July 2022

Wokingham Borough Council Climate Emergency Action Plan

Third Progress Report

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Foreword

The climate emergency we are currently facing is not just of our own making, it is the effect of all human created emissions throughout history. Today, we are at 1.2 degrees of warming and already witnessing an unprecedented increase in the frequency and magnitude of extreme weather events from droughts, heatwaves, flooding, winter storms, hurricanes, and wildfires[3] across the globe. These risks have direct and indirect impacts on everyone, as shown by the recent economic impacts of the pandemic and conflicts, as a result of disruption to the global economy. Therefore, these risks apply to all residents of the Borough.

Despite these warning, we continue to head for a dramatic temperature rise of 3-5˚C this century[1], threatening humanity and the world's natural ecosystems if nothing is done. The signs of an acceleration in warming are clear, 2020 was the hottest year on record so far, bookending the hottest decade worldwide[2], meaning our horizon for meaningful action is shrinking.

Our future response must exceed the totality of our collective emissions. In October 2018, the Intergovernmental Panel on Climate Change (IPCC) report set out the dire consequences if humanity fails to limit warming to 1.5˚C – on our health, economy and our lives. Effectively, the IPCC report said that the world had just 12 years to get a grip of the problem or face irreparable damage.

In response to this, The UK adopted The Paris Agreement in November 2016, and has committed to reduce greenhouse gas emissions by 100% by 2050. In April 2021, the government announced a new climate change commitment which will set the UK on course to cut carbon emissions by 78% by 2035. Today, over 300 District, County, Unitary & Metropolitan Councils have declared a Climate Emergency accounting for 74% of authorities in the UK[4].

The COVID-19 pandemic global lockdowns temporarily reduced emissions and pollution, though carbon dioxide levels are still at record high – and rising. In 2019, carbon dioxide levels reached 148 per cent of pre-industrial levels. In 2020, this upward trend has continued despite the pandemic, making the next decade critically important. As we overcome the pandemic, there is an opportunity to reshape the world economy, transforming it into a mechanism for a sustainable future.

Over the last year, the UK Government has introduced more ambitious strategies to support the decarbonisation targets, more details of which can be found in the below changing landscape section.

However, the scale of the challenge remains colossal, and everyone needs to play a role in tackling climate change, bringing together businesses, organisations and the public is vital to reach the climate change goals.

The cost of climate change action is outweighed by the significant benefits which will result: reducing pollution, generating fuel savings, enhancing biodiversity, and support economic growth. Reaching net-zero will create jobs and trade, but that transition to a green economy requires a workforce with the right skills, providing us with the opportunity to develop new talent.

[1] State of the Planet speech, United Nations Secretary General Antonio Guterres. December 2020
[2] World Meteorological Organisation
[3] Facts about the Climate Emergency, UN Environment Programme
[4] https://www.climateemergency.uk/blog/list-of-councils/

Introduction

In response to the rising concern over the urgent need for action, in July 2019, Wokingham Borough Council 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 Wokingham Borough by 2030. Subsequently, in January 2020, the council published its first Climate Emergency Action Plan (CEAP), establishing the eight key priority areas to focus on for reducing CO_2.

In July 2020, an annual report was presented to Council which detailed targets and actions that needed to be undertaken to reach the 2030 net-zero carbon target. In order to quantify the magnitude of the challenge and the level of commitment needed, we used trajectories and best estimates to quantify the carbon savings generated by the delivery of the actions and achieving the proposed targets. A short fall of 67.18 ktCO2e was identified, which provides a clear picture for the scale of the approach that is needed.

This CEAP Third Progress Report outlines the current stage of each of the major actions within the plan, alongside the associated carbon savings, where possible. The report summarises the Borough's plans for the years ahead and demonstrates the benefits of becoming net zero. The annual climate emergency progress report will be published each year in July.

Most of the actions to be delivered over the first few years set in motion the groundwork and foundations for new strategies and policies that will influence our way of life locally. The biggest gains are expected to come towards the end of the decade after most of the actions have come to fruition. Short term actions can be achieved within two or three years (2020-2023), medium term actions are designed to take several years to reach fulfilment (2024 to 2028), and longer-term actions will take many years to come to fruition (2028 to 2030).

The climate emergency affects us all, but we are acutely aware that the impacts of climate change can be more severe and felt more keenly for some groups of people. Research shows that those most at risk include people with respiratory health conditions, children, older adults, and people in poverty. Wokingham Borough Council is committed to tackling inequality and promoting inclusion. We are clear that the benefits of climate change mitigation go far beyond carbon dioxide emission savings. They include improved health outcomes, economic growth, and improved energy efficiency; all issues which are vitally important to our communities. As such, the targets in this plan are underpinned by our commitments set out in the council's Equality Plan 2021-25 and our (draft) Tackling Poverty Strategy 2021-26. The co-benefits of the actions in this plan are explained below each target which explain the added benefits from the action, above and beyond the direct benefits of a more stable climate.

This plan is aligned with our Corporate Delivery Plan and is an important part of the work we are doing to deliver our Community Vision for Wokingham. We know that we cannot achieve these targets alone. It is together, with the support of our residents, communities, local businesses, and towns and parish council, that we will achieve the targets in this plan. We will listen to and learn from our residents, ensuring that we empower everyone to take action to ensure a just transition to a more sustainable future. To ensure that we are taking every opportunity through this plan to tackle inequality and promote inclusion, we conduct Equality Impact Assessments on all significant projects. These enable us to identify impacts on different groups of people at all stages of planning and delivery and enable us to take action to enrich the lives of every member of our community.

We need to be agile to a dynamic landscape and anticipate that new actions and initiatives will be introduced into this plan over the coming years, which will enable us to close the shortfall identified. Targets and actions within this plan will change and develop over time. Therefore, the Council has committed to continually revisit targets, to tweak, adjust or even entirely re-evaluate them in line with actual progress, new policies, and global events that might affect the climate emergency agenda. Indeed, the direct effects climate change is likely to have on the local environment means that adaptation to minimise these risks, such as flooding or biodiversity loss, has

been incorporated into actions wherever possible, alongside in individual project assessments.

Furthermore, the council recognises the importance of the United Nations' Sustainable Development Goals (SDGs) and aligned the key areas of action within the Climate Emergency Action Plan to the SDG framework. In doing so, the council hopes to ensure that its actions contribute to global level action and lead to a socially just response to tackling climate change.

To ensure we are on track to reach these goals and that each project is working effectively, they will each be closely monitored, with a RAG rating system in place to provide clarity. Here each target has been assigned a colour based on the standard RAG system, where green represents being on track to being achieved, yellow indicates currently being slightly delayed or being depending on delivery of previous milestones, red indicates being delayed or cancelled and grey means it has not yet been started.

The Changing Landscape

The last twelve months have been volatile and the Covid-19 pandemic has continued to affect us all, with the impact being felt far and wide locally. Wokingham Borough Council has continued to financially support the community, including businesses, the care and voluntary sectors. Despite the impact of the pandemic is still being felt, Wokingham Borough Council remains a good place financially but still faces future uncertainty in terms of government funding and proposed adult social care reforms.

In the past six years the council has worked to reduce costs to be more efficient in offsetting inflation but the authority continues to face a number of ongoing challenges and it has to focus on investing in its priorities, which offer value for money and improve services for residents. Tackling the climate emergency remains key for the council as we work to ensure two of our strategic priorities: a clean and green borough and safe and strong communities.

Nationally, the pandemic has sped up innovation in working practices and it has created greater focus on technology and the financial systems that underpin society. We have been compelled to adopt new behaviours, which have influenced the way we see the future and what is possible. A summary of these events and how they affect the climate emergency response is outlined below:

COP26

The United Nation's Conference of Parties hosted it's 26th Annual meeting (COP26) in Glasgow in November 2021. There were two headline outcomes from COP26. Firstly, the signing of the Glasgow Climate Pact, a "series of decisions and resolutions that build on the Paris accord", setting out what needs to be done to tackle climate change. However, it doesn't stipulate what each country must do and is not legally binding. Secondly, the Paris Rulebook was agreed which gives the guidelines on how the Paris Agreement is delivered. A focus of COP26 was to secure agreement between all the Paris signatories on how they would set out their nationally determined contributions (NDCs) to reduce emissions.

Coronavirus - COVID 19 Global Pandemic

The COVID-19 pandemic caused global social and economic disruption, dramatic loss to human life worldwide, unprecedented challenges to public health, food systems and the world of work in addition to the largest global recession since the Great Depression, according to the International Monetary Fund (IMF). Reductions in global carbon dioxide emissions were a positive unintended consequence of periods of lockdowns, as governments across the world restricted our ability to travel and social and economic activities were discouraged across the world. Maintaining some of these behaviours locally poses challenges and opportunities as we transition to net zero. However, one thing that is certain is that more large-scale actions are essential to avoid the worst impacts of climate change.

In Wokingham borough, Covid has also caused an increase in the number of local people struggling with income and in some cases, at risk of

homelessness. There has also been a rise in temporary accommodation and as a result, the council chose to prioritise investment in social housing in its 2022-23 budget.

IPCC Mitigation Report 2022

This detailed, analytical report again highlights the importance of keeping the global temperature rise to below 1.5^{o}C, outlining the devastating impacts missing this target would have on global ecosystems, markets, and human settlements. It then discusses an updated view on what can be done now, to avoid this disaster, including: slashing coal usage and subsidies, removing CO2 from the atmosphere directly through technology and storage, curbing demand from transport, accommodation and diets.

UK Climate Risk Assessment 2022

This report assesses the future risks of climate change to the UK and emphasises the importance of incorporating adaptation into existing long-term plans and mitigation efforts, as we must be prepared for changes from a global rise of up to 4 degrees. Even under low warming scenarios the UK will likely be subject to significant risks and associated impacts and costs, with this report identifying a wide range of potential costly impacts of climate change.

These include impacts on health and productivity, affecting many of our households, businesses and public services, deterioration in soil health and agricultural productivity, water availability and thereby our alternative energy supply. However, it also demonstrates that there are a range of options for improving resilience which represent good value for money, such as early warning systems, climate smart agriculture and climate resilient infrastructure. A full resilience strategy has also been consulted on which will cover the expected responses and is expected soon.

Environment Bill

The Environment Bill has now been passed through Parliament and has become law as the Environment Act (2021). The Act will introduce a new independent regulator: the Office for Environmental Protection (OEP) which will take over regulatory functions formerly performed by the European Commission. The Act also allows for centrally prescribed lists of materials that local authorities must collect for recycling, extended producer responsibility for packaging and a deposit return scheme for drinks containers. This act aims to bring about urgent and meaningful action to combat the environmental and climate crises we are facing and acts as a key vehicle for delivering the vision set out in the 25 Year Environment Plan.

Transport decarbonisation strategy

With transport remaining the highest emitting sector in across the nation, this strategy directly targets not just reducing emissions, but decarbonising the entire transport process away from fossil fuel use, towards more sustainable alternatives such as electricity and hydrogen. This is being done by encouraging and supporting new opportunities and technologies, across a range of areas including domestic and commercial, public transport, aviation and freight. This involves significant new upcoming policies such as bans on diesel/petrol cars and HGVs after 2030/40 respectively, utilising £2bn in funding to do so.

The key theme is a message that the approach for the future is about doing things in a more efficient way and accelerating our existing plans around active and sustainable travel, and encouraging a shift to zero emission vehicles. Behaviour change is a key theme running throughout and is more about how this will be implemented and encouraged. It prioritises moving away from transport planning based on predicting future demand to provide capacity ('predict and provide'), towards planning that sets an outcome communities want to achieve and provides the transport solutions to deliver those outcomes (sometimes referred to as 'vision and validate'). This theory is likely to apply across more than just transport, particularly for climate emergency projects.

Hydrogen Strategy

This examines the potential for hydrogen to provide energy, not just as for vehicles, but as a renewable energy source, capable of providing 5GW of low carbon hydrogen production capacity by 2030 for use across the

economy. This will require a drastic change in many areas, with a rapid ramp up of production and use of hydrogen over the coming decade needed. Therefore, this strategy examines how this will be accomplished, by again encouraging and supporting the new technology and opportunities in this sector, with £240 million in funding for government co-investment in production capacity through the Net Zero Hydrogen Fund, as part of a wider £1bn fund to accelerate commercialisation of low-carbon technologies and systems for net zero. This includes pilot schemes such as a hydrogen village, along with the implementations of a UK Low Carbon Hydrogen Standard. It also acknowledges the beneficial role hydrogen can play as a storage mechanism for excess renewable energy generation, helping to cover the traditional shortcomings in reliability from these other methods such as wind/solar.

Net Zero Strategy

This overarching document encompasses all of the above strategies towards achieving net zero by 2050, along with all carbon budgets on the way. It outlines the next steps we will take to cut our emissions, seize green economic opportunities, and leverage further private investment into net zero, beyond the £26 billion of government capital investment already mobilised for the green industrial revolution. It targets doing so in a sustainable way that still supports growth and all the new jobs promised in the Ten Point Plan by improving the effectiveness and therefore viability of low carbon alternatives, to make them more competitive. This will ultimately set an example so others can follow.

Heat and Buildings Strategy

The Government also published the Heat and Buildings Strategy on 19 October. This strategy sets out the actions they will be taking to reduce emissions from buildings in the near term and provides a clear long-term framework to enable industry to invest and deliver the transition to low-carbon heating. The Strategy also states that £800 million of additional funding has been granted to the Social Housing Decarbonisation Fund (SHDF) over 2022/23 to 2024/25.

Key announcements included: new grants of £5,000 will be available from April next year to encourage homeowners to install more efficient, low carbon heating systems – through a new £450 million 3-year Boiler Upgrade Scheme; an 'ambition' to phase-out the installation of natural gas boilers beyond 2035; plans for a strategic decision on the role of hydrogen in heating by 2026. Accompanying consultations were announced on market-based mechanisms for incentivizing low carbon heat; phasing out the installation of new fossil fuel heating in domestic properties off the gas grid; and on phasing out the installation of fossil fuel heating systems in businesses and public buildings off the gas grid.

Air Quality Framework

This command paper sets out how the UK government and devolved governments propose to work together on policies that aim to reduce harmful emissions and concentrations of air pollutants that can damage human health and the environment. Again, following departure from the EU and its common standards, this aims to replicate and replace this process, continuing to monitor and report on emissions in order to control transboundary pollution and align responsibility for reduction measures.

EV Infrastructure Strategy

This outlines the governments approach towards delivering the essential EV infrastructure to support the transition, along with the anticipated barriers and engagement elements, all supported by models for understanding the anticipated demand. The aim is to remove all these perceived and real barriers by developing the supporting network and encouraging chargepoint operators to expand their provision early, in order to deliver ahead of demand and so inspire future confidence in EV adoption. It estimates approximately 10 million EVs on the road by 2030, with 300,000 chargepoints available. Over 600 chargers are being installed each month, supported by the grants still being delivered in this area.

Department for Education's (DfE) Sustainability and Climate Change Strategy

Published in April 2022, this Policy paper acknowledges the vital role education plays in helping to tackle climate change and creating a better, greener world for future generations. The strategy's vision is for the UK to be the world-leading education sector in sustainability and climate change by 2030 and aims to support the delivery of the UK government's 25 Year Environment Plan and Net Zero Strategy. The strategy sets out 4 aims to achieve this in England:

- Excellence in education and skills for a changing world
- Reducing direct and indirect emissions from education and care buildings, driving innovation to meet legislative targets and providing opportunities for children and young people to engage practically in the transition to net zero.
- Adapting our education and care buildings and system to increase resilience against the effects of climate change.
- A better environment for future generations: enhancing biodiversity, improving air quality and increasing access to, and connection with, nature in and around education and care settings.

The strategy also sets out how local authorities will need to consider environmental sustainability, carbon reduction and energy efficiency to develop solutions for projects that are in line with government targets and objectives, regardless of their chosen delivery route when planning the use of basic need funding allocations. We have uplifted basic need grant-funding rates to support local authorities in delivering school capital projects to help all new school buildings delivered by DfE (not already contracted) to be net zero in operation.

Overview and Scrutiny

Task & Finish Group for Climate Emergency

In order to scrutinise the Action Plan, the Overview and Scrutiny Management Committee established the Task and Finish Group at its meeting in February 2020. The Task and Finish Group focused on scrutinising the emerging targets and key performance indicators underpinning the Action Plan. The Group has made 25 recommendations to the Council on ways to help to strengthen the Action Plan, making it more robust, transparent and evidence based.

The Council used this extensive input as the basis for further work, focused in particular on our approach to enable the engagement of residents and key stakeholders across the Borough, as well as to clarify the impact of specific schemes and ensure that they were supported by SMART targets. The Council published response to the Scrutiny Review to set out our underlying thinking about our current vision and strategy, outline what we intend to do and explain how the group's recommendations further our vision.

The Overview and Scrutiny Management Committee: Climate Emergency Task and Finish Group Report and Recommendations paper (September 2020) can be found here. The Council Commentary and Response to Recommendations (October 2020) can be found here.

Auditing and Reporting

The council is constantly seeking to ensure the accuracy and quality of the information in the action plan, and that our response to climate change is as robust as it can be. To this end, an internal audit is currently underway, meanwhile this plan and future actions are externally and independently reviewed by the council climate scorecards.

Current Emissions Profile

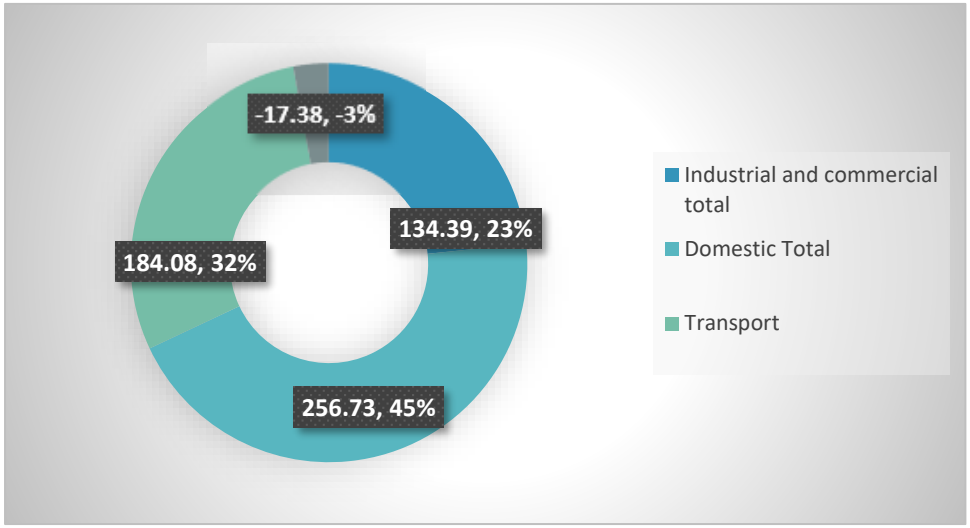

Figure 1. *Wokingham Borough Carbon Footprint 2019 ($ktCO_2$)*

Wokingham Borough`s carbon footprint is **557 $ktCO_2$**, as seen in Figure 1. This is based on government data and reported two years in arrears (BEIS 2019)[1]. This is comprised of emissions from: transport (32%), the industrial and commercial sector (23%), and the domestic sector (45%).

Residential Buildings emissions are the greatest single contributor to Wokingham's carbon footprint accounting for 256.7 $ktCO_2$ (45%). Of these, 59 $ktCO_2$ account for domestic electricity, 186.9 $ktCO_2$ for domestic gas usage and 10.8 $ktCO_2$ for usage of other fuels.

Transport emissions contribute to 184.08 $ktCO_2$ (32%). A roads account 76.7 $ktCO_2$, minor roads 97.7 $ktCO_2$, other transport modes 9.7 $ktCO_2$. This figure excludes sectors that are completely beyond the council's scope of influence. For example, the emissions from major transport links (M4) (156 $ktCO_2$) as well as diesel rail transport (12.4 $ktCO_2$), which are managed by Highways England and national rail companies, respectively.

Industrial and commercial emissions from energy and fuel use in industrial and commercial buildings contributes to 134.4 $ktCO_2$ (23%) per year as follows: electricity 74.5 $ktCO_2$, gas 39.9 $ktCO_2$, large industrial installations 0.01 $ktCO_2$, agriculture 4.1 $ktCO_2$, and other fuels 15.8 $ktCO_2$.

Carbon sequestration in the Borough accounts for 17.4 $ktCO_2$ (-3%) of savings a year through forestry and natural land use (LULUCF).

How we measure carbon emissions:
The Greenhouse Gas Protocol provides a global standardised framework to measure and manage emissions. To distinguish between emissions occurring inside and outside the borough's boundary resulting from activities within Wokingham, emissions are divided into three categories: scope 1, 2 and 3.

Scope 1: Emissions associated with combustion of fuels directly by a consumer. Within Wokingham this mainly refers to gas use for 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 the emissions from the food we eat, products we buy, our travel outside the borough, etc. Measuring these emissions is particularly complex as they are often a combination of scope 1 and 2 emissions in other locations. These emissions are out of the scope of the Borough's carbon

[1] UK local authority and regional carbon dioxide emissions national statistics: 2005-2017

footprint. However, the council will support behavioural change through the actions in this plan.

Carbon Trajectory for Wokingham

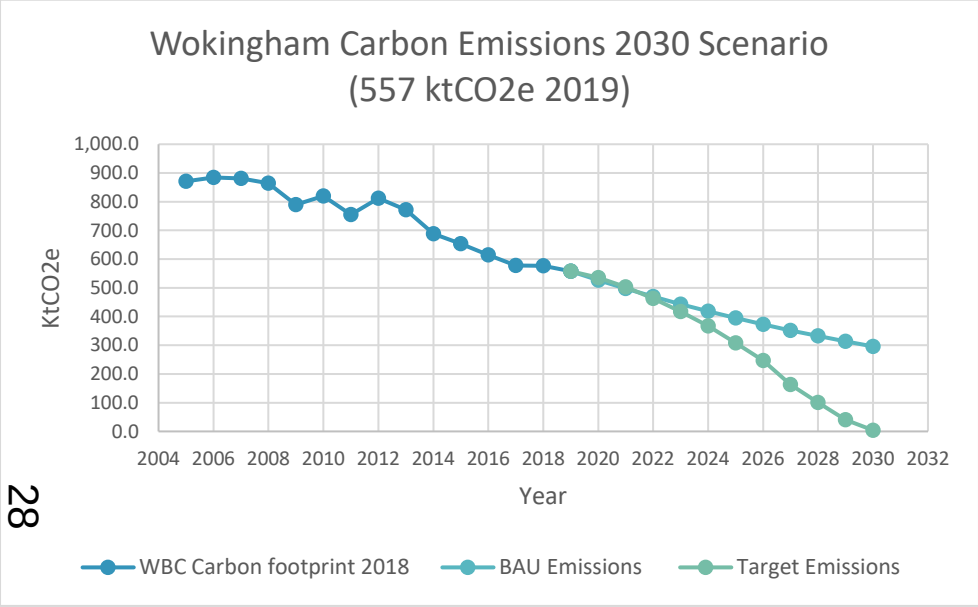

***Figure 2**. Projection of current rate reduction of carbon dioxide emissions to 2030 in Wokingham Borough*

The trajectory of carbon emissions for Wokingham Borough has been steadily decreasing since 2012. This is partly due to Central Government targets to increase the renewable energy infrastructure nationally, resulting in a higher proportion of renewable energy feeding into the electricity supply, and technological advances leading to greater energy efficiency.

Assuming that there is minimal action beyond current, national policy and nationally led decarbonisation of the electricity grid and transport through electric vehicles, the estimated carbon emissions by 2030 will be approximately **291.16ktCO$_2$**. This figure excludes the carbon sequestration levels for the Borough that could potentially increase by -16.71ktCO$_2$, providing a predicted carbon footprint of **274.45 ktCO$_2$**.

The projected 2030 carbon emissions have been calculated following an extrapolation of the data provided by BEIS. The method used was an extension of the behaviour of the CO_2 emissions recorded from 2007 up to 2017 for Wokingham Borough (data is published two years on arrears).

The overall picture is needed to help us understand the extent of the response required, however, this is classified as experimental statistics because of inherent uncertainties in the estimation of CO_2 emissions. We used available tools to local authorities such as the Tyndall report and the Scatter Tool to build scenarios that help to understand the uncertainties and key elements that will affect emissions in the future. The methodology is subject to ongoing review and refinement.

The Committee on Climate Change (CCC) report does not recommend that local authorities are set binding carbon budgets due to the range of factors affecting local emissions that are beyond their direct control. However, it does recommend that local authorities consider Net Zero action plans for their own emissions and that they work in partnership to reduce area wide emissions[2].

The latest government policies introduce new commitments which may influence the BAU scenario should they be successfully implemented, for example, the increase of renewable energy generation from offshore windfarms. The trajectory of carbon emissions will be reviewed once full details over expected savings are made available.

