

Greener Woking Climate Change Strategy

A vision for a net zero borough



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1.0 Introduction

Woking Borough Council has long been committed to protecting the environment. Our first climate change strategy was adopted in 2002, although activities in this area began much earlier in 1990. This climate change strategy is the follow up to 'Woking 2050', which was adopted in 2015. It reaffirms the Council's commitment to tackling climate change – a central priority for the Council, its political and corporate leadership.

A lot has happened in the intervening period. Climate change grew in prominence once again internationally, nationally and locally. And as we began to review this strategy, the effects of our changing climate were reported with ever increasing frequency in the news with record summer temperatures felt in the UK; unprecedented heat health warnings reaching code red for first time; heat related deaths across Europe and devastating floods in Pakistan. All this reaffirming the reality of climate change and the likelihood of further extremes to come if we don't act.

Defining moments on the international stage included COP26 and COP27. In November 2021, the UK hosted COP26, a conference that emphasised the continuing critical need for climate action. The emerging Glasgow Climate Pact comprised various pledges covering aspects of mitigation and adaptation such as reducing dependence on fossil fuels, ramping up the transition to electric vehicles and halting and reversing deforestation. COP27 hosted in Egypt in November 2022 saw the agreement to establish a loss and damages fund. This will see developed countries providing financial support to developing countries (which are often the hardest hit by climate change and yet contribute the least to its causes), to help fund costs accrued as a result of global warming. The commitment to limit global warming to 1.5°C above pre-industrial levels was reasserted having been central to COP26 and the requirement for countries to strengthen their mitigation plans remains in place. COP 27 was not without its controversy however with no deal struck to phase out the use of fossil fuels, instead committing to phasing down unabated coal power. Nonetheless, whilst the focus of these negotiations was sealing international collaboration; there also came an emphasis that governments and communities at all levels can and must play their part. Climate change is a global issue but one that can be tackled locally.

Meanwhile, in October 2021, the UK government published its Net Zero strategy. However, since then various global factors have impacted the national economy resulting in huge financial and inflationary pressures affecting households and businesses. The government launched a review of its strategy a year on to determine the best ways to deliver net zero to ensure it is pro-growth and pro-business.

Much has been achieved on the local scale through our previous strategy. The following activities offer a snapshot of how the Council continues to progress this agenda:

- The Council's biodiversity and green infrastructure strategy and guidance – Natural Woking – was adopted in 2016;
- In July 2019, the Council declared a [climate and ecological emergency](#) pledging to become net zero by 2030 across its own estate and operations, and by 2050 (or sooner) across the wider borough;

- A Climate Emergency Action Plan (CEAP) was adopted in February 2020 setting out a range of priority actions in furtherance of the declaration;
- The Council's climate change and biodiversity communications campaign, Planet Woking, was launched in September 2020;
- May 2022 saw the new political administration confirm climate change within its top three priorities;
- The Council's Woking for All corporate strategy (adopted in 2022) includes a core 'greener communities' theme, acknowledging the commitment to climate change action by the local authority and in its role as a key influencer and enabler for engagement by others;
- A carbon footprint assessment undertaken in 2022 gives the Council its most accurate insight to date into its emissions and pathways to a net zero estate.

However, Woking borough is not insulated from the prevailing national economic challenges and the cost-of-living crisis which is impacting our residents and businesses at the local scale. Nevertheless, as highlighted by [The Carbon Literacy Project](#), tackling climate change ought not be pitched head to head against other issues and shouldn't be a binary choice. The co-benefits of environmental action for the economy, for health and wellbeing and for the community are now more pressing than ever. The importance of local government in the role of net zero and the opportunities for local green and sustainable growth are explored in this new strategy.

Resources

Read more about our work to date in the section "How we're tackling climate change locally".

[Woking Borough Council's climate change webpages](#)

[Planet Woking](#)

2.0 What is climate change?

There is clear evidence to show that climate change is happening and is due to human activity. In fact, the [Intergovernmental Panel on Climate Change \(IPCC\)](#) states that “human activity is unequivocally the cause of climate change”.

As explained by the [Met Office](#), climate change refers to a large scale, long term shift in weather patterns and average temperatures. Since the 1800s, human activities such as burning fossil fuels, have resulted in the release of carbon dioxide and other greenhouse gases into the atmosphere. They trap the heat from the sun causing the planet to heat up – this is also referred to as global warming or the greenhouse effect. It is this process that results in changes to the climate. *Insert diagram here to illustrate greenhouse effect.*

The Met Office’s UK Climate Projections predict what effect climate change will have in the UK. Generally, we will see:

- Warmer and wetter winters
- Hotter and drier summers
- More frequent and intense weather extremes

These trends are likely to be felt in the local area with implications such as increasingly extreme local weather like more intense downpours, more severe droughts and floods, and more extreme heatwaves which all have direct and consequential impacts on our society. Some of these effects are already being felt now. Some further implications, threats and challenges of climate change are explored later in this strategy.

Greenhouse gases remain in the atmosphere for many, many years and so it is inevitable that some degree of warming will continue. However, how much will depend on what changes we can make now. In order to limit climate change, ultimately we need to make drastic cuts in greenhouse emissions. Climate scientists recommend that to prevent the very worst effects of climate change, warming needs to be limited to 1.5 degrees above pre-industrial levels. The Paris Agreement was the first-ever universal, legally binding global climate change agreement, adopted at the Paris climate conference (COP21) in December 2015. It set out a global framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C. However, research shows that global temperatures have risen by 1 degree already and to “keep 1.5 alive”, far reaching cuts in carbon together with wholesale transitions to cleaner fuels and more sustainable living are still much needed. Analysts suggest that despite pledges and actions plans agreed at COP26 and COP27, warming is likely to go beyond 1.5 degrees. Recent global geopolitical and economic factors have had a part to play in terms of slower than hoped action and delivery. What is certain though is faster paced action will not only limit catastrophic impacts on nature and society but will have benefits for more resilient and sustainable economies.

There are many ways in which we can all play our part to help tackle climate change locally, as explored in the chapters within this strategy.

Throughout the strategy, action on climate change covers two areas: mitigation and adaptation. Mitigation relates to action taken to tackle the causes of climate change i.e., by reducing greenhouse gas emissions from human activities. Adaptation relates to action taken to adapt to the inevitable effects of climate change.

In July 2019, the Council declared a climate and ecological emergency, pledging to reach net zero across the Council estate by 2030 and by 2050 or before for the wider borough.

The terms carbon neutral and net zero are often used interchangeably, but what do they mean and are they the same thing? Ultimately, they both look to remove harmful gases from the atmosphere. But, as explained by the [National Grid](#), they do this on different scales.

Carbon neutrality focuses on removing the equivalent amount of CO₂ as emitted through activities and operations. Net zero goes beyond this and looks to eliminate all associated greenhouse gases.

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3.0 Our Vision for a Net Zero Woking

This strategy sets out our net zero ambition across nine chapters:

- Theme 1: Energy
- Theme 2: Waste
- Theme 3: Water
- Theme 4: Transport
- Theme 5: Economy, business and supply chains
- Theme 6: The Natural Environment
- Theme 7: Communicating and Enabling Change
- Theme 8: The Built Environment
- Theme 9: Woking Borough Council's Journey to Net Zero

Each gives guidance and direction for how the local authority, our residents, businesses and partner organisations can all play their part to achieve our shared environmental goals.

In the context of our climate and ecological emergency declaration, and underpinning these themes, are **two overarching objectives** to ensure we remain on track to meet our climate change commitments:

Objective 1: A net zero Council estate by 2030

Objective 2: A net zero borough by 2050 (or 2045)

Each theme will contribute to these through targets and actions. The Strategy is designed to enable us all, whether we live, work or are visitors to the Borough, to help achieve these objectives.

The strategy will be reviewed annually to ensure the targets and objectives remain relevant and annual priority actions to deliver the objectives are agreed and set.

Beyond our net zero goals are a set of principles for the future of our borough which were agreed in our previous strategy and remain relevant now. Ultimately for the benefit of all, we want a borough:

- that protects and enhances its high-quality natural environment;
- where resources are used wisely, and biodiversity is conserved;
- that has a built environment that is developed sustainably, which meets local needs and enables the local economy to prosper;
- that recognises, prepares and adapts to the socio-economic; environmental and demographic changes that the future will bring.

Consultation questions:

- Do you agree with the suggested themes?
- Do you agree with the objectives and overarching goals proposed?

4.0 The borough’s carbon footprint: what does net zero look like?

The Council’s climate and ecological emergency declaration pledges to reduce the borough’s carbon emissions to zero by 2050 (or 2045). But what does this mean and what is the scale of reduction needed? The latest emissions statistics for Woking borough are shown below:

	Industry Total	Commercial Total	Public Sector Total	Domestic Total	Transport Total	Agriculture Total	Waste Management Total	Grand Total	Per Capita Emissions (tCO ₂ e)
2018	91.9	61.6	13.7	157.4	138.7	3.5	18.1	477.1	4.7
2019	94.9	53.7	13.5	151	134.6	3.5	12.3	455.5	4.5
2020	90.7	43	12.9	148.4	112.5	3.4	11.5	414.6	4.1
% of 2020 totals by sector	21.9	10.4	3.1	35.8	27.1	0.8	2.8		

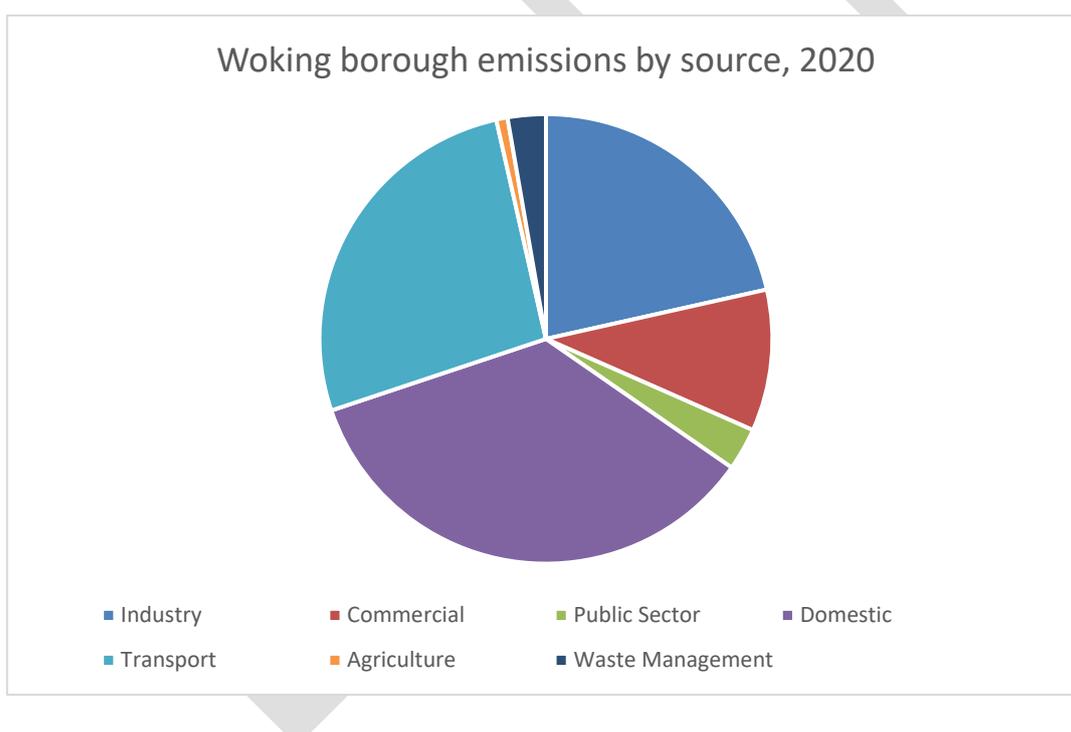


Table and pie chart: Woking borough CO₂ equivalent emissions. Source: UK local authority and regional greenhouse gas emissions national statistics (ktCO₂e) – published by the Department of Business, Enterprise and Industrial Strategy (BEIS) 30 June 2022 (Figures may not add due to rounding)

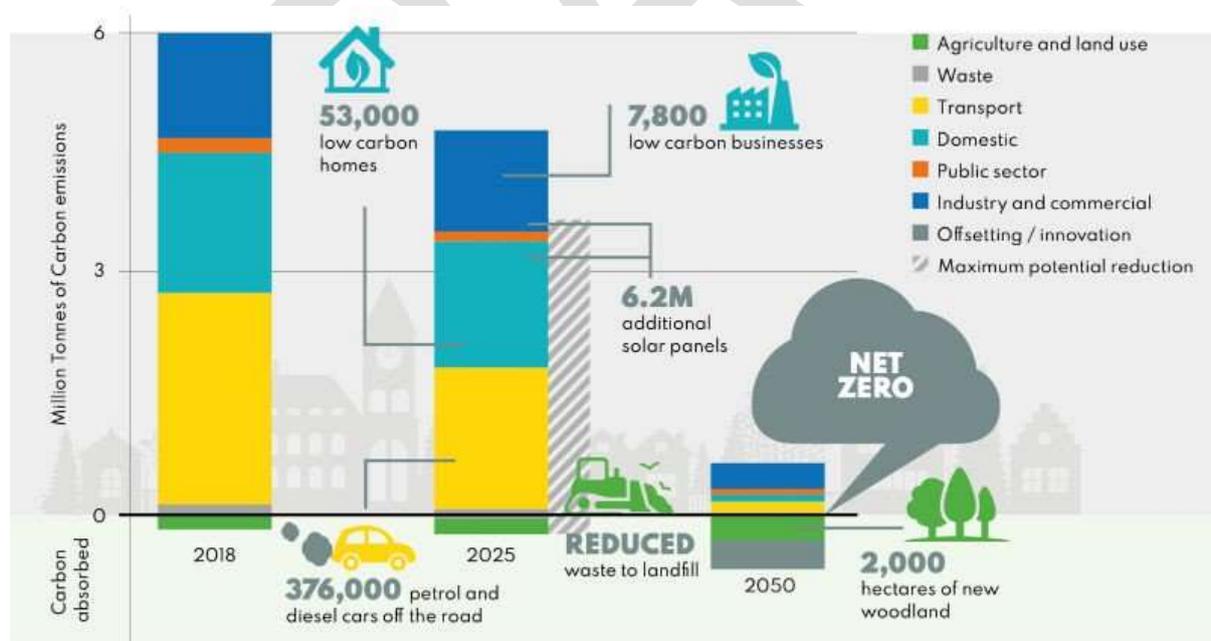
The largest contributors to the borough’s carbon footprint are domestic emissions (35.8%) and transport (27.1%). Our area’s industrial and commercial activities combined, account for one third of the area’s greenhouse gas emissions. Meanwhile, the public sector accounts for 3%. You can find out more about the implications for the Council estate in the chapter “Woking Borough Council’s Journey to Net Zero”.

The borough figures highlight the need for public support and engagement in tackling climate change locally and how we can all work together – across all sectors of society - to positively influence the future of the Borough for generations to come.

This strategy explores how we can contribute to emissions reductions across the nine themes. Broadly though we'll need to decarbonise our fuel sources; electrify transport; retrofit our homes and buildings to reduce energy demand and reduce waste. As the proportion of renewables powering the national grid continues to increase, we'll benefit from associated carbon reductions but we need to do more. To help understand the scale, according to [Pawprint](#), the average carbon footprint per person in the UK is 12.7 tonnes CO₂e. This is equivalent to driving 23,000 miles in an average sized car – once around the world. Find out more about your personal carbon footprint by using WWF's [carbon footprint calculator](#).

To reach net zero, the borough collectively will have to eliminate almost 415,000 tonnes of CO₂e emissions by 2050.

Through its [Greener Futures Climate Change Delivery Programme](#), Surrey County Council estimates that we will need to work together to reduce countywide carbon emissions by 1.3 million tonnes by 2025. The infographic that follows (permission requested to include) demonstrates the scale of the challenge. Deep emissions cuts will be needed through a marked transition away from fossil fuel dependency, through measures such as the installation of 6.2 million solar panels; taking 376,000 petrol and diesel cars off the road; the conversion of 53,000 low carbon homes; and 7,800 low carbon businesses.



