydrogen fuel cell electric vehicles for their own transportation needs and other services provided or contracted by the Council.

8.4 Environment /Pollution/ Air Quality

8.4.1. Respondents commented on the issue of air quality and pollution in their locality resulting from transportation. Some expressed the view that efforts should be focused on pushing for the electrification of all modes of transport as a priority while others believed the bigger impact will come from shifting towards renewable power generation and improving insulation for energy efficiency.

8.4.2. Respondents highlighted that while low emission vehicles are important, simply encouraging people to change their personal vehicles may not effectively address congestion. They emphasised the need to promote alternatives such as public transport, walking and cycling as means to tackle both congestion and carbon emissions. By promoting and supporting sustainable transportation options, it may be possible to reduce congestion, lower emissions, and improve overall mobility and quality of life in the community.

8.4.3. Respondents strongly urged against the consideration of introducing an ultra low emission zone (ULEZ) style scheme in Wokingham, expressing concerns that such a scheme could disproportionately affect lower-income individuals. They emphasised the need to carefully consider the potential impacts on different socio-economic groups and ensure that any measures implemented are fair and equitable to all residents. Furthermore, as vehicles naturally transition to less polluting options over time, there may not be a need to impose additional charges on drivers, which could potentially harm the local economy.

8.4.4. Respondents suggested that road user charging should be implemented at a national level, with local authorities having powers to impose supplementary charges based on factors such as vehicle type, owner residency, time of day, distance, and duration of the journey. The purpose of such charges would be to address issues such as congestion, air quality, and road maintenance costs.

8.5 New Development

8.5.1. Some respondents felt that the level of traffic has significantly increased due to the addition of new housing in and around the area. However, new houses being pushed on existing infrastructure creates congestion.

8.5.2. Many respondents stated that the Local Transport Plan needs to address and mitigate the impact of new development in the area. The Arborfield Bypass aids in routing Arborfield traffic to the motorway bridge but has increased the flow of traffic on routes to and over the motorway leading to queuing.

8.5.3. Concerns were raised that people living in Arborfield have no choice but to drive. Getting into Wokingham may be possible by bus, but the route is indirect and journey times are slow.

8.5.4. Infrastructure, including road networks and bypasses, should be carefully planned and implemented to support the changing needs of a growing population and ensure efficient and safe transportation options for the community. Proper urban planning and transportation integration can help address issues such as congestion, accessibility, and safety, and contribute to a more sustainable and liveable community.

8.6 Parking

8.6.1. Respondents raised concerns about pavement parking by vehicles as it makes the pavements narrow, obstructs emergency service vehicles and those using wheelchairs, prams, buggies and bicycles on shared use pathways. The roads around residential areas are congested with parked commuter vehicles trying to avoid paying for parking, which has negative impacts on residential safety. Respondents suggested that the Council should be more flexible with planning applications for driveways in order to address the issue of reduced on-street parking in residential areas.

8.6.2. Concern was also raised in rural areas, where there are ecological and environmental concerns with vehicles parking on roadside verges. This is because it compacts the ground, prevents absorption of rainfall, destroys vegetation, and increases emissions in residential areas.

8.6.3. Some respondents felt that there were insufficient disabled parking spaces throughout Wokingham.

8.6.4. While efforts may be made to reduce car journeys, it may not be feasible for most people to eliminate the need for a car, and thus parking spaces remain a necessity. As such, respondents suggested a need for a balanced approach that considers the practicality of reducing on-street parking while also accommodating the parking needs of residents.

8.7 Public Transport / Bus / Rail

8.7.1. Respondents gave suggestions for public transport, with many feeling that more should be done to increase the contributions/subsidies for local bus routes to increase the frequency

of bus routes. A number of respondents highlighted the importance of higher frequency services such that provided an attractive enough facility to offer an alternative to other alternatives (e.g. their own car). Similarly, some respondents recognised that would not be possible to achieve high frequency to everywhere, especially from rural areas.

8.7.2. Respondents expressed concerns about the reliability and frequency of bus services, particularly during peak times. The impact of reduced service levels at different times of the day was highlighted by some respondents, with examples of having to change their working hours to fit around lack of early morning bus service.