[2] Local Authorities and the sixth carbon budget. Climate Change Committee. December 2020

Targets and Estimated Carbon Savings

This action plan establishes targets to achieve carbon dioxide reductions in the identified priority areas. These focus on tackling emissions from transport, energy usage, generating renewable energy, planting more trees and other green foliage, encourage more recycling and encouraging behavioural change. Because we are working ten years in advance, these targets are best estimates with the information we currently have.

The carbon savings outlined by each target represent the cumulative annual savings, towards net zero. Some of these targets will not directly represent carbon savings but are essential to the delivery of the other targets; these are identified as 'Neutral' in the carbon saving column.

TR	Transport	tCO_2e
1	Deliver a greenway network of over 37 Km across the Borough by 2030 with the ambition to deliver 60 Km by 2036	**Included in T4**
2	Double public transport use by 2030 from 2019 baseline	**3,879.86**
3	20% reduction in total distance travelled in private vehicles per individual per year by 2030.	**27,246.8**
4	The use of all cars, vans and motorbikes as a mode of transport decreases from 74% (current national/borough average) total miles to 56% in 2030	**24,522.2**
5	Leading by example - Reduce by 70% CO_2 emissions produced by council related travel by 2030	**892.21**
6	Continue research and innovation programmes for the reduction of CO_2	**27,246.8**
EV	**Electric Vehicles**	**tCO_2e**
7	50% Electric Vehicles (EVs) registered in the Borough by 2030.	**46,020**
8	Council's car fleet becomes entirely ultra-low emission by 2028.	**45.39**
AQ	**Air Quality**	**tCO_2e**
10	Reduce NO_2 concentration by 50% against 2019 baseline in the three AQ management areas by 2025	**Neutral**
11	Educate the public on how they can actively improve air quality whilst reducing carbon emissions	**Neutral**
	Estimated Total Carbon Savings	**125,973.4**

RE	Renewable Energy Generation in Council's owned assets	tCO_2e
12	Increase the generation of renewable energy through investment in solar farms to power the equivalent of 25,000 homes within the Borough by 2030.	**25,560**
13	Increased renewable energy generation to generate equivalent to 1550 kWh per household in 2030	**27,333.46**
	Estimated Total Carbon Savings	**52,893.46**

RT	Retrofitting existing and council development	tCO_2e
14	By 2028 All council buildings to be retrofitted to carbon neutral standards	**17,090.2**
16	By 2029 all local schools to be retrofitted	**5,034.08**
RH	**Retrofitting Households**	**tCO_2e**
17	By 2030, 20% of all houses in the borough to be retrofitted	**25,690**
	Estimated Total Carbon Savings	**47,814.23**

CS	Carbon Sequestration	tCO_2e
18	Plant 250,000 trees throughout the Borough by 2025	**3,100**
19	Carbon sequestration by design - improving carbon sequestration rates in future land management decisions	**702**

20	Transition to low intensity (high carbon sequestration) land management	**1,329**
21	Implement a programme of carbon sequestration opportunities	**Included in total**
	Estimated Total Carbon Savings	**5,131**

These savings are generated from carbon dioxide removal.

SY	Schools and Young People	tCO_2e
22	Encourage and support school children in the Borough to take an active role in reducing carbon emissions	**153.06**
23	Celebrate schools' achievements in climate emergency initiatives and inspire the future generations	**0.34**
	Estimated Total Carbon Savings	**153.4**

Estimated CO_2 savings from engagement targets with schools have been reduced on the 2020 estimates by 79%. This is to be in line with the consumption-based UK carbon footprint which states that only 21% of all greenhouse gas emissions are from direct sources and therefore within our scope of influence, as defined above. This also ensures less risk of double counting savings from other sections, whilst recognising that behaviour change encouraged through engagement within schools and elsewhere, may result in an accelerated shift reach other targets within this plan.

WR	Waste & Recycling	tCO_2e
24	Recover 80% recycling in the form of wet paper by October 2021	**5,188.67**
25	Achieve 70% recycling target by 2030	**45,270.5**
26	Zero waste going to landfill by 2050	**8,939.74**
	Estimated Total Carbon Savings	**59,398.91**

Waste generation & recycling related carbon emissions are not included in the BEIS datasets and are out of scopes 1 and 2. Hence, the savings are not included in the overall totals, but demonstrate the potential savings from such measures and their continued importance overall.

ND	New Development	tCO_2e
27	Towards the end of 2023, major residential development to be designed and built to chieve carbon neutrality	**Neutral**
28	From 2023, major non-residential development to be designed and built to the BREEAM excellent standard	**Neutral**
29	Establish a spatial strategy and design framework which promotes active and sustainable travel, sustainable design and construction and enables biodiversity gain	**Neutral**
30	Support low carbon and renewable energy generation	**Neutral**
31	From 2023, all new residential and non-residential buildings to be designed and built to be EV ready	**Neutral**
32	From 2021 100% council new development is built to carbon neutral standards	**Neutral**
	Estimated Total Carbon Savings	**Neutral**

It is imperative that new homes in the council must be built to be low-carbon, energy and water efficient and climate resilient. Building new homes to net-zero carbon standards will not generate carbon savings: however, it will stop new carbon dioxide emissions being generated. New development targets are therefore preventative targets.

	Procurement	tCO_2e
33	By 2022, achieve sustainable procurement practice throughout the Council as part of Corporate Procurement Strategy	**Neutral**
34	By 2023, the Council will consider social value in all its procurement cycles	**Neutral**
	Estimated Total Carbon Savings	**Neutral**

It is essential that the council procurement and decision-making policies and procedures establish requirements for a low-carbon economy. Addressing the carbon emissions from our decision-making process and the supplier chain would contribute to the reduction of carbon emissions embedded in the council operations, as this will stop new carbon dioxide from being generated. Procurement targets are therefore preventative targets.

C&E	Engagement and Behavioural Change	tCO_2e
35	Raise awareness in the community about the climate emergency agenda	**Neutral**
	Estimated Total Carbon Savings	**Neutral**

Engagement and behavioural change targets support the delivery of the climate emergency action plan. There is great need for significant changes to our consumption and behaviour patterns. Through active engagement programmes we plan to encourage our residents to be part of this change; their buy-in to this plan is crucial in achieving a net-zero Borough by 2030.

Remaining Shortfall:
With total savings of 231.96 $ktCO_2e$ is predicted that when all the actions in the plan have been implemented, the Borough will still fall short of its carbon zero target by 2030 by **59.2 $ktCO_2e$**. We anticipate that new actions and initiatives will be introduced over the coming years, which will enable us to close the shortfall identified.

Considerations for the Delivery of the Action Plan:
As more information becomes available, we will continually update the targets and actions within this action plan. In a rapidly changing landscape, this plan has the potential to be affected by major global, national and local events. There is an appreciation that the council must be agile in how it responds to the climate emergency in order to fulfil its ambition of zero carbon Borough by 2030.

This action plan is a predictive tool that allows us to understand generally, where we are heading and to implement new actions accordingly. Without this tool, we would not have a clear path on what the scale of the approach should be.

Not all carbon savings for all the projects listed in this plan have been calculated, as some of the information needed for this calculation is not yet available. As projects develop, we will be able to give more information on carbon savings per individual actions.

Wokingham Borough Council Control and Influence:
While Wokingham Borough Council has already established a strong track record for delivery on actions to address climate change, the Council's influence is varied and complex across the different activities that occur within their own operations and the Borough, having powers or influence over roughly a third of emissions in their local areas.

The Council's statutory powers and responsibilities are important levers to reduce emissions in the Borough. But these powers are limited when considering how to reach net zero across buildings, transport, and industry, meaning that partnership and collaboration – and the Council's role as an influencer and convenor – will be vital for the successful delivery of this plan.

More than half of the emissions cuts needed rely on people and businesses taking up low-carbon solutions - decisions that are made at a local and individual level. Many of these decisions depend on having supporting infrastructure and systems in place.

Consumption Based Emissions:
These are emissions that extend beyond the Borough's boundary, whereby demand (and supply) of goods and services will be driving emissions in supply chains around the world. Research suggests that imports from abroad could represent a further 45% of GHG emissions, relative to the UK

produced emissions totals. We - the community - need to recognise the damage we cause through the goods and services we consume.

The CCC is set to broaden its reporting to include all of the UK's emissions from 2033, including those caused internationally by the country in the production and transportation of goods and services.

Challenges & Opportunities:
Local governments across the country have seen a very significant impact on finances as a result of additional costs and lost income throughout the COVID-19 pandemic. Therefore, there is a risk that, despite our commitment to climate goals, projects may be delayed in favour of delivering core statutory duties in this period. Local authorities require sufficient funding to increase their skills and capacity to deliver the project pipeline for Net Zero.

Nevertheless, there is an opportunity to ensure that all of our investments – to enable an inclusive economy, support thriving communities and deliver more, affordable housing – will deliver environmental co-benefits and support the transition to a net-zero carbon Borough. The Council itself seeks to benefit from sustainable and low carbon revenue streams and there will be new opportunities to work with the Government and private sector on pilot projects, crowdfunding, grants and loans or joint projects.

Council Emissions 2021/22

Within this wider borough target, the council aims to lead the way on helping deliver carbon neutrality, by improving its own operations, to become a net zero carbon organisation by 2030. This applies primarily to scope 1+2 emissions where the council has direct accountability and can have the most impact through solutions, though scope 3 elements are also taken into account where it is possible for the council to utilise its influence.

To measure progress to become carbon neutral the council will calculate its gross emissions through the Local Authority GHG Accounting Tool[3], which applies standard emissions factors to usage figures and is designed specifically for authorities. Within this tool the following scopes for emissions are defined for businesses/councils:

Emissions Summary:

Scope	Emissions Type	Emissions (tCO_2e)	Percentage of Total Emissions
Scope 1	Heating	5,668.51	50.7%
	Fugitive Emissions	0.00	0.0%
	Authority's Fleet	46.57	0.4%
Scope 2	Electricity	4,688.47	42.0%
Scope 3	Staff Business Travel	271.16	2.4%
	Outsourced Fleet	2.56	0.0%
	Transmission & Distribution Losses	414.75	3.7%
	Water	14.38	0.1%
	Material Use	0.00	0.0%
	Waste generated from own operations	68.25	0.6%
	Outsourced Scope 3	0.00	0.0%
Total Emissions		11,174.65	100%
Green Tariff Electricity		(-)3,516.35	
Final Emissions		**7,658.29**	

Scope 1 and 2:
Direct emissions produced by sources which are owned or controlled by the council and include electricity use, burning oil or gas for heating, and fuel

[3] https://localpartnerships.org.uk/greenhouse-gas-accounting-tool/

consumption from business travel or distribution. This therefore includes streetlighting for the council, though this is not a direct result of operations.

Scope 3:
Indirect emissions produced by external factors but as a result of council operations and consumption. This includes elements such as staff commuting, waste production and working from home.

This is the first year (2021/22) which these figures have been fully accounted for. Due to some irregularities in figures available with the time lag in reporting, some of the months have been estimated based on previous years, to find the best annual estimate for this period.

By using this tool, it creates a summary table, shown below, which identifies the totals and percentages. This therefore highlights key areas of major emissions, so these can then be targeted with relevant actions.

Currently the council emits approximately 7.6 $ktCO_2e$, which represents only 1.36% of the boroughs total. From this summary it is clear that there are 3 main areas of emissions for the council: Energy, Transport and Waste.

A brief explanation on the sources of the emissions contributing to each of these areas is provided in the below analysis, along with the actions which have already been outlined regarding council operations specifically. These actions will help address nearly all of the council's carbon emissions and contribute to reducing emissions district wide by 2030. These actions are currently being run and monitored in the same manner as those in the CEAP.

Covid disruption has had a significant impact on all of these areas, as explained below. Therefore, these figures are not fully representative of the council's usual emissions at this stage and are anticipated to change noticeably in future reports.

Current Council Actions:

Transport:
Due to Covid-19 and the resulting lockdowns, the vast majority of council staff have been working from home where possible, and will continue to do so for the foreseeable future, thanks to the continued positive results achieved and the results from the workplace reimagined survey confirming optimal working patterns. This has been an unexpected positive and means this aspect is well ahead of target, leading to a drastic drop in transport emissions for the council.

However, elements remain, primarily from the use of council owned or private vehicles for council work, representing a total of 271.16 tCO_2e across all scopes. Staff commuting figures fall under outsourced scope 3.

In response, as explained fully in the below table, the council is currently working to replace all of its own fleet with ultra-low emission vehicles by 2028, along with a number of actions to encourage staff to reduce their mileage and utilise EVs for business purposes and commuting where possible, to reduce emissions by 70%.

Waste:
In 2021/22 the council produced approximately 190 tonnes of waste, of which 46 tonnes was recycled, as shown below. This waste is collected separately to domestic waste and includes those from council run public facilities such as libraries, leisure centres and community centres. Therefore, initiatives here not only focus on council staff, but improving responses from the public through making recycling more accessible and clear.

Type	Amount	tCO^2_e
Glass	2	0.04
Commercial Waste	144	67.25
DMR (Dry Recyclables)	44	0.93

Council targets for waste are aligned with the CEAP and therefore aims for a 70% recycling rate by 2030. This includes new practices already in place, such as the implementation of a zero single use plastics policy in staff areas, along with increased separation of food waste and dry recyclables.

Buildings and Energy:
As the scope in this report now includes all council run sites, not just offices, this now represents by far the largest area of emissions, directly contributing 92.7% and 10,365.99 tCO_2e across all scopes. By excluding streetlighting, which the council has lower direct influence over, this figure would fall to 9,640.24 tCO_2e.

For this calender year these figures are also above usual levels due to covid disruption, as protocols on leaving windows open for circulation has led to increased heating and energy usage overall, meaning this is anticipated to fall once these procedures are removed. In response, as explained fully in the plan, the council is currently implementing a wide range of energy efficiency improvements at all owned properties, towards carbon neutral standards by 2028, which will also apply to new builds.

Meanwhile, the council is also working towards sourcing as much electricity as possible from green tariffs, with 75% of the current electricity purchased coming from these sources across the period. This means 3,516.35 tCO_2e of these emissions would be negated in this respect. Therefore, the remaining total council emissions would be 7,658.29 tCO_2e, as shown above.

This is supported by additional significant investment in renewable energy sources including the solar farm, along with renewable energy installations in council buildings when feasible, to ensure capacity is available.

Engagement and Behavioural Change – Green Team:
Overall, the council is committed to supporting changes in work practices and behavioural change amongst council staff, which covers not just the above key aspects, but all elements where possible.

To this end, the council also has an internal green team of officers from all across the council, who are interested in driving sustainable shifts in the council as a workplace. This group is in addition to the council's Climate Emergency team, volunteering their time to gather regularly and assess progress in this area, providing new ideas on potential improvements in sustainability for internal practices. These projects and ideas, which often also help staff minimise their impact at home too, are included in regular internal communications.

Minor actions developed here are not included in the full plan for simplicity, but include clear signage around the offices to remind staff on printing, heating and lighting usage, waste etc, along with the removal of single use cups and improvement of internal procurement processes. Meanwhile, any ideas which are developed into larger ideas are discussed with the relevant teams and included in the full plan where viable. Therefore, new actions may continue to be added to this plan.

Procurement:
The council is committed to achieving sustainable procurement practice throughout our operations and, as part of Corporate Procurement Strategy, to consider social value in all its procurement cycles, with a number of actions to support this, as shown in the below tables.

Carbon Sequestration:
While minimising emissions is top priority to the council, following the energy hierarchy, carbon sequestration is an important element in contributing towards net zero, by increasing the amount of carbon absorbed and so effectively, taken away from the total amount emitted.

The council has committed to plant 250,000 trees by 2025, which would sequester approximately 3,100 tCO_2e per year. This accounting tool does not include a section for these figures as this is accounted as a borough wide target.

Climate Emergency Action Plan

Transport

Annual Carbon Savings: 56,355.24 tCO_2e

Being one of the key sectors which contributes towards emissions in the borough, transport targets remain a priority for the council, with significant progress being made in a number of areas. These targets all work together to support and encourage residents to minimise car usage, instead prioritising sustainable and active methods wherever possible. However, the scale of these projects require significant external funding to implement, with a number of bids submitted for such this year alone. Meanwhile, negative covid influences still remain around public transport.

Estimated total savings of at least 41,762.26 tCO_2e were achieved within the borough this year due to home-working and travel restrictions.

Key Achievements:
These milestones have been completed in the action plan this year:

- Innovation Valley Rewards app scheme launched.
- £2.95m grant received from DfT for the continuation of Woodley to Reading Active Travel Route.
- Coppid Beech park and ride works complete, to open once demand increases.
- Over 1500 children received bikeability training.
- Great progress made in the delivery of our greenways and PRoW.
- Continued delivery of EV – more than doubling our publicly available chargepoints to 176.

Consumption Emissions:
The only element of consumption within this sector would come from the initial purchase of a vehicle, which does not fall within our scope. Fuel is accounted for directly within scope 1 emissions.

Our Partners:
For each target, the council has engaged with partners to ensure these are incorporated into existing plans and maximising their potential for success. Towns & parish councils, local bus companies, residents, schools, local businesses and consultants/subcontractors are key for the delivery of this plan.

Behavioural change is vital to producing the carbon savings associated with the actions listed below. Engagement with the stakeholders listed above will be key to the uptake in use of new and improved infrastructure such as greenways and bus services to reduce reliance on private vehicles and encourage a modal shift in the way we travel around the borough.

Future Opportunities:
Transport is undergoing a major change in the way it is planned with central government focussing on active travel; in 2022 we expect new guidance to help develop our emerging Local Transport Plan which is anticipated to be driven by carbon emissions. In addition, the council is currently completing a Low Emissions Transport Strategy which is based on our transport model; this is expected to give us a more accurate reflection of current emissions and will help us to refine the plan and review our actions accordingly.

New Actions: Previous Action 2.9 removed as this achieves the same as 2.3.

SDGS:

TR	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
T1	**Target 1. Deliver a greenway network of over 37 Km across the Borough by 2030 with the ambition to deliver 60 Km by 2036**				**Included in T4**	**£7.5m**	
37 1.1	**Deliver a comprehensive and connected network of greenway routes to encourage active and sustainable transport modes.** This network supports many of the later actions in enabling more people to switch away from cars, so the majority of savings are directly counted there, while also improving air quality and access to key areas	Greenways are a strategic network of traffic free, multi-user routes that will connect the Strategic Development Locations to the existing heritage green and blue infrastructure, communities and places of interest, employment or recreational value. Create a coherent network system of well signposted greenways that enable an increased take up of sustainable transport modes and becoming more active, towards a reduction of car usage. Overall, the network (SDLs) will provide 33.5 km of new and enhanced routes by 2030 and a total of 60 km by 2036.	1. Review and Improve ROW Improvement plan 2. Route A – Shinfield to Aborfield Cross 3. Route B - Arborfield SDL - Barkham - Wokingham - 7.6 km 4. Route D - Arborfield SDL – Barkham – South Wokingham SDL - Wokingham - 7 Km 5. Route E - River Loddon – Arborfield - 2.1 Km 6. "Route F- Arborfield – Arborfield SDL - 4.0 Km" 7. Route I - Arborfield SDL - Finchampstead - California Country Park - 1.9km 8. Route J - Arborfield SDL – Blackwater Valley - 2.9 Km 9. Route K - Arborfield Cross - 2.5 Km	ROW Improvement plan Published in April 2020. 83 separate actions included in the plan which will be delivered in phases. Full details of individual route updates provided at: https://www.wokingham.gov.uk/major-developments/greenways-programme/ Bid submitted from Levelling up fund but unsuccessful. Feedback will inform later bids.	This is Included in Target 4 but contri-butes **17.99** tCO_2e towards such.	Long term (Routes A,B,D Short term) Full Costs TBC £570,000 for Route B £40,000 for Route I	

1.2		The River Loddon Long Distance Path (LLDP) will link between many of the Greenway Routes, particularly the greenways connecting to the Arborfield and the South of the M4 SDL. It aims to link the Thames Valley Path in the north of the Borough in Wargrave to the Blackwater Valley Path in the South of the Borough in Swallowfield. Overall, the LLDP network will provide 30.6km of new traffic free paths to encourage residents to become more active and utilise sustainable travel solutions, that ultimately will reduce the amount of private vehicles on the roads.	1. LLDP Section A - Blackwater Valley Path, Swallowfield to A327 Reading Road - 6.8 Km 2. LLDP Section B - A327 Reading Road to Showcase Cinema, Winnersh - 8.42 Km 3. LLDP Section C - Showcase Cinema, Winnersh to Waggon & Horses Pub, Twyford - 6.55 Km 4. LLDP Section D - Waggon & Horses Pub, Twyford to River Thames - 8.84 Km	Section A – Initial discussions with landowners for this section are underway prior to feasibility designs being developed. Section B – Positive initial discussions with landowners. Feasibility design to be started. An alternate route option for M4 section has been chosen to utilise the existing cycleway along Lower Earley Way. Section C - The route confirmation is 90% complete. Work has begun on the early design stages of the route. Section D- In early design stages of the route which includes exploring the option for a new bridge crossing the River Loddon.	Included in total	Medium term Full Costs TBC £612,000 for Section C	
T2	**Target 2. Double public transport use by 2030 from 2019 baseline**				**3,879.86 tCO_2e**	**TBC**	

2.1	**Produce bus service improvement plan.** Setting the policy framework for bus services to recover from Covid and for establishing longer-term growth. Allows access to funding - COVID-19 Bus Services Support Grant (CBSSG) or any new sources.	Gap analysis SWOT analysis, produce policies of what will need to be improved. Enhance partnership - vision, plan, setting the policy framework and establishing targets for bus passenger growth within the borough. The plan aims to boost passenger numbers to 3 million following a recent decline from 2.8 million before the covid-19 outbreak to 1.8 million, or roughly 65 per cent of pre-pandemic levels.	1. Engagement and consultation local bus operators, internal stakeholders. 2. Engagement with consultants to produce reports. 3. Converting these reports into combined strategy. 4. Setting the policy framework for bus services to recover from Covid and for establishing longer-term growth. 5. Publishing the bus service improvement plan.	Complete – Published 31st Oct	Included in total	Short term £27,500	
2.2	**Establish an enhanced partnership with contractors.** Allows access to transformational funding.	Make a legally binding document with bus operators - define levels of service and provision of infrastructure in relation to the schemes Identifying key corridors and setting frequency of bus service - set up bus priority and how to improve journey times	1. Have an Enhanced Partnership in Place by June 2022	Draft agreed for this and will begin ASAP following elections. To include variation clauses for: more frequent and more reliable bus services, better access in rural areas, more attractive fares for young people, better marketing and improving buses themselves.	Included in total	Short term Costs TBC	
2.3	**Support electrification of local buses.** Improved air quality along key urban routes	Zero emission bus regional areas (ZEBRA) Route 21 - Lower Early - Reading University - Reading Town Centre	1. Identification of the route/buses/ specifications 2. Applying and achieve funding for Zero emission	2nd bid submitted as part of BSIP, particularly for urban routes including Lower Early as strong		Medium term	

	and inspiration of possibilities.	Depending on Reading buses having the required funding for fleet renewal Gov will fund 75% and LA need to fund the rest	bus regional areas (ZEBRA) Trunch 1. 2021 May 2021 Trunch 2. September 2021 3. This will be included in the BSIP	feasibility due to shorter route, but unsuccessful. This will be revisited if suitable funding opportunity arises.	Included in total	Included in £34m bid.	
2.4 40	**Improve the bus public transport network for Wokingham Town.** This presents the opportunity to synchronise timetables.	Identifying the key transport needs for the public travelling between Wokingham and surrounding areas: Wokingham Town, Finchampstead, Winnersh, Twyford, and Woodley to decrease the number of people arriving in personal vehicles at public transport interchanges (rail stations & P&R sites) by 5% by March 2022.	1. Launch public consultation. 2. LCTS consultation 3. Re-tender the public transport contract to procure an improved contract 4. This will be included in the BSIP	Network review by end of Sept 2022, as requested by DfT, with contracts extended until this point.	Included in total	Short term Costs TBC	
2.5	**Bus Stop Infrastructure Works to Support North Arborfield SDL Bus Strategy.** This will connect people to jobs, study and local services, allowing people who are old, young, disabled and isolated to commute	Public Transport infrastructure enhancement includes more shelter from poor weather, more seating capacity and real time information displays to encourage more residents to use the bus network.	1. Create a bus strategy for North Arborfield 2. Develop and agree an implementation plan 3. Start works on site.	The strategy has been published and an implementation plan agreed. This has been assessed as part of an ongoing Enhanced Partnership agreement process, with new bus stops added and routes amended as part of wider works.	Included in total	Medium Term £54,000	

	and helping reduce traffic jams.						
2.6	**Increase peak-hour bus transport for Lower Earley.** This will connect people to jobs, study and local services, allowing people who are old, young, disabled and isolated to commute and helping reduce traffic jams.	Increase the capacity of bus transport between Lower Earley and Reading as surveys suggest morning services are at capacity and leaving passengers at stops. 5% decrease in the number of people arriving in single occupancy vehicles at public transport interchanges (rail stations & P&R sites) by March 2022.	1. Review contract with Reading buses 2. Identify capacity requirements 3. Bid for funding 4. Deliver increased capacity in the short term 5. Re-assess requirements post covid and home-working	Additional capacity has been delivered on a short-term basis - Achieved with extra vehicles thanks to DfE funds during covid. Currently the route is still operating with capacity, so there is not a case for increasing the resource, though it is being monitored regularly.	Included in total	Short term Nil	
2.7	**Implement the South of M4 bus strategy.** This will connect people to jobs, study and local services, allowing people who are old, young, disabled and isolated to commute and helping reduce traffic jams.	Increasing the frequency of the Leopard Bus services, serving the South of M4 SDL to increase the number of residents using this by 5%.	1. Launch public consultation to understand demand for travel 2. Deliver increased frequency of services 3. Review capacity requirements under covid changes. 4. This will be included in the BSIP	Completed. This will be reviewed as part of an ongoing Enhanced Partnership agreement process for new pattern of service, dependent on the joint review with Reading Borough - collaborating on this project towards shared goals.	Included in total	Short term £480,000	