Consultation question:

- Should Woking Borough Council adopt the emission reduction pathways for Surrey as a tracker towards our own borough-wide 2050 goal? The target would be Woking's share of Surrey's 1.3 million tonnes to be reduced by 2025.

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5.0 The Co-Benefits and Challenges of Climate Action

As well as the direct environmental benefits of climate change **mitigation** (i.e. the reduction or avoidance of greenhouse gases emissions), there comes a range of positive effects – or **co-benefits** – including:

Environmental	Social	Economic
Improved biodiversity and expansion of green space.	Lower emissions / pollutants resulting in cleaner air and improved public health.	Local energy and climate projects boosting local employment and economic activity.
A cleaner greener borough.	Active travel (walking and cycling) results in positive health benefits through physical activity.	Energy security and resilience brought about by increased renewable supplies.
Protection and enhancement of the local environment and habitats. Possible new or returning species with changes in local conditions.	Equity and social cohesion through enabling affordable energy and tackling fuel poverty. Access to energy efficiency advice / support.	Creation of green jobs and green apprenticeships. Investing in future green skills. Training and upskilling of workforce.
Less waste.	Citizen engagement.	Future proof new developments by incorporating smart design features that work with our changing climate e.g. mitigating against solar gain; enhancing drainage; etc.
More sustainable use of resources.	Reduced congestion brought about by a shift to sustainable and active modes of travel.	Opportunities for increased green tourism.
Improved air quality benefiting us, our habitats and local wildlife.	Pride of place.	Digital transformation enabling smarter efficient working.
	Contribution that green spaces and environmental improvements can make in supporting both physical and emotional wellbeing.	

Climate change **adaptation** is defined as making adjustments to limit the negative effects of climate change or to taking advantage of opportunities provided by a changing climate. By

recognising the potential impacts and preparing in advance, it will mean we will be better protected against the challenges of climate change for the local area. By embracing and planning for adaptation, the less it will cost in the long term and the better prepared and more resilient we will be.

Challenges for the local area may include:

Environmental	Social	Economic
Changes in climate resulting in changes or even losses to local wildlife species and habitats affecting local biodiversity.	Public health risks brought about by exposure to extremes in weather (both hot and cold). Also weather events such as storms.	Impact of public health risks on health service and other critical services.
Spread of invasive species such as Himalayan Balsam affecting native biodiversity.	Disruption to distribution and supply chains resulting in lack of medication and food.	Disruption to distribution and supply chains impacting local businesses.
Poor air quality impacting our local habitats and wildlife.	Poor air quality caused by traffic and congestion exacerbating respiratory conditions.	Damage to properties and infrastructure caused by flood events, storms and high winds.
Greater risk of wildfire and heathland fires resulting in a loss of protected rare habitats.	Displacement and damaged property caused by flood or wildfire events.	Disruption to transport, business, utilities and schools during extreme weather events.
Impact of drought on groundwater levels affecting habitats and wildlife.	Potential health risks caused by contaminated flood water and waterborne diseases.	Existing buildings too hot and/or too cold with poor design and thermal efficiency unable to adapt to changing climate, affecting take up of older premises.
	Eco-anxiety.	
	Impact of extreme weather events felt more strongly by the most vulnerable in our community.	
	Depletion of stored water reserves during drought may lead to supply disruption, hose pipe bans etc.	
	Infectious disease such as Flu pandemics may be exacerbated by extremes of cold and hot weather.	
	Houses too hot and/or too cold with poor design and thermal efficiency unable to adapt to changing climate,	

	affecting comfort of occupants.	
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It is clear that climate change is not just an environmental issue. The table above demonstrates how it impacts our society, our health and our economy. The impacts of climate change are, and will continue to be felt, by everyone in our community but those most vulnerable will be hit hardest. Woking Borough Council is working with partners across these themes to build on the opportunities, tackle the challenges and to focus support for those most in need.

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6.0 How we're tackling climate change locally

Woking Borough Council has long been committed to protecting the environment. Its first climate change strategy was adopted in 2002, although activities in this area began much earlier in 1990. [A timeline of activities is available on the Council's website.](#)

On 25 July 2019, the Council declared a [climate and ecological emergency](#) pledging to become net zero by 2030 across its own estate and operations, and by 2050 (or sooner) across the wider borough. The declaration acknowledged the need for accelerated action. It also highlighted the need for climate action to go hand in hand with conservation and biodiversity protection and enhancement. A Climate Emergency Action Plan (CEAP) followed in February 2020.

This strategy update reaffirms our commitments and how we continue to hold climate change at the heart of our activities. The nature of our earlier declaration and continuing work is such that many activities are cross-service and involve inter-departmental working. All Council activities and services have an important part to play in reducing its overall climate impact. The need for cross-service collaboration is vital and fundamental to achieve our goals.

Many activities and projects continue to be made possible through working together with key stakeholders, commercial partners and volunteer organisations to meet our shared environmental goals. These activities are key to achieving net zero both across the council estate and borough wide. Our continuing collaboration with organisations such as ThamesWey, Action Surrey, Woking Environment Action, Woking Chamber, Surrey Heathland Partnership and Surrey Wildlife Trust (amongst others) is highlighted throughout this strategy.

There are clear synergies between the Council's own climate commitments and those of our neighbouring districts and boroughs; and Surrey County Council's own Greener Futures Climate Change Delivery Programme. Ultimately our actions to reduce the Council's, and the wider borough's, carbon footprints will also contribute towards these wider county ambitions. Whilst recognising the areas of influence, opportunities and uniqueness that each geographical area offers in decarbonising their own operations and services; and helping their communities do the same; this opportunity for countywide collaboration is vital for our local environment.

This collaboration is reflected in the themes of this strategy and includes details of local action taken by the Council and its partners to meet our shared net zero goals.

The Council plays a key role in shaping the future of the Borough given its fundamental roles as a user, influencer and regulator of policy and services. These roles offer a range of opportunity to influence the future of Woking, the type of place it will be and its environment. In May 2022, the new political administration confirmed climate change within its top three priorities. Furthermore, the Council's Woking for All strategy was adopted in 2022, providing the strategic direction in shaping the future of our borough. Its inclusion of a 'greener communities' theme, acknowledging the core corporate commitment to climate change action by the local authority - placing climate change at the centre of Woking Borough Council's decisions and actions - secures a strong foundation for this strategy and the vision for a net zero borough. In turn this positively influences decision making and investment planning.

Alongside Woking for All, many of our strategies demonstrate the links between Council services and activities and their links to what we're doing on climate change:

- [Natural Woking](#)
- [Renewable Energy Plan](#)
- [Health and Wellbeing Strategy](#)
- [Local Cycling and Walking Infrastructure Plan](#)
- [Economic Development Strategy](#)
- [Housing Strategy 2021-2026](#)
- [Digital Strategy 2022-2025](#)
- [Countryside Strategy](#)

6.1 Climate change and the community – we need you

This climate change strategy has two overarching objectives to ensure we remain on track to meet our climate change commitments:

Objective 1: A net zero Council estate by 2030

Objective 2: A net zero borough by 2050 (or 2045)*

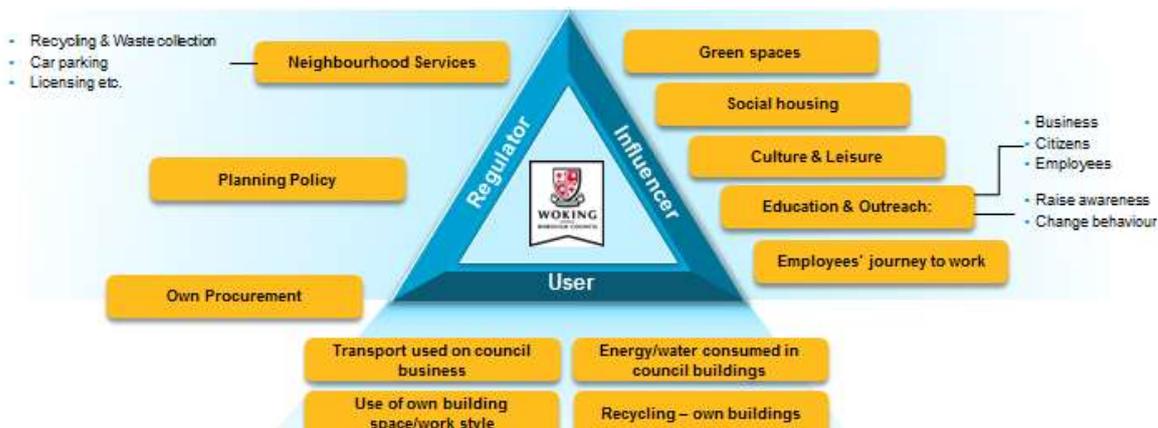
[*link to consultation question about changing area wide target? UK100 membership requirement...](#)

Objective 1 is underpinned by a carbon footprint assessment undertaken in 2022 which gives the Council its most accurate insight to date into its emissions and pathways to a net zero estate. See the chapter 'Woking Borough Council's Journey to Net Zero' for further information.

While we continue to embed climate change in our decision making we must also bring the community closer to climate action and encourage positive, sustainable behaviours that benefit our local environment. And that's why in September 2020 we launched [Planet Woking](#), the Council's climate change and biodiversity communication programme.

As seen in the chapter 'The borough's carbon footprint: what does net zero look like?', public sector emissions only account for 3% of the borough's footprint. The diagram below indicates what leverage we have as the local authority in terms of our role as a user, influencer and regulator of policy and services. To achieve the stated goal, Woking Borough Council cannot do this in isolation. We will continue to work collaboratively with our partners and stakeholders. We will also need to continue to lobby government. But ultimately, to achieve Objective 2's vision for a net zero borough we will need the engagement and buy in of all of our communities.

[Update diagram below.](#)



The proposed themes of this strategy demonstrate how each sector of the community can positively contribute to the overall objectives and goals. Each has a two-pronged approach i.e. what we as the Council commit to do and what the reader can do (i.e. resident; business; stakeholder etc).

As we review this strategy it gives us the opportunity to consider our area wide target and acknowledge calls for further accelerated action.

[UK100](#) is a network of highly ambitious local government leaders supporting the transition of UK towns, cities and counties in their transition to net zero. The network brings together local authorities across the country to share knowledge, collaborate, and petition the UK government with their collective power.

UK100's Membership Pledge requires an area-wide net zero target date of 2045. WBC is supportive of the network and furthering our climate activities as much as possible however we also recognise the challenge and the need to balance our targets with other socio-economic pressures. As part of the strategy consultation, we welcome your views on whether we should embrace this target and amend our area wide pledge.

Find out more about our continuing commitments to tackling climate change in the chapter 'Communicating and Enabling Change'.

Consultation question:

- Should we adopt UK100's target date of 2045 for area wide emissions reductions?

7.0 Theme 1: Energy

Energy use is the largest contributor to our borough's carbon footprint across the industrial, commercial, public and domestic sectors. Combined, electricity and gas use equates to almost 58% of the total footprint.

	Industry Electricity	Industry Gas	Commercial Electricity	Commercial Gas	Public Sector Electricity	Public Sector Gas	Domestic Electricity	Domestic Gas	Total energy use (kt CO2e)	Grand Total
2018	47.2	4.1	45.6	15.7	4.4	9.3	43.4	108.3	278	477.1
2019	46.4	4.4	40	13.4	4.1	9.3	38.8	106.7	263.1	455.5
2020	36.8	3.7	30.8	12.1	3	9.8	37.1	105.9	239.2	414.6
% of total borough footprint (2020)	8.9	0.9	7.4	2.9	0.7	2.4	8.9	25.5	57.7	

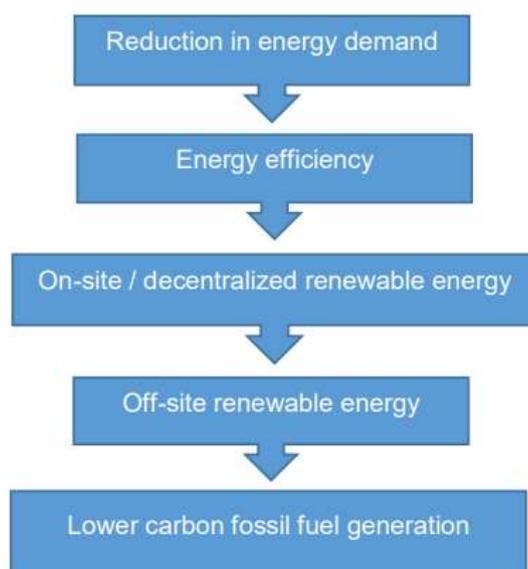
Table: Woking borough CO2 equivalent emissions by energy consumption sector. Source: UK local authority and regional greenhouse gas emissions national statistics (ktCO2e) – published by the Department of Business, Enterprise and Industrial Strategy (BEIS) 30 June 2022

We rely on energy to heat, power and light our homes and businesses and we still largely have a dependence on fossil fuels to provide us with this energy. In order to support local and national net zero goals, we need to support the transition to a fossil fuel free energy model.

We can do this by reducing energy demand; investing in energy efficiency; electrifying heating and cooling; and continuing to support and invest in renewable energy generation. By making changes to how we use energy we can all make a difference to the sustainability and carbon footprint of the borough.

7.1 Improving energy efficiency and reducing energy demand

Improving energy efficiency and reducing energy demand form the foundations of an 'energy hierarchy' (see diagram) and are central to this theme. At a time of unprecedented energy prices and the need for greater energy security, these needs are more focused than ever. Wasted energy or inefficient energy use through poorly insulated homes and buildings results not only in high CO2 equivalent emissions being produced but also high energy costs, poor energy security and greater numbers facing fuel poverty.



According to [RICS](#), 50% of residential and 39% of non-residential buildings in the UK were built before 1970, meaning large scale retrofit programmes are necessary to improve their energy efficiency and reduce their energy demand. [ONS statistics](#) up to March 2021, show that just 44% of all housing in Woking borough has an EPC rating of C or above. 73% of our housing relies on mains gas for heating.

Retrofit home improvements such as solid and cavity wall insulation; loft insulation; park home and underfloor insulation; draught-proofing; and LED light bulbs can all help make your home more energy efficient.

The Council continues to ensure local homes across a range of tenures are being brought up to modern energy efficiency standards.

Through a consortium of Surrey local authorities, Action Surrey (part of the ThamesWey group of companies owned by Woking Borough Council) is delivering an extensive programme of household energy efficiency retrofits. £12 million funding was secured through the government's Sustainable Warmth fund. People living in hard to heat homes and on lower incomes, received grants between £10,000 and £25,000 to improve insulation and install renewable technology - helping to save energy, reduce emissions and combat rising energy prices. Eligible improvement measures included loft insulation, cavity and external wall insulation, underfloor insulation and renewables, such as solar electricity panels. In total, XXX Woking borough households benefited from the scheme.

The Council's planned maintenance programme for its own housing stock includes energy efficiency improvements to ensure our tenants benefit from warmer homes and that they comply with the Decent Homes Standard. Approximately £3,700,000 per annum is allocated for planned maintenance, improvements, and major works to housing stock equating to circa £1,117 for each property.

Meanwhile in the Private Rented Sector, the Minimum Energy Efficiency Standards (MEES) regulations establish a minimum level of energy efficiency for privately rented property in England and Wales. Landlords of privately rented domestic properties must ensure that their properties reach at least an Energy Performance Certificate (EPC) rating of E.

With government funding, WBC's Housing Standards Team improved circa 90 non-compliant properties to EPC E during 2021/22 and continues to raise awareness of MEES contacting almost 750 landlords with advice on how to improve their property.

The Council's Let's Rent service, which is used to prevent homelessness and has over 400 private rented properties, must also all meet the MEES standards to join this service.

The Government is committed to a long-term trajectory to improve the energy performance standards of privately rented homes in England and Wales, with the aim for as many of them as possible to be upgraded to EPC Band C by 2030, where practical, cost-effective, and affordable.

Businesses can benefit from energy (and water) consumption savings too. According to the [Energy Saving Trust](#), the average small and medium sized enterprise (SME) could reduce energy bills by 18-25% by installing energy efficiency measures and implementing behavioural change.