8.7.3. Specific examples included the lack of bus services in Shinfield and Spencers Wood, making bus travel into Reading impractical, bus routes in Maiden Earley not going to the main shopping area (Asda), and that the 19a and 19c routes have very slow circuitous routes. Similarly, concerns raised that bus services along Nine Mile Ride are unreliable, and that public transport is also not available in Finchampstead.

8.7.4. Suggestions for new services included a park & ride from Wokingham to Royal Berks Hospital, reintroduction of services from Arborfield Green through to Bracknell, and new bus services to be introduced in the North Wokingham corridor to improve public transportation options in the area. Detailed suggestions to refine existing routes were also provided, including for 121, 123 and 128/9.

8.7.5. Suggestions were also provided for improved bus connections from Wokingham, Winnersh and other areas to allow residents to make better use of the Elizabeth Line.

8.7.6. To improve rail services, suggestions included improvement in the journey times on South West Rail (SWR) trains to Waterloo, an additional fast service to Gatwick, and need to install third rail operations all along the line between Wokingham and Redhill to get rid of diesel trains.

8.7.7. Some respondents expressed support for the idea of bringing back trams or implementing a new type of district light rail service into Reading that would connect all the districts in the Borough to Reading and Bracknell without being affected by traffic, like the London underground services. This would encourage people to switch from cars to public transportation, reducing congestion and promoting greener mobility choices.

8.8 School Travel

8.8.1. The impacts on safety of parking around schools was highlighted. Some respondents either highlighted a desire to alleviate issues related to parking congestion and safety concerns near schools and encourage more sustainable transportation options for school-related travel, or suggested a need for changes in how traffic is managed around the schools.

8.8.2. Some respondents suggested that schools should take more responsibility for off-street parking and regulation of on-street parking near their premises. This could include measures such as providing adequate off-street parking facilities for staff and visitors and

implementing parking regulations and enforcement to ensure that on-street parking near schools is managed effectively.

8.8.3. Responders also suggested that a school bus system (similar to the USA) should be introduced to ease traffic at peak times, enabling parents to get their kids to school without wasting time. It would be safer for kids, more efficient for the economy, reduce pollution and traffic, reduce time spent travelling and improve mental health.

8.9 Speed limits / Safety issues

8.9.1. Respondents expressed concerns about traffic congestion, especially during rush hour and at other times, despite the construction of new roads.

8.9.2. Some respondents suggested that lower speed limits could improve safety for all road users, with particular focus on in areas where there may be higher pedestrian and cyclist activity. It was suggested this could help address traffic congestion and create a safer and more pedestrian and cycle-friendly environment in Wokingham and aligns with the goal of creating safer roads and neighbourhoods in Wokingham. Specific suggestions included:

- Basingstoke Road (some of which is the B3349) through Spencers Wood and Three Mile Cross shouldn't have a 40mph speed limit when there is a directly parallel A33 that can take the higher speed traffic instead.
- Hyde End Road (B3349) and Church Lane/Brookers Hill, where a 40mph speed limit encourage being used as part of alternative long distance to non-local traffic.
- Hollow Lane through Shinfield

8.9.3. Respondents also highlighted that any small decrease in speed limits would have a bigger increase in overall emissions reductions in the area. Finally, for local short journeys, with a slightly slower speed limit, the differences in journey time for car versus cycling would be smaller, again encouraging more journeys to be taken by active travel options.

8.10 Vehicular Travel and Roads

8.10.1. Respondents highlighted that car/vehicle use is essential for many individuals, including those with disabilities, young children, or the elderly. Respondents felt that there is a need to find ways to balance accessibility, safety, and environmental concerns in traffic management decisions. This may involve finding innovative solutions that address the needs of all road users, while minimising negative impacts on the environment and promoting sustainable transportation options.

8.10.2. The condition of roads all around the area was raised by a number of respondents, with specific concerns about potholes and a need to plan to get them properly repaired. Some respondents felt emphasis should be on sorting out and repairing potholes throughout the Borough before allocating more funds for new infrastructure and that such an approach would benefit both vehicle drivers and cyclists alike.