2.8	**Investigate demand services opportunities and on-demand flexi-routes.** This will connect people to jobs, study and local services, allowing people who are old, young, disabled and isolated to commute and helping reduce traffic jams.	Improve access to rural areas by implementing an uber style public transport service for people living in remote locations where a full service would be unviable but still help reduce car usage. Leading to a 5% increase in the number of trips from our public transport interchanges by bus and rail by March 2022.	1. Twyford is being considered under the rural mobility fund bid as a pilot area. 2. Investigate ARRIVA Click success. 3. Submit bid for extra funding in this area 4. This will be included in the BSIP as a longer-term aspiration for improvement to rural transport and early morning / late evening transport.	A bid has been submitted to DfT as part of BSIP but unsuccessful. Under consultation to explore DRT further.	Included in total	Short term Included in £34m bid.	
2.9*	**Deliver the Winnersh Triangle Parkway parking project and infrastructure enhancement at Coppid Beech.** Improvement costs offset somewhat by revenue.	Creation of more parking spaces at Winnersh parkway station and Coppid beech to encourage uptake of public transport for part of the journey, leading to a 10% increase in the number of residents using a train or park & ride at least once a week by March 2026.	1. Design schemes 2. Planning permission 3. Choose contractor 4. Start on site work	Winnersh project continuing onsite. Coppid Beech park and ride works complete, to reopen once demand increases.	153.34 tCO_2e	Medium Term £5.8m	
2.10	**Home to school transport project.** Potential to deliver costs savings and	Re-optimising the routes and capacity for school buses by re-tendering the contracts.	1. Calculate the optimal route plans 2. Calculate the estimated carbon savings 3. Re-tender contracts	Completed - The school bus contracts have been re-tendered with the switch happening on the	2.55 tCO_2e	Short term Nil	

	reduce wait/travel times for users.	Also re-optimising the wider taxi collection scheme to minibuses and sharing more.	4. Collate the details on the current taxi scheme 5. Identify opportunities for sharing or minibus routes 6. Modify plans as needed to ensure 100% coverage 7. Monitor progress to identify savings	06/09/21, with ongoing monitoring.			
T3	**Target 3. 20% reduction in total distance travelled in private vehicles per individual per year by 2030.**				**27,246.8 tCO_2e**	**TBC**	
3.1	**Engage businesses to promote home and remote working when possible.** People are more likely to stay around their home areas in general, shopping locally etc, following Covid. Increased time freedom due to lack of commute also increases adoption of active/sustainable transport methods.	Capitalise on the unintended consequences of the national lockdown by engaging with businesses to understand their working practices and encourage them to consider the new ways of working in their recovery plans to overall reduce the CO2 emissions caused by travel from workers of local businesses by 30% by 2022.	1. Engage businesses through a survey to assess their working practices during the national lockdown and encourage new ways of working as part of their recovery plans. 2. Deliver a communications campaign to encourage local business to learn from COVID-19 unintended consequences.	Data collected from homeworking questions in wider COVID survey. To inform later comms encouraging greater home and remote working opportunities.	4,200 tCO_2e (Included in total) *Luke Faulkner*	Short term Nil	
3.2	**Promote Liftsharing schemes / opportunities through My Journey to help individuals and businesses develop bespoke travel policies.**	Reduce transport related CO2e emissions, reduce congestion, improved road safety and air quality by promoting Liftsharing, which helps companies assess staff travel patterns to promote car	1. Produce and submit proposal Procurement process. 2. Launch Liftshare scheme 3. Map commuter trips across the Borough and provide access to live	Multiple liftshare providers have been consulted and procurement process to begin to deliver this. Following council adoption of a Liftshare	13,623.4 tCO_2e (Included in total)	Short term £30,000	

	Opportunities for cost savings for users compared to personal car usage.	sharing. To achieve a 10% reduction in the number of single occupancy car trips to and from businesses by March 2022.	data on how many miles/CO2 can be saved by people lift sharing across the Borough and for each individual business. 4. Set up CO2 emissions targets for local businesses. 5. Deliver a communications campaign to promote active and sustainable travel modes through competitions.	scheme, this commuting assessment process is hoped to be made available to local businesses at a discounted rate. - Thames Valley Park 2 years Trial – could be funded by them – to be followed by other business parks (Winnersh) This will deliver data on how and where people are travelling, which will support wider sustainable transport actions.			
T4	**Target 4. (Modal shift) The use of all cars, vans and motorbikes as a mode of transport decreases from 74% (current national/borough average) total miles to 56% in 2030**				**24,522.2 tCO_2e**	**TBC**	
4.1	**To provide more primary school children with the opportunity to develop practical skills and an understanding of how to cycle safely.** Will be more likely to choose cycling over cars as adults, health benefits from exercise. Increased time freedom due to lack of commute also increases adoption	Offer bikeability training up to level 3 to more primary school children in Wokingham Borough to improve cycling skills amongst children and improve air quality by substituting cycling for car journeys. Achieve a 5% reduction in the number of children being driven to Wokingham Borough schools by March 2023.	1. Compile and deliver an annual events programme for Bikeability courses. 2. Monitor impact of programme on take up of cycling to school.	Courses still underway. Project fully funded with a total of 2,373 children trained to date. Larger Bikeability grant obtained for 2022- 2023 to enable us to train up to 1,800 children on Bikeability courses. 372 children completing Learn to Ride courses, with 273 successfully riding after 1-2 sessions.	353.89 tCO_2e (Included in total)	Short term £122,512 + £83,332 for 2022/23	

	of active transport methods. People have embraced local green spaces.						
45 **4.2**	**Encourage and support local schools to join Modeshift Awards scheme for active and sustainable travel.** Will be more likely to choose active transport over cars as adults, health benefits from exercise. People have embraced local green spaces. Increased time freedom due to lack of commute also increases adoption of active transport methods.	Create a culture of active travel amongst school children, having a direct impact on air quality, carbon savings and helps improve student health and concentration levels. Leading to a 10% reduction in the number of children being driven to school by March 2026.	1. 10 schools targeted within the Wokingham Town, Finchampstead and Twyford areas (AQMA), to achieve Modeshift STARs accreditation at bronze, silver, gold or platinum level, as appropriate for the school, supported by active travel officers. 2. Promote the following campaigns in schools in the AQMA area: a car free day, an anti-idling campaign, national clean air day campaign, and Beat the Street.	Ongoing work with schools via certification and competitions. Two more schools accredited, with another two submissions. 12 schools actively engaged with, and an additional 10 schools with air quality focus and monitoring equipment. Evendons School achieved platinum level, one of only 8 schools in the country and winning regional school travel awards. 21 schools signed up to the Big Walk and Wheel, with Wescott and Windmill schools scoring in the top 50 schools nationwide. Upcoming similar Walk to School	137.7 tCO_2e (Included in total)	Medium Term £190,101	

				Week campaign with 32 signed up.			
4.3	**Roll out the Healthy School Streets programme.** Will be more likely to choose active transport over cars as adults, health benefits from exercise. People have embraced local green spaces.	Trial programme at school streets to tackle congestion, road safety and air quality by restricting motor traffic at the school gates for a short period of time, generally at drop-off and pick-up times. This will make it more difficult to drive to the school for the school run, resulting in a reduction in students being driven to school. Leading to a 10% reduction in the number of children being driven to school by March 2026.	1. Design how the scheme will work. 2. Assess potential schools and create tender opportunity. 3. Select a school to pilot scheme. 4. Review the results of the pilot. 5. Role out scheme more widely.	Process for suitable pilot site under assessment.	Included in total	Long term £10,000	
4.4	**Increase the uptake of cycling from local business by promoting the Love to Ride programme.** Health benefits from exercise and increased time freedom due to lack of commute also increases adoption of active transport methods. People have embraced local green spaces.	Encourages people to choose cycling as their main mode for essential travel and as a fun, enjoyable form of daily exercise. Aiming to reduce the CO2 emissions from employees of local businesses travelling to work by 10% by 2025.	1. Ride anywhere week campaign - 23 - 27 March 2020 2. Run 4 campaigns per year to promote cycling to work 3. Work in partnership with local businesses to promote active travel breakfast	Full audit of Love to Ride underway. Aiming for 100 active companies and 2-3000 participants per campaign, including push for WBC employees.	1,240 tCO_2e (Included in total)	Medium term £50,000	

47 **4.5**	**Develop the Local Cycling and Walking Infrastructure Plan (LCWIP) to be Borough wide and implement 50% LCWIP by 2030.** Health benefits from exercise and increased time freedom due to lack of commute also increases adoption of active transport methods. People have embraced local green spaces.	Create a comprehensive network of walking/cycling routes across the Borough which are joined up, based on evidence and data from the LCWIP process. Aiming to increase cycling modal share by 4% and walking modal share by 5%.	1. Completion of LCWIP studies across the borough from 2021 to 2025. 2. Implementation of measures from the reports ongoing to 2030.	Borough wide LCWIP Study assessments for primary routes completed with consultant. Public consultation on LCWIP routes and infrastructure ideas is expected in July 2022. Consultation for Woodley / Reading Active Travel Route complete and redesign of some sections underway in response. A 3rd public consultation on the revised design proposals will be undertaken in Summer 2022. £2.95m grant received from DfT for the continuation of Woodley / Reading Active Travel Route. Design proposals for the A329 Reading Road cycle scheme between Aspen	12,447.8 tCO2e (Included in total)	Long term £38m (£5m for report)	

				Place and Winnersh Relief Road Roundabouts are under development.			
4.6	**Deliver engagement and cycle training events across the Borough.** Health benefits from exercise and increased time freedom due to lack of commute also increases adoption of active transport methods. People have embraced local green spaces.	Deliver cycling training events at bike hubs, Dr Bike checks, puncture repair classes, smoothie bike, cycling skills and bike obstacle course, cycle maintenance courses, Breeze rides for beginner ladies, Bike Bonanza and Bikeability training levels 1-3. This increases confidence, road safety awareness and skill level on bikes to achieve a 2% increase in residents regularly cycling for leisure and utility by March 2022. Engage residents with active travel schemes by providing discounts for bikes & accessories.	1. Deliver events for Montague Park and a new one in Shinfield as planned in the Events Programme 2020 – 2021. 2. Deliver Wokingham Bikeathon as planned in the Events Programme. 3. Deliver Bike Hub community events for Woodley, FBC, Montague Park and Shinfield as planned in the Events Programme 2020 – 2021.	Events ongoing dependent on covid regulations. Bike Bonanza held in April 2022 with partners and delivering training. Annual Wokingham Bikeathon and E-bike event with WTC June 2022 Bike Hub events to go ahead as planned. Road safety shows run every year in primary schools.	212.59 tCO_2e (Included in total)	Short term £7,000	
4.7	**Adult cycle training.** Health benefits from exercise and increased time freedom due to lack of commute also increases adoption of active transport	Shine over 60s cycling program, focus on encouraging outdoor cycling for people over 60 for travel, leading to a 3% reduction in car use by residents over 60.	1. Deliver SHINE rides events as planned in the Events Programme 2020 - 2021	Began end of April 2022 and going out to businesses as well as over 60s.	1633.71 tCO_2e	Short term £1,500	

	methods. People have embraced local green spaces.				(Included in total)		
4.8	**Completion of the Cross Berkshire Cycle Route – NCN 422.** Health benefits from exercise and increased time freedom due to lack of commute also increases adoption of active transport methods. People have embraced local green spaces.	Creation of a new national cycle route between Newbury and Windsor (approx. 30 miles), including a section within Reading, Wokingham Borough, West Berkshire, Bracknell Forest and Windsor & Maidenhead, and it is included within the Thames Valley Berkshire Local Growth Deal. This will encourage more residents to cycle by connecting people with key destinations.	1. Completion of route across Wokingham with a combination of shared use and on-carriageway cycle lanes on the A329.	Completed. Note that this route was constructed to previous design standards and in the longer term will need to be upgraded to align with LTN 1/20.	Included in total	Short term £1m	
4.9	**South Wokingham Railway Crossings (Foot and cycle).** Health benefits from exercise and increased time freedom due to lack of commute also increases adoption of active transport methods. People have embraced local green spaces.	Improved walking and cycling infrastructure will encourage residents to mode shift.	1. Feasibility study on Carnival pool crossing with Network Rail.	Feasibility study on Carnival pool crossing with Network Rail – Engaged WSP to design replacement bridges	Included in total	Short term Costs TBC	

4.10	**Promote active and sustainable travel modes amongst new residents in new developments.** Health benefits from exercise and increased time freedom due to lack of commute also increases adoption of active transport methods. People have embraced local green spaces.	Inform new residents of alternatives to single occupancy car use, promoting the wider benefits of active and sustainable travel, while providing a local context. Welcome packs are provided with offers for sustainable travel, like bus taster tickets and cycle shop discounts, as well as localised cycle, bus maps and SANG walks. Aiming to achieve 25% of new residents travelling sustainably on a daily basis across the Strategic Development Locations each year by 2026.	1. Welcome pack for Deer Leap Park and Orchard Rise in the Spencerswood, Arborfield and Wokingham areas.	Dear Leap Park and Orchard rise welcome packs delivered and sites now complete. Packs also delivered to the numerous developers in Shinfield Arborfield and Wokingham areas and ongoing.	Included in total	Medium term £3,000	
4.11	**Provide personalised travel planning to new residents.** Health benefits from exercise and increased time freedom due to lack of commute also increases adoption of active transport methods. People have embraced local green spaces.	All residents in new developments are offered transport advice about alternative modes of travel, including free testing ticket and tailored travel packages. Aiming to achieve 25% of new residents travelling sustainably on a daily basis across the Strategic Development Locations each year by 2026.	1. Personalise travel planning to new residents in Shinfield development.	Planning underway for two rounds of PTP in financial year 2022/23.	Included in total	Medium term £50,000	

4.12 51	**Develop a domestic and industrial freight management policy alongside LTP4.** Reduces operational costs for firms and storage energy usage as more efficient supply chain.	To develop a borough wide traffic distribution hierarchy to understand traffic capacity, and traffic carrying routes. Improving operational logistics could reduce the number of 'empty runs' and consequently the number of trucks on the road, leading to a 22% decrease in distance travelled by road freight. The framework will support decision making on the traffic distribution, based on air quality, carbon emissions and energy savings.	1. Data gathering and assessment. 2. Creating an accurate baseline. 3. Develop route hierarchy. 4. Incorporate the first draft freight management policy into LTP. 5. Carry out a study to assess transport movements in Twyford in particular routes. Specifically for lorries and heavy-duty vehicles. This will be delivered through freight management work.	Not Started	23,240.9 tCO_2e (Included in total)	Short term Costs TBC	
T5	**Target 5. Leading by example - Reduce by 70% CO2e emissions produced by council related travel by 2030**				**892.21 tCO_2e**	**TBC**	
5.1	**Deliver a strategy to reduce miles produced by council staff work related travel.** Sets example so other actions more likely to be followed	To investigate the possibility to introduce EV Car clubs for council staff between Monday to Friday and with the option to open to the public during the weekends. Aiming to reduce grey fleet miles by 30% from transport related trips.	1. Carry out assessment for car clubs and produce a strategy 2. Analyse saving from Mileage paid to staff vs cost paid to provider	Feasibility study underway with Energy Savings Trust (EST) to assess council fleet vehicles and grey miles.	78.31 tCO_2e (Included in total)	Medium term Costs TBC Nil from strategy itself	

5.2	**Promote homeworking and remote working practices amongst council staff.** Lockdown has greatly sped up this process and meant that everyone is doing it so integrates more easily with any partners. Sets example so other actions more likely to be followed.	In addition to home working, expand remote working practices in other locations to reduce unnecessary travel and the need for central office accommodation. Aiming to reduce the CO2 emissions travelled from council staff to work by 40% by 2022.	1. Capitalise on the unintended consequences of the national lockdown by reviewing working from home practices in the council and consider new ways of working in the recovery plan for the council. 2. Deliver a staff survey to assess working from home preferences amongst council staff.	Managers have discussed the need for and preferences of home or flexible working patterns with staff, completing the required surveys. Only those staff required will be coming into the office at this stage. The workplace reimagined survey is complete and will likely support this further.	405.42 tCO_2e	Short term Nil	
5.3	**Incentivise council staff to mode shift to active and sustainable transport or EVs.** Increased time freedom due to lack of commute also increases adoption of active/sustainable transport methods. Sets example so other actions more likely to be followed.	Investigate incentives that can be given to council staff to support their commute to work being more sustainable by implementing schemes that make such methods more accessible. Aiming to reduce the CO2 emissions from staff travelling to work by 10% by 2025.	1. Carry out an assessment of viability of salary sacrifice schemes that could be offered to council employees for sustainable transport or EVs. 2. Assess alternative transport options for council staff. 3. Communicate these options and advice to relevant staff on how to reduce their commuting emissions.	Assessment of salary sacrifice schemes underway as part of wider council transition to EV plan. Feasibility study underway for a Liftshare scheme to analyse employee commuting patterns and car-share or active/sustainable travel opportunities.	304.06 tCO_2e	Medium term £10,000	
T6	**Target 6. Continue research and innovation programmes for the reduction of CO2 and NO**				**27,246.8 tCO_2e**	**TBC**	

6.1	**Continue to research and use innovative techniques to manage traffic and encourage uptake of sustainable modes and ultra-low emission options.** Benefits air quality, safety and congestion with reduced costs for all.	Research will continue and opportunities will be taken where appropriate. An arbitrary estimate of a 10% reduction in CO2 is assumed.	1. Research on opportunities to be included within the low carbon transport strategy.	Low Carbon Transport Strategy completed. Already working to reduce power in traffic signals and signs as part of congestion management.	13,623.4 tCO_2e	Medium term Costs TBC	
53 **6.2**	**Mobility as a service (MaaS) and future proofing the network.** Benefits air quality, safety and congestion with reduced costs for all.	MaaS is part of ITS strategic objective. Contribute to reducing the need to own a car and link up the public transport and active mode options to make it easier to travel sustainably, resulting in a further reduction of private motor vehicle ownership by 10%. Linked to air quality in that can support traffic reduction in response to air quality spikes.	1. Data gathering and assessment. 2. Develop ITS Strategy. 3. Deliver behaviour change.	Intelligent transport systems strategy underway. Installing technology across 140 locations borough wide. 85% complete and will be 100% soon.	13,623.4 tCO_2e	Short term Costs TBC	
6.3	**Deliver a variety of smart mobility projects**. Benefits air quality, safety and congestion	Deliver a combination of operational and information technologies that assess growing traffic peak demand while attaining environmental and user-experience data. This will deliver smarter and more	1. Data gathering and assessment 2. Develop ITS Strategy. 3. Gather C2 Cloud traffic data and put it in an open form to be utilise internally.	Intelligent transport systems strategy underway. Installing CCTV and traffic signal technology across 140 locations borough wide.		Short term Costs TBC	

	with reduced costs for all.	sustainable transport mobility combining different modes and options (public transport, car sharing, car rental services, taxis and a bicycle system). Linked to air quality in that can support traffic reduction in response to air quality spikes.	4. Investigate key locations to be included in the pilot. Special focus on Park & Ride sites and key gateways to the Borough.	85% complete and will be 100% soon.	Included in total		

*Previous Action 2.9 removed as this is achieves the same as 2.3 anyway, as ultra-low emissions equates to electric beyond Euro6 specification.

Electric Vehicles

Annual Carbon Savings: 46,020 tCO_2e

It is equally important to transition as many vehicles away from fossil fuel use as possible. To support this process, the council has begun measures towards improving accessibility, providing guidance and funding advice, assisting businesses and developing the necessary infrastructure to provide a reliable network and convenient in order to encourage the uptake of electric vehicles within the borough. However, this is a considerable undertaking and will require significant analysis, communication and commitment towards the overall long-term goal.

ULEV ownership in the borough rose by 321 over the last year of available data, representing 442.91 tCO_2e of savings.

Key Achievements:

Consumption Emissions:
As above in transport, there are no associated consumption emissions within scope here.

Our Partners:
For each target, the council has engaged with partners to ensure these are incorporated into existing plans and maximising their potential for success. Towns & parish councils, energy suppliers, residents, car parks, local businesses and consultants/subcontractors are key for the delivery of this plan.

Behavioural change is vital to encouraging the uptake in EVs and thereby reducing carbon emissions. To bring this about, stakeholder engagement will be key to the uptake in use of new and improved infrastructure such as improved access to charging points. Co-benefits such as cleaner air will be effectively communicated to both businesses and residents.