During 2022/23, funding through an initiative called [Low Carbon in the South East \(LoCASE\)](#) helped businesses become more competitive and profitable while protecting the environment and encouraging low carbon solutions. Supported by the [European Regional Development Fund](#) it provided a free business support programme offering focused, individual support to small and medium sized enterprises (including social enterprises) improving competitiveness and creating jobs through increased energy efficiency and new low carbon business. In Woking borough nine businesses were successful in their applications receiving £44,077 in LoCASE grants, generating an investment of £134,617 and saving 31.07 tCO₂e. The projects will enable a total annual saving of at least £34,244 in energy costs for these businesses.

An energy and water audit can help a company to assess where savings could be made and put together a plan for action. Installing measures such as LED lamping; presence / occupancy sensors; hippo bags in water cisterns; and switching off appliances and computer screens when not in use can all assist in saving energy. Find out more in the chapter on Economy, Business and Supply Chains.

7.2 Tackling fuel poverty / Affordable Warmth

As fuel prices continue to rise, affordability of fuel becomes more difficult, especially for those that are more vulnerable in our community. A household is 'fuel poor' if they are living in a property with an energy efficiency rating of band D or below and, when they spend the required amount to heat their home, they are left with a residual income below the official poverty line. Sub-regional government data published this year shows that 2,796 households of Woking's 42,884 total households (6.5%) were in fuel poverty in 2020.

The rising cost of living is impacting Woking's residents, with many experiencing financial difficulties for the first time. The increasing costs of energy prices is a key contributor to current high inflation, as wholesale costs have risen because the conflict in Ukraine has reduced supplies of Russian gas, and as demand for energy has risen since Covid restrictions ended.

Rising energy price increases are being passed on to customers through an increase to the Energy Price Cap. According to the [ONS](#), the wholesale price of gas (system average price) in January 2022 was almost four times higher than in early 2021, with large rises since summer 2021. The Energy Price Guarantee announced by the Government, which came into effect on 1 October 2022, reduced the unit cost of electricity and gas so that a household with typical energy use in the UK pays on average around £2,500 a year on their energy bill (during winter 2022). The guarantee limits the amount suppliers can charge for units of gas however a Treasury-led review is to look at what measures should be put in place after April 2023. The exact amount a household will pay for their energy will still depend on how much energy they use, as well as where they live, how they pay for their energy and their metering arrangement. The £2,500 figure is based on a household with typical consumption on a dual electricity and gas bill paying by direct debit.

In the backdrop of the ensuing cost of living crisis and ongoing uncertainty on energy prices and energy security in the long term, the Council continues to work with partners to improve energy efficiency in Council owned and private sector housing by:

- working with Action Surrey to help homeowners make their homes more energy efficient.
- working with ThamesWey and partners to identify how net energy usage of our housing stock can be further reduced.
- enhancing energy efficiency and improving energy performance across Council owned and leased properties.
- leading by example in our requirements for new homes, including those built on Council owned land and working with private rented sector landlords.

7.3 Low carbon heating and decentralised energy networks

Approximately 37% of the UK's carbon emissions are from heating. 73% of Woking's housing relies on mains gas for heating. A significant carbon saving can be achieved by electrifying heating through heat pumps and the use of decentralised energy networks.

According to the [Energy Saving Trust](#), over half of the fuel bills in a typical household are spent on heating and hot water. If we are to reach the net zero carbon emissions target set by the UK Government, we will need to reduce the carbon emissions from heating our homes by 95%. To put this into perspective, the average household generated 2,690kg of carbon dioxide (CO₂) from space heating and hot water heating in 2020. By 2050, the Energy Saving Trust calculates we need to reduce this to just 140kg per household.

Electric heat pumps provide lower carbon heating than gas boilers because [43% of the UK's electricity supply](#) comes from a mix of wind, solar, bioenergy and hydroelectric sources.

Heat pumps operate like a refrigerator in reverse. Powered by electricity they extract warmth from the air (air source heat pump) or ground (ground source heat pump) to heat water for radiators.

Meanwhile, district heating systems deliver heated water to radiators in numerous homes and buildings via a system of highly insulated pipes. Heat is generated from a single, local energy source.

ThamesWey Ltd (Woking Borough Council's energy services company) has been successfully generating electricity, heating and cooling for Town Centre customers via its combined heat and power plant since 1999. A form of district heating, over XX customers benefit from more efficient energy generation and security of supply. Whilst currently powered by natural gas, it delivers carbon savings as compared to conventional boilers due to efficiency of supply, tri-generation and reduced transmission/ distribution losses.

The Poole Road Energy Centre, commissioned in 2021, is designed with the capacity to meet Woking Town Centre's future demands for energy, but with the flexibility to adapt to changes in the energy system over its 50-year design life. The energy centre houses key network equipment such as system controls, pumps, thermal stores and energy generators. The flexibility to change energy generators at scale is one of the key benefits of heat networks and is how they offer long-term advantages over individual building-scale heating systems. One of the key design features supporting its long-term flexibility, is how heat is supplied at a lower temperature, compared to conventional heating systems of the past. Lower design temperatures allow heat pumps to operate at their highest efficiency and facilitate the integration of other low-carbon forms of heat such as waste heat. Opportunities to incorporate alternative renewable sources of energy will be continually assessed over the building's life.

The heat network infrastructure provides the means to decarbonise Woking Town Centre at scale which will contribute significantly to our area wide carbon targets.

7.4 Renewable energy

The Council's Renewable Energy Plan was adopted in June 2021. It recognises the role that large scale delivery of renewable energy projects will need to play in decarbonising the council and borough's energy supply.

The ongoing decarbonisation of the National Grid will contribute to carbon emissions reduction; alongside energy demand reduction and energy efficiency improvements. However, local decarbonisation through borough and county level renewable energy projects will be needed to accelerate carbon reductions in line with common net zero targets.

Local renewable energy projects bring additional benefits of localised generation; local investment and green recovery; and improved energy security and resilience.

The Council owns several solar photovoltaic (PV) assets across various sites. Around 260MWh of on-site generation was recorded across these sites in 2020/21. This equates to approximately 55tCO₂e if the same quantity of energy was drawn from the national grid.

Collaborative work with partners, including Surrey County Council (SCC), is underway to determine further opportunities for renewables across the public sector estate and to deliver community energy projects. Community Energy South is one such organisation working with local groups to identify potential community led renewables projects. *Include Shah Jahan Mosque as example if progressing.*

7.5 Planning for the future

As required by the National Planning Policy Framework, the Planning system supports the transition to a low carbon future by shaping places in ways that contribute to reductions in greenhouse gas emissions, minimising vulnerability and improving resilience; encouraging the reuse of existing resources, and supporting renewable and low carbon energy and associated infrastructure.

New developments in the borough should maximise opportunities for the efficient use of energy (and water) in buildings, as well as managing waste effectively and implementing renewable energy technologies. National and local standards of energy efficiency are required by legislation and/or policy in new residential and commercial properties built in the borough.

Woking's [Climate Change Supplementary Planning Document \(SPD\)](#) includes details on how to minimise energy and water consumption, use of energy efficient technologies, design and construction, electric vehicle charging points and more. Furthermore, the (updated) SPD supports the delivery of the draft Town Centre Masterplan in achieving its sustainable construction objectives and mitigation/adaptation measures for Woking Town Centre to contribute towards our climate goals. These objectives will be achieved through the following means:

- Development will be required to follow the energy hierarchy and reduce the demand for energy by generating on-site renewable energy that produces an efficient supply of heat and power.
- Large scale non-residential or mixed-use proposals will be required to conduct a BREAM assessment and achieve at least a 'Very Good' rating.
- New development should incorporate measures to reduce water demand. For residential development this should not exceed 110 litres per person per day.
- Development should incorporate electric vehicle charging points.
- Unless otherwise justified to the satisfaction of the Local Planning Authority, development will be required to connect to the existing network of Combined Heat and Power.

Find out more in the Built Environment chapter.

Planning controls are however limited in their ability to control the energy efficiency of the existing housing and building stock, much of which will have been built when requirements were less stringent. Large scale retrofit programmes are required to improve the efficiency of such buildings.

7.6 Objectives

WBC and community action to:

- Reduce energy consumption through improved energy efficiency.
- Decarbonise energy supplies.
- Encourage sustainable development that promotes energy efficiency and supports renewable and low carbon energy and associated infrastructure.
- Tackle fuel poverty.

7.7 What we will do:

- Implement actions arising from the independent carbon footprint assessment. See chapter on Woking Borough Council's Journey to Net Zero.
- Council owned corporate buildings to continue on a renewable electricity tariff only.
- Optimise the energy performance of Council owned properties through energy efficiency improvements and energy demand reduction.
- Decarbonise all Council/ThamesWey energy supplies by 2050 or before – [linked to TW business plan](#)
- Work through Action Surrey to help homeowners make their homes more energy and water efficient.
- Promote take up of grant funding for household energy efficiency improvements.
- Continue retrofit and planned maintenance of Council owned housing properties to [SAP rating X / EPC rating X](#).
- New Council owned residential properties to be built to [X energy efficiency standard](#).
- Review the Council's Climate Change SPD to incorporate latest energy efficient guidance and requirements for developers.
- Deliver our [Renewable Energy Plan](#) targets.
- Encourage and facilitate through external grant funding the retrofit of existing owner-occupied and private rented housing stock to EPC level C or above.
- Support SME businesses to access funds and expertise for reducing carbon and improving energy efficiency.
- Promote community energy projects.
- Support and deliver enhanced EV infrastructure. See chapter on Transport.
- Develop a Building Control green guide for home extensions .

7.8 What you can do:

- Check which home energy grants may be available by contacting [Action Surrey](#).
- If you're a private landlord, help your tenants by offering energy saving advice and installing energy efficiency home upgrades. The [Energy Saving Trust has advice on how to improve your property to meet the Minimum Energy Efficiency Standards](#).
- An up-to-date Energy Performance Certificate (EPC) will offer recommendations on what measures will improve the energy efficiency of your property.
- Consider a renewable energy contract.
- Smart meters can help you save money on your energy bills by helping you monitor your consumption. [Find out more about smart meters online](#).
- As part of the UK Government's plan to reach net zero carbon emissions by 2050, fossil fuel heating systems are likely to be phased out over time. This will start with a ban on gas and oil boilers in new homes from 2025. When replacing your boiler, consider low carbon heating options such as a heat pump.
- Local business support and signposting to grants is available through Woking Works.
- Carbon footprinting and energy audits can help businesses target measures to reduce consumption.
- If you're a developer, consider how design principles such as building form, layout, orientation, solar shading and landscaping can improve energy efficiency. Follow the Council's Climate Change SPD to ensure you comply with our sustainable development guidance.

7.9 Case study: Household retrofits delivered by Action Surrey

In July 2020, the Chancellor announced £500m of funding for Local Authority Delivery (LAD), as part of the wider £2bn 'Green Home Grants' programme of economic stimulus, to build a green recovery in response to the economic impacts of Covid-19. [ThamesWey](#) in collaboration with Woking Borough Council secured £6.3m of Phase 1A funding in September 2020 to upgrade 600 low-income, hard-to-heat properties across Surrey. An additional £3.1m was awarded to expand the project to a further 300 households under Phase 1B in February 2021. Surrey County Council also provided £372,000 of 'top up' funding to enable further delivery by easing some of the core project constraints.

ThamesWey delivered both phases via its long-running energy efficiency service [Action Surrey](#). The scheme was marketed locally as "Green Jump Surrey" and ran from October 2020 through to March 2022. Green Jump Surrey was a major success, creating much needed and sustained benefits for low-income households. A total of 775 installations for almost 600 households were delivered and estimated to reduce annual energy bills by an average of £660 (at April 2022 prices). The installations will help protect the fuel-poor grant recipients from continued rises in energy prices. The lifetime greenhouse gas emission savings were estimated at 26 mega-tonnes of CO₂e, which is the equivalent to 3,211 years of the average household's carbon footprint (footprint encompassing energy, transport, aviation and waste).

The project was not without its challenges. The first phase of the project suffered delays caused by Covid-19 lockdowns and poor weather, preventing exterior installations from taking place. The second phase was affected by rising inflation to material costs, and supply chain delays exacerbated by the end of the Brexit transition period. However, despite those obstacles, the project delivered the third highest number of upgrades out of 90 national projects.

Following the success of the Green Jump Surrey project, Action Surrey delivered further fully funded energy efficiency measures under the government's Sustainable Warmth scheme (also known as LAD2) for eligible households across the county. The scheme launched mid-February 2022 with measures completed by end of September 2022. Over £1.1m of funding for 202 energy efficiency measures including solar photovoltaics (PV) and loft, cavity wall and floor insulation were delivered to 116 low-income households.

Furthermore, in October 2022, Action Surrey was again successful in its bid to become the delivery agent for Surrey County Council's Sustainable Warmth contract. The contract served the consortium of Surrey districts and boroughs in delivering £12 million funding for household energy efficiency improvements under the third wave of Sustainable Warmth funding (also known as LAD3 and HUG). Targeted at people living in hard to heat homes and on lower incomes, grants of between £10,000 and £25,000 were available to improve insulation and install renewable technology - helping to save energy, reduce emissions and combat rising energy prices. Improvement measures included loft insulation, cavity and external wall insulation, underfloor insulation and renewables, such as solar electricity panels. Written in past tense as if completed - insert completed measures here in March 2023.

7.10 Resources

Visit the [Action Surrey](#) website

Visit the [Woking Works](#) website

Read more about [Planning Policy, Woking 2027 and climate change planning guidance](#)

Read more about the Council's [Renewable Energy Plan](#)

Consultation questions:

- Do you agree with the theme's objectives?
- Are there other ways the Council or its partners can help residents and businesses reduce their energy demand?

DRAFT

8.0 Theme 2: Waste

Reduce, reuse, recycle – the old adage still rings true. Reducing the amount of waste we all produce is one of the most effective ways of reducing emissions. We can all rethink our approach to waste. Many of the items we throw away have not reached the end of their useful life. Landfill sites are fast filling up, and combined with the resulting greenhouse gases they create, the way we treat waste needs to be re-evaluated. Waste management accounts for almost 3% of the borough's greenhouse gas emissions. Furthermore, local projected population growth and additional homes will result in increased pressure to local waste collection and disposal services magnifying the environmental impacts.

In Surrey about £92 million is spent each year collecting, managing and processing recycling and waste (source: [Surrey Environment Partnership](#)). In 2020/21, 55.1% of Surrey's waste was recycled, ranking the county as third amongst the 30 waste collection authorities in England (source: Defra). However, almost 17,000 tonnes of recyclables had to be disposed of as rubbish as it was contaminated. In Woking in 2020/21 the total waste per household was 950kg; 54.3% of which was recycled. The government's household waste recycling target is 65% by 2035 (Resources and Waste Strategy, 2018).

8.1 Waste Management

In Woking borough, domestic waste management and recycling is managed by the Surrey Environment Partnership (SEP). SEP is made up of Surrey County Council and the 11 district and borough councils in the county. It aims to manage Surrey's waste in the most efficient, effective, economical and sustainable manner.

The 11 district and borough councils are 'waste collection authorities' and are responsible for the collection of Surrey's municipal waste which includes waste from households. The County Council is the 'waste disposal authority' and is responsible for the disposal and treatment of Surrey's municipal waste collected at the kerbside and waste and recycling from Surrey's community recycling centres.

To achieve SEP's aims, action is required both at the individual partner level and collectively via countywide, centrally funded initiatives. These initiatives are developed and delivered on behalf of SEP by the Joint Waste Solutions (JWS) team, which also manages a joint waste collection contract on behalf of four Surrey authorities, including Woking Borough Council.

December 2018 saw the publication of the government's Resources and Waste Strategy. Pending consultation results on various aspects of the strategy, it will see fundamental changes to the delivery of recycling and waste services. Essentially, the Strategy seeks to preserve material resources by minimising waste, promoting resource efficiency and moving towards a circular economy, keeping products in use for as long as possible, making them easier to reuse, repair, refurbish or recycle. Some of the key national ambitions include:

- Increase the municipal recycling rate to 55% by 2025 and 65% by 2035.
- Near elimination of biodegradable municipal waste to landfill from 2028.
- Work towards eliminating food waste to landfill by 2030.
- Business fleet owners and operators work towards 100% of vehicle fleets being zero emission by 2030, or earlier where markets allow.
- No more than 10% of municipal waste to landfill by 2035.