8.10.3. The completion of the South Wokingham Distributor Road needs to be expedited to address the issue of access to roads like Easthampstead Road. Currently, cars often get stuck at the

level crossing, and there is no other direct route to get to the other side without driving long distances. Improving access to these roads would help alleviate congestion and provide more efficient routes for motorists. Some respondents suggested there should be a bypass of Wokingham town centre, whereas others suggested segregated cycle lanes, suitable active transport infrastructure along with positive discrimination against cars was the only ways to actively encourage short journeys by means other than car.

8.10.4. Reference was also made on the use of Church Road, Earley, as a short cut over the past few years. Concerns were raised about vehicle speeds and that the mini-roundabout is too small, lacks suitable pedestrian facilities even though there is a school nearby and frequently congested.

8.10.5. There are far too many heavy vehicles using Hyde End Road in Spencers Wood. Some respondents feel the Council were remiss to allow the use of Hyde End Lane and Ryeish Lane for access to the new housing developments.

8.10.6. Respondents gave suggestions on the need to maintain trees, hedges and road borders for effective energy efficient street lighting and visibility of signages.

8.10.7. The role of Low Traffic Neighbourhoods was highlighted as redressing balance between vehicles and pedestrians, although some respondents also raised how these had divided communities in West London. Some respondents feel that traffic calming or access restrictions on certain roads may increase congestion on arterial roads, leading to more queuing and emissions.

8.10.8. Also, the respondents stated some advantages of car usage, such as cars offer convenience which public transport cannot match as it is impossible to go shopping without a car, as public transport couldn’t possibly carry everything.

Appendix A

Engagement Questionnaire

How could we improve getting around the Borough?

Our current Local Transport Plan, an official document that guides maintenance and improvements to roads, footways, cycle lanes, public transport and bridleways, covers the period 2011 to 2026. A lot has changed in the past 12 years and the government is updating its guidance to shift the focus away from planning for vehicles towards planning for people and places, including setting national targets to decarbonise the transport system, reduce the reliance on private cars, support economic development and regeneration, and promote healthier lifestyles..

So, we're working on a new Local Transport Plan, and we're asking everyone who travels around the borough to answer a few simple questions.

We want to do all we can to offer more choices for getting around because we need to reduce air pollution, tackle the climate emergency, address inequality as living costs rise and help residents lead healthier lives. We will use your views to help us shape the new Local Transport Plan, which we will be consulting on later in 2023.

Are you responding as a

- [ ] Wokingham borough resident
- [ ] Live outside the borough but regularly travel into Wokingham borough
- [ ] Representing an organisation or individual
- [ ] Other (please specify):

If you are representing an organisation or individual, please tell us more, such as the name of the organisation

How you usually get around now

How do you usually travel for journeys of less than 5 miles?

	All of the time	4 to 5 days a week	1 to 3 days a week	Once or twice a month	Less than once a month
Walk	☐	☐	☐	☐	☐
Cycle	☐	☐	☐	☐	☐
Electric bike	☐	☐	☐	☐	☐
Bus	☐	☐	☐	☐	☐
Car as a driver	☐	☐	☐	☐	☐
Car as a passenger	☐	☐	☐	☐	☐
Motorbike	☐	☐	☐	☐	☐
Wheelchair or mobility scooter	☐	☐	☐	☐	☐

Is there any other way you get around for local journeys?

How do you usually travel for journeys over 5 miles in length?

	All of the time	4 to 5 days a week	1 to 3 days a week	Once or twice a month	Less than once a month
Walk	☐	☐	☐	☐	☐
Cycle	☐	☐	☐	☐	☐
Electric bike	☐	☐	☐	☐	☐

	All of the time	4 to 5 days a week	1 to 3 days a week	Once or twice a month	Less than once a month
Bus	☐	☐	☐	☐	☐
Car as a driver	☐	☐	☐	☐	☐
Car as a passenger	☐	☐	☐	☐	☐
Motorbike	☐	☐	☐	☐	☐
Wheelchair or mobility scooter	☐	☐	☐	☐	☐

Is there any other way you get around for longer journeys?