Future Opportunities:

These milestones have been completed in the action plan this year: • EV Strategy formation currently underway, Draft report to be complete June 2022. • 176 active sockets installed, with a further 190 planned. • Feasibility study for on street and council owned car parks site has been completed and a bid will be submitted to OZEV for funding in 2022/23.. • Feasibility study underway with EST for council transition to EV, along with a reduction in grey mileage.	A variety of new government led policies are hoped to improve the future effectiveness and likelihoods of these actions, including the ban on vehicles being brought forward, the environment bill, and the sixth carbon budget report, including developments in EV infrastructure and hydrogen power. Therefore, as each of these develops, they will influence the below actions and scope of such. This is a live document, meaning as these developments are introduced they will be incorporated and actions adapted, assessing throughout what opportunities are available to maximise the potential benefits, such as standardising electric vehicle charging across boroughs and the ORCS expanded charging schemes. **New Actions:** Target 8.3 – New business grant support for cargo bikes.
SDGS: 	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
T7	**Target 7. 50% EVs registered in the Borough by 2030**				**46,020 tCO_2e**	**TBC**	

7.1	**To develop an EV strategy for Wokingham Borough.** Improved air quality, reduce NOx, PM10s, PM25, cheaper to maintain and run, better driving experience. Also supports more constant energy usage for overall lower emissions from production. Despite covid and traditional car sales declining in the pandemic, EV sales have risen across the board.	Borough wide strategy to specify the infrastructure for EV charging point to encourage the uptake of EVs. Map the existing EV chargers across the Borough and on council property. Obtain a baseline on current electric vehicle market, current ownership, forecast growth and charging infrastructure technologically. Develop and agree policy for EV charge point provision, which will maximise uptake of EV. Assess the potential for an integrated network of EV charge points. This would include encouraging the installation of EV charging points at motorway service areas and at large fuel retailers.	1. Carry out initial assessment of the EV requirements for the Borough. 2. Instruct consultant on requirements baseline and create a brief to commission expert work. 3. Create a business case for funding. 4. Establish policy, processes and protocol for responding to requests for charge points and how they can be operated and maintained. 5. Agreeing partnerships, income streams and service providers to ensure best uptake. 6. Produce EV strategy report and present to senior leadership teams for approval.	EV Strategy formation currently underway. Draft report to be complete June 2022.	Included in total	Short term Costs TBC	
7.2	**Provide a uniform method of accessing public and private charge points**	Set up the back office so that EV chargers are accessible and easy to use to encourage more people to use them. Provide accurate standardised public	1. Investigate the types of back office payment systems used by the industry and assess the	Action completed. Documents available which provide this information (EV Charger selection guide and	Included in total	Short term Nil	

	Able to monitor power usage to ensure reliability. Opportunity for communication with users.	information on how to locate, use and pay for chargers in the Borough.	best option to be implemented at WBC. 2. Harmonised EV related contracts such as electricity, maintenance, service and back office. 3. Develop software for council to use when designing new projects and need this information.	Highways Annex E). Access requires contacting the EV team for permission and a quick guide. This is needed rather than a public standalone document as it is updated regularly. Being standardised to VENDelectric.			
57 **7.3**	**Review the residential charge point infrastructure for those who have communal parking facilities such as flatted developments.** Opportunity for communication with non-EV users.	Currently, 27% residential buildings (approximately 12,000 households) do not have off-street parking and therefore direct access to safely charging an EV vehicle. This represents a barrier for these occupants to own an EV and so reduces the uptake of EVs in the Borough.	1. Implement a pilot of EV charging points in selected location, aim at installing 19 new charging points for residents with communal parking facilities. 2. Based on the experience gained during stage 1, the council will seek to extend charging point facilities across the Borough.	A geospatial analysis was conducted to identify any existing and future demand for on-street charging. The analysis included residents requests, the results of our EV survey that was conducted last year (24/03/2021 - 30/04/2021) and information about the proportion of streets with flats and terraced houses (which therefore lack off-street parking). A funding applicationis due to be re-submitted to the On-Street Residential Chargepoint Scheme	72.02 tCO_2e	Long term Costs TBC	

				following a change in the fund criteria. A pilot project has been completed at three council-owned car parks within the Borough. A new technology that combines park and charge payments is currently being tested in Carnival Pool, Dinton and Shute End. If successful, this will be expanded at other potential sites.			
58 **7.4**	**Ensure that all EV charging points installed in the Borough are 'smart ready' to balance the electricity load demands on the grid.** Able to monitor power usage to ensure reliability.	Ensure that charge points are smart ready by setting requirements prohibiting installation of charge points unless they meet certain load management specifications. Establish the parameters for the management of available energy in an area through methods like dynamic load balancing or local storage systems. This will ensure reliability of power supply in the system. Maintaining confidence in the network and increasing the uptake of EVs. Overall carbon	1. Identification of dynamic load balancing or local storage systems that could be implemented in WBC. 2. Engage with service providers about generic support for WBC EV chargers through standards such as OCCP. 3. Analysis on current EV provisions and process in place. 4. Assessing the potential implementation of fast charging at a premium rate to assist load balancing.	Action completed. Some sites have limited capacity so load balancing for multiple charging sessions are planned to be implemented.	Included in total	Medium term Nil	

		savings cannot be achieved without this.					
7.5	**Support local businesses, including commercial property owners, to transition their commercial fleets to EV. Also to encourage employees to switch to EV for private use.** Improved air quality, reduce NOx, PM10s, PM25, cheaper to maintain and run, better driving experience. Also supports more constant energy usage for overall lower emissions from production.	Consult with local businesses to understand needs, including taxi fleets, to develop the required charging infrastructure to support the uptake of EVs. Support the transition of 20% vehicles used for commercial purposes to ultra-low or electric. This includes applying for grants and funding for purchase and installation cost, etc. Guide and advice local businesses about the benefits of transitioning to EVs.	1. Engage local business with Workplace Charging Scheme. 2. Provide information on salary sacrifice schemes to support employees to transition to EV 3. Assess opportunities to support the development of plug-in taxi programs within the Borough, considering the requirements for charge points. 4. Promote the benefits of EVS and electric transport overall through the climate conversation series and newsletters.	Awaiting full confirmation from EV Strategy. Following council adoption of a Liftshare scheme, this commuting assessment process is hoped to be made available to local businesses at a discounted rate, starting with Thames Valley Pilot as above. A few businesses have also been contacted specifically following low carbon workspace grants and the benefits and viability of EVs highlighted.	1,834.6 tCO_2e	Medium term Nil	
7.6	**Promote uptake of EVs with our residents through engagement** Improved air quality, reduce NOx, PM10s, PM25, cheaper to maintain and run, better driving experience. Also supports more constant energy usage for overall	Support and educate our residents about the benefits of transitioning to EVs. Make available information that will support residents in taking the decision to transition to EVs, including government schemes that will support residents in the installation of EV charging points.	1. Deliver a sustained campaign to inspire residents to 'Go Ultra Low' and transition to EVs.	Not started	Included in total	Medium term Nil	

	lower emissions from production.	60% of residential buildings have parking facilities.					
7.7	**Coordinate the installation of EV charging points into both council buildings and private or commercially owned land, in line with the EV network plan approved in the strategy.** Improved air quality, reduce NOx, PM10s, PM25, cheaper to maintain and run, better driving experience. Also supports more constant energy usage for overall lower emissions from production.	EV network plan will have standardised EV charging point requirements to make charging easy to access. To support this ensure all council-owned assets comply with the standard. This includes locations such as libraries, leisure centres, parks, etc. Investigate the requirements to install EV charge points to commercial property such as business parks, shopping centres, etc.	1. Explore potential locations for charging points. 2. Align the EVs installation requirements to the building retrofitting programs. 3. Potential pilot with flow-bird where they can pay for parking and charging at the same time. Requires integration into ticketing machine infrastructure with single operator rather than different back offices. 4. Targets for charger installation will be included in the EV Strategy	EV standards from highways design guide is being used. Feasibility study on additional car parks underway. Ongoing process of exploring new options for charging point. Checklist developed to help project managers identify needs and types of chargers based on needs of users and other restrictions. 230 active sockets installed, with a further 190 planned. This means 1,099 tCO_2e savings have been identified.	Included in total	Medium term Costs TBC	
T8	**Target 8. Council's car fleet becomes entirely ultra-low emission by 2028**				**TBC**	**TBC**	
8.1	**Ensuring 100% of the car fleet operated by the council is ultra-low emission by 2028** Helps set the example by leading the way. Opportunity for	Leading the way by transitioning the 16 WBC owned and leased vehicles to EV or low carbon vehicles at the end of their leasing contract/life. Vehicles range from minibuses, cars and a tractor in Dinton Pastures.	1. Deliver the programme to transition WBC owned vehicles to be ultra-low vehicles by 2028. 2. Review lease contracts and establish a programme for transitioning leased vehicles to EV when engaging in new contracts.	Feasibility study underway with Energy Savings Trust (EST) to assess council fleet vehicles and grey miles.	45.39 tCO_2e (This is included in target 5 savings total)	Medium term Costs TBC	

	communication with non-EV private users.		3. Embed requirements for EV's or Low Emission vehicles in WBC Fleet Guidelines Policy and WBC Vehicle Procurement Guidelines. 4. Update the Vehicle Procurement Application form to include the consideration of EV's or Low Emission vehicles as a standard with no sign off from the Board for any vehicle that does not meeting this requirement.				
91 **8.2**	**Establish contractual policies that promote the use of EV or ultra-low emissions vehicles as the council's preferable vehicles, including on education and social care services.** Improved air quality, reduce NOx, PM10s, PM25, cheaper to maintain and run, better driving experience. Also supports more constant energy usage for overall lower emissions from production.	Ensuring all our contractors use ultra-low or EV when possible will reduce emissions from contractors and suppliers vehicles working for and in partnership with the council. This includes Education and Social Care transport providers to encourage/specify transition to ultra-low vehicles for use on HTST transport. 50% (which exceeds the statutory minimum of 35%) contract transport fleet will be hybrid or fully electric by 2028.	1. Include in procurement policies considerations for EV/ultra-low emission vehicles as a standard. 2. All buyers/commissioners to apply contractual policies when subcontracting services 3. Review the contracts with our transport providers and establish requirements to transition to ultra-low emissions vehicles 4. Optimise HTST routes to reduce mileage	To be incorporated into EV strategy such that consideration must be made for climate issues, including EV, as part of the procurement process for projects.	Included in total	Long term Costs TBC	

8.3	**Support the transition of business vans to cargo bikes.** Improved air quality, reduce NOx, PM10s, PM25, cheaper to maintain and run. Also helps set the example by leading the way. Opportunity for communication with non-EV private users.	Establishing a short term business grant fund for businesses to apply for funds to switch their large vans to smaller petrol or EV cargo bikes.	1. Feasibility study to understand viability. 2. Secure funding from the capability fund. 3. Set up the business grant. 4. Monitor applications and results.	Feasibility study complete and funding secured. Setting up process underway.	TBC	Short term £20,000	

*Action 7.8. Note, this action has been removed as it was explored and the decision made not to take it forward. Full details are included in the methodology.

Air Quality

Annual Carbon Savings: Carbon savings for air quality targets are neutral as they overlap with transport targets.

Wokingham Borough Council's efforts over the last year have focused on tackling the levels of air pollutants, particularly in the Air Quality Management Areas (AQMAs) in the borough. Mitigations to tackle all pollutants including Particulate Matter 2.5 ($PM_{2.5}$) and Nitrogen oxides (NOx) align with measures to reduce carbon emissions in the borough such as by reducing idling, congestion and increasing awareness through education, to name a few.

Key Achievements:
These milestones have been completed in the action plan this year:

- Wokingham awarded grant for £185,000 to continue air quality project in schools to October 2023.
- The Public Protection Partnership (PPP) confirmed that diffusion tube sites of NO2 levels in Wokingham borough have shown a decreasing trend since the 2016.
- Wokingham borough specific Innovation Valley Rewards app challenges relating to air quality awareness and anti-idling campaigns such as Clean Air Day.
- New projects underway by PPP monitoring $PM_{2.5}$ at schools.
- The PPP have procured a behaviour change specialist to identify the best ways to reduce idling behaviour and improve air quality in the borough.

Consumption Emissions:
These are out of scope carbon emissions relating to the air quality agenda that must be taken into consideration. This includes out of borough road, rail and air travel as well as the purchases we make, including food miles.

Our Partners:
The PPP has been a key partner for the delivery of these projects. We have worked very closely with local schools in particularly in the AQMAs and collaborated with our towns and parish council's, residents, and local businesses.

Behaviour change will be very important to encourage the necessary mode shift towards active travel in order to improve air quality by working with partners listed above and particularly schools. There is currently a great opportunity at this time to maintain some of these shifts in travel behaviours.

Future Opportunities:
Nationally, the Environment Bill includes key measures on air quality. The Secretary of State will be required to periodically review the national Air Quality Strategy for England, the government will need to set 2 new targets to reduce annual levels of $PM_{2.5}$, local authorities will have new powers, including to declare an Air Quality Management Area (AQMA) and establish plans to reduce public exposure to air pollution which exceeds air quality targets.

New Actions: There are no new actions for this section of the CEAP.

SDGS:

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
T10	**Target 10. Reduce NO2 concentration by 50% against 2019 baseline in the three AQ management areas by 2025**				**Neutral**	**TBC**	
10.1	**Continue air quality monitoring for NO2 concentration in air quality management areas.** Public health benefits through reducing the risk of respiratory diseases and irritation, particularly impacting the vulnerable population.	There are 47 locations across the Borough. The Public Protection Partnership (PPP) set up a target to reduce Nitrogen Dioxide emissions from transport in Wokingham Town Centre and Twyford Crossroads. Monitoring which is overseen by Defra has shown a reduction of NO2 levels in Wokingham Town Centre, Twyford Crossroads and the 60m either side of the M4 throughout the whole of the Borough over the last 6 years to 2018. Monitoring allows us to assess the levels of pollution so we can increase the effort to reduce pollutants in the most affected areas	Continue implementing pollution prevention and control inspections required at Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995). The Air Quality Annual Status Report is published annually and provides an update of the monitoring results for the LAQM. The PPP has been awarded a £259k grant to deliver various projects focusing on improving air quality across the 3 authority areas including more monitoring. Monitoring at Peach Street and Twyford Crossroads in 2020 has seen average monthly year on year falls in NO2 of 40% and 28%	The 2021 Annual Status Report was accepted by DEFRA and included the following feedback: The Council has included discussion and review of its AQMAs and monitoring strategy, which is well-informed due to its extensive monitoring network, with additional diffusion tubes added to provide further monitoring, and demonstrates the Council's proactive and dedicated approach to improving air quality. Overall, the report is very detailed, thorough and satisfies the criteria of relevant standards, and the report is an example of best practice. The Council should continue their excellent work. The diffusion tube sites of NO2 levels in Wokingham borough have shown a decreasing trend since the 2016. No diffusion tube sites located within Wokingham exceeded the Annual Mean Objective. The continuous monitoring unit in Peach Street Wokingham, within the Wokingham AQMA, recorded an Annual Mean NO2 level of 22.3µg/m3, which meets the Annual Mean NO2	Neutral	Ongoing Costs TBC	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
65			respectively and would expect to see similar falls in CO2 emissions	Objective (40µg/m3) was not exceeded. The continuous monitoring also met the 1 hour NO2 objective. Within the Twyford AQMA the continuous monitoring recorded an Annual Mean NO2 level of 22.1µg/m3, which also met the objective. There were no exceedances of the Annual Mean NO2 Objective from the monitoring sites within the M4 AQMA. No diffusion tube results were recorded above 60µg/m3 which indicated no exceedances of the 1 hour NO2 objective. No extensions or amendments to the AQMAs are required nor any new AQMAs to be declared. Wokingham awarded grant for £185k to employ an Air Quality Active Travel Officer working in schools in a similar way to 2021/22. This will take the project to October 2023. The funding includes a capital portion which is specifically for green roofed bike shelters for school and in public areas around the AQMAs.			

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
10.2	**Reduce congestion in the borough.** Public health benefits through reducing the risk of respiratory diseases and irritation, particularly impacting the vulnerable population. Use intelligent traffic systems to allow the traffic signals at Twyford crossroads to respond to reduce air pollutants concentration and therefore CO2e emissions.	Result in reduced congestion and resulting emissions through improving traffic flow in the most traffic heavy areas. If successful, this technology could become more widely used at other junctions in the Borough.	1. Prepare Intelligent traffic signals (ITS) strategy for Twyford Crossroads which is a priority location for ITS. Cameras in AQ detectors to be installed on Twyford Crossroads 2. Develop preliminary design Easthampstead Road 3. London Road Corridor identify as an adaptive traffic management corridor: Install traffic signals upgrades, CCTV cameras, and software improvements. 4. Produce a parking management study at Twyford to identify opportunities to reduce unnecessary travel into Twyford when possible. 5. Traffic reassignment scheme to be delivered.	Intelligent transport systems strategy underway. Installing CCTV and traffic signal technology across 140 locations borough wide. 85% complete and will be 100% soon. Wokingham Borough Council has been awarded £250,000 for smart traffic lights and crossings across the area. The Department for Transport gave the grant to support the use of new technology to cut congestion across the area, as well as reducing journey times and emissions. Steady progress being made on the implementation of STRATOS equipment and CCTV at signal sites. Due to complete this year. Proposed installation of AQ detection at key transport sites this year (2022), following calibration of the STRATOS equipment.	Neutral	Short Term Costs TBC	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
			6. Speed Management programme to be delivered.				
10.3	**Implementation of air quality mitigation projects.** Public health benefits through reducing the risk of respiratory diseases and irritation, particularly impacting the vulnerable population. Increased awareness of the air quality issue through various mitigation projects.	Using the data from the air quality monitoring work above, air quality hot spots have been identified in the Borough. Reduce NO2 emissions from transport in Wokingham Town Centre and Twyford Crossroads	Public health benefits through reducing the risk of respiratory diseases and irritation, particularly impacting the vulnerable population. Increased awareness of the air quality issue through various mitigation projects.	The PPP has been awarded a £259k grant to deliver various projects focusing on improving air quality across the 3 authority areas including more monitoring. Since the funding award, an Air Quality Officer has been successfully recruited to post, a supplier for $PM_{2.5}$ monitoring and analysis at schools has been procured, and a behaviour change specialist has been contracted. As part of the project an anti-idling bumper sticker has been produced following a schools competition where students were asked to submit their designs. 4 Wokingham schools submitted a combined 287 entries into the competition. $PM_{2.5}$ monitoring equipment will be installed at 14 Wokingham schools throughout the remainder of the 21/22 academic year and in the beginning of the 22/23 academic year. Data captured during the 3 month installations will be used to consider	Neutral	Medium term Costs TBC	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
89				any potential mitigation options to reduce exposure at schools. Applied for further funding to monitor PM2.5 levels at 4 different sites across the PPP area. This bid was unsuccessful. 5 Smart Living Pillars have now been installed in Twyford on WBC lamp columns by the David Brownlow Charitable Foundation as a pilot to improve air quality (the first pillar was installed November 2019 with the others installed in Summer 2020). It is unlikely that air quality improvements would be detectable as other factors/measures are likely to have had a greater impact and the visual impact to Twyford centre in raising awareness is likely to be far greater. Assessment of measures to be implemented in Twyford and extend into surrounding areas. Review undertaken by WBC Air Quality Working Group with decision made to focus on the key actions to improve air quality most efficiently in the hotspots for pollutants. Intervention method to be implemented and linked with			

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
				improvements in traffic signalling.			
T11	**Target 11. Educate public on how they can actively improve air quality whilst reducing carbon emissions**				**Neutral**	**TBC**	
69 **11.1**	**Engage the public with air quality matters by providing information through campaigns and activities.** Public health benefits through reducing the risk of respiratory diseases and irritation, particularly impacting the vulnerable population. Increased awareness of the air quality issue through various mitigation projects.	Working with schools to increase awareness of air quality issues though running a competition to produce signs, stickers and leaflets to be distributed across the Borough with focus on hotspots. Reduce air pollutants concentration and consequently CO_2e emissions.	1. Run communications campaigns that include subjects such as Myths & facts of idling and home air quality to increase awareness of the impact of poor air quality on health. 2. Run a schools air quality competition, to engage children, parents and local residents with air quality issues related to idling. 3. Continue to promote active travel initiatives across 10 schools in & around AQMA areas including 6 with mobile diffuser units to monitor air quality.	Air quality issues are promoted to residents via monthly MyJourney Newsletters and on social media. The Eco Travel Officer Wokingham Twitter and Facebook accounts posts twice a week during term time and once a week during school holidays. PPP Banners from the schools' air quality competition have been distributed to primary schools in the borough. PPP "Bumper Sticker!" was completed in October / November to engage children in anti-idling & air quality issues. 10 primary schools in the borough have been given diffusion tubes for measuring air quality (NO2) alongside virtual lesson plans to raise awareness of air pollution. Assemblies and engagement on ModeShift STARS work with these schools will be ongoing until October 2023.	Neutral	Short term Costs TBC	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
				Innovation Valley Rewards app promoted to the 10 air quality schools and used to promoted to key schools near to AQMA and target campaigns such as anti-idling survey and walk to school week campaign (primary schools only). NO2 Handheld monitoring workshops have been rolled out to 5 AQ schools. All Year 6 pupils as AQ schools have received PPP windscreen sticker for Anti-idling			
11.2	**Reduce idling.** Public health benefits through reducing the risk of respiratory diseases and irritation, particularly impacting the vulnerable population. Increased awareness of the air quality issue	Improve signage around key spots such as schools, taxi spots, stations. Engage children with idling issues. Raise public awareness about the relationship between improving air quality and CO2 emissions.	1. Introduce an 'emissions and idling policy' in the Borough. 2. Produce initial comms plan to roll out non-idling plan. Identify audience, communication channels and periodicity. 3. Select and procure standard no-vehicle idling plates. 4. Implementing No-Vehicle-Idling zones,	Key locations have been identified and mapped. Signage will be implemented in approximately 12 locations across the borough. No-idling plates are drafted. Proof is awaiting sign-off. 'Light touch' enforcement training is taking place with parking enforcement officers to reduce idling.	Neutral	Short term Costs TBC	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
71	through various mitigation projects.		around as many schools in the Borough as possible, by the end of 2022, and in other identified areas such as taxi ranks, GP surgeries, and close to level crossings. Signage has been approved and locations for the zones are being confirmed. 5. Anticipate a 25% reduction in emissions from commercial vehicles.				

Renewable Energy Generation

Annual Carbon Savings: 52,893.46 tCO_2e

Over the last year, Wokingham Borough Council has established the complex supporting planning and procurement necessary to deliver the significant projects that will increase the generation of renewable energy across the Borough. Our targets to increase generation of renewable energy through investing in solar farms and to support the generation of renewable energy in the Borough remain. The council is also continuing the installation of renewable energy systems in public buildings.

The generation of 42,572.84 MWh renewable electricity in the last recorded year (2020), saved the borough 10,881.62 tCO_2e.

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Key Achievements:
These milestones have been completed in the action plan this year:

- Barkham Ride - Procurement underway and planning application completed.
- Grid application submitted – expected circa £6m.
- Consultation processes with local residents is complete.
- Consultation underway for more sites, following desktop analysis.
- Partnered with Reading and Energy4All to assess viability of a number of potential buildings, under the community energy fund.
- Working in partnership with Social Energy on a pilot project at Grovelands park, with solar and battery installation in progress.

Consumption Emissions:
Total life cycle GHG emissions from solar PV systems are similar to other renewables and nuclear energy, and much lower than coal. Therefore none applying to households.

Our Partners:
The delivery of the projects listed in our action plan will not be possible without the support and collaboration of the towns and parish council's, residents, local businesses, suppliers, the national grid, public energy suppliers. For the delivery of the first solar farm, the council has worked closely with SSE, DBO, the farmers, specialist consultants and the local community.

In order to achieve the actions below, engagement will be key to encourage behaviour change needed to achieve the goals below. Raising awareness about the benefits of renewable energy generation bring to both the environment, and what that means in tangible terms as well as co-benefits such as more green employment and skills opportunities in the local labour market.

Future Opportunities:
The Government energy white paper, and new commitments identified in the 10 Point Plan for a Green Industrial Revolution will bring new opportunities and stronger targets to promote renewable energy generation. As this is a recent policy, and still under development, we will closely track its progress.

For example, part of this 10 point plan includes quadrupling wind power production to 40GW by 2030, sufficient to power all current homes and 4x the current capacity.

New Actions: There are no new actions for this section of the CEAP.

SDGS:

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
T12	**Target 12. Increase the generation of renewable energy through investment in solar farms to power the equivalent of 25,000 homes within the Borough by 2030.**				**25,560 tCO_2e**	**£21M**	
12.1	**Deliver the installation of a solar farm in Barkham with the capacity to generate in excess of 29 MWp of energy.** Planning status of the land would remain unchanged with it reverting back to farmland after the solar farm reaches the end of its lifespan. Generation of green energy locally. 15,000 new trees on the farmland will be planted. New route for walkers, cyclists and horse-riders are being considered.	Installation of a large-scale solar farm on council owned land will allow the council to offset its carbon emissions from electricity and gas usage and possibly 'retail' any excess. Large scale solar farm installed in Barkham with the potential of generating 29 MWp output achieving 28,563,000 kWh's per annum by 2023. Potential to supply 8,000 homes.	1. Asset review board to the potential sites - consultant briefing for review of master planning of specific sites - With WSP for land planning now. 2. Options appraisal - commission specifications of the project to procurement team 3. Site tenant notice - one year notice 4. Initial procurements process - identify the contractor - framework and due diligence process - 6 months 5. Planning application - full application submission 6. Consultation with local residents. 7. Project delivery - Construction of solar farm - Project management 8. Start operation.	Potential sites reviewed. Options appraisal completed. Site tenants provided notice. Procurement process underway and planning application completed. Grid application submitted – expected circa £6m. Consultation processes with local residents is complete. Start operation expected by December 2023.	7,970 tCO_2e	Short term £21M	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
12.2 74	**Deliver the installation of a solar farm in Site 2 with the capacity to generate in excess of 20 MWh of energy. This will be reviewed case by case depending on surveys and other considerations.** Generation of green energy locally and direct way to reduce carbon emissions. Surplus power is feed to the mains grid thereby distributing clean energy locally. Planning status of the land would remain unchanged with it reverting back to farmland after the solar farm reaches the end of its lifespan.	Installation of a large scale solar farm on council owned land will allow the council to offset its carbon emissions from electricity and gas usage and possibly 'retail' any excess. Installation of solar farm in Site 2 with the potential of generating 20+ MWh generation by 2025. Potential to feed 5,000 homes.	1. Asset review board to the potential sites - consultant briefing for review of master planning of specific sites 2. Options appraisal - commission specifications of the project to procurement team 3. Site tenant notice - one year notice 4. Initial procurements process - identify the contractor - framework and due diligence process - 6 months 5. Planning application - full application submission 6. Consultation processes with local residents 7. Project delivery - Construction of solar farm - Project management 8. Start operation.	Consultation process underway following desktop analysis.	5,112 tCO_2e	Medium term Costs TBC	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
12.3	**Deliver the installation of a solar farm in Site 3 with the capacity to generate in excess of 20 MWh of energy. This will be reviewed case by case depending on surveys and other considerations.** Generation of green energy locally and direct way to reduce carbon emissions. Surplus power is feed to the mains grid thereby distributing clean energy locally. Planning status of the land would remain unchanged with it reverting back to farmland after the solar farm reaches the end of its lifespan.	Installation of a large-scale solar farm on council owned land will allow the council to offset its carbon emissions from electricity and gas usage and possibly 'retail' any excess. Installation of solar farm in Site 3 with the potential of generating 20+ MWh by 2027.	1. Asset review board to the potential sites - consultant briefing for review of master planning of specific sites 2. Options appraisal - commission specifications of the project to procurement team 3. Site tenant notice - one year notice 4. Initial procurements process - identify the contractor - framework and due diligence process - 6 months 5. Planning application - full application submission 6. Consultation processes with residents 7. Project delivery - Construction of solar farm - Project management 8. Start operation.	Consultation process underway following desktop analysis.	5,112 tCO_2e	Medium term Costs TBC	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
12.4	**Deliver the installation of a solar farm in Site 4 with the capacity to generate in excess of 20 MWh of energy. This will be reviewed case by case depending on surveys and other considerations.** Generation of green energy locally and direct way to reduce carbon emissions. Surplus power is feed to the mains grid thereby distributing clean energy locally. Planning status of the land would remain unchanged with it reverting back to farmland after the solar farm reaches the end of its lifespan.	Installation of a large-scale solar farm on council owned land would allow the council to offset its carbon emissions from electricity and gas usage and possibly 'retail' any excess. Installation of solar farm in Site 4 with the potential of generating 20+ MWh by 2030.	1. Asset review board to the potential sites - consultant briefing for review of master planning of specific sites 2. Options appraisal - commission specifications of the project to procurement team 3. Site tenant notice - one year notice 4. Initial procurements process - identify the contractor - framework and due diligence process - 6 months 5. Planning application - full application submission 6. Consultation processes with residents 7. Project delivery - Construction of solar farm - Project management 8. Start operation	Consultation process underway following desktop analysis.	5,112 tCO_2e	Medium term Costs TBC	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
T13	**Target 13. Support the generation of renewable energy in the Borough to generate the equivalent of approx. 1550 kWh per household in 2030**				**27,333.46 tCO_2e**	**TBC**	
13.1	**Set up a Community Energy Fund for Wokingham (WEC)** Enable residents and the community to become investors in renewable energy installations. Facilitate access to external funding to cover the cost of renewable energy installations across the Borough. Projects can be wholly owned by the community Support the creation of new green jobs in the area. Help to increase the premium of renewable energy technologies by increasing uptake.	A Community Energy Fund will help accelerate the uptake of renewable energy generation within the Borough. It will allow the council to engage with the community in the journey to net-zero carbon. The WCEF funds renewable energy installations through local shares from the community, enabling individuals and local organisations to support and benefit from the scheme. The scheme aims to generate an average of 27,000 kWh/year of renewable energy from the installation of small-scale PV systems funded through this scheme.	1. The scheme was approved by the council in January 2021. 2. WBC will partner with Wokingham Energy Community (WEC) and will put forward potential buildings that could be considered for the scheme. These will include schools without solar PV, Young and Community Centres, etc. 3. Next steps with key stakeholders to set up the shares value and future delivery of the scheme 4. An annual report will be provided by WEC and Enery4all one year after it has been launched	The scheme was approved by the council in January 2021. Partnered with Reading and Energy4All to assess viability of a number of potential buildings. Community led initiative being loosely supported by council officers. The scheme will be fully launched by summer 2023.	6.9 tCO_2e	Short term Nil	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
13.2	**Support residents and local businesses to reduce their energy usage and carbon emissions and increase the uptake of green energy.** Wider uptake of green energy will reduce the green premiums and allow more people to access cheaper green energy tariffs	Develop a comprehensive service to residents and local businesses, offering green energy provision, as well as energy efficiency measures, consultancy, and advice Provide a scheme which allows for Public and businesses to 'buy' Green electricity / Gas through WBC (referral).	1. Feasibility assessment for the council to commence a 'Green label' energy procurement initiative for council properties. 2. Development of the scheme, initial conversations with potential partners. 3. Scheme approval by Executive and launched. 4. Provide advice to residents on energy efficiency measures.	2. Development of scheme to make green electricity available for public to directly buy not started. 4. Providing advice to residents where possible on switching to green suppliers and improving energy efficiency, connecting them with services such as the Green homes and Sustainable homes grants. Also directly responding to residents enquiries, often raised from discussion with other services.	9,585 tCO_2e	Long term Costs TBC	
13.3	**Support the delivery of smart grid technologies.** Digital infrastructure	A modernise energy service through smart grid technologies and digital infrastructure will provide more accurate information about	1. Work in collaboration with ADEPT, UoR and the LEP to deliver initial research on test different control strategies / interventions.	Not Started	Included in total	Medium term Nil	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
	enable consumers to access innovative solutions such as smart tariffs. These tariffs reward consumers financially for using less electricity at peak times of demand or using more when overall demand is low and there is surplus generation available.	energy consumption and costs, so consumers can easily understand how to save money on their bills. The project aims to monitor the benefits of energy management trials, implemented by Smarter Grid Solutions, and to advise on future upscaling potential.					