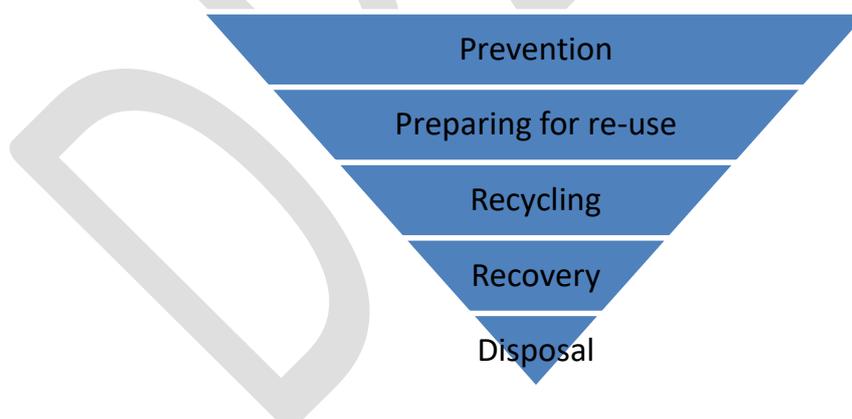
- 50% reduction in per capita residual waste (excluding major mineral wastes) by 2042 from 2019 levels (proposed).

In the meantime, SEP 2025 (currently in draft) has been developed to bridge the gap between the prevailing Joint Municipal Waste Management Strategy (published in 2015) and emerging national policy, reaffirming the partnership approach to waste prevention and recycling on behalf of all Surrey local authorities. To align with the national policy direction, the priorities for SEP to 2025/26 will be:

- Reduce all residual waste with a particular focus on food waste.
- Promote and maximise reuse, supporting the principle of a circular economy.
- Increase participation in food waste recycling, to eliminate food waste that remains in residual bins.
- Increase the quality and quantity of dry mixed recycling (DMR), to move towards the 65% target by 2035.
- Decarbonise waste collection and street cleansing vehicle fleet.
- Reduce fly tipping.

8.2 The Waste Hierarchy

A key principle behind waste management and driving SEP is the concept of a 'waste hierarchy' which prioritises waste management options. Ultimately, reducing the amount of waste going to landfill is the end goal, with waste prevention as a first step is the most favourable option. When waste is created, priority should be given to reuse, then recycling, then recovery, with disposal in landfill the last option.



Landfilling biodegradable waste has a detrimental impact on the environment through the production of greenhouse gases, methane and CO₂.

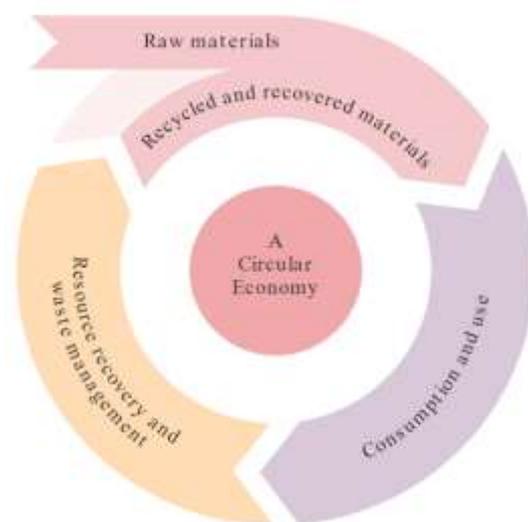
8.3 Circular economy

As a society we need to de-link unsustainable consumption and waste generation. We can do this by moving away from a linear economy – where resources are consumed to make products which are thrown away, often before their useful life ends - to a circular economy.

In a circular economy, waste is considered a raw material and the use of new resources to generate goods is reduced. This in turn reduces waste and emissions and benefits the

environment. The diagram below illustrates this concept in basic terms. Further information about the circular economy can be found online at the [Ellen Macarthur Foundation](#).

Circular economy diagram: Resources and Waste Strategy, 2018.



What we buy and where we buy it from can have an impact on the environment. Avoiding single use plastics; buying local produce; using long-life bags; etc can all make a positive difference.

8.4 Single Use Plastics

Single-use plastics are defined as all products that are made wholly or partly of plastic and are typically intended to be used just once or for a short period of time before being disposed of. Examples include drinks bottles, food packaging and containers such as shampoo or shower gel bottles. The problem with plastic waste is that it never fully breaks down. As it degrades into smaller parts it releases toxins and chemicals that pollute our environment and cause harm to wildlife for years.

The government has taken steps to tackle plastic pollution, banning microbeads in rinse-off personal care products, and restricting the supply of single-use plastic straws, stirrers and cotton buds. More is to come with additional emerging policy relating to the national Resources and Waste Strategy.

To coincide with its climate and ecological emergency declaration in July 2019, the Council adopted its own Single Use Plastic Policy. The policy identifies how we can eliminate avoidable single use plastics across our estate and operations. The Council has taken a number of actions to take this forward. As well as removing plastic water bottles from Council meetings and discontinuing vending machines offering single use drinks bottles; segregated waste bins help our staff recycle more. To help local residents and visitors, we launched Refill Woking in September 2018. There are now over XX participating cafes and restaurants where members of the public can refill their drinks bottles with free tap water. We've also installed four bottle filling stations encouraging people to refill their bottles on the

move. We continue to provide residents with a kerbside recycling service to enable them to recycle plastic bottles, pots, tubs and trays. Cartons and cups can be recycled at the mini recycling sites located at supermarket car parks in Brookwood, Goldsworth Park, Woking Town Centre and West Byfleet.

8.5 Food waste

According to [WRAP](#), UK households and businesses produce around 9.5 million tonnes of food waste each year equating to £19 billion in worth and accounting for 25 million tonnes in greenhouse gas emissions. This is equivalent to 5% of the UK's territorial emissions or 1 in 3 cars on the road (10 million cars). The production of food is also intensive in its use of energy, water and land which must also be considered.

In Surrey, food waste caddies are collected each week. In 2021, the capture rate for food recycling in Surrey was 43%. However, as found by the Surrey Environment Partnership, an estimated 50,954 tonnes of food waste remains in residual bins that could be recycled. Priorities for SEP 2025 will be to reduce food waste arising and to increase participation in food waste recycling.

As well as reducing waste processing costs and greenhouse gas emissions, according to the [Surrey Environment Partnership](#), a family of four could save £70 a month just by reducing the amount of food they throw away. Food waste can be avoided by planning meals, popping food in the freezer and using leftovers.

8.6 Objectives

WBC and community action to:

- Use resources efficiently.
- Reduce waste generation and increase recycling.
- Consume local produce and use local services.
- Facilitate a circular economy for a sustainable borough

8.7 What we will do:

- Work collaboratively with the Surrey Environment Partnership to progress the SEP 2025 targets.
- Lobby the government in support of bring / return schemes to increase the availability of recycling streams.
- Raise awareness about local waste and recycling schemes to continue to reduce consumption; reduce household residual waste and increase recycling rates.
- Encourage use of reuse schemes such as the Woking Community Furniture Project.
- Encourage behaviour change through promotion and awareness raising to avoid contamination of recycling.
- Through our contracts with JWS and SEP, ensure alignment with our shared net zero goals.

- Reduce the amount of waste generated by the Council across its own estate and operations.
- Increase recycling of the Council's own waste.
- Demonstrate our commitment to resources management and waste prevention through corporate actions and procurement processes, in particular the use of sustainable and environmental products and materials (links also to the Economy, Business and Supply Chains theme).
- Contribute to corporate waste prevention via the Council's digital and transformation strategies e.g. by reducing printing capacity and paperless working practices.
- Eliminate single use plastics across the Council estate and operations and progress our Single Use Plastics Policy.
- Continue to expand the Refill Woking network of retailers and bottle filling stations to help the public reduce single use plastic drinks bottles.
- Work with Woking Environment Action to introduce recycling facilities for hard to recycle items such as Tetrapak containers and medicine blister packs.
- Provide advice and support to local businesses on reducing waste and enhancing recycling via Woking Works and in partnership with Woking Chamber of Commerce.
- Continue to take action on littering and fly tipping and waste crime.

8.8 What you can do:

- Help minimise packaging and reduce single use plastics by buying loose fruit and vegetables and taking your own containers and bags when shopping.
- Follow Surrey Environment Partnership's guidance on [what to do with waste items](#) to maximise your household recycling.
- Reduce food waste and use your food caddy to dispose of any appropriate leftovers.
- Make do and mend. Repair and reuse products where you can, prolonging their useful life.
- Use bulky waste collections or schemes such as Woking Community Furniture Project to enable the reuse of furniture etc.
- Avoid fast fashion – did you know it takes 2,700 litres of water to create enough cotton to make just one t-shirt? That's enough water to sustain a person for 900 days (source: [WWF](#)).
- Home composting helps to divert garden waste and some uncooked fruit and vegetable waste from disposal, reducing greenhouse gas emissions and providing gardeners with their own supply of compost. [Planet Woking offers some tips on how to get started.](#)
- Businesses can play their part in reducing waste. Central sorting bins along with staff communications can help drive up recycling rates.

8.9 Case study: Bare + Fair

Bare + Fair, Woking's zero waste and refill shop stocks a wide range of refillable products. Starting out as a weekly market stall, the fully fledged store opened in October 2021 in Victoria Place and stocks over 250 refillable products, including food, toiletries, household

cleaning products, skincare and beauty. About a third of these are sourced on a fully circular supply, meaning they are sourced in bulk and when empty, go back to the suppliers to be reused and refilled. The majority of Bare + Fair's remaining products are sourced in plastic-free packaging which is either reused or recycled. The store is also working with several companies on pioneering circular returns schemes (where refilling in-store is not possible). Customers can return the empty packaging to store which is then sent back to the suppliers to be reused and refilled. Product examples using this model include refillable candles and nail varnish.



In 2022 alone, 30,000 containers have been refilled at Bare + Fair, demonstrating how collectively small actions can add up to make a big difference.

8.10 Resources

Find out more about [waste and recycling in Woking borough](#)

Visit the [Joint Waste Solutions](#) website

Visit the [Surrey Environment Partnership](#) website

Read Woking Borough Council's [Single Use Plastic Policy](#)

Find out more about [Refill Woking](#)

Consultation questions:

- Do you agree with the theme's objectives?
- Are there other ways the Council can help residents and businesses to reduce waste?

9.0 Theme 3: Water

This theme looks at water as a precious resource to conserve and protect, particularly in terms of its efficient use and availability. It also considers water in the context of climate adaptation and the consequences of drought and flooding. With the predicted rise in extreme weather events so will our need to adapt to increases in intensity and frequency of local flood events and extreme heat.

We can all change our approach to water to use it more efficiently and better protect ourselves from water scarcity and flooding. Population growth and increased demand on utilities and infrastructure, combined with the effects of climate change will cause increasing pressure on this already precious resource affecting future water availability. Likewise our ageing buildings and infrastructure that were designed for a cooler climate and less extremes highlight the need for greater adaptation and resilience.

9.1 Water consumption

According to Waterwise, the average amount of water used in England is 142 litres per person per day. Surrey supplier [SES Water](#) states the average consumption in the South East is higher at 150 litres per person per day. Additionally, the [Consumer Council for Water](#) highlights that 113 litres per property are lost through leakage every day. This combined with water stress in this region and lower rainfall, adds increasing pressure on already limited supplies. This level of use is not sustainable in the long-term. The Environment Act 2021 – the delivery tool for the government’s 25 Year Environment Plan - promises to deliver targets to improve water efficiency. The Plan states it will work with the industry to set an ambitious personal consumption target and agree cost effective measures to meet it.

The likelihood of continued drier, hotter summers will result in a greater need for irrigation and water resource management. Reduced water availability from river abstraction and from groundwater resources, combined with increased water demand (e.g. for irrigation, energy and industry and domestic use) and with reduced water drainage could result in increased water restrictions. Prolonged periods without rainfall can lead to a depletion of stored water (groundwater) reserves as seen during summer 2022 resulting in hose pipe bans across extensive parts of the country. Drier conditions can also lead to greater surface water runoff in turn resulting in flood events. In contrast, extreme rainfall can lead to fluvial and flash localised flooding quickly resulting in disruption and damage to buildings, transport and infrastructure.

9.2 Flooding

The International Panel on Climate Change’s (IPCC) [Sixth Assessment Report from the Intergovernmental Panel on Climate Change](#) (2022) concluded that heavy rainfall has increased over land since 1950.

Additionally, the [State of the UK Climate report](#) 2021 published by the Met Office in July 2022, shows that overall, the UK is expected to experience wetter winters and drier summers. However, data and trends also suggest future increases in intensity of heavy summer rainfall events, with knock on impacts noted for urban areas in terms of frequency and severity of surface water flooding.

The Met Office notes that “Flooding can be affected by a combination of many factors including (but not limited to) river flow rates, local soil type and the presence of flood defences.” Recognising the impact of local flood events on our community, the Council continues to work with partners to prepare and develop flood interventions across the borough.

The Sanway Road flood alleviation scheme in Byfleet is being progressed in partnership with the Environment Agency, Surrey County Council and others. This scheme seeks to improve the local environment and access to green space while also protecting 150 homes from flooding. Public consultation on the scheme’s design took place in May 2022 with completion anticipated in 2025.

The Sutton Green flood alleviation scheme was completed in 2021. It involved widening existing ditches and opening a piped section of watercourse to help attenuate excess flood water but also improve ecology and biodiversity and water quality from the area.

9.3 Raingardens and Sustainable Drainage Systems

Many redevelopments in the borough’s urban areas, such as the Dukes Court refurbishment, Chertsey Road public realm improvements and the Sheerwater regeneration scheme incorporate raingardens. These are surface water drainage features which help to reduce the risk of flooding during and immediately after high intensity rain events whilst improving water quality. A programme of retrofit raingardens within the highway across the Rive Catchment covering Woking town centre is being developed in partnership with Surrey County Council.

Increased urbanisation prevents rainwater from being absorbed into the groundwater. This results in increased flood risk, overused sewer infrastructure and reduced ability to refill aquifers. Sustainable Drainage Systems (SuDS) alleviate these issues by copying natural processes for managing rainfall by filtering and reducing surface water; reducing pressure on infrastructure and refilling groundwater supplies. SuDS that incorporate vegetation have additional benefits of carbon capture; increased biodiversity; spaces for recreation and relaxation and improved air quality.

9.4 Drought and water stress

With extremes in weather, we’re also susceptible to drought and the State of the UK Climate report 2021 notes a general trend for hotter, drier summers. Summer temperatures are due to increase along with the frequency of hot spells (temperatures exceeding 30C for two or more consecutive days). As recently as summer 2022, we saw high summer temperatures and a hose pipe ban introduced in August 2022 to limit water use. This follows the driest July since 1885 with the hottest temperatures on record.

Woking, like most other boroughs in the South East of England, is a densely populated area with relatively low levels of rainfall and a high level of per capita water consumption. Predictions for future water availability in the UK show that our region will suffer from high future water stress.

During the heatwaves of 2022, Thames Water recorded the highest demand for over 25 years with the company supplying 2.9 billion litres of water a day to customers across the

region. In some areas during the particularly hot weather, demand for water rose by 50% compared to the norm for the time of year.

We can all do our bit to be more water wise, using water more efficiently to reduce our impact on the environment.

Water use, conservation and adaptation matters are closely linked to other themes and actions within this strategy. For instance, according to Waterwise, “around 18% of energy consumption in UK homes is spent heating water, and about 12% of a typical gas heated home’s heating bill is from the water for showers, baths and the hot water tap.”

9.5 Water courses

And of course, water should not just be considered in the human context, we are lucky to have a variety of water courses in Woking borough that are home to an abundance of wildlife. They too can be impacted by climate change. Through our green infrastructure and biodiversity strategy, [Natural Woking](#), we have outlined our objectives for protecting, and where possible enhancing, the Borough’s watercourses for both wildlife and recreation.