Your views on transport

Thinking about your nearest town, urban centre and local shops, how important are the following to you?

	Very Important	Important	Neutral	Not that important	Not important
Pedestrian safety	☐	☐	☐	☐	☐
Safe and protected cycling routes	☐	☐	☐	☐	☐
Secure cycle parking	☐	☐	☐	☐	☐
On-street parking	☐	☐	☐	☐	☐
Space for outside seating and pavement cafes	☐	☐	☐	☐	☐

	Very Important	Important	Neutral	Not that important	Not important
Clean air	☐	☐	☐	☐	☐
Traffic congestion	☐	☐	☐	☐	☐
Public transport services (bus/rail)	☐	☐	☐	☐	☐
Public transport information	☐	☐	☐	☐	☐

How much do you agree with the following statements about local transport?

	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Not applicable / don't know
I have a good choice of travel options to go to work	☐	☐	☐	☐	☐	☐
I have a good choice of travel options to go shopping	☐	☐	☐	☐	☐	☐
I have a good choice of travel options to go to school	☐	☐	☐	☐	☐	☐
I can get where I need to and feel safe doing so by bus	☐	☐	☐	☐	☐	☐
I can get where I need to and feel safe doing so by train	☐	☐	☐	☐	☐	☐
I know where to go to get information on bus services	☐	☐	☐	☐	☐	☐
I know where to go to get information on train services	☐	☐	☐	☐	☐	☐
Children can travel safely walking and cycling to and from school	☐	☐	☐	☐	☐	☐
I would change my travel habits to help tackle the climate change emergency	☐	☐	☐	☐	☐	☐

	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Not applicable / don't know
Since Covid traffic congestion has got worse	☐	☐	☐	☐	☐	☐

Walking, Cycling and Wheeling

Walking is the second most popular way of getting around and the number of people cycling has increased significantly since the COVID-19 pandemic.

We also need to remember other wheeled travel on our local networks, increasingly referred to as 'wheeling', which refers to anyone using a wheelchair or a pushchair as well as those travelling on a scooter. Many people rely on wheeled aids to get to local services and amenities, while children and others enjoy cycling and scooting for travelling to and from school, for fitness and for leisure activities.

Thinking about where you live, how do you feel about the current facilities for walking, cycling and wheeling, and what might enable you to undertake more active travel?

	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Not applicable / Don't know
There are good facilities (footways/crossings) for walking and wheeling to and from local amenities where I live/ usually walk	☐	☐	☐	☐	☐	☐
I can get where I need to and feel safe doing so by bike.	☐	☐	☐	☐	☐	☐
There are lanes/streets near where I live/usually go that I would like to use more for walking, cycling and wheeling but traffic prevents me.	☐	☐	☐	☐	☐	☐
I would like to see more traffic-free routes near where I live/usually go for walking, cycling and wheeling.	☐	☐	☐	☐	☐	☐

	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Not applicable / Don't know
I would like to see rural lanes made safer for walking, cycling and wheeling.	☐	☐	☐	☐	☐	☐
I have sufficient space to store a bicycle securely where I live.	☐	☐	☐	☐	☐	☐

Environmental Impacts

Emissions from travel by car are a major cause of CO2 emissions, air pollution and noise, all of which affect our health and wellbeing. However, we can take action locally to reduce or eliminate the impact and improve our quality of life.

To what extent do you agree with the following statements?

	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Don't know
Air quality should be within legal limits, in all locations in the borough.	☐	☐	☐	☐	☐	☐
Our transport plan should aim to reduce CO2 emissions from transport in the borough.	☐	☐	☐	☐	☐	☐
Our transport plan should limit access for the most polluting vehicles to ensure cleaner air in areas with highest levels of pollution in the borough.	☐	☐	☐	☐	☐	☐

Shared mobility and zero emission vehicles

Electrification of road transport is growing, with the number of electric cars and buses increasing. Zero emission vehicles will make travel cleaner and quieter. To support the transition to electric vehicles, we are developing a local electric vehicle charge point strategy for the borough.