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Retrofitting Domestic and Commercial

Annual Carbon Savings: 47,092.38 tCO_2e

Being another large contributor to borough wide emissions, considerable work is underway to support the installation of energy saving measures at domestic, commercial and council properties. By doing so, significant savings can be achieved in both energy bills and carbon emissions, particularly for buildings with currently low energy efficiency ratings, including low-income or vulnerable households. To address this, the council is supporting the delivery of the Energy Company Obligation (ECO) and Green Homes Grant schemes, alongside council building and school retrofitting, among many other measures noted below.

Retrofitting works so far have cumulatively contributed towards savings of 741.89 tCO_2e.

Key Achievements:
These milestones have been completed in the action plan this year:

- Energy Management Plan in development.
- Feasibility assessment on Woodley Library pilot completed.
- Compared to 2019/20 figures street lighting efficiency improvements have contributed savings of 163 tCO_2e.
- Completed referral stage of the Green Homes Grant scheme.
- Over 1500 households getting assistance so far from help to heat.
- Pilot Project Completed in Riseley, raising a house from SAP D to B

Consumption Emissions:
Total life cycle GHG emissions from solar PV systems are similar to other renewables and nuclear energy, and much lower than coal. Therefore, none applying to households.

Our Partners:
The delivery of the projects listed in our action plan will not be possible without partnering with Parish & Town Councils, Residents, schools, subcontractors.

Behaviour change will also be vital in supporting residents and businesses to retrofit their properties and Wokingham Borough Council will work to raise awareness on how to make the best and most efficient choices and how to go about this through effective communication with stakeholders.

Future Opportunities:
The Government energy white paper, and new commitments identified in the 10 actions plan for green recovery will bring new opportunities and stronger targets to promote renewable energy generation. However, as this is recent policy and still under development, it will be closely monitored to support and strengthen our own targets.

New Actions: Target 16.3 Added to incorporate the support of housing associations into the retrofitting process.

Action 14.2 has been added, which is the Passivhaus Gorse Ride regeneration project from 32.2

SDGS:

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
T14	**Target 14. By 2030 All council buildings, excluding schools, will be retrofitted to carbon neutral standards**				**17,090.2 tCO_2e**	**TBC**	
14.1	**Improve energy performance of council owned buildings to carbon neutral standards.** Reduce cost of energy bills. Support more jobs in the green and sustainability industries. Emerging of new supply chains for building efficiency will reduce the cost of the green technologies such as heath pumps, batteries, solar panels, etc.	Implement a wide range of energy efficiency projects at existing properties to improve energy efficiency. These include, installing LED lighting, Cavity Wall, loft insulation etc., all to make the property 'consume' less energy. Programme for retrofitting corporate assets based on energy performance baseline and energy improvement requirements.	1. Establish baseline energy performance for each council-owned asset. 2. Three year assessment, average kilowatt value (FY from 2017-20) 3. Develop Energy Management Plan 4. Identify energy performance improvement requirements to all corporate sites and recorded in the Corporate Assets Carbon Reduction Database. 5. Programme for asset retrofit set up 6. Feasibility assessment on Woodley Library as a pilot project. 7. Establish guidelines of energy improvements that can be used for all corporate assets. 8. Deliver the retrofitting programme.	Baselines and three year assessment complete. Energy Management Plan in development. Feasibility assessment on Woodley Library as a pilot project completed.	6,612.30 tCO_2e	Medium term £13.5M (£4.5M per year)	
14.2 *	**Gorse Ride Regeneration Project** A chance for Wokingham Borough Council to take the lead and set an exemplar approach.	New council homes will follow the passivhaus housing scheme as in action To develop a council led pilot Passivhaus housing scheme by 2021.	1. Assess and identify a suitable site for PassiveHaus scheme to be applied, based on optimal savings. 2. Contact developers and discuss requirements/design ideas, along with required consultants. 3. Apply measures. 4. Monitor performance and feedback from users	Design options at Gorse ride under assessment. It has houses designed to the first the first stage of PassiveHaus. There will be no gas to the	935.85 tCO_2e	Medium term Costs TBC	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
	Provide residents with more efficient, warmer homes, with cheaper running costs.	Regeneration of urban improvement schemes. There are around 255 homes in Gorse Ride state regeneration project.		domestic houses on the side.			
T15	**Improve energy performance of council housing stock.**				**9,542 tCO_2e**	**TBC**	
15.1	**Improve energy performance of council housing stock.** Improving the energy efficiency of our homes will mean households can significantly reduce demand and save money on their bills, reducing fuel poverty rates.	There are around 2,600 council owned housing units. We want to improve energy performance of council housing and incrementally reduce the use of domestic gas and replace it with cleaner technologies. This will contribute to a reduction in energy bills and fuel poverty rates. Improve energy efficiency of council	1. Survey the whole stock to develop and energy benchmark. 2. Carry out assessment to Public Energy Supplier funding that could be used to improve the energy profile of council housing. 3. Carry out an assessment to ECO (Energy Company Obligation) scheme and potential funding. 4. Pilot energy improvement work to a property increasing it from SAP D to B. 5. Carry out independent EPC ratings for each property. Establish and deliver a retrofitting programme for council housing based on EPC baseline and available budgets.	Basic condition surveys are underway to assess stock and EPC ratings. ECO scheme assessment completed. Pilot Project Completed in Riseley, raising a house from SAP D to B. Also completed a council owned housing project for Care Leavers that achieved SAP A rating.	9,542 tCO_2e	Medium Term Costs TBC	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
		owned houses to EPC band C.		Focus Group Council Housing Stock to be established.			
T16	**By 2029 all local schools to be retrofitted**				**5,034.08 tCO_2e**	**Included in £13.5M**	
83 **16.1**	**Upgrade various energy measures in the schools to improve their energy performance.** Improving the energy efficiency of our schools will significantly reduce demand and save money on their bills. Support more jobs in the green and sustainability industries Emerging of new supply chains for building efficiency will reduce the cost of the green technologies such as heath pumps, batteries, solar panels, etc.	Schools retrofitting programme will be based on initial assessment. Works will typically include: LED lighting, Insulation measures, controls upgrades, heating upgrades / replacements and Renewable Energy Generation technologies. Priority given to energy 'payback' calculations of less than five years against energy spend.	1. Carry out energy audits to all schools to identify possible energy reduction projects. 2. Establish and deliver the schools retrofitting programme which will be based on carbon 'paybacks'.	Stock Condition survey reports underway, to feed into Energy Management Plan. Collecting EPC certificates and run energy audits to support this. Projects Ongoing in advance of the above, where realistic ROI can be achieved. Measures achieving 98.71 tCO_2e of savings per year already implemented.	5,034.08 tCO_2e	Medium term Included in above £13.5M	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
T17	**By 2030, 20% of all houses in the borough to be retrofitted**				**25,690 tCO_2e**	**£750,000**	
17.1	**Develop and deliver schemes to support retrofitting of homes - ECO (Energy Company Obligation) offering.** Improving the energy efficiency of our homes will mean households can significantly reduce demand and save money on their bills, reducing fuel poverty rates.	Support residents to reduce their energy usage and carbon emissions and increase the uptake of green energy technologies. This scheme will include energy efficiency measures. More residents will be able to improve the energy efficiency of their properties and switch from gas to electricity	1. Set up the scheme. Identify the type of measures that can be implemented 2. Identification of suppliers that will help deliver the scheme 3. Scheme approval by Executive 4. Launch the scheme – identify and contact the residents that can benefit from the scheme 5. Continue advertising and implementation.	The scheme is now active and will continue to advertise and implement improvements, likely until the end of 2025. Over 1500 households getting assistance so far from help to heat, the councils locally set ECOFlex scheme.	25,690 tCO_2e	Medium – long term £750,000	
17.2	**Develop and deliver schemes to support retrofitting of homes - Green Homes Grant.** Improving the energy efficiency of our homes will mean households can significantly reduce demand and save	Support residents to reduce their energy usage and carbon emissions and increase the uptake of green energy technologies. This scheme will include energy efficiency measures.	1. Deliver Green Homes Grant LAD 1 2. Green Homes Grant LAD 2 3. Continue application for upcoming grants	Completed referral process stage of the scheme, progressing to installation of measures stage.	Included in total	Medium term Nil	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
	money on their bills, reducing fuel poverty rates.	More residents will be able to improve the energy efficiency of their properties and switch from gas to electricity					
17.3	**Engage with House Associations to support retrofitting of homes.** More residents will be able to improve the energy efficiency of their properties and switch from gas to electricity. By improving the energy efficiency of our homes will mean households can significantly reduce demand and save money on their bills, reducing fuel poverty	Contact social housing associations to demonstrate and discuss the opportunities around retrofitting homes, towards greater energy efficiency. This will enable more residents to reduce their energy usage and associated costs.	1. Discuss opportunities for collaboration with housing associations/landlord on social housing improvements. 2. Direct towards SHDF scheme. 3. Support delivery of measures. 4. Monitor and provide advice.	Initial conversation with RPs delivered in October 2021. Delayed due to insufficient capacity.	Included in total	Long term Costs TBC	
17.4	**Support residents and local businesses to reduce their energy usage and carbon emissions by**	The Green Bank Scheme will provide loans to assist householders in their net zero carbon	1. Identify partners and set up the scheme	Green Bank Focus Group set up and running.	Included in total	Medium term Costs TBC	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
98	**retrofitting their properties - Green Bank Scheme** More residents will be able to improve the energy efficiency of their properties and switch from gas to electricity. By improving the energy efficiency of our homes will mean households can significantly reduce demand and save money on their bills, reducing fuel poverty.	ambitions. This will include energy efficiency measures on the fabric of the building and replacing appliances with low carbon versions. Householders will pay this back against a loan re-payment (plus interest) over a period of time (7, 10 and 15 years).		Currently assessing different partners and schemes.			
17.5	**Smart City Cluster pilot project** May identify wider opportunities for energy savings elsewhere.	The project focus on energy savings from 'small' devices using a 'smart' plug. This project will help to inform on technologies that will help reduce energy consumption.	1. Contact Measurable Energy regarding pilot under new funding. 2. Trial office locations where the impacts across numerous devices can be tested and monitored. They are looking for a minimum energy saving of 5% along with associated cost savings.	This project was explored but significantly delayed due to covid.	Included in total	Long term Nil	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
17.6	**Street lighting project** Benefits wildlife with less light pollution. Reduces running and maintenance issues/costs. Greater monitoring ability to detect and respond to issues.	A major street lighting LED Upgrade Scheme took place over the last few years. This has significantly reduced energy consumption and equipped the streetlights with remote control/monitoring.	1. Part-night lighting: Apply "part-night" timing to highway street lights, where they switch off between 0:30 and 5:30. 2. The council will explore how this scheme could be extended to other roads 3. Dimming: All of the new LED lights are dimmable and in the majority of locations we currently dim them to 80% power at 10pm and 60% power at midnight. The council will explore the possibility to further fine-tune these dimming levels. 4. With the DfT reducing requirements for lighting signs and traffic bollards these will be included where possible. 5. The expected new infrastructure and housing projects lighting requirements, along with new traffic signals across the borough will be minimised where possible, but some increase is anticipated from such.	Further updates following the LED Upgrade Project are currently being made, with the few remaining sites where the street/sign lighting is to be upgraded (e.g. Market Place) to be complete in the next few years. Approximately 2,000 lights now follow part night timing. Ongoing programme of upgrades of traffic signals to LED and more energy efficient control. Fine tuning lighting would require individual design for each road so will be a gradual process. Compared to 2019/20 figures this represents savings of 163 tCO_2e.	Included in total	Medium – long term Costs TBC	

*Action 14.2 has been added, which is the passivhaus Gorse Ride regeneration project from 32.2

Carbon Sequestration

Annual Carbon Savings: 5,131 tCO_2e

Over the last year we have focused on doing the groundwork that will ensure the long-term sustainability of this project as it is essential to consider the maintenance of the trees in the long-term, as well as making sure we choose the right tree for the right location, promote native tree planting and well targeted woodland creation, as well as retention of trees.

This will be supported by a Tree Strategy, which will help meet statutory biodiversity obligations, while maximising the wide range of benefits that trees and woods can deliver for health, amenity, climate change and water management. The council plans also include projects to manage grassland, rewild land, and protect and enhance wetland habitats. Alongside hedgerows and management, the 15,400 trees planted since October have contributed towards offsetting an estimated 2,310 tCO_2e.

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Key Achievements:
These milestones have been completed in the action plan this year:

- Community orchards planted at Winnersh Meadows, Woosehill Meadows and Dinton Country Park, in collaboration with Freely Fruity,
- 1,800 new trees confirmed for residents under Garden Forest Scheme – available for collection in autumn.
- Engaging with private landowners and town/parish councils who can register interest for scheme.

Consumption Emissions:
These emissions are minimal due to planting UK and Ireland sourced and grown native trees.

Our Partners:
The delivery of tree planting and other carbon sequestration projects will not be possible without the support and collaboration of the towns and parish council's. Wokingham Borough Council's partnership with the Woodland Trust will ensure we receive the advice and support needed to ensure that we will be able to maximise the wide range of benefits that trees and woods can deliver.

Behaviour change remains important through the solutions to the climate and ecological emergencies which are recognised as intertwined. Residents have appreciated their green spaces across the borough throughout the pandemic more than ever before and stewardship over those spaces is accepted as vital.

Future Opportunities:
The Climate and Ecological Emergency (CEE) Bill will accelerate change and provide positive outcomes for the local authority climate emergency agenda. Further resources and funds are to be allocated if the Bill is passed into law. Point 9 of the Government's Ten Point Plan for a Green Industrial Revolution focuses on protecting our natural environment where the government committed to protect 30% of UK land by 2030 by designating new national parks and AONBs, initiate recovery projects as well as plant 30,000 hectares of trees and rewild the countryside to the measure of 30,000 football pitches. Upcoming policies include the England Tree Strategy and Nature Strategy.

New Actions: Action 21.2 removed as this was investigated but the benefits to carbon savings and AQ would be minimal at the viable scale.

SDGS:

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
T18	**Plant 250,000 trees throughout the Borough by 2025**				**3,100 tCO_2e**	**£2.215m**	
18.1	**Create a new forest that will increase the number of trees in the Borough to improve carbon capture and biodiversity net gain.** New community orchards for local food production. Improve our local air quality. Safeguard local biodiversity. Improve water management. Provide space for leisure, recreation and education.	Large-scale (greater than 5ha) woodland planting on council owned land on high carbon capture potential sites (e.g. arable land, improved grassland). Current woodland cover estimated at 2576 ha of Wokingham Borough (14.3%). Planting 250 ha more woodland (and associated green infrastructure) would get the Borough woodland land cover close to 15%.	1. Initial feasibility study, project plan and business case development. 2. Identify council owned land that is suitable for a major tree planting scheme. 3. Review our estate portfolio for agricultural land / improved grassland, which has the potential to be converted to woodland. 4. Engage forestry specialist contractor to advice on feasibility, constraints, and process. Prepare consultant brief. 5. Preparing plans and consulting public. 6. EIA Screening / Planning. 7. Grant and other scheme applications. 8. Ordering and planting trees (with protection). 9. Installation of other site infrastructure. 10. Produce forest management plan. 11. Handover to site manager (phased) - Ongoing management	Green Infrastructure Special Project Manager is now in post. 15,400 trees planted since October, following project plan.	Included in total	Medium term £705,500	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
18.2	**Deliver small-scale woodland planting on council estate in existing parks and opens spaces sites.** New community orchards for local food production. Improve our local air quality. Safeguard local biodiversity. Improve water management. Provide space for leisure, recreation and education.	Identify potential programme to invest in small-scale woodland planting on council estate in existing parks and opens spaces sites. This small-scale planting can be deployed with shorter time scales than larger afforestation schemes. Estimate 5 to 10 ha of land available (circa 8,000 to 16,000 trees if planted as woodland). Potential for the sites to be planted as Community Orchards for local food production and BAP targets. Converting from improved grassland to traditional orchard with wildflower rich ground flora has the potential to still sequester circa 6 tonnes of CO2e equivalent a year.	1. Assessment of council estate portfolio to identify areas in existing public open space that has potential to be converted to woodland. 2. Carried out an internal review of constraints, costing, and scheduling. Preferably looking to target small low risk areas. 3. Preparing plans. 4. Implement public consultation on identified sites. 5. Grant and other scheme applications. 6. Ordering and planting trees (with protection). 7. Ongoing management - Produce/review woodland management plan. 8. Promote tree planting campaigns to engage with residents, schools and local businesses (e.g. National Tree Week).	Work to assess the council estate portfolio to identify areas in existing public open space that has potential to be converted to woodland is ongoing. Community orchard planted at Woosehill and Winnersh Meadows (182), in collaboration with Freely Fruity, along with 29 fruit trees and thousands planted as hedgerows at Dinton Country Park, alongside various schemes. Breakdown on sites available on Wokingham engage.	Included in total	Medium term £618,000	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
18.3	**Support woodland and hedgerow creation on private sites.** Improve our local air quality. Safeguard local biodiversity.	Set up a grant scheme for local private landowners to apply for funding to create new woodland and hedge roads on privately owned sites.	1. Produce Wokingham Borough Tree strategy to establish guidance for the delivery of the scheme. 2. Set up the scheme. Define the thresholds, suitability assessment and grants or plants. 3. Call for sites - Scheme promotion and engagement with local landowners Selection for piloting with a beacon site. 4. Tranche 1 - Planting plan design and approval, establishing contract negotiation, payment mechanism, compliance checking and other grant and carbon trading scheme support. 5. Review of tranche 1 take-up and feasibility assessment for tranches 2 & 3.	Engaging with private landowners and town/parish councils who can register interest for scheme via Wokingham engage.	Included in total	Medium term £705,500	
18.4	**Make Wokingham a Garden Forest by promoting and encouraging residents to plant new trees.** Improve our local air quality.	Establish general process and guidance that could allow residents and local businesses who want to plant and maintained their own trees either with our permission on our land, or to help them have a successful tree on their own land. A community of garden tree owners - scheme will be	1. Produce Wokingham Borough Tree strategy to establish guidance for the delivery of the scheme. 2. Design the scheme; include considerations on types of trees, maturity. 3. Provide the mechanism to select the right tree for the right place. 4. Establish the delivery mechanism. 5. Launch the scheme and engage with residents and local businesses.	Working with the T&L team to develop Native Tree Palette which will help provide guidance on which trees are suitable for each landscape character.	Included in total	Medium term £160,000	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
92	Safeguard local biodiversity. Improve water management. Supports leisure, recreation and education.	required to engage the community and ensure the legacy of the tree planting, securing that trees will be looked after. These schemes will seek to deliver 6,000 trees Estimate that a scheme with approximate 10% of householder take up rate has the potential to deliver 6,000 to 7,000 trees planted. Recommend that that the scheme should be budgeted to have a 10,000 tree ceiling.	Provide guidelines on the types of trees to be planted, the pathway for application of new trees and the benefits from the tree (carbon savings, biodiversity gain, etc.). 6. Implementation of the scheme. System to take and register the orders - place tree orders and delivery. Record keeping. 7. Legacy - is there ongoing support offered. Long-term recording of benefits Opt-out (local offsetting) 8. Annual review and monitoring of the scheme.	1800 new trees confirmed for residents under Garden Forest Scheme – available for collection in autumn. This will be re-run following significant interest.			
T19	**Carbon sequestration by design - improving carbon sequestration rates in future land management decisions.**				**702 tCO_2e**	**TBC**	
19.1	**Develop the Wokingham Borough Tree Strategy to support long-term creation and retention of woodland and trees.** Improve our local air quality.	Developing a tree strategy for the Borough which will help define: • Appropriate species (and adaptation to climate change); • Good management practice; • Facilitating ongoing recruitment to veteran tree population;	1. Identification of requirements for Tree Strategy. 2. Development of Feasibility study brief (including land appropriation and/or acquisition). 3. Develop and builds upon existing studies. 4. Identify land available and type of habitat. 5. Verify likely carbon sequestration. 6. Confirm more detailed cost estimates.	Value Engagement Survey published on Wokingham engage in Nov 2021 – results reviewed into report for O+S in Jan 2022, leading to below. Draft tree strategy underway with	660 tCO_2e	Short term Included within the projected cost for Target 17	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
	Safeguard local biodiversity. Improve water management. Supports leisure, recreation and education.	• Appropriate places for woodland creation; and access. • Improving the retention rate of trees - The longer trees are standing the longer carbon is locked up. • Encouraging planting of woodland on private land.	7. Allows milestone point for decision to continue with full funding.	consultant, for public consultation in October 2022.			
19.2	**Include in the Local Plan Update policy for carbon sequestration potential. Subject to inspection, the local plan update will include: Green Infrastructure Policy Tree Policy Flood Policy Biodiversity Policy Design Policy.** Avoid / reduce the loss of established habitat.	Policies written to avoid loss of established habitat will help retain carbon stores. Policies written to seek multifunctional design of green and blue infrastructure will build in carbon sinks to new development. Policies written to retain and enhance biodiversity (particularly botanic diversity) will aid carbon sequestration in soils. Design guide to green and blue infrastructure will encourage inclusion of low intensity (maintenance) habitat for carbon sequestration.	1. Require a review of ability to enhance carbon sequestration rates for all new policies and design guides to be published alongside. 2. Independent assessment - design policy approach to maximise carbon sequestration.	Not Started	42 tCO_2e	Medium term £10,000	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
	Retain and enhance biodiversity.						
94 19.3	**Develop the Local Nature Recovery Strategy to provide complementary funding source to aid land use change (LULUCF being a carbon sink)** Biodiversity net gain unit capacity raises the value of land. Avoid / reduce the loss of established habitat. Retain and enhance biodiversity.	Developing a Local Nature Recovery Strategy that covers the Borough will provide a 5% uplift on the number of biodiversity net gain units that can be generated in areas identified as part of a local nature recovery network. The ability of soil to sequestrate carbon correlates positively with biodiversity. Additional biodiversity net gain unit capacity raises the value of land (for making improvements for biodiversity), and will leverage funding for habitat improvement that will lead to soil restoration and carbon sequestration. On assumption that average of 2.5 units per ha (not including current woodland area) can be generated at £15,000 per unit, the 5% uplift on a LNRS (over and above the national	1. Develop the Local Nature Recovery Strategy through the Berkshire Local Nature Partnership. 2. Initial analysis of 30% target area - mapping exercise. 3. Develop Berkshire wide habitat inventory to update LULUCF. 4. Consultation exercise with stakeholders. 5. Revising the Local Nature Cover Strategy and taking it through the local authority adoption process.	Not Started Awaiting government regulations.	Included in total	Medium term £40,000	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
		strategy area) would generate value on the biodiversity potential of £5,276,250					
19.4	**Develop a Natural Flood Management partnership and scheme.** Reduce risk of floods and improve water management.	The creation of wetland habitat as part of a programme of restoration of natural flood management processes has potential to sequestrate carbon and reduce soil degradation. The partnership work and scheme would place through agreements with Environment Agency, water companies, and other Loddon Catchment Partnership partners.	1. Initial mapping exercise to identify locations that will provide wetland habitat and could be forward into the scheme. 2. Consultation exercise with stakeholders. 3. Revising the Strategy and taking it through the local authority adoption process.	Across the borough there has been a significant reduction in flood risk from surface and groundwater. Working closely with environment agency to reduce fluvial flood risk in the borough. All new developments come with drainage responsibility so measures incorporated.	Included in total	Long term Costs TBC	
T20	**Transition to low intensity (high carbon sequestration) land management.**				**1,329 tCO_2e**	**TBC**	
20.1	**Work to transition Grassland Management to less frequent cutting scheme allowing**	Considerations to the BLUE heart campaign style management of grassland moving away from improved grassland habitat under an intensive cut cycle and	1. Pilot the principle of cut and collect to highways verge to improve biodiversity and soil restoration in selected areas. Run a 5% conversation pilot for highways verge and rural highways verge	PROW first cuts have started across the borough. Nature reserve public access cuts	642 tCO_2e	Medium term £130,000	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
96	**wildflowers to bloom and set seed.** Less maintenance than traditional mowing schedules can save money. Significantly increasing local wildlife density and diversity. Support learning for the wider community and provide opportunities to get involved in environmental projects.	allowing rewilding of highway verge and other areas increasing Currently approximately 125ha of Environmental Localities greenspace is improved or semi-improved grassland.	2. Target of 12.5ha of wildflower grassland creation across Environmental Localities sites. 3. Working with ecosystem services team to manage land in more sustainable manner.	have started on access paths.			
20.2	**Work to transition Grassland Management to support the Restoring Biological Processes.** Less maintenance than traditional	Natural greenspace grassland will perform better at carbon sequestration where: a) soil compaction from machinery is kept to a minimum, and b) structural diversity is encouraged by 'conservation' grazing (instead of uniform cutting).	1. A feasibility study for applying a Legacy Gracing approach will set out the steps towards reducing our reliance on machine cutting and restoring soils.	Meadow management has started on some of our sites regards to conservation grazing while other will only be grazed after a hay cut in August.	642 tCO_2e	Medium term Costs TBC	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
	mowing schedules can save money. Significantly increasing local wildlife density and diversity.	With the additional natural greenspaces being taken on alongside development the scale to justify an internally owned and managed conservation-grazing herd may be reached.					
97 **20.3**	**Implement Citizen Science Engagement for Hedgerow Restoration.** Improve our local air quality. Safeguard local biodiversity. Improve water management.	There is approximately 1534 km of (mapped) hedgerow in Wokingham Borough. Of this, approximately 963km (63%) is within the countryside (as defined by settlement hierarchy). Of this, approximately 397km (26%) are associated with the adopted highway. Hedgerows are a good target for restoration work to increase the number of standing mature trees storing carbon. At a 50m spacing 400km of hedgerow would be equate to 8,000 open growing trees.	1. TVERC product development to take PTES hedgerow survey data and project in an interpreted way to inform hedgerow management for land managers. 2. Tool can be used by Trees & Landscape officers for enforcement of the Hedgerow Regulations. 3. To inform a planting and restoration plan (as a part of the tree strategy), a citizen science condition assessment programme would greatly enhance the targeted planting of trees in suitable locations.	Delayed due to staffing issues at TVERC, which the product is reliant on.	45 tCO_2e	Medium term £15,000	
T21	**Implement a programme of carbon sequestration opportunities**				**Included in total**	**Nil**	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
21.1	**Engage the community with Community Garden Schemes.** Promote production of fresh, local, seasonal produce. The social contact offered by gardening in an allotment environment helps to combat the lack of social capital embodied by loneliness. Gardening can prevent and alleviate mental ill-health and offer physical benefits. Improve local air quality.	Allow new allotment site due to be opened in 2020 as part of the South Wokingham Strategic Development Location (SDL) Carbon savings for these schemes are detrimental, however engaging residents with allotments and community garden schemes contributes to behavioural change	1. Work with UoR in assessing the 'Life Cycle Sustainability Analysis (LCSA) of Urban Food Production – the Case of Allotment Gardens and identify future opportunities for engagement 2. Explore the opportunity to plant hazel trees on sites for future purposes, including the local provision of hazel beanpoles, to reduce consumption emissions.	Not Started	Included in total	Short term Nil	