9.6 Refill Woking

Bottled water is 900 times more carbon intensive than tap water (Source: [Water UK](#)). To help local residents and visitors, we launched Refill Woking in September 2018. There are now over **XX** participating cafes and restaurants where members of the public can refill their drinks bottles with free tap water. We’ve also installed four bottle filling stations encouraging people to refill their bottles on the move. The initiative not only helps cut single use plastics but also avoids the need to purchase bottled water on the go.

9.7 Objectives

WBC and community action to:

- Reduce water consumption.
- Manage water as a precious resource promoting its efficient use.
- Prepare for and adapt to the consequences of flooding and drought.
- Protect and enhance the Borough’s watercourses for both wildlife and recreation.

9.8 What we will do:

- Establish monitoring and targets for reduced water consumption in Council owned buildings.
- Raise awareness and promote water efficiency for householders and local businesses.
- Continue to improve the water quality and ecology of the main water channels and their tributaries in the borough: the River Wey, Hoe Stream, the Basingstoke Canal, River Bourne and The Wey Navigation.
- Ensure all new development incorporates well-designed and maintained SuDS and other water management solutions.
- Through planning policy and building regulations, encourage the incorporation of water efficiency and water recycling measures in residential extensions and new build developments.

- Through planning policy and building regulations, encourage the reduction of water demand and more efficient use of water through designing in water efficient devices and rainwater harvesting / grey water recycling into developments.
- Protect and enhance watercourses and their associated habitats as a water resource and for the benefit of wildlife and recreation.
- Continue to work with partners to implement flood risk management activities to help reduce the consequences of future flooding in the Borough.
- Continue to develop and expand the Refill Woking scheme.

9.9 What you can do:

- Seek out water efficient household appliances. There are a range of appliances which reduce water consumption in the home including; dual flush systems and hippos for toilets, water efficient washing machines and aerated taps and shower heads which mix air into the water jet and reduces the water flow.
- When purchasing products such as taps, showers, toilets, dishwashers and washing machines consider their water efficiency rating. Reduced consumption not only benefits the environment but can also save you money on household water and energy bills. Almost 20% of household energy bills is spent heating water.
- Use water efficiently at home and in the garden – use shorter washing cycles; harvest rainwater in a water butt; turn off the tap while brushing teeth; use a shower timer (these actions could also save energy too).
- Consider a water meter to help monitor water usage and reduce consumption. The Consumer Council for Water's [online calculator](#) can help you work out if you might benefit from having a meter.
- Encourage your workplace to incorporate water efficiency measures and monitoring to reduce consumption.
- Consider water harvesting at home. Water butts and whole building water harvesting systems collect rainfall and store it to be reused at a later date, for instance in the garden. This helps to alleviate water demand and also reduces the risk of flooding.
- If you live in an area that is susceptible to flooding, think about how to make your home more resilient by keeping sandbags easily accessible and investing in air brick protectors or door barriers. The [National Flood Forum has lots of advice for householders](#).
- Consider incorporating drought or flood resistant plants in your garden or even creating your own raingarden. As well as helping to reduce garden flooding; you'll also provide welcome habitats for wildlife and help improve air quality. The RHS has lots of advice for [climate resilient gardening](#).
- [RHS research](#) also shows that 'urban greening' can contribute to storm water mitigation which helps to reduce garden flooding; provide a source of habitats for wildlife; and improve air quality.
- When you're out and about take a reusable bottle. You can get free water refills from lots of [Refill Woking participants](#).

9.10 Case study: Raingardens

In urban landscapes, concrete and other impermeable surfaces, together with the removal of vegetation, results in increased surface water run-off.

The trend to pave our driveways and front gardens allows rainwater to be quickly directed into the drainage system, which during heavy rain and storms can cause local flooding.

First developed in the United States in the 1990s, rain gardens are a popular flood prevention approach. They comprise landscaped areas, designed to help slow down surface water run-off, reducing the rate at which it enters the surface water drainage system.

As well as helping to prevent flooding, rain gardens can make attractive features in front or rear gardens that can also benefit wildlife and attract bees and other pollinating insects.

Woking Borough Council is working in partnership with Surrey County Council and Highways to install rain gardens as part of a pilot project across the borough in areas that are susceptible to flooding. The first rain garden was installed in 2019 in Blackdown Close, Sheerwater, where the existing roundabout was converted with a range of plants that are also good for pollinating insects. The garden, which has successfully worked to manage surface water run off during heavy rain and storms, has also provided an attractive perennial garden for residents to appreciate.

Other recent examples include a second residential raingarden at Alpha Road in Sheerwater and the incorporation of raingardens as part of highways and landscaping improvements in Woking Town Centre.

The project team continues to identify further locations across the Borough that have suffered from past flood events that will benefit from the installation of rain gardens. An [online handbook](#) is available to guide residents wanting to create their own rain garden at home.

9.11 Resources

Find out more about [Refill Woking](#)

Use our [online guide to help create your own raingarden](#)

Learn more about green gardening from the [RHS website](#)

Consultation questions:

- Do you agree with the theme's objectives?
- Are there other ways the Council and its partners can help residents and businesses reduce water demand?
- Are there other ways the Council and its partners can improve local water resilience and adaptation?

10.0 Theme 4: Transport

This theme looks at how we can make positive changes to the sustainability of the Borough by adopting sustainable modes of transport.

As a largely fossil fuel-based sector, transport is a major contributor to air pollution and generates a variety of emissions that have a detrimental impact on the climate, our health and our environment. Transport accounts for almost a third of Woking Borough's carbon footprint (source Local Authority territorial greenhouse gas emissions estimates 2020 (kt CO₂e), BEIS, published June 2022). Decarbonising transport offers a fundamental way to cut carbon emissions. Other linked pollutants include nitrous oxides and particulate matter which can severely impact air quality and are linked to health concerns and respiratory diseases. Poor air quality can also adversely affect our wildlife and habitats.

Whether you live here, work here or are a visitor, we want getting around in Woking to be easy while also contributing to and maintaining a cleaner, greener Borough. We hope that walking, cycling and public transport will be the first choice for short trips. Not only does this benefit local air quality and carbon emissions, but there are clear health and well-being advantages of "active travel". We can make positive changes to the sustainability of the Borough by adopting greener modes of transport.

10.1 Electric vehicles

The sale of new petrol and diesel cars will end in 2030 and new plug-in hybrid vehicles will not be available after 2035.

Electric vehicles (EVs) are a cleaner alternative to petrol and diesel vehicles and the technology required – particularly for batteries and charging – is rapidly evolving.

EVs are becoming increasingly common on our roads and have a vital role in tackling climate change and air pollution. The total number of licensed plug-in electric vehicles in Woking borough was 1,195 in early 2022. This has risen from just six vehicles in 2013 (source: Department for Transport). According to the UK Government's EV Infrastructure Strategy, between 300,000 and 700,000 public chargepoints will be needed by 2030 to support the uptake of electric vehicles. SCC estimates that the county will need 10,000 electric vehicle chargepoints by 2030.

Woking Borough Council has installed over 80 chargepoints in public car parks in Woking Town Centre. As part of Surrey County Council's (SCC) On-Street Electric Vehicle Charging Point (EVCP) project, a total of 20 charging bays have been installed across the borough, with more planned over the next year.

We will continue to work with partners to expand EV infrastructure for Woking residents, workers and visitors, enabling a shift to zero emission transport.

10.2 Car clubs and car sharing

Department for Transport [statistics](#) show that there were 55,000 cars registered in Woking borough up to early 2022. That equates to 1.4? cars per household.

Car clubs and car sharing schemes could provide part of the solution in reducing private car ownership with benefits for the environment, air quality, and cost savings for the individual too.

Car clubs offer an alternative to private car ownership, giving affordable occasional access to cars on a pay as you go basis. Research shows that for every car club car provided, ten vehicles are removed from the road, helping to reduce congestion and improve air quality.

According to [Sustrans](#), low mileage drivers travelling less than 6,000-8,000 miles per year could save up to £3,500 a year by joining a car club, saving money on car tax, insurance and servicing. All you pay for is a membership and car hire.

Car sharing is when two or more people share a car to travel together. This can also bring environmental and cost benefits. [Liftshare.com](#) offers a formal way to arrange car sharing with secure storage of data and advice on safety and how to share fuel costs.

10.3 Active travel

Active travel refers to modes of travel that involve some level of physical activity, most commonly walking and cycling.

They offer the least carbon intensive ways to travel but according to the Department for Transport walking currently accounts for only 4% of the total distance travelled by households with access to a car. Journeys under two miles made up around 45% of all urban trips in England, in 2019, and journeys below five miles made up 58% of all car trips.

By walking or cycling short trips, a significant saving in carbon emissions can be made with added benefits for alleviating air and noise pollution, relieving congestion and improving people's physical and mental health and wellbeing. As well as the obvious benefits associated with physical activity, walking and cycling can also help in reducing incidences of heart disease and other conditions. Evidence suggests walking and cycling can also contribute positively towards mental health both through physical activity and other factors in comparison to commuting by car (Sustrans).

10.4 Public transport

Public transport provides a more sustainable alternative to car travel, reducing traffic and carbon emissions and improving air quality. Bus and rail services can improve quality of life by offering safe and accessible means of transport to town centres, jobs, education, healthcare, leisure facilities and other key destinations. They also offer a valuable means of social inclusion by improving community mobility and providing an equitable transport system that is more affordable than the private car.

10.5 Local Transport Plan

SCC is the local transport authority. In 2022, it published the latest [Local Transport Plan \(LTP4\)](#) which sets out how it plans to transform local transport networks to achieve net zero emissions by 2050 and the changes we will all need to make to achieve this goal. Alongside net zero carbon emissions, LTP4 objectives include sustainable growth, well-connected communities; and clean air and excellent quality of life.

Key to achieving these objectives are the principles of 'avoid, shift, improve'.

- **Avoid** unnecessary travel by reducing the number and length of trips needed. This will be achieved through improving planning for homes and employment sites, travel planning and levels of digital connectivity.
- **Shift** travel choices to more sustainable modes of transport, including public transport, walking and cycling, away from car use.
- **Improve** the energy efficiency of vehicles and operational efficiency of roads through technology improvements.

LTP4 covers a breadth of policies linking to sustainable transport including active travel and personal mobility; public and shared transport; promoting zero emission vehicles and planning for place to reduce the number of local car journeys.

WBC works in partnership with SCC to secure local travel improvements.

10.6 Local improvements to date

To enable a transition towards greener travel, the Council has worked with partners to:

- Enhance cycling and walking infrastructure through better connected and safer off-road routes, with further improvements identified through its [Local Cycling and Walking Infrastructure Plan](#);
- Operate a car club scheme using electric and low emission vehicles for Council business use to reduce the number of cars on the road and lessen the impact on the environment;
- Promote and facilitate publicly accessible car club schemes facilitating short term access to a car when needed;
- Ensure sustainable travel and travel planning is a consideration in all development schemes through our Planning policies;
- Install around 100 public electric vehicle charging points to date in Town Centre car parks and on-street locations across the Borough, with further installations planned;
- Raise awareness and promote schemes that incentivise active travel such as [BetterPoints](#);
- Incentivise lower emission vehicles through differential parking charges with a 40% discount applied to season tickets for vehicles with less than 100 g/km CO2 emissions (from April 2023 until April 2024);
- Encouraging our own staff to make sustainable travel choices through our Staff Transport Plan.
- Create an integrated travel network to improve connectivity and access to people and places on foot, by bike and by public transport through partnership schemes like the [Woking Integrated Transport Project](#).

10.7 Objectives

WBC and community action to:

- Encourage travel by more sustainable modes of transport to contribute to a cleaner, greener borough.
- Improve air quality.
- Benefit from the health and well-being benefits of active travel.
- Connect people and places without reliance on private car travel.

10.8 What we will do:

- Continue to promote and enable sustainable transport and active travel modes in order to contribute to a cleaner, greener Borough.
- Continue to encourage the use of car clubs and car sharing as an alternative to private car ownership.
- Continue to implement vehicle emissions thresholds for cars used on Council business.
- Work with partners to promote the local cycle network and increase the number of local cycle journeys in the Borough.
- Work with partners to deliver further EV charging points in publicly owned locations.
- Promote the use of the electric vehicle charging network in Woking borough.
- Continue to work with partners to provide an integrated transport system that promotes lower carbon and healthy transport choices.
- Work with partners to reduce the number of children travelling to school by car.
- Continue to bid for external grant funding for cycling, walking and electric vehicle infrastructure improvements (including e-bikes, e-scooters and e-mobility).
- Continue to improve connectivity to people and places within and beyond Woking aiding local prosperity and growth.
- Further enhance secure cycle storage provision in our town and village centres.
- Continue to provide safe and attractive walking and cycling routes.
- Continue to monitor and improve local air quality.
- Provide signposting and advice on local EV infrastructure.
- Encourage the take up of EVs by local taxi operators and signpost to available grants and advice.
- Facilitate and promote links between health partners and local agencies to enable health and wellbeing benefits through initiatives such as active travel GP prescribing.
- Support improvements to public and shared transport services operating in the Borough including provision of electric buses and minibuses.

10.9 What you can do:

- Consider walking and cycling for short journeys.
- Encourage your local school to join the [Eco School](#) programme which promotes active travel to and from school where possible.
- Staff travel plans for businesses are a great way to promote sustainable travel to and for work. Active travel can keep your workforce healthier and reduce your business' carbon footprint too.

- If you're considering an electric vehicle, the Energy Saving Trust and Department for Transport have created a [decision flow chart](#) and series of [Frequently Asked Questions](#) to help inform your decision.
- If you're a developer, incorporate sustainable travel into your scheme and think about providing prospective residents with travel plans and packs that promote active travel for shorter journeys;
- The government's [Workplace Charging Scheme](#) is a voucher-based scheme that provides eligible applicants with support towards the upfront costs of the purchase and installation of EV chargepoints.
- If you're a local employer, [Cycle Scheme](#) could help your employees save between 25 – 39% on a new bike and accessories.
- Enterprise Rent A Car operates a [car club](#) in partnership with SCC in locations around Woking and the wider county.

10.10 Case study: GP Social Prescribing Pilot for Cycling Referrals

This proposed pilot project in Maybury and Sheerwater is the focus of a SCC led bid in partnership with WBC for Department for Transport funding. The pilot is designed to complement the government's Green Social Prescribing 'test and learn' programme which began in the Surrey Heartlands Health and Care Partnership in April 2021. This programme is designed to test ways in which connecting people with nature can improve mental wellbeing via activities such as walking, cycling and community gardening. The proposed pilot scheme aims to tackle health inequality and deprivation through providing resources and skills/confidence training to enable people within the target area to take up walking and cycling as part of their everyday activities. **Need an update on this to determine its inclusion in the strategy.**

10.11 Resources

Find out more about [walking and cycling in Woking borough](#)

View Woking's [Local Cycling and Walking Infrastructure Plan](#)

Discover [guided Woking nature walks](#)

Read Surrey County Council's [Local Transport Plan](#)

Consultation questions:

- Do you agree with the theme's objectives?
- Are there other ways the Council can help residents and businesses adopt more sustainable modes of transport?

11.0 Theme 5: Economy, Business and Supply Chains

A prospering community is one of the key themes behind the Council's [Woking for All](#) strategy. The ambition is a borough of opportunity benefitting from new technology; a strong and sustainable economy; and a destination with a strong case for infrastructure investment.

Aspirations for a strong, enterprising borough do not have to compromise the local environment or conflict with our climate change and sustainability objectives. A strong economy can go hand in hand with a low carbon economy. In fact, sustainability is good for business, bringing the following benefits:

- Brand and reputation.
- Competitive edge.
- Increased efficiencies.
- Reduced costs.
- Increased profits.
- Enhanced profile.
- Future proofing against legislation and reporting requirements.

Commerce and industry accounts for 32% of Woking borough's carbon footprint (source Local Authority territorial greenhouse gas emissions estimates 2020 (kt CO₂e), BEIS, published June 2022).

This theme looks at how local companies can incorporate sustainability into their business. Reducing energy and water consumption; enhancing waste and recycling initiatives; promoting sustainable travel; incorporating sustainable procurement practices; and adapting to climate change can all make a positive difference – not only to the sustainability objectives for the Borough, but also economically for a business.