Shared mobility includes scooter and bike hire as well as access to car-hire clubs, ready for use on demand for as long as we need them. With fuel prices rising, "shared mobility" can offer a cheaper way for residents to have access to a car when they need it.

To what extent do you agree with the following?

	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Don't know
For some, travel by car will remain essential and therefore any strategy should support the uptake of zero emission vehicles.	☐	☐	☐	☐	☐	☐
I would consider using a car club vehicle (vehicles that can be hired for use by the hour).	☐	☐	☐	☐	☐	☐
I would consider reducing the number of cars in my household if I had access to a car club vehicle.	☐	☐	☐	☐	☐	☐

My streets

In villages and towns, transport has a big impact on the quality of the area. From historic town centres to the ordinary streets where we live, work and shop, the environment in these places has a profound influence on our quality of life, pride of place, and sense of community.

To what extent do you agree with the following?

	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Don't know
I would support measures to reduce on-street parking in my nearest town, urban centre or local shops to provide more outdoor space for business like pavement cafes and street markets, and improved walking, cycling and wheeling facilities.	☐	☐	☐	☐	☐	☐
While retaining access for vehicles, I would support re-designating roads in my nearest town, urban centre or by local shops to provide more outdoor space for businesses, like pavement cafes and street markets, and improved walking, cycling and wheeling facilities.	☐	☐	☐	☐	☐	☐
I would like there to be less vehicle traffic on the street where I live/I tend to go.	☐	☐	☐	☐	☐	☐
I would accept slightly longer journeys by car if it meant less vehicle traffic on my street/where I tend to go.	☐	☐	☐	☐	☐	☐
I would accept slightly longer journeys by car to make it safer for children to walk, cycle and wheel to school.	☐	☐	☐	☐	☐	☐

	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Don't know
The roads I use in Wokingham are adequately maintained.	☐	☐	☐	☐	☐	☐
The footways and cycleways I use in Wokingham are adequately maintained.	☐	☐	☐	☐	☐	☐

Financial measures

To support traffic management, we could use financial incentives which would raise funding to allow wider transport improvements to help mobility and reduce carbon emissions across the borough.

To what extent do you agree with the following?

	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Don't know
I would support the use of different parking charges based on the type of vehicle (i.e. if zero emissions, how polluting, etc.).	☐	☐	☐	☐	☐	☐
I would support the principle of access charges for the most polluting vehicles to ensure cleaner air in areas with highest levels of pollution in the borough.	☐	☐	☐	☐	☐	☐

Thinking about your experience and how you travel around the borough, please let us know if you have any comments or matters you consider are relevant to the Local Transport Plan.

Are you happy for us to contact you about your answers? ☐ Yes ☐ No

Email address:

What is your postcode?

We will use it to compare your answers with others which may help us target policies and schemes that will improve travel in your area. If you provide this information we will not contact or identify you, and we will not report anything you have said which would reveal your address or identity.

About you (optional)

The following questions are to ensure we take the views and needs of differing people into consideration and to understand your responses to the previous questions a little better. It is a legal requirement for us to ask these questions, but you are not obliged to answer any you do not wish to. The data is used for this survey only and cannot be used to identify you.

If you're happy to do so, please proceed to complete the remaining questions – otherwise, many thanks for taking the time to complete this survey.

The following questions are to ensure we take the views and needs of differing people into consideration and to understand your responses to the previous questions a little better. It is a legal requirement for us to ask these questions, but you are not obliged to answer any you do not wish to. The data acquired is used for this consultation only and cannot be used to identify you.

What town or parish do you live in?

What sex/gender do you identify as?

☐ Female ☐ Male ☐ Transgender ☐ Prefer not to say

☐ Other (please specify):

How old are you?

☐ 17 or younger ☐ 18-24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65 or above

What race or ethnicity best describes you?

☐ Arabic ☐ Asian/British Asian: Bangladeshi ☐ Asian/British Asian: Chinese

☐ Asian/British Asian: Indian ☐ Asian/British Asian: Pakistani ☐ Black/British Black: African

☐ Black/British Black: Caribbean ☐ White: British ☐ White: Other ☐ Mixed race

☐ Gypsy/ Traveller ☐ Prefer not to say ☐ Other (**please specify below**):

What do you consider your religion to be?