*Action 21.2 removed as this was investigated but the benefits to carbon savings and AQ would be minimal at the viable scale.

Schools & Young People

Annual Carbon Savings: Accounted for throughout the plan

Due to Covid-19 relate restrictions in visiting schools over the last two years there has led to less physical engagement with schools than planned. Despite this, the council has continued to build up contacts with schools and gain more experience of delivering these targets virtually which will be implemented in the updated action plan below.

Many of the project listed below are around engagement, awareness raising and education which are difficult to attach a carbon saving to. However, carbon saving associated with the tree planting, retrofitting and active travel work with schools is accounted for in the relevant sections.

Key Achievements:
These milestones have been completed in the action plan this year:

- Let's Talk Climate sessions with primary and secondary school children specifically, run in an adapted manner to suit the audience.
- Retrofitting measures achieving 98.71 tCO2e of savings per year have already been implemented.
- Second annual Youth Climate Conference delivered in Nov 2021.
- 12 schools actively engaged with ModeShift STARS
- An additional 10 schools engaged with air quality focus and monitoring equipment.
- Tree planting took place at 17 schools in the last season (October 2021 – March 2022)

Consumption Emissions:
The engagement targets below are to reduce overall carbon footprints of our residents which includes all 3 scopes of emissions. Further details of estimations are explained in the methodology.

Our Partners:
Wokingham Borough Council is keen to engage with as many schools and young people in the borough as possible in order to tackle the climate emergency as the council recognises the next generation are the driving force being this international movement. Schools, teachers and young people themselves will be the council's key partners for delivery of the actions set out below.

Behaviour change is a key aim of this section of the climate emergency action plan and should raise awareness and allow both children, young people to continue to drive this agenda. Making the voices of young people heard should also encourage intergenerational learning meaning sustainable behaviour change in encouraged from their parents and families.

Future Opportunities:
There are various environmentally focused initiatives, award schemes and accreditations which schools can work towards and many schools in the borough have achieved some of these awards. The council's aim is to make it as simple as possible to identify which scheme will work for them and what their pupils want to achieve and support schools in their journey to becoming more sustainable or even net zero carbon and how this can tie in with the curriculum at all levels.

New Actions: There are no new actions in this section of the CEAP.

SDGS:

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
T22	**Encourage and support school children in the Borough to take an active role in reducing carbon emissions**				**TBC**	**TBC**	
22.1	**Deliver annual climate emergency assemblies at local schools.** Engagement from pupils should also reduce out of scope emissions in their carbon footprints, such as from food choices.	Introduce discussions about Climate Emergency amongst children and young adults via an annual climate emergency assembly for all secondary school students.	1. Plan and deliver climate emergency assemblies with all secondary schools.	This project remains on hold. Climate Emergency Assemblies were delivered to all year groups in 3 Secondary Schools in the borough in the 2019/20 academic year, to a total of approximately 3,357 pupils before lockdown restrictions came into place. Assemblies have been carried out by the MyJourney team about active travel and by the Air Quality Active Travel Officer about air quality over the 2021/22 academic year.	Neutral	Short term and ongoing Nil	
22.2	**Create climate committees in schools.** Will be able to raise awareness around the connectedness of the climate emergency into all affected topics such as biodiversity.	Provide an opportunity for students, teachers, parents and the local community to work together to support the delivery of climate related projects. Increase engagement with climate emergency issues and ownership of actions to	1. Produce information pack for how to set up a school council. 2. Provide contacts within Wokingham Borough Council to help/attend when needed.	The Youth Council was set up in the summer of 2021. This is a borough wide initiative and serving a wide range of council areas. The climate emergency is one of the 10 Youth Council priorities. The first session of the council focused on Climate	Neutral	Medium term Nil	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
101	Engagement from pupils should also reduce out of scope emissions in their carbon footprints, such as from food choices.	reduce carbon dioxide emissions. One per school starting with secondary schools initially.		Emergency on 20th September 2021. The Climate Emergency and Waste teams attended and presented at this meeting.			
			3. Aim to set first committees up with particularly engaged schools in 2021, or 2022 depending on the schools capacity post covid-19.	The Youth Council has also set up its own a Climate Change Sub-Committee which was promoted by the council with a sign-up sheet at the Youth Climate Conference in November. This is open to all students of secondary schools and the group continue to meet.		Short term and ongoing Nil	
22.3	**Deliver the Youth Climate Conference.** Learning opportunity around how energy use impacts our carbon footprints.	Increased awareness, engagement and understanding of climate emergency issues amongst children and young adults attending. Youth Climate Conference is aimed at sixth form (16+) students from across the Borough.	1. Deliver an annual Youth Climate Conference for secondary school students of the borough's schools to keep the conversation going with young people. 2. Aim to repeat this event virtually one a platform which allows for improved engagement.	A Youth Climate Conference was delivered as a series of videos in October 2020 and received a total of 5,600+ views across all social media platforms. The second Youth Climate Conference was delivered on 24th November 2021 on Teams. There were 3 external speakers covering water scarcity and biodiversity and conscious consumption and 3 council officers discussing the councils work with schools to help with sustainability. The	Neutral	Short term and annual £2,000	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
				recording of the event can be found on the councils YouTube channel.			
2024	**Encourage schools to include climate emergency issues in lesson time.** Behaviour change promoted in specific areas as demanded by the accreditation aimed for.	Commitment from schools to include climate change in lesson time, for all children in at least one subject i.e. science, geography, philosophy, PSHE. Increased knowledge amongst children and young adults on climate emergency issues.	1. Create a series of climate emergency lesson plans for Key Stages 1-3 initially. 2. An initial climate emergency lesson plan has been drafted for testing in secondary schools. 3. Create a pledge with criteria for all schools to sign; to be presented at the Secondary Federation. 4. Create campaign to engage across schools and the public to lobby for commitment from all schools. Use different communication channels (e.g. local news, social media, etc.) 5. Gain commitment from all schools and follow up to see how they are fulfilling the promise, with positive press coverage.	The council is working with teachers in the borough to investigate how this can be best achieved as in the different levels of education as well as gauging interest from schools and identifying gaps in climate education. Sustainability and climate change topics in lesson time will be a topic of discussion between local educators at the Teacher's Climate Summit which is due to be held in July 2022.	Neutral	Medium term Nil	
22.5	**Encourage schools to adopt sustainable property and operational**	Develop a sustained campaign to encourage schools to focus on environmental issues to	1. Work with schools to encourage retrofitting and raise awareness about	Gas AMR installation has been completed in the majority of schools in the borough. This produces an accurate	See Target 15.1	See Target 15.1	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
	management practices that reduce carbon emissions and support the environment. Learning opportunity to tie in the various services the council can provide into the climate emergency.	promote behavioural change. Better informed children and school staff on sustainability practices.	energy ratings, usage and consumption. 2. Work with schools to identify the school's carbon footprint including consumption emissions where possible, such as from food choices.	consumption information. Feedback is then given to schools to address unusually energy spikes. This service has yet to be promoted formally but will be part of an offer launch via the new climate emergency webpage.	 Neutral	 Short term Nil	
103 **22.6**	**Encourage Wokingham Borough schools to become net zero carbon and embrace sustainability.** Comradery amongst a local network of schools, students and teachers to share lessons learned	Create positive partnerships with schools to make the best use of already existing schemes such as the Eco Schools Scheme, UN Climate Accreditation for school staff, etc. All schools to achieve Eco Schools programme by December 2025.	1. Get all schools to sign up to bronze level of eco schools by December 2021 2. Set up an incentive for all local schools to become green flag level by December 2025	Eco Schools has been invited to attend the Teacher's Climate Summit being held in July 2022 to encourage schools to take part.	TBC	Short term Nil	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
104	through both failure and success and accelerate the path to carbon neutral.	Support schools to assess their carbon emissions and sustainability status. Each school to have a sustainability and carbon emissions baseline to help schools to take better informed actions in the journey to become net-zero carbon.	3. Produce an online resource on the Council's offering to schools. 4. Assessment of sustainability initiatives implemented at schools to identify what they already do and how we can support them to become net-zero carbon.	Ongoing and will be launched with the new climate emergency webpage. The assessment mapping exercise has taken place and is regularly monitored and updated.	Included in total	Short term Nil	
			5. Energy performance assessment for each school.	In addition to progress under Target 15.1 The Energy team are developing a rolling programme for Display Energy Certificates in the borough's schools including identifying unusual energy usage and Scheduling retrofit work to address these. There are an additional 13 retrofit projects soon to be carried out at schools including LED lighting, loft/pipe insulation and air source heat pump installations at oil fuelled sites.	See Target 15.1	See Target 15.1	
		Learn from best practices amongst local schools.	6. Draw up a step-by-step toolkit for schools to exemplify best practice in	Research is ongoing to bring together a comprehensive toolkit to help schools to decarbonise their operations.	Included in total	Short term Nil	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
		Create an active network of support within and among schools.	the borough, including financial cost. 7. Create our own federation/platform for sustainability within schools with sustainability leads at schools. 8. Look into ways where we can use internal school communications systems to nudge users.	When ready, this will be available on the website. This will be a topic of discussion at the Teacher's Climate Summit in July 2022. Looking into setting up teacher forum/network as an outcome of the Teacher's Climate Summit. Internal communication pathways in school are utilised where possible.			
22.7	**Support schools to implement carbon sequestration projects.** Focus on wildlife, biodiversity and connection to where food comes from as co-benefits to absorbing carbon we produce from the atmosphere via planting.	Connect schools to voluntary sector and the community in projects such as planting in care homes, working with local allotments and farms. Increased engagement with carbon sequestration projects among children and young adults.	1. Planting trees and plants to create a small-scale young forest in school grounds or council owned land. 2. Promote tree planting campaigns in schools grounds as part of education in climate change issues. 3. Make more allotment plots available to people on council owned ground to encourage young people to grow their own food.	17 schools had trees planted within their school grounds last season (Oct 21-Mar 22). These consisted of hedgerows, small woodland and fruit tree planting. Officers are engaging with schools to encourage more to participate in the tree planting project during the next planting season. This scheme will be promoted to schools at the Teacher's Climate Summit. Freely Fruity, a charity helping the local community to plant more fruit trees, will be	Included in target 17.1	Medium Term Nil	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
				attending the Teacher's Climate Summit to promote fruit trees on schools' grounds.			
22.8	**Waste reduction.** These suggestions may be passed on to the parents and wider family. It will have a long term benefit by embedding the ideas early. Supports vulnerable groups with food donations.	Run competition between schools to promote recycling, reduce waste and increase children's awareness about the impact of waste and reduce recycling contamination.	1. Set up the competition guidelines and trial competition in a specific school.	Research has been carried out into Re3's ability to provide educational content for schools. They can offer lesson plans including activities, site tours for students aged 18+ and can deliver some education for this age group in schools. The next steps will be to draw attention to and offer these activities up to schools.	51.93 tCO_2e (Out of scope)	Short term Costs TBC	
		Schools connected to Food Waste Hero volunteers and local businesses, to share surplus food (and other goods) rather than produce waste to increase children's awareness about the value of food and goods and reduce waste.	2. Investigate Freecycle for food schemes, to reduce food from schools go to waste and gets used, either for food banks or homeless shelters				
T23	**Celebrate schools achievements in climate emergency initiatives and inspire the future generations.**				**TBC**	**TBC**	
23.1	**Launch sustainability awards for schools.** Raise awareness of achievements and inspire the wider borough to engage with the climate emergency agenda.	Create an awards scheme to recognise and celebrate the efforts and achievements of local schools and their engagement with the climate emergency agenda. Engage children with climate emergency initiatives.	1. Establish the criteria for all schools to participate. 2. Promote the school awards.	This project is on hold, however the achievements of schools around issues of sustainability are celebrated where possible through council communications.	Included in total	Short term Costs TBC	

REF	Action / Co - Benefits	Description / Outcomes	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
23.2	**Nurture creativity and resourcefulness amongst children and young adults.** Raise awareness of achievements and inspire the wider borough to engage with the climate emergency agenda.	Create a culture of innovation and enterprise thinking on climate emergency solutions Help develop resourcefulness and creativity that is connected to climate change.	1. Roll out the Dragons Den climate competition across all schools.	The pilot was successfully completed at one secondary school in the 2019/20 academic year. This project now on hold due to limited resources.	0.34 tCO_2e	Short term Costs TBC	
23.3	**Implement a behavioural change programme within schools that would support the adoption of new behaviours, particularly within sustainability and climate change.** Raise awareness of achievements and inspire the wider borough to engage with the climate emergency agenda.	Initial pilot in three schools will result in engaging 200 children who are encouraged and rewarded for taking daily sustainable actions.	1. Identify and propose schools that should be part of the pilot. 2. Set up focus groups with children to drive the platform design. Potential to use eco committees within schools. 3. Write a Business Case that includes timelines, activities and carbon savings to obtain funding for the scheme implementation.	The council undertook an internal 'Market Engagement' event in October 2021 where council officers had the opportunity to assess various 'behaviour change' platforms, tools and organisations on the market. Several of these were focused on schools, mostly related to transport. The next step will be to identify a gap which can be addressed through a platform.	TBC	Short term Costs TBC	

Waste and Recycling

Annual Carbon Savings: 59,398.91 tCO_2e (Out of scope)

To reach total net zero, along with minimising wider environmental impacts such as plastic pollution, it is vital to also minimise the amount of waste produced. This reduction is the primary goal of the waste strategy, alongside ensuring all recyclables are sorted correctly wherever possible.

Overall, this year's total waste decreased to 71,624 tonnes, with the recycling rate rising to 54%. This totalled 38,852 tonnes of the overall amount, meaning 15,620.45 tonnes of CO_2 savings and 221.13 $kgCO_2e$ per household, a huge achievement. This is thanks to the below actions.

Key Achievements:
These milestones have been completed in the action plan this year:

- Waste Strategy approved and cross-party working group formed.
- Conducted surveys to identify sites to target for food waste.
- A number of successful campaigns and communications have been run in this area and continue to do so, including comms on food waste over Halloween and festive period.
- 14 champions developed, to identify and respond to issues quickly.
- Low participation food waste areas identified and targeted with straw pool observations and surveys to identify barriers.
- Conversation with multiple developers to improve their provision of communal dwellings waste and recycling materials, along with engagement in initiatives.

Consumption Emissions:
Per household an average of 0.55 tonnes of waste is being reused/recycled, against 0.46 tonnes of residual waste, with the majority going towards EfW (only 0.05tonnes to landfill). Within this household figure, it is estimated that for consumption emissions: 194.75 tCO_2e arises from residual waste and 11.7 tCO_2e arises from all the recyclables combined.

Our Partners:
Here the main partners for each have been the Town and Parish Councils, Veolia (waste collection), re3 (Waste disposal). We are also working closely with our schools, residents and businesses.

Behaviour change is of great importance to firstly reduce the amount residents and businesses throw away and secondly to encourage to recycle more. There are a number of different ways to engage and communicate with residents to encourage this shift in behaviour which the council is exploring.

Future Opportunities:
A variety of government led policies will impact on the future effectiveness and likelihoods of these actions, including, the environment bill, the white paper and the sixth carbon budget which includes a section specifically regarding waste. Therefore, as each of these develops, they will influence the below actions and scope of such. This is a live document, meaning as these developments are introduced, they will be incorporated and actions adapted, assessing throughout what opportunities are available to maximise the potential benefits, such as energy from waste.

New Actions: Target 26 has been added, aiming to improve the awareness of recycling and its benefits within school children.

SDGS:

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
T24	**Eliminate loss of MDR recyclable material in the form of wet paper.**				**5,188.67 tCO_2e**	**TBC**	
109 **24.1**	**Increase awareness amongst residents to keep paper and card dry.** Improved awareness about overall recycling quality and increased communication with residents. Residents more likely to participate as not handling soggy waste. Covid communication about keeping waste clean and dry in order to prevent covid transmission to workers etc., will also indirectly benefit.	Reaching a high level of awareness amongst residents about the implications of wet recyclables and impact on recycling rate through regular (weekly) campaigns to prevent loss of recyclable material.	1. Delivering collection bags to all residents to use for MDR waste instead of black boxes. 2. Repeated communication delivered on this subject. 3. Eliminate wet paper rejections.	This has now been completed, with bags distributed and no collections being rejected for wet waste. Black boxes have been repurposed. Comms sent out to celebrate this and to confirm future plans.	5188.67 tCO_2e	Short term £288k	
T25	**Achieve 70% recycling target by 2030.**				**45,270.5 tCO_2e**	**TBC**	
25.1	**Implement a new waste and recycling collection**	Following consultation, a full	1. Prepare consultants briefing, Options appraisal in early 2021, Market	New waste strategy process approved, to			