Our aim is to create a dynamic Borough that is a hub for business growth but one that also helps local businesses to play their part in contributing to a sustainable Woking.

11.1 Energy and water consumption savings

Your business and budgets will benefit from reducing energy demand which also benefits the environment.

According to the [Energy Saving Trust](#), the average small and medium sized enterprise (SME) could reduce energy bills by 18-25% by installing energy efficiency measures and implementing behavioural change.

Energy efficiency improvements and building maintenance can help reduce energy demand and improve thermal comfort for your employees. An energy and water audit can help a company to assess where savings could be made and put together a plan for action. Installing measures such as LED lighting; occupancy sensors and hippo bags in water cisterns can all help. Encouraging staff to switch off lights and computer screens when not in use can assist in saving energy. Energy management systems can proactively identify increases in energy use assisting in building maintenance.

Signing up to a renewable energy tariff is recommended. Your building may lend itself to installing your own on-site renewables.

11.2 Waste reduction, recycling and a circular economy

A waste audit can help determine the quantity and types of waste generated by your business. This can be done internally if you're a small business or with external help.

The principles of a waste hierarchy guide waste management which can assist your business to generate less waste and recycle more.

As recommended by the [Federation of Small Businesses \(FSB\)](#), there are practical steps that can be taken to manage waste:

- Work with your suppliers to remove unnecessary packaging;
- Minimise packaging associated with any products you produce;
- Switch away from paper to digital as far as possible;
- Segregate your recycling to improve recycling rates. Common separate bins would be cardboard, paper, glass, tin cans/aluminium, food, and (most) plastics.

As explored in the chapter on Waste, we can rethink the approach to consumption and waste generation by moving away from a linear economy to a circular economy where waste is considered a raw material and reduce the use of new resources to generate goods. The principles of a circular economy see a decoupling of growth from resource consumption – essentially reducing waste and supporting the environment. By adopting the principles of a circular economy, businesses can benefit from cost reduction, growth and resilience by considering repair and reuse; technological improvements, conserving materials and recycling.

11.3 Business mileage and company travel plans

Reducing business mileages has benefits for your company and your staff including:

- Money saved on travel costs;
- Lower environmental impact of business travel;
- A shift to sustainable travel to and from work;
- Improved staff health and well-being with a fitter, healthier workforce;
- Increased productivity and efficiency through digital connectivity;
- Improved corporate sustainability and lower environmental impact.

According to the [Energy Saving Trust](#), reducing the mileage of a driver covering 12,000 business miles a year by 10% would save around £131 on fuel costs and release around 30 hours for productive work. Their [Fleet Support](#) service can help businesses cut carbon and reduce fleet costs.

A company travel plan can help set out sustainable travel options and communicate to staff why they are necessary. Establishing a travel hierarchy which determines whether travel is needed and by what means can also help. Factors to consider include:

- Whether short journeys could be made on foot, by bike or by public transport;
- If multiple staff are travelling to the same location, could they travel together by public transport or carshare;
- Digital connectivity can play a key role in reducing mileage. Audio or video conferencing can be an effective alternative to a face-to-face meeting;
- Whether sustainable travel could be incentivised for example by offering a payment per mile for trips undertaken by active travel means or to those staff that share their car. Financial incentives that encourage business miles by car should be reconsidered.
- Whether electric vehicles (EVs) could be integrated into your fleet. EVs offer savings on fuel and maintenance costs and could lower your company's impact on the environment and air pollution.

11.4 Sustainable procurement practices

Environmentally sustainable procurement is the commissioning, purchase and management of goods, works and services in a way that reduces or negates negative environmental impacts within the supply chain.

Sustainable procurement practices help businesses manage the environmental impact of the goods and services they purchase. Benefits include reduced carbon and environmental impact; sustainable resource use and consumption; reduced waste, and lower energy consumption. Having a sustainable procurement policy can also have a positive knock-on effect throughout the supply chain. As well as greening your business, it can also help with ongoing contract management and improving resilience in supply chains.

Examples of sustainable procurement could include:

- Specifying emissions criteria for contractor vehicles.
- Requiring that any packaging meets a minimum percentage of recycled materials.
- Zero single use plastics.
- Printer cartridge recycling.
- The use of innovation and digital connectivity.
- Adopting the principles of a circular economy - making and using products made from non-virgin, repurposed and local materials.
- Procuring renewable energy supplies.
- When tendering for products or services, set environmental performance criteria and require that prospective suppliers provide evidence of environmental initiatives, credentials and plans to inform your decision.

Improving the green credentials of your business can positively influence customers and prospective employees seeking out environmentally responsible companies.

11.5 Be Prepared

The changing climate and increasing frequency of extreme weather events can have detrimental impacts on business and supply chains. The potential risks and impacts faced include:

- Increased frequency and severity of flooding, causing damage to property and infrastructure affecting business continuity.
- Overheating of buildings and thermal comfort affecting staff productivity.
- Displacement of businesses due to flood water ingress and subsequent damage and repair costs.
- Disruption to transport caused by extreme weather with subsequent impacts on business travel and supply chains.

By creating a **business continuity plan**, organisations can identify the risks and opportunities these changes can bring and help businesses to be better prepared for the future. The table below identifies some examples:

Risk	Opportunity
Extreme weather causing damage to physical assets and business interruption.	Building resilience into property using measures such as sustainable drainage systems and raingardens; and diversifying supplies.
Disruption of local infrastructure affecting supplies and workforce.	Technology development and innovation to secure markets, products and services. Digital connectivity to support business continuity.
Rising insurance costs.	Supporting the local community through sustainability projects that mitigate and adapt to changes in climate.
Sector specific businesses may be impacted in different ways e.g. a company that relies on water supplies during summer months may be adversely impacted by drought.	Identify ways to forward plan and build resilience to supplies e.g. rainwater harvesting; water storage.

11.6 Supporting your local community and environment

Business plays a vital part not only in securing local growth and prosperity but also in supporting the local community and environment. Local companies can contribute to a sustainable borough and pride of place by:

- Taking part in conservation corporate volunteering days;
- Investing in and supporting community energy or conservation projects;
- Donating to green infrastructure projects such as tree planting and community gardens;
- Sharing skills and knowledge with others;
- Offering placements and training to expand green skills.

As well as having a positive role in society these actions can directly benefit your workforce and help attract and retain staff.

11.7 Technology

Technology can help businesses improve efficiencies and reduce their environmental impact. Examples include:

- Video and audio conferencing can reduce business travel and aid productivity;
- Energy management software can proactively manage and monitor energy consumption;
- Going digital and paperless can save on printing costs; resource use and waste generation;
- Invest in renewable technology such as heat pumps and on-site solar photovoltaics (PV) to reduce energy consumption;
- Automated thermostats and room sensors can cut energy consumption to suit office occupancy.

11.8 Knowledge sharing, advice and green skills

There is a range of support available to boost local green growth and skills. Local networks such as the [Woking Chamber of Commerce](#) and [Woking Works](#) can help you green your business. The [Crest Awards](#) are also a source of inspiration, showcasing local businesses that have taken steps to embrace sustainability at the heart of their business.

There are grants and support available to assist with various improvements through schemes such as [LoCase](#), Local Enterprise Partnership [Enterprise M3](#) and national organisations such as the [Energy Saving Trust](#) and the [Carbon Trust](#).

There are also courses available to boost awareness and green skills offered by organisations such as [LoCase](#) and [Carbon Literacy Project](#).

11.9 Objectives

WBC and community action to:

- Secure prosperity through sustainable growth.
- Support business resilience and its ability to adapt to the risks and impacts brought about by climate change.
- Support green skills.

11.10 What we will do:

- Deliver actions with the Council's own [Digital Strategy](#) to support improved sustainability across services.
- Adopt and implement a Council-wide Sustainable Procurement Policy by 2024 (TBC).
- Reduce residual waste by X% and increase recycling by X% across the Council's estate and operations by XXXX (Building Services to be consulted).
- Encourage low carbon and sustainable growth for the Borough linking to our Woking for All objectives.

- Promote sustainability good practice amongst local businesses and signposting to support networks.
- Continue collaboration with the business community on climate change and sustainability through Council and business working groups and networks.
- Promote take up of external grant funding schemes that help businesses invest to go greener.
- Move to 100% electric vehicles used on Council business mileage by XXXX.
- Work with community groups to identify opportunities for green volunteering.
- Install software to proactively manage corporate energy consumption and identify measures for improved efficiency.
- Ensure our emergency and business continuity plans address climate adaptation and projected local impacts and risks.

11.11 What you can do:

- Reduce energy and water consumption at your business premises.
- Switch to a renewable energy tariff.
- Reduce waste generation and increase recycling.
- Consider opportunities to adopt the principles of a circular economy prolonging the life of products.
- Access advice and grant funding for improving sustainability.
- Be prepared. Build in resilience to your operations and supply chains that could be disrupted in the event of extremes in weather and other climate impacts.
- Electrify your fleet and consider options for reducing emissions associated with staff transport to and for work.
- Support your local community and environment through volunteering days and considering opportunities to invest in environmentally focused projects.
- Adopt and implement a sustainable procurement policy.

11.12 Case study: Ashtead Engineering

Ashtead Engineering is an engineering company based in West Byfleet, offering metal machining services, toolmaking, and injection moulding to a wide range of customer including the aerospace, defence, oil and gas, marine and automotive industries.

Determined to reduce the company's carbon footprint having completed a carbon footprint analysis, Ashtead Engineering applied to LoCASE to replace 87 efficient fluorescent lights with LED lighting. LoCASE awarded a grant of just over £3,000 towards the project which saved 6.54 tCO₂e and an estimated £2,749 per year on electricity.

Ashtead Engineering Director, Matt Parry, says, "Updating the lighting to LED has had a huge positive impact on the business. The quality of light has made work easier and lifted morale, and spurred us on to take an even bigger investment in a solar array. As owners of an SME with a relatively large energy usage, we now recognise the importance of 'greening' our operations in a commercially viable manner." [Taken from Woking Works green pages – seek permission](#)

11.13 Resources

Visit the [Energy Saving Trust business advice webpages](#)

Visit the [Volunteer Woking webpages](#)

View the [Surrey Chambers Climate Change Hub resources](#)

Visit the [Woking Works website](#)

Consultation questions:

- Do you agree with the theme's objectives?
- Are there other ways the Council and its partners can support local sustainable growth and green skills?

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12.0 Theme 6: The Natural Environment

This chapter promotes and celebrates our diverse countryside and urban environments. We want to enhance accessibility to our natural habitats and wildlife, where appropriate, and promote the benefits that enjoying the great outdoors can bring including to our own health and well-being. We also recognise the need for ensuring biodiversity security and protection so that future generations can benefit and the importance of working in partnership to achieve these aims.

Woking Borough Council is committed to supporting our local flora and fauna and the diverse environments these call home. Protecting biodiversity is one of our key objectives – playing our part locally to help reverse its global decline and address climate change.

Woking is a Borough of contrast: from the hustle and bustle of the thriving town centre to the green open spaces of our commons. The Borough comprises 1600(tbc) hectares of green spaces. The profile of these green spaces is diverse and includes:

- Parks, gardens and recreation grounds;
- Natural and semi natural urban green space including 12 countryside sites such as Horsell Common, Prey Heath, Smarts Heath, Brookwood Lye, Brookwood Country Park and Pyrford Common;
- Green corridors including areas alongside the Basingstoke Canal and River Wey;
- Outdoor sports facilities including private golf courses and recreation grounds;
- Amenity green space including green spaces within housing areas and village green;
- Allotments;
- Burial grounds and cemeteries including closed burial grounds and Brookwood Cemetery.

Nowhere in the urban area of the Borough is more than 1 mile from open countryside. This provides our population with a great opportunity to enjoy and benefit from the use of the Borough's green spaces for sport, recreation and social interaction and the benefits this can bring to health and well-being.

12.1 Natural Woking

Complementing this strategy is [Natural Woking](#) (adopted in 2016), the Council's equivalent strategy for biodiversity and green infrastructure. It is part of the Council's work towards a sustainable Woking. It sets out how the Council is seeking to enhance the provision and accessibility of green spaces; conserve existing biodiversity and habitats; and create opportunities for species to return.

It describes out how the Council works with partners to ensure biodiversity protection and security while also enhancing accessibility to our natural habitats and wildlife and promoting the benefits that enjoying our green spaces can bring.

Biodiversity encompasses all living things and the rich variety of habitats, species and ecosystems of which they are a part. It is not restricted to rare or threatened habitats and species but includes the whole of the natural world from the common place to the critically endangered. Protecting biodiversity for future generations is essential to creating a sustainable borough.

Natural Woking also sets out the Council's strategic approach to green infrastructure by identifying the existing network and gaps for potential new provision. It looks to connect the individual elements to make strong recreational, ecological and environmental networks in Woking Borough.

12.2 The role of nature in tackling climate change

Our climate and ecological emergency declaration in 2019 recognised that tackling climate change and stemming biodiversity loss go hand in hand. This combined pledge also highlights that nature can help us in the climate emergency.

As stated by the [UK Centre for Ecology and Hydrology](#), our green spaces, water courses, woodlands and heathland are not only home to a variety of flora and fauna but themselves offer benefits in reducing net emissions and taking carbon out of the atmosphere.

12.3 Opportunities and challenges for the natural environment

There are a range of opportunities and challenges to consider with regard to the urban and countryside environment. We want to balance these and ensure that the Borough copes with existing and future demands for green space and outdoor recreational facilities; the need to protect and secure our local wildlife and biodiversity; and the need to respond to issues such as changes in climate and development pressures.

Opportunities

- A clean, healthy and safe environment positively contributes to our sense of place, our quality of life and well-being.
- Accessible green spaces can have positive effects on local economic vitality and tourism.
- The diversity of our local habitats and wildlife provide valuable opportunities for education, awareness and engagement of local people and visitors.
- Whilst changes in climate give rise to challenges, they also offer opportunities for new species of flora and fauna to extend their range. Further ahead it could mean the opportunity for cultivation of otherwise more difficult to grow crops etc.
- The great outdoors offers our local residents and visitors the opportunity to enjoy a range of activities, sports, recreation and social interaction - all of which positively contribute to our health and well-being.
- 'Nature based solutions' offer co-benefits such as flood attenuation; carbon sequestration i.e. the ability of our green spaces and watercourses to act as carbon sinks; preventing soil erosion; shade and cooling; and supporting biodiversity.

Challenges

- Changes in seasonal weather characteristics such as drier, warmer summers and colder, wetter winters which will affect local plant and animal life.

- We are likely to experience greater and more frequent extremes in weather events such as flooding, drought and heatwave. See earlier chapter on The Co-Benefits and Challenges of Climate Action.
- Drier, hotter summers could result in a greater need for irrigation and water resource management and the need to plant vegetation that is more suited to changes in seasonal weather characteristics e.g. drought tolerant species.
- Changes in climate resulting in factors such as reduced soil moisture and greater risk of fire damage may adversely affect the Borough's hectares of heathland and woodland. Secondary impacts of these changes can mean that shallow rooted trees are more susceptible to high winds and root damage.
- Possible changing patterns of migration of species as they become intolerant to their surroundings following changes in the local environment and climate.
- A growing population may mean potential gaps in green infrastructure provision for future generations. The Natural Woking Strategy sets out a strategic approach to green infrastructure within the Borough by identifying the existing network and identifying gaps for potential new provision.
- Air quality is a further challenge to our environment. With population changes and possible increases in congestion (unless mitigated by a shift to sustainable transport) it is essential that we monitor and manage our air quality to maintain a clean, healthy and safe environment.

12.4 Biodiversity and nature-based solutions

As stated in the 2019 [State of Nature report](#), "climate change is driving widespread changes in the abundance, distribution and ecology of England's wildlife, and will continue to do so for decades or even centuries to come".

This is a pattern that is reflected locally, with the Surrey Nature Partnership's [The State of Surrey's Nature report \(2017\)](#), highlighting that Surrey can lay claim to important populations of around 30% of the tranche of rapidly declining species afforded 'priority' conservation status and that nearly 12% of our native wildlife has been lost.

The Council recognises the ecological services provided by habitat in the area and is working with partners on local nature based solutions for the benefit of boosting biodiversity and climate mitigation and adaptation.