☐ Buddhism ☐ Christianity ☐ Hinduism ☐ Islam ☐ Judaism ☐ Sikhism

☐ No religion ☐ Prefer not to say

☐ Other (please specify):

Which of the following terms best describes your sexual orientation?

☐ Asexual ☐ Bisexual ☐ Gay ☐ Lesbian ☐ Heterosexual/Straight ☐ Prefer not to say

☐ Other (please specify):

Have you undertaken any form of sex/gender reassignment?

☐ Yes ☐ No ☐ Prefer not to say

Are you currently pregnant or have you given birth within the last year?

☐ Yes ☐ No ☐ Not applicable ☐ Prefer not to say

Do you have a disability, long-term illness or health condition?

☐ Yes ☐ No ☐ Prefer not to say

Would it be helpful if you could indicate the nature of your disability? If so, please do.

Appendix B

Consultation Responses

Q1:

Are you responding as a

Answer Choices	Responses	
Wokingham borough resident	97.59%	729
Live outside the borough but regularly travel into Wokingham borough	1.61%	12
Representing an organisation or individual	0.54%	4
Other (please specify): Show	0.27%	2
Answered: 747	Response Total:	747
Skipped: 1		

Q2

If you are representing an organisation or individual, please tell us more, such as the name of the organisation

Responses:	
4	The British Horse Society
3	University of Reading
2	Reading Buses
1	Cycling UK Reading

Answered: 4

Skipped: 744

Response Total: 4

Q3

How do you usually travel for journeys of less than 5 miles?

How do you usually travel for journeys of less than 5 miles?Answer Choices	All of the time	4 to 5 days a week	1 to 3 days a week	Once or twice a month	Less than once a month	Response Total
Walk	10.12% 66	23.77% 155	36.96% 241	16.26% 106	12.88% 84	652
Cycle	3.34% 16	7.52% 36	18.37% 88	13.99% 67	56.78% 272	479
Electric bike	1.42% 5	0.85% 3	3.98% 14	3.69% 13	90.06% 317	352
Bus	2.16% 11	2.94% 15	12.16% 62	25.29% 129	57.45% 293	510
Car as a driver	23.03% 161	25.46% 178	39.34% 275	5.58% 39	6.58% 46	699
Car as a passenger	4.76% 24	6.35% 32	31.55% 159	25.79% 130	31.55% 159	504
Motorbike	0.29% 1	0.29% 1	2.33% 8	1.46% 5	95.63% 328	343
Wheelchair or mobility scooter	1.51% 5	0.90% 3	0.00% 0	0.60% 2	96.99% 322	332

Answered: 744

Skipped: 4

Comments 102

Q4

How do you usually travel for journeys over 5 miles in length?

How do you usually travel for journeys over 5 miles in length?Answer Choices	All of the time	4 to 5 days a week	1 to 3 days a week	Once or twice a month	Less than once a month	Response Total
Walk	2.22% 9	0.74% 3	7.64% 31	14.04% 57	75.37% 306	406
Cycle	1.51% 6	3.27% 13	8.82% 35	17.63% 70	68.77% 273	397
Electric bike	1.24% 4	0.93% 3	1.24% 4	5.57% 18	91.02% 294	323
Bus	3.51% 16	2.63% 12	8.77% 40	26.10% 119	58.99% 269	456
Car as a driver	38.41% 265	13.33% 92	34.20% 236	8.70% 60	5.36% 37	690
Car as a passenger	8.63% 43	5.02% 25	31.93% 159	24.70% 123	29.72% 148	498
Motorbike	0.31% 1	0.62% 2	2.15% 7	1.85% 6	95.08% 309	325
Wheelchair or mobility scooter	1.28% 4	0.32% 1	0.00% 0	0.32% 1	98.08% 307	313

Answered: 736

Skipped: 12

Comments 181

Q5

Thinking about your nearest town, urban centre and local shops, how important are the following to you?