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
110	**system with improved facilities.** Improved system in general facilitating this across all materials. Includes permanent solution to keeping paper and cardboard dry.	Waste Strategy will be devised and implemented which will focus on waste minimisation, a high recycling rate, improved quality of recycling and reduced collection/ disposal costs and reduced carbon emissions. It will deliver an improved system in general, facilitating this across all materials.	research and Decision making by end of 2021. 2. Devise and adopt the communications plan by 2022 3. Development of the Waste Strategy throughout 2022. 4. Communication with residents pre-delivery. 5. Delivery of new waste collection methods by March 2026 (three month). 6. Ongoing communication with residents post delivery. 7. Assess impact of the new initiative on the property stock. 8. The council operations are included in this target.	be complete by 2023, with a cross-party working group established to deliver this. Options including associated costs to be presented to members at next cross party working group. 1st stage of consultations complete. Separating food waste and other initiatives at re3 WR Centres, such as rigid plastics. Council wise carboard and cans are being recycled, along with separate food waste bins provided.	Included in total	Medium term Costs TBC	
25.2	**Improve residents' engagement with waste and recycling initiatives via partner Green Redeem.**	Weekly customer email to subscribers and monthly targeted campaigns to coincide with	1. Weekly email to prompt residents on presenting their waste / recycling. 2. Waste reduction campaign by GreenRedeem. 3. Climate Change Emergency campaigns.	A number of successful campaigns and communications have been run in this area and continue to do so.	7,395.10 tCO_2e	Short term £252,480	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
111	Increased communication with residents. Increase in gardening and allotment interest may lead to greater garden waste recycling, food waste and composting opportunities. Going forward people have started to give more to charity shops and find ways to re-use/sell unwanted items rather than disposing of them, while also being more selective of waste on the whole, so as to not overload general waste when limited disposal is available.	council's services and initiatives to increase the level of participation in recycling and improve the accuracy of recycling materials. Alongside greater awareness amongst residents about environmental issues.	4. Promote and prompt residents to renew Garden Waste. 5. Promote online bulky waste collection service.	Residents reminded via email and in other communication to renew their service. 11% of annual recycling amount now coming from this service. Planned food waste comms campaign to celebrate what has been done so far, making more of a social norm. Campaigns in May focusing on zero waste, community gardens, littering, repair cafes and soft plastics. Significant increase in users in March		(£31,560 per annum)	
25.3	**Target low participation areas to increase food waste tonnage to increase participation above 70%.**	Improve uptake in food waste recycling to increase food waste tonnage, hence reducing	1. Veolia to identify areas where FW recycling requires improvement (completed). 2. Veolia to give tonnage reports from vehicles rounds to help identify progress and localities requiring improvements. Subject to having the	List of 6 target areas and specific roads identified by Veolia as the worst performing on food waste. Also using ACORN map to identify areas of	36,805.2 tCO_2e	Short term Costs TBC	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
112	Low participation areas likely low in all aspects so identification can allow for focus and communication on all recycling. Likely will lead to greater food security/reduced inequality due to more donations of excess. Also greater health as residents able to purchase cheaper veg and items in general under shop excess schemes. Opportunity for communication in delivery.	loss of recyclable material.	capacity and RBs sign off to this request. 3. JA to take straw poll of FW food waste participation to ensure meets 50% figure being used. 4. Ticker system use to be investigated to identify in more detail areas requiring support with FW. 5. Letters to be sent out to Residents in low participation areas. 6. Build up a network of recycling champions made up of residents (10 per quarter). Residents raising concerns or complaints about the service will be targeted as they have demonstrated a concern and care about recycling issues in their area. 7. Increase FW & Recycling signage in communal bin stores - Create Signage to promote food waste recycling as well as general recycling. Assess 10/15 sites per quarter through site visits and contact with champions and increase signage accordingly. 8. Food waste directed from blue bags to food caddys to save funds against financial plan.	depravation to ensure this process is representative, while communal areas are included. The same areas will see multiple visits over a month to ensure repeat quality data. Straw polls have been undertaken in key areas, with mixed results in areas varying with income levels. Letters sent out to those with low participation rates. 14 champions in total, to identify and respond to issues quickly. Some reports from these already which have been investigated and addressed. More red bins added to stores for communal areas.			
25.4	**Increase & improve facilities for glass recycling.**	Increase capture rate of glass from	1. Identify potential new specific and sheltered sites by communicating	Glass expected to move to kerbside collection		Medium term	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
113	Supports wider glass usage in goods, meaning less plastic. Kerbside collections also means less travel for residents.	general waste through introduction of 50 new specific recycling sites and kerbside collections at sheltered accommodation, making it more convenient for residents and reducing loss of recyclable material.	with parishes & town councils and other private businesses & partners such as FCC. 2. Install bottle banks once approved and communicate this with site management and residents. 3. Providing kerbside glass collection at sheltered accommodation.	following environment bill.	1,070.25 tCO_2e	Costs TBC	
25.5	**Proactive approach to partner with housing developers to deliver waste management facilities in new developments.** Opportunity to induce better recycling habits amongst new residents. Home working means more domestic waste so this needs to be accounted for in planning.	Provide good waste and recycling facilities and communicate the system to new residents in new developments. Leading to greater recycling rates and quality.	1. Contact Developers to ensure they have access to the guidance document for providing waste & recycling facilities for single and communal dwellings. 2. Establish relationships with sales offices as well as site managers & directors of communal dwellings to further establish that the proper W&R materials are in place and appropriate for new residents moving in.	All developers in WBC database have been sent the 'W&R Guidance for Developers' document. Open Dialogue with Bewley Homes sales office for Equestrian Walk, along with First Port and Burford Court to improve their provision of communal dwellings waste and recycling materials for	Neutral as applies to future developments	Long term Costs TBC	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
	May lead to requests for upgrades for existing homes. Designing this optimally from the start will save time and costs on collections.			Jasmin Square and regarding resident engagement in FW & Recycling efforts. Contact to improve provision with managing agents and developers continues to take place, Metropolitan Thames Valley Housing, Sage Housing, Trinity Estates and many others.			
T26	**Target 26. Zero waste going to landfill by 2050.**				**8,939.75 tCO_2e**	**TBC**	
26.1	**Identify, establish & deliver necessary measures to achieve zero waste to landfill from domestic properties.** More land available for other uses such as renewable energy. Going forward people have started to give more to charity shops and find ways to re-use/sell unwanted	Reuse, recycle and recover 100% of WBC waste from domestic properties by moving waste up the waste hierarchy and increasing potential savings from landfill diversion.	1. Comprehensive communications campaign on "Reuse" and "Appropriate Recycling" including website, social media, GreenRedeem and target campaigns to divert as much recycles from waste as possible. 2. Tagging contamination recycling and leave uncollected. 3. Identify alternate markets for hard to recycle items.	Ongoing campaigns and actions are significantly contributing towards a reduction in waste to landfill. Consultation regarding enforcement is ongoing. We receive less contamination through the use of bags, and once more settled after covid disruption will be	8,939.75 tCO2e	Long term Costs TBC	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
	items rather than disposing of them, while also being more selective of waste on the whole, so as to not overload general waste when limited disposal is available.			progressed further via tagging. Combustion has been identified as one potential avenue of energy generation to minimise existing fossil fuel use. 22770 tonnes of borough waste going to EfW (so only 6% to landfill), provided 12.68 gWh this year.			
26.2	**Engage school children in recycling via Green Team & Youth Council. Improve awareness of recycling and its benefits in school children.** These suggestions may be passed on to the parents and wider family. It will have a long-term benefit by embedding the ideas early.	Deliver events and material to support schools in increasing awareness and knowledge of waste and recycling, as part of a wider climate emergency programme towards this demographic.	1. Speak about the circular economy at the Youth Council climate change themed event & link it to the borough's waste & recycling practices, introducing the circular economy. Include an activity for participants (September). 2. Develop activities for primary school aged children. A Wokingham waste & recycling themed board game designed as an activity for teachers to use in-between curriculum topics with the aim activity to gamify waste and recycling (for primary school aged children).	1. Completed – Foundry contacted after this asking for follow up discussion. 2. Not Started	Included in total	Short term Nil	

*The previous action 26 on contamination has been removed as it was explored and the decision made not to take it forward.
** The previous action 28 on incoporating carbon based savings targets has been removed from the table as it has been incorporated into the carbon savings column and methodology.

New Development

Annual Carbon Savings: Neutral as applies to future development, hence no yearly saving figures either.

With a rising population and increasing need for new homes, including from government requirements, it is essential this service is provided, alongside supporting infrastructure, businesses and council requirements. However, it is vital not to repeat past mistakes, in order to minimise the overall long term cost of reaching net zero (with aspects like retrofit much more expensive retroactively). Therefore, by using this information, combined with industry knowledge, government policy and proper planning, guidelines and requirements can be established to ensure high standards are met across all aspects of new development construction.

Key Achievements:
These milestones have been completed in the action plan this year:

- Ruscombe draft neighbourhood plan consultation complete and will proceed to next stage of examination.
- £84m in funding collected from developers – see below.
- Local Plan – Revised Growth Strategy Consultation complete and analysis of main issues underway and will inform future stages.
- Carnival hub assessment complete and measures implemented to improve efficiency.
- Carnival apartments reassessed and expected to be net zero, primarily through PV generation.
- Design options at Gorse ride under assessment.

Consumption Emissions:
The construction industry is very material focused and thus, has a high level of consumption emissions associated, though these emissions are out of scope.

Our Partners:
The following partners are vital to completing the action listed in the action plan below: Development Management and Delivery, Planning Policy, Building Control, Developers, Housing Associations and the highways authority as well as consulting with the local community and stakeholders.

Although much of the targets and goals involved in this section of the action plan are focused on infrastructure and planning, behaviour change remains important for residents to understand the value of these new innovations and interventions in the development sector. The council will continue to communicate about these new technologies and explain their importance.

Future Opportunities:
The council responded to a consultation on the Future Home Standards to ensure the ability for Local Plans to set higher energy performance standards for all new homes. The government has set out plans to radically improve the energy performance of new homes, with low carbon heating and be zero carbon ready by 2025. These homes are expected to produce 75-80% lower carbon emissions compared to current levels. To ensure industry is ready to meet the new standards by 2025, new homes will be expected to produce 31% lower carbon emissions from 2021. Existing homes will also be subject to higher standards, making homes warmer and reducing bills.

	New Actions: Action 28.2 has been incorporated into 27.2 as both will be covered by the supplementary planning document.

SDGS:

REF	Action / Co - Benefits	Description / Outcome	Milestone	Current Status	Carbon Savings	Timescale / Total Cost	RAG
T27	**Towards the end of 2023, major residential development to be designed and built to achieve carbon neutrality.**				**Neutral**	**TBC**	
117 **27.1**	**Require major residential development to achieve carbon neutrality.** A chance for Wokingham Borough Council to take the lead and set an exemplar approach. Cheaper future operational costs for residents.	Policy within the new Local Plan will require residential developments of 10 or more dwellings to provide carbon neutral homes. A definition of what carbon neutral means in this context will be provided. Where there is robust evidence that this cannot be achieved on site, the council proposes to accept appropriate carbon offset financial contributions.	1. Prepare climate change evidence base in support of the Local Plan Update (LPU). This will be a key part of evidencing the requirements set out in the draft plan and will contribute towards the goals relating to new development in the CEAP. 2. Consult on draft policy as part of the Draft Local Plan. 3. Publish draft policy as part of the Pre-Submission Local Plan. 4. Policy included within adopted Local Plan.	This is being incorporated into the local plan update. Climate change evidence currently being finalised. Evidence will inform improvements to Draft policy. Draft Local Plan Consultation and analysis of main issues relating to policy wording complete. Representations received will inform future stages.	Neutral	Short term Nil	

REF	Action / Co - Benefits	Description / Outcome	Milestone	Current Status	Carbon Savings	Timescale / Total Cost	RAG
27.2	**Provide guidance to support major residential and non-residential development to achieve carbon neutrality.** Greater clarity to developers and homeowners.	A Supplementary Planning Document (SPD) will support the new Local Plan by providing additional detail on how development of all types is expected to demonstrate the achievement of the policy requirements, including carbon neutrality. The SPD will itself be subject to consultation and formally adopted, following the local plan.	1. Consult on draft Supplementary Planning Document. 2. Adopt Supplementary Planning Document.	This is to follow on from, and provide additional detail to, the Local Plan Update.	Neutral	Medium term Nil	
T28	**From 2023, major non-residential development to be designed and built to achieve the BREEAM excellent standard.**				**Neutral**	**Nil**	
28.1	**Require major non-residential development to achieve BREEAM excellent standard.** Clarity and consistency using internationally recognised standard.	BREEAM is an internationally recognised certification scheme. It provides a holistic set of criteria to support the delivery of energy efficient developments, which are resilient to the impacts, and mitigate the effects, of climate change. Development proposals will be expected to demonstrate how they have met this standard (or future equivalent) as a minimum.	1. Prepare climate change evidence base in support of the Local Plan Update (LPU). This will be a key part of evidencing the requirements set out in the draft plan and will contribute towards the goals relating to new development in the CEAP. 2. Consult on draft policy as part of the Draft Local Plan (complete). 3. Publish draft policy as part of the Pre-Submission Local Plan. 4. Policy included within adopted Local Plan.	This is being incorporated into the local plan. Climate change evidence currently being finalised. Evidence will inform improvements to Draft policy. Draft Local Plan Consultation and analysis of main issues relating to policy wording complete. Representations	Neutral	Short term Nil	

REF	Action / Co - Benefits	Description / Outcome	Milestone	Current Status	Carbon Savings	Timescale / Total Cost	RAG
				received will inform future stages.			
T29	**Establish a spatial strategy and design framework which promotes active and sustainable travel, sustainable design and construction and enables biodiversity gain.**				**Neutral**	**Nil**	
29.1	**Minimise unnecessary travel from new development, better house design for working from home and better integrated IT capability.** Residents will be more likely to choose active transport over cars as adults, health benefits from exercise, rather than private car. People have embraced local green spaces. Increased time freedom due to lack of commute also increases adoption of active transport methods.	The new Local Plan will establish a spatial strategy which secures a pattern of development which allows for more people to live and work where journeys can be undertaken by walking, cycling and public transport. Buildings, services and infrastructure need to be able to respond to new working patterns and needs.	1. Consult on draft policy as part of the Draft Local Plan. 2. Publish draft policy as part of the Pre-Submission Local Plan. 3. Policy included within adopted Local Plan.	This is incorporated into the local plan. Local Plan Revised Growth Strategy Consultation complete and analysis of main issues currently being undertaken and will inform future stages.	Neutral	Short term Nil	
29.2	**Require development, including the public realm, to be accessible to all and prioritise walking, cycling and other**	Development will be expected to include measures to make walking and cycling the mode of choice for shorter journeys, both within and through the site,	1. Consult on draft policy as part of the Draft Local Plan. 2. Publish draft policy as part of the Pre-Submission Local Plan.	This is incorporated into the local plan. Draft Local Plan Consultation and	Neutral	Short term Nil	

REF	Action / Co - Benefits	Description / Outcome	Milestone	Current Status	Carbon Savings	Timescale / Total Cost	RAG
	sustainable modes of transport. Residents will be more likely to choose active transport over cars as adults, health benefits from exercise, rather than private car. People have embraced local green spaces. Increased time freedom due to lack of commute also increases adoption of active transport methods.	including links to facilities, services, bus stops and train stations. They will be designed so that they are easily navigable for people of all ages and physical ability.	3. Policy included within adopted Local Plan.	analysis of main issues relating to policy wording complete. Representations received will inform future stages.			
29.3	**Require allocations for major development to secure smart and sustainable approaches that champion climate change resilience and adaptation.** Potential to provide exemplary new developments at scale which can facilitate wider green and energy infrastructure improvements	Buildings, services and infrastructure need to be able to respond to the impacts of climate change. Part of this ability relates to ensuring that new development is designed to adapt to more intense rainfall, the possibility of flooding, plus heat waves and droughts. The design of developments, including the use of materials, must consider matters such as shading, insulation and ventilation, surface water runoff and storage and the use of	1. Consult on draft policy as part of the Draft Local Plan. 2. Publish draft policy as part of the Pre-Submission Local Plan. 3. Policy included within adopted Local Plan.	This is incorporated into the local plan. Draft Local Plan Consultation and analysis of main issues relating to policy wording complete. Representations received will inform future stages.	Neutral	Short term Nil	

REF	Action / Co - Benefits	Description / Outcome	Milestone	Current Status	Carbon Savings	Timescale / Total Cost	RAG
121		appropriate tree and other planting.					
29.4	**Provide positive policy framework for retrofitting existing buildings.** Limitations in the role of planning policy and decision making to influence existing buildings, but highlighting a permissive approach will assist in raising the profile of retrofit.	Existing domestic buildings contribute around 34% of carbon dioxide emissions from within Wokingham Borough, whilst existing non-domestic buildings contribute around 20%. A permissive policy approach to retrofitting the existing building stock with measures that enhance sustainability and energy efficiency will assist in reducing emissions.	1. Consult on draft policy as part of the Draft Local Plan. 2. Publish draft policy as part of the Pre-Submission Local Plan. 3. Policy included within adopted Local Plan.	This is incorporated into the local plan. Draft Local Plan Consultation and analysis of main issues relating to policy wording complete. Representations received will inform future stages.	Neutral	Short term Nil	
T30	**Support low carbon and renewable energy generation.**				**Neutral**	**Nil**	

REF	Action / Co - Benefits	Description / Outcome	Milestone	Current Status	Carbon Savings	Timescale / Total Cost	RAG
30.1	**Provide positive policy supporting low carbon and renewable energy generation.** Greater clarity and assurance to local groups and businesses wishing to support renewable energy schemes in their areas.	Due to the benefits which low carbon and renewable energy generation bring to tackling climate change, development proposals for these will be supported unless there are unacceptable impacts that outweigh the benefits. An increase of renewable energy generation projects being developed across the Borough by local businesses and community energy groups.	1. Consult on draft policy as part of the Draft Local Plan. 2. Publish draft policy as part of the Pre-Submission Local Plan. 3. Policy included within adopted Local Plan.	This is incorporated into the local plan. Draft Local Plan Consultation and analysis of main issues relating to policy wording complete. Representations received will inform future stages.	Neutral	Short term Nil	
T31	**From 2023, all new residential and non-residential buildings to be designed and built to be EV ready.**				**Neutral**	**Nil**	
31.1	**Ensure new developments make adequate provision for EV. Make all new houses electric vehicle ready by establishing requirements for EV charging points in new dwellings as described in the EV strategy.** Improved air quality, reduce NOx, PM10s, PM25, cheaper to maintain and run, better	Electric and hybrid vehicle ownership is increasing, and likely to become more prevalent. Lack of charging infrastructure is a principal barrier to increased use of low-emissions vehicles. Therefore, all new developments will be expected to design in electric vehicle charging facilities from the outset. Establish the requirement for EV charging point infrastructure for new dwellings in the Borough where appropriate.	1. Consult on draft policy as part of the Draft Local Plan. 2. Publish draft policy as part of the Pre-Submission Local Plan. 3. Policy included within adopted Local Plan. 4. Developers to be informed of policy and requirements shall be listed in planning application 5. New developers to ensure that there is sufficient power serving new developments.	This is incorporated into the local plan. Draft Local Plan Consultation and analysis of main issues relating to policy wording complete. Representations received will inform future stages.	Neutral	Short term Nil	

REF	Action / Co - Benefits	Description / Outcome	Milestone	Current Status	Carbon Savings	Timescale / Total Cost	RAG
	driving experience. Also supports more constant energy usage for overall lower emissions from production. Despite covid and traditional car sales declining in the pandemic, EV sales have risen across the board.	Make sure that new homes planning applications submitted from 2023 and where appropriate, have a charge point available. This will ensure there is no barrier for new homeowners or occupants of new dwellings to own or leased an electric vehicle. Developers will have to ensure there is sufficient power serving their developments.	6. 100% new buildings are EV ready from 2022				
T32	**From 2021 100% of council new development is built to carbon neutral standards**				**Neutral**	**TBC**	
123 **32.1**	**All new council properties non-residential will be built to the highest efficiency standards from 2021.** **All new council homes will be built to the highest efficiency standards by 2024.** A chance for Wokingham Borough Council to take the lead and set an exemplar approach.	Consult on all future council builds and engaged with developers to ensure that carbon neutrality is consider from the design stage and associated cost is identified. The new development has been placed with a consultant to look at carbon neutrality and associated build costs. Net zero carbon standards to be considered for all new developments. Move away from 'gas provision' to cleaner technology for new build properties when possible.	1. Initial assessment to all new council development to assess stage of development and possible interventions to committed buildings 2. Assessment of possible interventions to Dinton Activity Centre, Arborfield School, carnival hub leisure centre and apartments, 75 London road, Toutley care home, and Addington Scheme, among others. 3. Contact providers. 4. Agree program of works. 5. Implement viable measures.	Dinton Activity Centre construction complete to become boroughs first net zero building. Carnival hub assessment complete and measures implemented to improve efficiency. Carnival apartments reassessed and expected to be net zero, primarily through PV generation.	Neutral	Medium term Nil	

REF	Action / Co - Benefits	Description / Outcome	Milestone	Current Status	Carbon Savings	Timescale / Total Cost	RAG
	Provide more efficient, warmer buildings, with cheaper running costs.		6. Monitor performance to inform future, further and wider work.	Peach place Three and Old boys school schemes currently on hold – grant received for latter to implement efficiency measures once work resumes. 75 London Road housing scheme work completed with carbon saving measures implemented. Initial stages of planning underway for Toutley care home.			

*Action 28.2 has been incorporated into 27.2 as both will be covered by the supplementary planning document

**Previous Action 32.2 has been moved to 14.2 for Gorse Ride, with remaining future projects incorporated into 32.1

Procurement

Annual Carbon Savings: Neutral as applies to future procurement, hence no savings this year either.

Procurement drives carbon savings throughout the other sections of the plan. This section of the action plan focuses on how the council can utilise its influence to encourage suppliers to also reduce their emissions, by implementing policies which incorporate this as a requirement/criteria in the overall procurement selection process.

It also covers training staff on this topic and other methods through which CE is being embedded into the governance and decision making within the council. This is primarily through an assessment tool which assists staff in identifying the potential impacts of projects and how they can potentially mitigate these. The majority of the actions are therefore listed as 'Neutral' for their carbon savings.

Key Achievements:
These milestones have been completed in the action plan this year:

- Staff CE E-learning module to be uploaded to site.
- Procurement Strategy published, which will inform many other actions.
- CE has been embedded into the PID Document and PM Sizing Tool.
- Temporary CE risk assessment tool applied to Exec Papers

Consumption Emissions:
All goods purchased and used by the council come with their own consumption emissions, though these are not currently reported as they would be outsourced scope 3 emissions. However, the council recognises the importance of sourcing products from more sustainable sources and the need to expand the lifetime of goods wherever possible.

Our Partners:
WBC works with a large range of suppliers as part of its essential operations, whether through contracts to provide external services, supporting operations or supplying goods/services directly to council sites. All of these suppliers must be approved via strict official and documented procurement process, whether through an approved supplier network or tender application system.

Therefore, WBC will exert its considerable purchasing influence wherever possible to encourage suppliers to improve their own sustainability measures, prioritising those who have done so where possible.

Future Opportunities:
With a number of significant contracts and strategies set to expire or be reviewed before the 2030 goal, along with vehicles becoming outdated and with a series of new policies such as the petrol/diesel ban etc, these opportunities will be utilised to review and improve the sustainability elements of these services, by incorporating such into the official tender processes.

New Actions: The old actions 34.3 and 33.5 have been removed as identical to new action 34.3.

SDGS:

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
T33	**By 2022, achieve sustainable procurement practice throughout the council as part of Corporate Procurement Strategy**				**Neutral**	**Nil**	
33.1	**Include a drafted approach to sustainable procurement within review of Procurement Strategy.** Opportunity to identify cost savings from greater efficiency and minimal waste.	Goods contracts will consider whole-life costing including disposal. Service and works contracts will include carbon neutrality or reduction measures either directly or indirectly by their design. Procuring in line with business needs and climate emergency targets.	1. Draft update to procurement strategy. 2. Seek consultation of strategy with SLT. 3. Achieve sign off of strategy. 4. Implementation and communication of strategy with CEM.	Strategy approved July 2021. Procurement board to be put in place.	Neutral	Short term Nil	
33.2	**Develop a sustainable procurement culture and associated skills for green procurement.** Will encourage consideration of wider objectives to be incorporated, such as planting trees or implementing cycle lanes simultaneously in projects.	Design of an e-learning module training people in green procurement techniques.	1. Complete E-learning design. 2. All staff in council who procure to complete training on CE.	CE E-learning module to be uploaded to site. Coaching feasibility study underway.	Neutral	Medium Term Nil	
33.3	**Assess suppliers on sustainable procurement standards.** Encourages competition between suppliers, which	Evaluation of all suppliers to promote sustainability proportionate to contract and financial constraints.	1. All buyers/ commissioners in the council to impose carbon targets on our suppliers including reporting back of carbon production.	Not Started	Neutral	Medium Term Nil	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
	may generate other benefits in terms of efficiency and cost savings. Has a knock on effect as this supplier will now be more competitive for wider contracts.	Use of the Standard SQ / inclusion of a pass/fail phase in all contract evaluations.	2. All buyers/ commissioners taking embedded carbon into account when purchasing goods and services. 3. Performance Team to name the top 20 carbon producers from our suppliers.				
127 **33.4**	**Implementation of sustainable procurement KPIs amongst suppliers.** Will incorporate more stakeholders and viewpoints, allowing for wider objectives to be incorporated, such as planting trees or implementing cycle lanes simultaneously in projects. Supports local residents and businesses, developing skills in these key areas.	Contracts have sustainability KPIs included where suitable to contracts scope and will be performing within the 'green' threshold (or equivalent) for these KPIs.	1. Consult with stakeholders, including local and national business during the development of council's sustainable procurement policy through a consultation event. 2. All buyers/commissioners embed carbon KPI targets into all suitable council contracts. 3. Provide clear and detailed instructions to suppliers on the council's sustainability requirements. 4. Investigate opportunities from big businesses to train SME and VCSE in bid writing, social value etc.	Not Started	Neutral	Medium term Nil	
T34	**By 2023, the council will consider social value, including carbon neutrality, in all its procurement cycles**				**Neutral**	**Nil**	
34.1	**Introducing a culture of carbon neutrality in all council procurement activities.**	For environmental social value, include carbon impact into the council's principal business activities, relevant to project's scope, risk and value:	1. All buyers/commissioners ensure that the corporate strategy themes of carbon neutrality is embedded in each procurement cycle.	Climate Risk Assessment tool for embedding under assessment. Already in place	Neutral	Short term Nil	

REF	Action / Co - Benefits	Description / Outcome	Milestones	Current Status	Carbon Savings	Timescale / Total Cost	RAG
	Will incorporate more stakeholders and viewpoints, allowing for wider objectives to be incorporated, such as planting trees or implementing cycle lanes simultaneously. May also identify cost saving opportunities.	Business Needs Analysis and Case Approval. Contract and Specification Design. Bid Submission Evaluations. Contract and Supplier Management.		for project management sizing tool. Temporary CE risk assessment tool applied to Exec Papers.			
34.2	**Adopt a WBC Social Value Policy** Supports people and particularly vulnerable populations around the globe.	Generation of a WBC Social Value policy, linking to corporate procurement strategy.	1. Draft social value policy. 2. Consult with businesses and SLT 3. Implement communication of policy via CEM.	Not Started	Neutral	Medium term Nil	
34.3	**Promote local skills and employment** Supports local residents and businesses, reducing unemployment. Develops local skills for long term careers.	Where appropriate, locally-based suppliers will be used for all direct award and quotation processes, leading to reduce carbon impact from logistics and travel where compliant. Improve Skills for low carbon transition, including supporting those in traditional 'high carbon industries to retrain.	1. All buyers / commissioners to impose SME/local supply targets on suppliers including reporting back of SME/local supplier subcontracting and carbon reduction. 2. Performance Team name the top 20 suppliers supporting scheme.	Not Started	Neutral	Medium term Nil	

Engagement and Behaviour Change

Annual Carbon Savings: Neutral as per below, hence no savings this year either.