One such example is the [Horsell Common SANG](#) project which has created three holding ponds with a combined capacity of over 16 million litres of surface water from the Rive ditch system. The aim of this project is not only to increase capacity of the drainage system to alleviate local flooding, but to improve accessibility and introduce new wetland ecosystems to enhance the biodiversity of the area. **TBC status / whether to include here.**

A Suitable Alternative Natural Greenspace (SANG) is an open recreational space created as an alternative to attract visitors away from designated sites that need protecting due to their valuable ecology and are sensitive to recreational activities such as dog walking. Horsell Common Preservation Society in partnership with Surrey County Council and Woking Borough Council identified the opportunity for providing flood storage within a proposed SANG extension, which will help alleviate downstream flood risk to housing within Woking.

The seasonally flooded areas will benefit invertebrates, reptiles, and amphibians. The site will include a new hibernacula which serves as an underground chamber that amphibians and reptiles use throughout the winter to protect themselves from the cold. Native trees and wildflowers will be replanted upon the scheme's completion to further boost biodiversity.

To improve accessibility for all, 400 metres of recycled plastic boardwalk over the new ponds has been installed creating over 2 kilometres of all-weather hard-standing and free-draining footways across the site.

12.5 Light pollution and nature

According to the International Dark Sky Association, light pollution is defined as any inappropriate or excessive use of artificial light, which affects humans, wildlife, and the climate. Components of light pollution include:

- Glare – excessive brightness that causes visual discomfort.
- Skyglow – brightening of the night sky over inhabited areas.
- Light trespass – light falling where it is not intended or needed.
- Clutter – bright, confusing and excessive groupings of light sources.

Studies show that light pollution is impacting animal behaviours, such as migration patterns, wake-sleep habits, and habitat formation. Research has found light pollution can disrupt the behaviour of nocturnal moths, reducing caterpillars numbers by half. The detrimental impacts on local insect populations have consequences for birds and other wildlife that rely on caterpillars for food.

The Council's Light Pollution Supplementary Planning Guidance offers guidance on the suitable design of artificial lighting to reduce adverse impact on the environment resulting from light. It also provides advice on how lighting can stimulate and enhance the night time amenity and economy of our built environment.

12.6 Partnership Working

Securing and enhancing biodiversity cannot be achieved by the Council in isolation. Partnership working is essential in achieving our local biodiversity goals and targets. The opportunities and challenges facing the local natural environment are complex and could affect many different aspects of the community and environment in which we live. By pooling together the knowledge and expertise of multiple organisations, we can achieve the most effective results. We work in partnership with a range of organisations, residents, landowners and developers to coordinate action across the Borough. Surrey Wildlife Trust; Basingstoke Canal Authority; WWF; Horsell Common Preservation Society; Natural England and Woking Environment Action to name but a few.

Swifts in Woking, the Woking Peregrine Project and the Great Crested Newt pilot project are examples of conservation projects supported by WBC.

12.7 Conservation volunteering

Engaging in nature conservation through volunteering is a great way to get involved and make a positive contribution to your local environment. Groups such as the Horsell Common Preservation Society, the Basingstoke Canal Society and the Basingstoke Canal Authority

welcome volunteers to help with maintenance and protection work. Conservation volunteering is also a great way for workplaces to improve staff wellbeing and encouraging team building.

12.8 Objectives

WBC and community action to:

- Ensure biodiversity security and protection.
- Enhance accessibility to our natural habitats and wildlife, where appropriate.
- Promote the benefits that nature and wildlife can bring to our health and well-being.
- Continue to realise the co-benefits of conservation for climate mitigation and adaptation.

12.9 What we will do:

- Continue to deliver against our Natural Woking strategy and actions to support local biodiversity and habitats.
- Work with partner organisations / groups to implement and support wildlife and species protection projects.
- Explore work with developers to go beyond national requirements for forthcoming Biodiversity Net Gain guidance (TBC).
- Continue to provide guidance on light pollution in new and existing developments to ensure sensitivity to wildlife and habitats.
- Raise awareness of the need for biodiversity conservation.
- Promote the use of the Borough's green spaces for sport, recreation and social interaction and the benefits this can bring to health and well-being.
- Work with partners to protect our green spaces and habitats in the face of challenges brought about by changes in climate.
- Continue to monitor and review local air quality in line with Government based health standards.
- Continue to seek out opportunities for nature based solutions such as habitat conservation and creation to support our climate change and biodiversity goals.

12.10 What you can do:

- Find out about local nature conservation volunteering opportunities. Organisations such as Woking Environment Action's Woking Biodiversity Group; Horsell Common Preservation Society and Surrey Wildlife Trust help conserve our diverse range of habitats and species and welcome new volunteers.
- Take part in local litter picks to help keep our local environment free of litter.
- Let our forthcoming Planet Woking Garden Guide [\(link when ready\)](#) show you how you can turn your garden into a haven for wildlife to support pollinators and species in decline.
- Avoid unnecessary light pollution in your garden and surroundings where possible (and while maintaining safety) for the benefit of insects and wildlife.

- Support community greenspace or gardening projects that help green the local environment.
- Take part in national wildlife surveys, like the [Big Garden Birdwatch](#) to help scientists record changing numbers in species.

12.11 Case study: Sheerwater Youth Centre community garden

In October 2022, Sheerwater Youth Centre was given a green make over by local volunteers supported by the [RHS Community Outreach Team](#). A group of 20 volunteers helped clear the paths, cut back overgrown plants, prepare flower beds and plant spring bulbs. With the assistance of RHS experts, volunteers aged as young as two and six got stuck in helping to transform the area and get it ready for spring. Sheerwater Youth Centre, in Blackmore Crescent, is managed by Woking Tigers and hosts a range of community activities, from kids' football and women's badminton to coffee mornings during the week. As well as greening the urban area, the project brought the community together to share knowledge and skills while also promoting the health and wellbeing benefits that gardening brings.

12.12 Resources

Read our [Natural Woking strategy](#)

Visit the [Volunteer Woking webpages](#)

Find out more about our [conservation projects](#)

Consultation questions:

- Do you agree with the theme's objectives?
- Are there other ways the Council and its partners can help secure the future of the borough's natural environment?

13.0 Theme 7: Communicating and Enabling Change

To achieve net zero we can only do this in partnership and in collaboration.

Woking Borough Council's climate and ecological emergency declaration seeks a zero carbon borough by 2050 or before. As explored throughout this strategy, climate action can be achieved across many activities. However there are often obstacles which need to be overcome to better enable change and understanding of how we can all make a difference. Sometimes people need advice on the most effective ways to reduce the impact of their own lifestyles.

The Council continues to take steps to better embed climate change at the core of our business, recognising the cross-cutting nature of sustainability across all of our services and operations. As highlighted earlier, our Woking for All strategy (adopted in 2022) includes a core greener communities theme acknowledging the commitment to climate change action by the local authority and in its role as a key influencer and enabler for engagement by others. It states:

"We take climate change and finding greener sustainable solutions very seriously. We aim to be a carbon neutral council by 2030 and will continue to encourage and support others to follow our lead."

13.1 How are we doing this?

- Integrating climate change mitigation and adaptation into Council decision making, policies and procedures.
- Undertook an independent assessment of our carbon footprint to most effectively focus action across our estate and operations.
- Lobbying national government for changes in policy and funding.
- Staff communications and training to raise awareness of the cross-cutting nature of sustainability across all of our services and operations.
- Investment planning for climate action across our estate and operations.
- Develop and implement a sustainable procurement strategy to ensure greener purchasing of products and services.
- Planned maintenance across our buildings and housing to optimise energy efficiency and reduce energy demand.
- Integrating climate change and biodiversity considerations into our parks' maintenance e.g. minimising pesticide use; electric fleets and tools?; less frequent mowing.
- Integrating our climate change strategy with other Council strategies and plans e.g. Natural Woking; air quality reporting; staff transport plan; Woking for All.

13.2 Rallying community support

However, to set our borough wide target in context, the public sector only accounts for 3% of borough wide greenhouse gas emissions. So, as well as influencing policy and regulation, Woking Borough Council has a key role in helping support communities by enabling change, through engagement and helping others to also take ownership of action on climate change. We all have a role to play in protecting our local environment. Community engagement that informed the Woking for All strategy, highlighted that work to tackle climate change is

important to residents. We need to rally this support from the community to achieve our area wide ambitions.

In fact, a report ([In our hands: behaviour change for climate and environmental goals](#)) by the House of Lords Environment and Climate Change Committee published in October 2022 found that “people power is critical” in meeting net zero goals and halting nature loss. It found that around one-third of the emissions reductions the UK must deliver by 2035 (in order to meet its legally binding climate targets) will involve people changing their behaviours. The reductions needed will require us all as “individuals and households to adopt low carbon technologies and choose low-carbon products and services, as well as reduce carbon-intensive consumption”.

13.3 Enabling change – how can we help?

One of the fundamental ways the Council can help is to raise awareness of climate change and how our local residents, businesses and community groups, large or small, can get involved and make a difference.

Soon after our climate emergency and ecological declaration, we launched the [Planet Woking](#) programme – our climate change communications campaign. Its purpose is to share what the Council has done and continues to do to meet our net zero targets; and to inspire local people to get involved and continue to make changes to live a greener, more sustainable life.

As stated by the [Natural History Museum](#), climate change does not and will not affect everyone in the same way, leading to inequalities between places, people and even generations. It is important to recognise the vulnerabilities of different groups within our community to ensure we target services and better enable change by and support for all.

The support of WBC and partner organisations is important in addressing social vulnerability to the impacts of climate change. Personal, social and environmental factors can combine to result in a greater vulnerability to climate change, requiring more support. These vulnerabilities could be linked to spatial/geographical considerations e.g. residents living in an area susceptible to flooding or in property that overheats during a heatwave. Other socio-economic factors can exacerbate these vulnerabilities too, for instance: income; age; mobility/accessibility; language; access to social/support networks or social isolation.

The [Joseph Rowntree Foundation](#) states that “Climate disadvantage is determined not just by the likelihood and degree of an individual or group being exposed to a hazard but also by their social vulnerability to such hazards. Vulnerability is a matter of how external events convert into changes in well-being. An individual or group is more vulnerable if they are less able to respond to stresses placed on their well-being.”

“Social vulnerability and climate disadvantage are linked to place” (Joseph Rowntree Foundation) and decision makers can assist with the combining factors.

As local decision makers, it is important for us and our stakeholders to recognise how climate change will impact the most vulnerable in our community and how we can help. Impacts could include the immediate aftereffects of an extreme weather event e.g. damage to property caused by flooding; but also longer term detrimental impacts such as loss of earnings; or

health and wellbeing concerns. Understanding how social vulnerability and climate disadvantage are linked to place, will enable us to focus support for these communities. This could take the form of fuel poverty support; improving jobs skills and access to training; accessibility to key services and housing; housing maintenance and flood protection measures; affordability of public transport and access to active travel.

By raising awareness we want to empower the local community to take ownership and action to reduce their own climate impact. Through communicating on climate change we want to inspire the community to do what they can for the benefit of our environment. Positive changes and sustainable behaviours all count and will make a difference. As shown in our case study below (Imperfect Footprints), the most effective change will come from making sustainability work for you and doing what you can to incorporate it into your daily life.

This chapter, and the wider strategy, will be further developed as we consult on this draft. We'll feedback how we've addressed your comments and suggestions in an accompanying report to the final strategy.

13.4 Objectives

WBC and community action to:

- Lobby government for support and action on climate change.
- Empower communities to play their part in reducing emissions and securing a green future for our borough.
- Work with stakeholders to help identify those who are vulnerable to the impacts of climate change and focus support for these communities.
- Continue to communicate on climate change.

13.5 What we will do:

- Continue to embed climate change in WBC organisational procedures, policies and decision-making ensuring “we have own house in order”;
- Deliver on the actions outlined as part of the corporate carbon footprint assessment and embed these in our Climate Emergency Action Plan.
- Develop and implement a sustainable procurement policy by 2024 (TBC) that accounts for the climate impact of all our contracts and services;
- Continue to lobby to national government for changes in policy and funding;
- Continue to communicate on climate change to our staff and councillors;
- Continue to facilitate take up of carbon and climate literacy training for staff and councillors;
- Support the community and local businesses to go greener by raising awareness and signposting to resources and grant funding;
- Work with community groups and local stakeholders to identify the most effective ways to target support for those that are more vulnerable and difficult to reach in our borough.

13.6 What you can do:

- Consider the themes in this strategy – are there ways you could reduce your energy consumption; travel greener; generate less waste?
- A carbon footprint calculator could help identify ways to reduce your environmental impact. [WWF](#) offers a free web based calculator while their app enables the user to choose and track challenges to help make small changes that all add up.
- Volunteering for a local environmental or conservation group is not only great for greening our borough but has a positive effect on personal wellbeing and feeling part of a network.
- Share your experiences of going green with family, friends and colleagues. Often people don't know where to start but word of mouth goes a long way.
- Check out our [Planet Woking website](#) and social media accounts for advice and resources on sustainable living.

13.7 Case Study: Take the Jump

[Take the Jump](#) by trying out six lifestyle shifts to live more sustainably. The aim of this volunteer-led campaign is “a world of less stuff and more joy”, balancing humanity with nature and reducing the impact of consumption in rich countries by 2030. Research behind the campaign highlights that citizens can have a huge role in making this happen and so encourage everyone to try out a shift for one, three or six months to see the positive change it can make. The shifts include:

- End clutter – keep products for at least seven years.
- Travel fresh – without personal vehicles if you can.
- Eat green – promoting a plant-based diet.
- Dress retro – limit new items of clothing to three a year.
- Holiday local – limiting the number of flights to one in three years.
- Change the system – encouraging one life shift to “nudge the system”.

Find out more on the [Take the Jump website](#).

13.8 Resources

Find out more about [Volunteer Woking](#)

Visit the [Surrey Wildlife Trust website](#)

Learn about [Horsell Common Preservation Society](#)

Visit the [Planet Woking Get Involved webpages](#)

Consultation questions:

- Do you agree with the theme's objectives?

- Are there other ways the Council and its partners can help you play your part in reducing emissions and securing a green future for our borough?

DRAFT

14.0 Theme 8: The Built Environment

The built environment: where we live, work, shop and socialise plus the infrastructure and facilities that connect us.

As stated in the UK Climate Change Committee's 2021 Report to Parliament [Progress in adapting to climate change](#), "The vast majority of people in England live in built-up areas, with about 92% of the population living in cities and towns. The built environment therefore has a strong influence on how climate change will impact upon people and communities".

14.1 Mitigation and adaptation

According to [the Climate Group](#), 40% of global greenhouse gas emissions come from the built environment. And when you look closer, as found by the [Open University](#), 28% of these emissions come from heating, lighting and cooling existing buildings; while the remainder comes from embodied carbon in the construction of new buildings.

Add to this the fact that much of the UK's building stock is relatively old and was built before more modern energy and thermal requirements were introduced. According to [RICS](#), 50% of residential and 39% of non-residential buildings were built before 1970, meaning large scale retrofit programmes are necessary to improve their energy efficiency and reduce their energy demand. [ONS statistics](#) up to March 2021, show that just 44% of all housing in Woking borough has an EPC rating of C or above. 73% of our housing relies on mains gas for heating.

The built environment therefore plays a key role in reaching our net zero goals.

As well as the need to mitigate the emissions associated with the built environment, there's also the question of adaptation and its resilience in our changing climate. Our buildings and infrastructure have been built and designed for a cooler climate with less frequent or severe extreme weather events. The [UK Green Building Council](#) says a "typical building constructed today will still be in use in 2070 and beyond, but the climate it encounters will have changed significantly. Many key elements of that building's design are based on historic records of climate data that are, even now, several decades out of date." As the hazards we face are likely to become more extreme, this compounds the need to adapt and to make our buildings, infrastructure and communities more resilient to change.

The built environment also has links with our natural environment in its use of the land it occupies, the resources needed for its power and the waste and emissions generated in its occupation.

14.2 Challenges and opportunities

Our vision includes a built environment that is developed sustainably, which meets local needs and enables the local economy to prosper.