Thinking about your nearest town, urban centre and local shops, how important are the following to you? Answer Choices	Very Important	Important	Neutral	Not that important	Not important	Response Total
Pedestrian safety	66.53% 495	25.13% 187	5.65% 42	1.34% 10	1.34% 10	744
Safe and protected cycling routes	36.65% 269	25.75% 189	14.58% 107	8.99% 66	14.03% 103	734
Secure cycle parking	30.17% 219	25.76% 187	19.83% 144	7.02% 51	17.22% 125	726
On-street parking	16.33% 120	22.72% 167	28.57% 210	18.64% 137	13.74% 101	735
Space for outside seating and pavement cafes	23.58% 175	34.10% 253	25.34% 188	10.38% 77	6.60% 49	742
Clean air	57.28% 425	31.94% 237	8.09% 60	2.02% 15	0.67% 5	742
Traffic congestion	50.07% 371	36.44% 270	9.18% 68	2.56% 19	1.75% 13	741
Public transport services (bus/rail)	46.14% 341	32.61% 241	11.77% 87	4.33% 32	5.14% 38	739
Public transport information	42.35% 313	33.15% 245	15.02% 111	3.65% 27	5.82% 43	739

Q6

How much do you agree with the following statements about local transport?

How much do you agree with the following statements about local transport?Answer Choices	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Not applicable / don't know	Response Total
I have a good choice of travel options to go to work	5.65% 42	13.17% 98	9.14% 68	13.31% 99	21.77% 162	36.96% 275	744
I have a good choice of travel options to go shopping	10.59% 79	30.97% 231	13.81% 103	19.03% 142	23.19% 173	2.41% 18	746
I have a good choice of travel options to go to school	2.74% 20	8.64% 63	5.35% 39	5.62% 41	9.05% 66	68.59% 500	729
I can get where I need to and feel safe doing so by bus	6.35% 47	19.86% 147	14.86% 110	18.92% 140	28.78% 213	11.22% 83	740
I can get where I need to and feel safe doing so by train	9.05% 67	40.14% 297	18.78% 139	11.08% 82	13.38% 99	7.57% 56	740
I know where to go to get information on bus services	25.68% 190	34.59% 256	11.62% 86	12.70% 94	8.92% 66	6.49% 48	740
I know where to go to get information on train services	43.92% 325	42.97% 318	5.81% 43	2.43% 18	1.49% 11	3.38% 25	740
Children can travel safely walking and cycling to and from school	5.56% 41	18.18% 134	10.58% 78	18.86% 139	17.37% 128	29.44% 217	737
I would change my travel habits to help tackle the climate change emergency	19.97% 148	37.38% 277	18.89% 140	9.72% 72	11.34% 84	2.70% 20	741
Since Covid traffic congestion has got worse	17.65% 131	21.02% 156	25.88% 192	23.45% 174	5.66% 42	6.33% 47	742

Answered: 746

Skipped: 2

Q7

Thinking about where you live, how do you feel about the current facilities for walking, cycling and wheeling, and what might enable you to undertake more active travel?

Thinking about where you live, how do you feel about the current facilities for walking, cycling and wheeling, and what might enable you to undertake more active travel? Answer Choices	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Not applicable / Don't know	Response Total
There are good facilities (footways/crossings) for walking and wheeling to and from local amenities where I live/ usually walk	14.38% 107	36.02% 268	13.98% 104	17.74% 132	15.86% 118	2.02% 15	744
I can get where I need to and feel safe doing so by bike.	5.29% 39	13.98% 103	9.91% 73	20.76% 153	22.66% 167	27.41% 202	737
There are lanes/streets near where I live/usually go that I would like to use more for walking, cycling and wheeling but traffic prevents me.	24.09% 179	25.03% 186	14.27% 106	14.40% 107	17.09% 127	5.11% 38	743
I would like to see more traffic-free routes near where I live/usually go for walking, cycling and wheeling.	30.42% 226	20.19% 150	17.63% 131	11.71% 87	17.77% 132	2.29% 17	743
I would like to see rural lanes made safer for walking, cycling and wheeling.	43.80% 325	25.34% 188	14.82% 110	6.47% 48	8.09% 60	1.48% 11	742
I have sufficient space to store a bicycle securely where I live.	53.51% 396	18.65% 138	5.41% 40	2.57% 19	2.97% 22	16.89% 125	740

Answered: 745

Skipped: 3

Expand

Q8

To what extent do you agree with the following statements?