This section of the action plan focuses on promoting and accelerating the shift to more sustainable behaviours amongst our residents, businesses, schools and community organisations and will feed into the carbon savings achieved elsewhere on this action plan, such as increased use of public transport, as well as reducing out of scope emissions from purchases of goods and services. The majority of the actions are therefore listed as 'Neutral' for their carbon savings.

Key Achievements:
These milestones have been completed in the action plan this year:

- Lets Talk Climate sessions organised and run, with external facilitator.
- The climate emergency newsletter continues to be successful, directing readers to numerous online articles on these topics.
- Market engagement has been undertaken with multiple organisations to identify opportunities for optimal public engagement, with a pilot scheme under development.
- Green Team achieved a monthly internal newsletter article each month in 2021.

Consumption Emissions:
The engagement targets below are to reduce overall carbon footprints of our residents which includes all 3 scopes of emissions, including indirect or 'consumption' emissions which includes out of borough travel, goods and services purchased, food choices etc.

Our Partners:
WBC is keen to engage with as many stakeholders as possible within the borough in order to drive sustainable behaviour change. This includes businesses, community and voluntary organisations, schools and young people, Town and Parish councils, council colleagues and residents more generally.

Working in partnership with all stakeholders is vital to tackling the climate emergency which is not possible alone. Behaviour change is vital to achieving many of the goals throughout this action plan which rely on uptake of technologies, initiatives and schemes by local residents and businesses in order to result in the associated CO_2 savings.

Future Opportunities:
The government's Build Back Better strategy will enable more policy and mean more opportunities will become available for businesses at a local level, particularly in promoting the green sector. Both of these opportunities will be thoroughly built into the upcoming Climate Emergency Engagement & Behaviour Change Strategy. The intention is to develop and implement an engagement and behaviour change strategy that is specifically targeted towards tackling the climate emergency and will dictate the actions within this section of the plan going forward, once approved and published.

New Actions: There are no new actions in this section of the CEAP.

SDGS:

REF	Action / Co - Benefits	Description /Outcomes	Milestone	Progress	Carbon Savings	Timeline / Total Cost	RAG
35	**Raise awareness in the community about the climate emergency agenda**				**Neutral**	**TBC**	
35.1	**Implement a Wokingham Borough Council Climate Emergency Engagement & Behaviour Change Strategy.** Ensures that all voices are heard and accounted for. Develops relationships with numerous stakeholders.	Ensure there is a long-term plan for the delivery of sustained communication with all stakeholders in the borough needed to tackle the climate emergency, including residents, businesses, young people, council staff and the Town and Parish Councils.	1. Options appraisal to inform on different engagement methods. 2. Complete a visioning project (Let's Talk Climate) to allow for residents, businesses, community organisations and young people to envisage how a net zero carbon borough will look in 2030. 3. Investigate behaviour change barriers. 4. Develop a programme available for residents to shift to more sustainable choices and be rewarded for forming these new habits. 5. Draft the Climate Emergency Engagement & Behaviour Change Strategy for approval at Council. This includes completion of an Equality Impact Assessment to measure the potential impacts on all members of the community. 6. Consult with community-based organisations and town & parish council's on the strategy. 7. Support Town and Parish councils to share best practice and lessons learned to set out a path to net zero carbon in their own operations, where possible.	The community deliberative process on climate change is a wide community engagement process. The project is currently coming to the end of the first stage where key stakeholders came together in 'deliberative peer groups' to discuss key issues of local climate change impacts and potential solutions and form recommendations for the council to adopt into its CEAP. These groups were: - Residents x2 - Businesses - Community groups & voluntary sector - Teachers - Primary School-aged children (plus a parent) - Secondary school-aged children - Town & Parish council clerks - Council Officers The next stage is an e-panel (similar to an online survey) to allow a wider group of residents	Neutral	Medium Term £46,000	

				can give feedback on these recommendations. The final report of the outcomes and recommendations from the process to go to council Autumn 2022.			
131 35.2	**Actively communicate the progress of the climate emergency initiatives delivered borough-wide.** **Provide and share information with residents on how to reduce their carbon emissions**. Develops relationships with residents to be a trusted provider.	Develop a sustained campaign to provide information, advice, and signposting to promote behavioural change amongst residents to drive engagement with council initiatives. Encourage residents with opportunities to improve energy performance of homes and buildings, reduce carbon emissions from transport, adopt new behaviours.	1. Set up a resident climate emergency newsletter to promote the actions the council are taking and focus on how individual actions can make a big difference. 2. Deliver a campaign to businesses on COP26. 3. Ensure climate emergency messaging is intertwined with comms plans for projects sat within the climate emergency action plan across the council, such as transport, waste and development projects.	The climate emergency newsletter is now well underway, with multiple useful iterations produced and delivered, including a monthly spotlight to provide encouragement and demonstrate viability for others. As of April 2022, there are 4,675 subscribers to the newsletter. Articles are published regularly on the council website: https://news.wokingham.gov.uk/ A number of articles on COP26 have been included in the business matters newsletter, with strong feedback, along with a summary update included in the upcoming business directory. This action plan itself is published annually with progress updates on each target.	Neutral	Short term Nil	
35.3	**Provide communicatio n support to**	Develop a sustained communications campaign to provide	1. Align engagement campaigns to the climate emergency programme designed for schools and deliver	The council promotes it's offering to schools relating to climate emergency through serval	Neutral	Short term Nil	

132	**promote sustainable action taking place in schools.** Develops relationships with numerous stakeholders. Long term benefits of children being more active on these issues, along with passing it across to parents.	information, advice, and signposting to promote behavioural change amongst schoolchildren and staff and giving more background to link the action to the climate emergency. Residents of the borough will gain a better understanding of why school children and staff are making sustainable changes and will be better informed of how this can be applied to their own lifestyle.	engagement campaigns to inspire children and school staff to adopt new behaviours.	channels including Education News (weekly newsletter) and the My Journey and Air Quality Active Travel Officer social media pages. We will continue to work to build and strengthen relationships with schools around climate change issues.			
35.4	**Support changes in work practices and behavioural change amongst council staff.** Healthier staff living more	Wokingham Borough Council staff to be better informed of their impact as an organisation and how to drive this impact down through projects and communications, providing information, advice & signposting to promote behavioural change amongst	1. Deliver a sustained communications campaign through the council's Green Team to inspire staff to reduce their personal carbon footprints by making sustainable shifts in their daily routines. 2. Investigate and promote the carbon footprint of Wokingham Borough Council as an organisation and workplace and how individual actions of staff contribute towards this.	Internal comms articles continue on key issues, including a Together Again staff newsletter to encourage colleagues to maintain 'greener' habits formed during home working. Coaching feasibility study underway.	Neutral	Short term Nil	

	sustainable lifestyles. Reducing the council's own carbon footprint as an organisation.	council employees (e.g. active and sustainable travel, increased plant based food).	3. Communicate environmental benefits and carbon savings of the Workplace Reimagined project to ensure staff are fully informed. 4. Investigate a behaviour change platform for business use.				
35.5	**Support changes in work practices and behavioural change amongst local businesses.** Develops relationships with numerous stakeholders and identifies the council to be a trusted provider. Potential for economic benefits from green recovery and build back	Provide information, advice, signposting to promote sustainable behaviours amongst local businesses (e.g. remote working, retrofitting buildings, solar PV installation). Promote working from home practices to reduce the proportion of staff at corporate sites for more efficient use of the space. Ensure the climate emergency action plan is fully aligned with the Wokingham Borough Council's Economic Recovery Strategy and the government's plan for a Green Recovery,	1. Host events to stimulate the conversation around sustainability in business between the council and the business community. 2. Ensure the conversation is kept going through regular climate emergency articles in the Business Matters newsletter. 3. Engage with providers to gather information on what more can be done with businesses. 4. Assessment of unintended consequences from the national lockdown (COVID-19) and the effects to energy consumption and site occupancy of corporate sites. 5. Incorporate into the Climate Emergency Engagement & Behaviour Change Strategy. 6. Provide monthly spotlights for businesses to demonstrate real actions they can take from people in a similar position.	The climate emergency newsletter is now well underway, with multiple useful iterations produced and delivered, including a monthly spotlight to provide encouragement and demonstrate viability for others. A number of articles on COP26 have been included in the business matters newsletter, with strong feedback, along with a summary update included in the upcoming business directory. Market engagement has been undertaken with multiple organisations to identify opportunities for optimal public engagement, with a pilot scheme under development. The council held its second Climate Conversations event	Neutral	Short term Nil	

	better schemes.	which focuses on enabling local business to Build Back Better.		successfully. A virtual webinar-style event with a discussion panel of local experts. The theme was 'Carbon Footprinting. Further conversations are pending once capacity is expanded.			

Appendix 1. Data Sources

Table 5: Summary GHG inventory table of building emissions, as split by SCATTER

SUB-SECTOR	DIRECT tCO_2e	INDIRECT tCO_2e
Residential buildings	187,968.61	78,875.18
Commercial buildings & facilities	11,254.16	42,841.08
Institutional buildings & facilities	8,831.41	9,301.94
Industrial buildings & facilities	32,229.12	52,294.99
Agriculture	2,804.37	0.52
Fugitive emissions	23,738.05	-
On-road	305,851.95	IE
Rail	11,438.37	IE
Waterborne navigation	NO	IE
Aviation	NO	IE
Off-road	3,058.52	IE
Solid waste disposal	6,664.21	-
Biological treatment	NO	-
Incineration and open burning	NO	-
Wastewater	9,888.15	-
Industrial process	44,871.97	-
Industrial product use	0.00	-
Livestock	9,383.60	-
Land use	-15,861.55	-
Other AFOLU	NE	-
Electricity-only generation	NO	-
CHP generation	132.57	-
Heat/cold generation	NO	-
Local renewable generation	2.01	NO
Notation keys:		
NO - Not Occurring	IE - Integrated Elsewhere	NE - Not Estimated

Table 6: Summary GHG inventory table of building emissions, as split by BEIS

Wokingham Carbon footprint 557 $KtCO_2e$	$KtCO_2e$
Industry and Commercial Electricity	74.5
Industry and Commercial Gas	39.9
Large Industrial Installations	0.01
Industrial and Commercial Other Fuels	15.8
Agriculture	4.1
Domestic Electricity	59
Domestic Gas	186.9
Domestic 'Other Fuels'	10.8
Road Transport (A roads)	76.7
Road Transport (Minor roads)	97.7
Transport Other	9.7
LULUCF Net Emissions	-17.4

• BEIS data (right-hand table) and SCATTER data are compiled using different methodologies. The SCATTER model (Setting City Area Targets and Trajectories for Emissions Reductions) operates on 2018 data. BEIS data is from 2019. See page 52 for further notes on why the data differs between SCATTER & BEIS.

Data Sources – Frequently Asked Questions

What do the different emissions categories mean within the Scatter inventory?

Direct = GHG emissions from sources located within the Local Authority Boundary (also referred to as Scope 1). For example petrol, diesel or natural gas.

Indirect = GHG emissions occurring as a consequence of the use of grid-supplied electricity, heat, steam and/or cooling within the city boundary (also referred to as Scope 2).

Other = All other GHG emissions that occur outside the city boundary as a result of activities taking place within the city boundary (also referred to as Scope 3). This category is not complete and only shows sub-categories required for CDP / Global Covenant of Mayors reporting. Other Scope 3 emissions are however explored within Sections 2 and 3.

The BEIS Local Emissions Summary does not differentiate between direct/indirect/other (or the various 'scopes'

What do the different sectors and subsectors represent within the SCATTER Inventory?

• The Direct Emissions Summary and Subsector categories are aligned to the World Resource Institute's Global Protocol for Community-Scale Greenhouse Gas Emission Inventories ("GPC"), as accepted by CDP and the Global Covenant of Mayors.

• The BEIS Local Emissions Summary represents Local Authority level data published annually by the Department for Business Energy & Industrial Strategy (BEIS).

• Stationary energy includes emissions associated with industrial buildings and facilities (e.g. gas & electricity).

• IPPU specifically relates to emissions that arise from production of products within the following industries: Iron and steel, Non-ferrous metals, Mineral products, Chemicals. These are derived from DUKES data (1.1-1.3 & 5.1).

• Waterborne Navigation and Aviation relate to trips that occur within the region. The figures are derived based on national data (Civil Aviation Authority & Department for Transport) and scaled to the City of Oxford region.

Why does the BEIS summary differ from the SCATTER summary?

• The BEIS summary represents CO2 only; SCATTER also includes emissions factors for other greenhouse gases such as Nitrous Oxide (N20) and Methane (CH4). These are reported as a CO2 'equivalents (e)'.

• The BEIS summary does not provide scope split; SCATTER reports emissions by scope 1, 2, and 3 (i.e. direct, indirect or other categories).

• The BEIS summary categories are not directly consistent or mapped to the BEIS LA fuel data which is available as a separate data set. SCATTER uses published fuel data and applies current-year emissions factors, whereas the BEIS data calculations scale down national emissions in each transport area. Specifically with regard to road transport, BEIS data splits total emissions across road type; SCATTER uses fuel consumption for on-road transport per LA.

• Different treatment of 'rural' emissions i.e. Agriculture, Forestry and Other Land Use (AFOLU) and Land Use, Land Use Change & Forestry (LULUCF) categories are derived from different underlying data sets and have been explored further within section 3 of this report.

Appendix 2. Glossary

Term	*Definition*
Carbon Baseline	The year against which target decreases in emissions are measured.[4]
Carbon dioxide (CO_2)	Carbon dioxide is a gas in the Earth's atmosphere. It occurs naturally and is also a by-product of human activities such as burning fossil fuels. It is the principal greenhouse gas produced by human activity.
Carbon Budget	A tolerable quantity of greenhouse gas emissions that can be emitted in total over a specified time. The budget needs to be in line with what is scientifically required to keep global warming and thus climate change "tolerable."
Carbon dioxide equivalent (CO_2e)	Six greenhouse gases are limited by the Kyoto Protocol and each has a different global warming potential. The overall warming effect of this cocktail of gases is often expressed in terms of carbon dioxide equivalent - the amount of CO2 that would cause the same amount of warming. For consistency in this climate emergency action plan, the figures on carbon dioxide emissions have been presented in tonnes **tCO_2e**
Carbon footprint	The amount of carbon emitted by an individual, organisation, geographical area or during the manufacture of a product in a given period of time.
Carbon neutral	A process where there is no net release of CO2. For example, growing biomass takes CO2 out of the atmosphere, while burning it releases the gas again. The process would be carbon neutral if the amount taken out and the amount released were identical. A company or country can also achieve carbon neutrality by means of carbon offsetting in limiting quantities not all together.
Carbon offsetting	A way of compensating for emissions of CO2 by participating in, or funding, efforts to take CO2 out of the atmosphere. Offsetting often involves paying another party, somewhere else, to save emissions equivalent to those produced by your activity.
Carbon Sequestration	The process of storing carbon dioxide. This can happen naturally, as growing trees and plants turn CO2 into biomass (wood, leaves, and so on). It can also refer to the capture and storage of CO2 produced by industry.
Climate Change	A pattern of change affecting global or regional climate, as measured by yardsticks such as average temperature and rainfall, or an alteration in frequency of extreme weather conditions. This variation may be caused by both natural processes and human activity. Global warming is one aspect of climate change.
Climate Change Act (2008)	At the core of the Act is the 2050 target to reduce UK greenhouse gas emissions by at least 80% relative to 1990, and the system of carbon budgets that provide five-year stepping stones to the 2050 target[5]. In 2019 this target was altered to achieve net zero emissions by 2050[6].

[4] https://www.bbc.co.uk/news/science-environment-11833685
[5] https://www.theccc.org.uk/2014/03/04/the-climate-change-act-a-retrospective/
[6] https://commonslibrary.parliament.uk/insights/acting-on-climate-change-the-plan-for-net-zero-emissions-in-the uk/#:~:text=Net%20zero%20is%20a%20statutory,emissions%20by%2080%25%20by%202050.

Climate Emergency	A situation in which urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it.[7]
Climate Emergency Declaration	The recognition of the urgency of the Climate Emergency by organisations, businesses or government at any level, often resulting in setting a target date to become carbon neutral.
The Committee on Climate Change (CCC)	An independent, statutory body established under the Climate Change Act 2008 whose purpose is to advise the UK and devolved governments on emissions targets and to report to Parliament on progress made in reducing greenhouse gas emissions and preparing for and adapting to the impacts of climate change.[8]
Decarbonise	To replace fossil fuels as fuel source with a fuel that is less harmful to the environment such as solar power. See Renewable energy.
Emission Trading Scheme (ETS)	A scheme set up to allow the trading of emissions permits between business and/or countries as part of a cap and trade approach to limiting greenhouse gas emissions by businesses or countries buying or selling allowances to emit greenhouse gases via an exchange. The volume of allowances issued adds up to the limit, or cap, imposed by the authorities. The best-developed example is the EU's trading system, launched in 2005.
Fossil fuels	Natural resources, such as coal, oil and natural gas, containing hydrocarbons. These fuels are formed in the Earth over millions of years and produce carbon dioxide when burnt.
Global warming	The steady rise in global average temperature in recent decades, which experts believe is largely caused by man-made greenhouse gas emissions. The long-term trend continues upwards, even though the warmest year on record, according to the UK's Met Office, is 1998.
Grand-fathering	A form of carbon budgeting which allocates a higher carbon budget to those organisations or regions, which emit at a higher levels. In other words, high emitting areas will be allowed to emit at higher levels than those with lower existing emissions.
Greenhouse gases (GHGs)	Natural and industrial gases that trap heat from the Earth and warm the surface. The Paris Agreement, following The Kyoto Protocol restricts emissions of six greenhouse gases: natural (carbon dioxide, nitrous oxide, and methane) and industrial (perfluorocarbons, hydrofluorocarbons, and sulphur hexafluoride).
The Inter-governmental Panel on Climate Change (IPCC)	A scientific body established by the United Nations Environment Programme and the World Meteorological Organization. It reviews and assesses the most recent scientific, technical, and socio-economic work relevant to climate change, but does not carry out its own research. The IPCC was honoured with the 2007 Nobel Peace Prize.
Kyoto Protocol	A protocol attached to the UN Framework Convention on Climate Change, which sets legally binding commitments on greenhouse gas emissions. Industrialised countries agreed to reduce their combined emissions to 5.2% below 1990 levels during the five-year period 2008-2012. It was agreed by governments at a 1997 UN conference in Kyoto, Japan, but did not legally come into force until 2005. A different set of

[7] https://www.oxfordlearnersdictionaries.com/

[8] https://www.theccc.org.uk/about/

	countries agreed a second commitment period in 2013 that will run until 2020.
Land Use, Land-Use Change, and Forestry (LULUCF)	Activities in this category provide a method of offsetting emissions, either by increasing the removal of greenhouse gases from the atmosphere (i.e. by planting trees or managing forests), or by reducing emissions (i.e. by curbing deforestation and the associated burning of wood).
Mitigation	Action that will reduce man-made climate change. This includes action to reduce greenhouse gas emissions or absorb greenhouse gases from the atmosphere.
Net zero carbon	A target to achieving net zero carbon dioxide emissions by balancing carbon emissions with carbon offsets and/or eliminating carbon emissions altogether.
Paris Agreement (2015)	The Agreement's central aim is to strengthen the global response to the threat of climate change by 21 countries agreeing to keep the global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius[9].
Per-capita emissions	The total amount of greenhouse gas emitted by a country per unit of population.
Renewable energy	Energy created from sources that can be replenished in a short period of time. The five renewable sources used most often are: biomass (such as wood and biogas), the movement of water, geothermal (heat from within the earth), wind, and solar.
SCATTER	Standing for Setting City Area Targets and Trajectories for Emissions Reductions, SCATTER is a local authority focussed emissions tool, built to help create low-carbon local authorities. SCATTER provides local authorities and city regions with the opportunity to standardise their greenhouse gas reporting and align to international frameworks, including the setting of targets in line with the Paris Climate Agreement.
Tyndall Centre	A partnership of universities bringing together researchers from the social and natural sciences and engineering to develop sustainable responses to climate change, working with leaders from the public and private sectors to promote informed decisions on mitigating and adapting to climate change[10].
The United Nations Framework Convention on Climate Change (UNFCCC)	One of a series of international agreements on global environmental issues adopted at the 1992 Earth Summit in Rio de Janeiro. The UNFCCC aims to prevent "dangerous" human interference with the climate system. It entered into force on 21 March 1994 and has been ratified by 192 countries.

[9] https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement

[10] https://tyndall.ac.uk/about

Appendix 3. Sustainable Development Goals

The 2030 United Nations Agenda for Sustainable Development[11], provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are 17 Sustainable Development Goals (SDGs), which act as an urgent call for action to all countries - developed and developing – to work as a global partnership. They recognize that ending poverty and deprivation must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – at the same time as tackling climate change and working to preserve our oceans and forests.

Wokingham Borough Council and the Sustainable Development Goals

The Local Government Association (LGA) passed a motion in July 2019 declaring a climate emergency. At the same time offering a unified voice for local government to assist in delivering the UN's 17 Sustainable Development Goals (SDGs). In the table below each goal has been assigned an SDG number. For example, Good Health and Wellbeing is SDG3 and links back to the appropriate action in the Climate Emergency Action Plan demonstrating how Wokingham Borough are supporting the UN's 17 Sustainable Development Goals.

Wokingham Borough Council recognises that, as a local authority, we are in the best position to raise awareness and to influence in the delivery of the Sustainable Development Goals.

No poverty SDG1	Although Wokingham is an affluent borough, we will work hard to ensure the Climate Emergency action plan creates a sustainable, carbon neutral economy that will achieve economic justice as well as economic growth.	
Zero hunger SDG2	As a rural borough, sustainable agricultural practice is of high importance as well as promoting sustainable eating in the borough through the action plan which focuses on cutting down on meat consumption.	
Good health and wellbeing SDG3	We will be encouraging sustainable transport such as cycling and converting to electric vehicles through our action plan to ensure we maintain our high level of well-being across the borough	
Quality of education SDG4	The youthful population are a large part of our action plan to meet our 2030 net zero carbon target and we aim to promote sustainable lifestyles throughout our schools and ensure we hear the voices of our children.	
Gender equality SDG5	We hope the women and girls in the borough will take part to make the action plan the most effective in everyday situations like reducing waste and single use plastics.	
Clean water and sanitation SDG6	There is a strong focus on reducing water waste in the Borough which will comply with the sustainable management of water targets sat beneath this SDG.	

[11] Resolution adopted by the UN General Assembly on 25 September 2015.

Affordable and clean energy SDG7	We are determined to roll out sustainable energy generating methods through the implementation of solar panels, particularly in our SDLs, which are both clean and affordable in the long term.
Decent Work and economy growth SDG8	Wokingham Borough benefits from a below average unemployment rate and bringing more sustainable enterprises to the borough will only enhance our working population further.
Industry, innovation and infrastructure SDG9	A large section of our action plan is dedicated to ensuring our new developments are net zero carbon through sustainable infrastructure and that we promote sustainable leaving within these new communities.
Reduce inequalities SDG10	The UK suffers from vast disparities in wealth but this can also be seen on a local scale within the Borough. We aim to work the Climate Emergency action plan with economic development in mind to ensure we achieve economic equality throughout the borough.
Sustainable cities and communities SDG11	Wokingham Borough is lucky to have an existent community that is resilient, inclusive and safe. We aim to build on this and strengthen this through the action plan to promote the same characteristics for the communities created in the new developments.
Responsible consumption and production SDG12	The themes of this goal are woven throughout the action plan to promote and encourage a change in lifestyle of the residents in the borough starting with the council staff through the work of the Green Team.
Climate action SDG13	By working towards our 2030 net zero carbon borough target we have been able to put in place Officer groups and projects that reflect the targets under our action plan and enforce action to combat climate change.
Life below water SDG14	Protecting bodies of water is essential as they are facilities for residents to enjoy in green space for non-polluting recreational activities
Life on land SDG15	Protecting our greenspace as a rural borough is of huge significance and is reflected in the action plan, as we aim to preserve the land as a carbon sink or sustainably develop on land in a way that allows the whole borough to reap the sustainable rewards.
Peace, justice and strong institutions SDG16	As an influential institution in the borough, we take our role in combating climate change very seriously and will show our respect of our communities through public consultation and incorporating resident's ideas throughout.
Partnerships for the goals SDG17	Creating partnerships are an essential aspect of our action plan, especially one which is tackling such a global problem. Partnerships, especially with the businesses in the borough, will allow us to achieve more.

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