To what extent do you agree with the following statements? Answer Choices	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Don't know	Response Total
Air quality should be within legal limits, in all locations in the borough.	65.23% 486	22.95% 171	6.85% 51	1.74% 13	1.88% 14	1.34% 10	745
Our transport plan should aim to reduce CO2 emissions from transport in the borough.	54.37% 404	25.17% 187	10.50% 78	4.44% 33	4.98% 37	0.54% 4	743
Our transport plan should limit access for the most polluting vehicles to ensure cleaner air in areas with highest levels of pollution in the borough.	41.88% 312	26.85% 200	12.21% 91	7.92% 59	10.07% 75	1.07% 8	745

Answered: 745

Skipped: 3

Q9

To what extent do you agree with the following?

To what extent do you agree with the following? Answer Choices	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Don't know	Response Total
For some, travel by car will remain essential and therefore any strategy should support the uptake of zero emission vehicles.	45.77% 341	32.48% 242	10.74% 80	4.97% 37	5.37% 40	0.67% 5	745
I would consider using a car club vehicle (vehicles that can be hired for use by the hour).	8.11% 60	13.38% 99	16.89% 125	19.05% 141	37.84% 280	4.73% 35	740
I would consider reducing the number of cars in my household if I had access to a car club vehicle.	7.99% 59	11.11% 82	16.26% 120	18.16% 134	37.26% 275	9.21% 68	738

Answered: 745

Skipped: 3

Q10

To what extent do you agree with the following?

To what extent do you agree with the following? Answer Choices	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Don't know	Response Total
I would support measures to reduce on-street parking in my nearest town, urban centre or local shops to provide more outdoor space for business like pavement cafes and street markets, and improved walking, cycling and wheeling facilities.	26.51% 197	23.42% 174	15.21% 113	14.67% 109	19.52% 145	0.67% 5	743
While retaining access for vehicles, I would support re-designating roads in my nearest town, urban centre or by local shops to provide more outdoor space for businesses, like pavement cafes and street markets, and improved walking, cycling and wheeling facilities.	27.21% 203	31.37% 234	12.87% 96	10.19% 76	17.43% 130	0.94% 7	746
I would like there to be less vehicle traffic on the street where I live/I tend to go.	30.74% 229	19.46% 145	29.53% 220	8.32% 62	11.28% 84	0.67% 5	745
I would accept slightly longer journeys by car if it meant less vehicle traffic on my street/where I tend to go.	22.45% 167	24.73% 184	19.62% 146	13.58% 101	17.47% 130	2.15% 16	744
I would accept slightly longer journeys by car to make it safer for children to walk, cycle and wheel to school.	32.79% 243	31.04% 230	14.30% 106	8.91% 66	10.26% 76	2.70% 20	741
The roads I use in Wokingham are adequately maintained.	1.48% 11	11.68% 87	10.74% 80	28.32% 211	47.11% 351	0.67% 5	745
The footways and cycleways I use in Wokingham are adequately maintained.	3.08% 23	19.71% 147	18.36% 137	25.74% 192	26.81% 200	6.30% 47	746

Q11

To what extent do you agree with the following?

To what extent do you agree with the following? Answer Choices	Strongly agree	Tend to agree	Neutral	Tend to disagree	Strongly disagree	Don't know	Response Total
I would support the use of different parking charges based on the type of vehicle (i.e. if zero emissions, how polluting, etc.).	16.49% 123	24.53% 183	13.14% 98	17.16% 128	27.21% 203	1.47% 11	746
I would support the principle of access charges for the most polluting vehicles to ensure cleaner air in areas with highest levels of pollution in the borough.	24.26% 181	27.35% 204	10.86% 81	12.87% 96	22.92% 171	1.74% 13	746

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