The graphic below considers some of the key climate related issues arising from the built environment and how they can be addressed to contribute to our common environmental objectives. Some have been referred to in other chapters of this strategy, demonstrating their interlinking nature. *Information below to be converted to graphic – only presented in table here for ease of formatting.*

Healthy homes – not damp; too warm; or too cold. Safe and warm new and retrofit homes for the health and well-being of our local population.	The need for low carbon new developments – buildings and homes – both in terms of construction and energy use.	Treating hard to heat homes with poor thermal efficiency to help tackle fuel poverty.
Using planning and building regulations legislation and guidance to require and encourage low carbon and resilient building standards.	Incorporating urban greening to create shade and cooling (while also supporting biodiversity), reducing temperatures within buildings and built-up environments.	Addressing the future challenges of climate adaptation and resilience in new developments so that they are fit for the future.
Supporting the private rented sector to meet minimum energy efficiency standards.	Continuing to retrofit Council owned housing to meet and where possible exceed minimum energy efficiency standards.	Decarbonising our energy supplies, transitioning away from fossil fuels for our heat and power needs – lowering carbon and enhancing energy security.
Supporting businesses to reduce the carbon footprint of their premises and operations.	The scale of the retrofit challenge to reduce energy consumption but also to adapt buildings for the inevitable effects of climate change.	Incorporating flood protection measures at individual household level and at development scale to protect from future flood events.

14.3 Climate Change Supplementary Planning Document (SPD)

Planning policy and building regulations have key roles to play in the development of new homes and buildings in our Borough and how residents of the future will live. The Woking Local Development Framework Core Strategy sets out the overall strategic vision for spatial planning and management of development in the Borough up to 2027. It contains a number of policies that will help to reduce carbon emissions and build resilience to changes in our climate and environment, for instance through encouraging renewable and low carbon energy generation and delivering high standards of sustainable construction of buildings. The Council's Climate Change Supplementary Planning Document (SPD) provides more detailed guidance on the application of these planning policies.

First adopted in December 2013, the Climate Change SPD is now under review and will be subject to public consultation in parallel to this Climate Change Strategy. The review seeks to consolidate recent changes made to planning policy further to the emergence of national net-zero goals, in particular the introduction of the Environment Act 2021 and changes to Building Regulations earlier in 2022. The revised SPD will continue to support and strengthen the Council's climate change agenda covering themes such as low carbon and sustainable energy; design, materials and waste; sustainable transport and electric vehicles;

water efficiency; climate change resilience and adaptation including overheating and flood risk; green and blue infrastructure.

Furthermore, a review of the Core Strategy will commence in 2023 with the potential opportunity to increase relevant planning policy requirements, as far as national policy context allows.

14.4 Retrofitting our homes and buildings

Retrofitting homes and buildings is one of the biggest challenges in reaching net zero. As stated earlier, much of the country's residential and non-residential buildings was built before 1970, meaning large scale retrofit programmes are necessary to improve their energy efficiency and reduce their energy demand. Poor insulation means that many buildings are losing heat, wasting energy and costing more money. Retrofit refers to improving an existing building or home through measures such as loft and cavity wall insulation and draught-proofing.

Through a government funded programme, Action Surrey (part of the ThamesWey Group owned by WBC) has been delivering retrofit improvements to homes across Surrey. Between October 2020 and September 2022, £10.5m in funding was used to install 977 measures at 716 low-income, hard-to-heat properties. Measures included solar photovoltaics (PV) and loft, cavity wall and floor insulation. It is estimated that household energy bills will be reduced by an average of £660 (at April 2022 prices) with the installations helping to protect the fuel-poor grant recipients from continued rises in energy prices.

Further large-scale domestic retrofit is underway by Action Surrey via Surrey County Council's Sustainable Warmth contract. The contract serves a consortium of Surrey districts and boroughs in delivering £12 million funding for household energy efficiency improvements under the third wave of the government's Sustainable Warmth funding (also known as LAD3 and HUG). Launched in October 2022, people living in hard to heat homes and on lower incomes, could receive grants between £10,000 and £25,000 to improve insulation and install renewable technology - helping to save energy, reduce emissions and combat rising energy prices.

14.5 Objectives

WBC and community action to:

- Secure a built environment that is developed sustainably.
- Make our existing buildings and homes more energy efficient and resilient in a changing climate.
- Ensure warm and healthy homes for all.

14.6 What we will do:

- Continue to improve energy efficiency and reduce energy demand across our local authority estate (see also theme 9).
- Continue to improve the average EPC rating of all local authority owned housing.
- Improve the energy efficiency of our commercial properties.

- Continue to work with landlords to improve the energy efficiency of private sector rented accommodation.
- Promote uptake of grants and advice for household energy improvements.
- Consult on the revised Climate Change SPD to ensure Planning guidance continues to seek sustainable and climate positive development.
- Work with partners to reduce the number of households experiencing or vulnerable to fuel poverty and enable access to support and grant funding.
- Work with the business community to improve uptake of energy efficiency measures and grants where externally available.
- Work with partners such as the Surrey Local Resilience Forum to identify ways in which we can help build resilience and adaptation in our built environment e.g. cooling; flood protection, etc.
- Seek out ways to incorporate urban greening in new buildings or within the built environment as a natural cooling and shading measure.
- Develop a green guide for home extensions to provide guidance on the best ways to incorporate sustainable construction features and energy efficiency measures.

14.7 What you can do:

- If you're a private landlord, ensure your property meets the Minimum Energy Efficiency Standards (MEES). Help your tenants reduce their energy demand by considering going beyond these by further improving the energy efficiency of your property and seeking out grants or advice on how to do this from WBC's Housing Service.
- Businesses can contact [Woking Works](#) for advice on how to improve the energy rating of your premises and available grants.
- Energy and water audits can help businesses identify ways in which to reduce demand.
- Install a smart meter. Smart meters help you be more aware of how much energy you're using so you can try to be more efficient. They can also help pinpoint where energy might be being wasted, for instance where devices or lights may be being left on unnecessarily.
- Seek householder energy efficiency advice and where eligible, grant funding from Action Surrey. 'Fabric first' measures such as loft, underfloor and cavity wall insulation can help improve the thermal comfort of your home and reduce energy demand.
- Heating controls can help you make sure you're only using heating when necessary. Thermostats, thermostatic radiator valves and smart heating controls (which programme when your heating comes on and turns off) can all help.
- Be prepared. If your home is susceptible to flooding, seek advice on how best to protect it. Similarly, if you're home overheats in summer, follow advice on ventilation and cooling.

14.8 Case study: Hale End Court

Officially opened in November 2021, Hale End Court extra care is a unique housing scheme designed to meet the needs of frail or vulnerable people living in Woking. Located in

Old Woking, the scheme offers onsite care to help people with additional support needs to remain as independent as possible.

The scheme consists of 48 self-contained flats, 45 one-bedroom properties and three two-bedrooms, as well as communal facilities that include a range of essential and accessible services to help people live well.

The scheme won Building Project of the Year over £10 million at the Constructing Excellence SECBE Awards in July 2022. The award recognises developments that deliver outstanding outcomes for all those involved in a construction project. The criteria for the award include great teamwork between client and supply chain, a low environmental impact, high levels of innovation and technical achievement, outstanding customer satisfaction and being delivered on time and within budget.

Hale End Court's environmental credentials include:

- Solar photovoltaic (PV) panels with a capacity of 19 kWp.
- Green roofs with a sedum and wildflower mixture.
- Sustainable Drainage System (SuDS) flood attenuation tanks.
- Bird and bat boxes built into brickwork.
- Wildlife beneficial plant species and log pile.
- Bicycle storage hoops.
- Energy sub-metering.
- Responsible sourcing of materials including Forest Stewardship Council (FSC) certified timber.
- Electric car charging points.
- Heat metering for each flat.

14.9 Resources

Visit the [Woking Works website](#)

Find out more about household energy efficiency from the [Action Surrey website](#)

Consultation questions:

- Do you agree with the theme's objectives?
- Are there other ways the Council and its partners can secure a sustainable and climate positive built environment?

15.0 Theme 9: Woking Borough Council's Journey to Net Zero

In summer 2022, Woking Borough Council commissioned an independent carbon footprint assessment of the Council's corporate emissions. Our climate and ecological emergency declaration highlighted the need for more robust data and reporting to enable the Council to measure its progress.

The study, undertaken by Anthesis, improves the Council's knowledge of its footprint helping to identify key areas of focus in reaching our net zero target by 2030. Emissions trajectories were mapped according to varying degrees of intervention required to achieve our ambitions. The full report is available on our website [\(link\)](#).

15.1 Our footprint

The footprint boundary is determined by our climate and ecological emergency declaration which says we will reduce emissions across the Council's estate and operations to net zero by 2030. The study used GHG Protocol guidance to measure scope 1 and 2 emissions from buildings and operations within WBC's direct operational control, using a baseline year of 2020/21.

WBC is unique in its ownership of its energy company [ThamesWey Ltd](#) and its associated energy networks. They use combined heat and power (CHP) plant to generate heating, cooling and power within a private network. While currently still using natural gas, CHP offers greater efficiencies and lower carbon than power consumed directly from the grid. ThamesWey's Poole Road Energy Centre in Woking serves a range of Town Centre customers all benefitting from these efficiencies and security of supply. The system is designed for the future and is compatible with future changes in fuel source to fulfil our decarbonisation ambitions.

Understanding of the network ownership and responsibility for associated emissions is important in the context of the Council's total carbon footprint.

The headline emissions are shown below. The total footprint of 18,218 tonnes CO₂e (for 2020/21) has been compartmentalised to reflect this unique structure. WBC corporate emissions account for 17% of the total emissions.

Activity	Emissions in tonnes CO ₂ e and % of total			
	Total footprint	WBC Corporate Estate	ThamesWey Woking	ThamesWey Milton Keynes
Total	18,218 (100%)	3,041 (17%)	4,609 (25%)	10,567 (58%)
Fleet	91 (1%)	91 (3%)	-	-
Natural gas	13,738 (74%)	1,034 (34%)	3,088 (67%)	9,616 (91%)
Building use	4,387 (25%)	1,916 (63%)	1,520 (33%)	951 (9%)

15.2 Pathways to Net Zero

The assessment looked at WBC's emissions trajectories according to different carbon reduction scenarios. Future emissions reductions have been mapped in each financial year to 2030 based on differing levels of project intervention - Business as Usual, Medium Ambition and High Ambition.

- **Business-as-usual:** the Council does not adopt any significant low-carbon projects, and reductions in the footprint are led by the decarbonisation of the national grid.
- **Medium ambition:** Wide implementation of lighting and appliance upgrades at most Council sites, including leased sites. Building control and management measures are also installed. Energy centre supply is switched onto a non-natural gas source, such as hydrogen.
- **High ambition:** Lighting, appliance and building control measures are applied. Additional projects aimed at upgrading building fabric and heating systems of Council sites with significant energy consumption implemented. Energy centre supply switches to a fully renewable source, such as biogas or electricity (via heat pump).

15.3 The challenge ahead

What the study concludes is that early intervention and investment at scale will be needed to achieve our net zero goals. A range of measures will be needed including building improvements, energy demand reduction, electrification of heating and zero carbon fuel sources. The scale and range of interventions is reflected in the indicative cost estimates associated with these works (estimates run between £1.4m - £11m).

The scale of delivery will also influence the level of residual emissions remaining in 2030. An emissions removal hierarchy is the primary focus but options for dealing with residual emissions such as offsetting, inseting and local nature-based solutions are explored and costed.

The full study is available here ([include link when published](#)) and includes a number of actions for the Council to take forward in order to reach its net zero target by 2030 across its estate and operations. These are summarised below.

15.4 Monitoring and governance

Delivery against our climate commitments is monitored through regular reporting to the Greener Woking Working Group whose members include representatives from the community, business, environmental organisations, councillors and council officers.

Further to our climate and ecological emergency declaration, a [Climate Emergency Action Plan](#) (CEAP) was approved by the Council on 13 February 2020. This is designed to be a living document which is developed and updated as more information is gathered about progress and projects.

Once public consultation on this strategy update is concluded, the CEAP will be reviewed and updated further to incorporate the latest actions and themes found within this document, pending its adoption.

Furthermore, a set of performance indicators will be developed to accompany the CEAP to ensure we can easily monitor progress against measurable actions.

15.5 Objectives

WBC action to:

- Achieve a net zero corporate estate by 2030.
- Continue to identify external funding to retrofit our estate improving its energy efficiency and reducing its energy demand.
- Explore options to decarbonise our energy supplies.
- Continue to monitor our carbon footprint.

15.6 What we will do:

- Implement far reaching energy efficiency and energy demand measures as outlined in the High Ambition Pathway of the carbon footprint assessment. For example, implement upgrades to building fabric and building management controls from 2023, with all small appliances and lighting upgraded by 2025.
- Accelerate the decarbonisation and demand reduction of energy centres and corporate buildings. For example, by prioritising sites with very large energy demands (>100,000 kWh of heating) for fabric improvements and heat pump retrofits; and continuing feasibility work to understand the implications of installing biogas or pilot hydrogen infrastructure on the energy networks.
- Continue monitoring and reporting of emissions to improve the value and insight of the data, using the carbon footprint assessment methodology.
- Adopt a carbon insetting strategy or local carbon offset mechanism by 2026 to address residual emissions anticipated to remain in 2030.
- Reduce corporate emissions by X% each year as per carbon footprint assessment recommendation.
- Undertake a full assessment of the Council's Scope 3 emissions by 2025 (TBC), including the Council's supply chain.
- Continue to embed climate and sustainability in Council operations and at the centre of our governance to ensure carbon reduction is suitably prioritised.
- Be 'bid ready' and continue to identify external funding opportunities to support financing carbon reduction initiatives across the corporate estate.
- Consider the plan beyond 2030 to maintain net zero and / or go beyond this to carbon negative.

15.7 Case Study: ThamesWey decarbonisation pathways

As part of its net zero target and ongoing decarbonisation plans, ThamesWey has extended its low carbon Town Centre heat network to include two council-owned buildings previously reliant on mains gas and the grid. The work to connect Midas House and Export House was financed with £3.5 million Public Sector Decarbonisation Scheme funding. The design of the connections to these two buildings pioneers a novel arrangement of combining the heat network with water source heat pumps. These heat pumps enable older buildings to benefit from connection to the heat network without extensive and intrusive works to re-fit internal heating services, by intelligently boosting temperatures of the heat network supply where required. It is hoped that this design solution will provide a template enabling other older buildings to be connected to the low temperature heat networks in Woking town centre, further contributing to our net zero targets.

Furthermore, ThamesWey has received £9.4 million in government support through the national Heat Networks Investment Project (HNIP) to continue to facilitate its plans to expand and decarbonise the supply of heat to Woking town centre. Over the next seven years, the funding will assist in extending Woking's heat and cooling networks to supply energy to new developments in the Town Centre including sites south of the railway line. The HNIP funding will also enable further decarbonisation of heat through the addition of large-scale heat pumps and heat storage capacity at the Poole Road Energy Centre. When complete, Woking Town Centre will benefit from one of the lowest carbon heating systems in the UK.

These are significant milestones on our journey to net zero, facilitating the decarbonisation of electricity and heating supplies.

15.8 Resources

Find out more about our corporate carbon footprint assessment [\(link when published\)](#)

Visit the [ThamesWey Group website](#)

[Read the Council's climate change webpages](#)

Consultation questions:

- Do you agree with the theme's objectives?
- Are there other ways the Council could meet its corporate net zero goal?

16.0 Conclusion

Our objectives are clear and the challenge is set: a net zero Council estate by 2030 and a net zero borough by 2050 or earlier.

Our commitment is longstanding, demonstrated by our early work on energy efficiency and climate change dating back to the late 1990s and early 2000s. This has been strengthened and reaffirmed in recent years by the pledges made through our climate and ecological emergency declaration; continuing local action and our steadfast political and corporate priorities.

However, the scale of the challenge requires that this momentum not only continues but accelerates in order to reach zero carbon in less than seven years. And for our wider borough, we will need to rally support of the community to secure that area wide goal for the benefit of all.

This is set in the backdrop of huge financial and inflationary pressures facing households, businesses and of course, the public sector. However, what we know is that tackling climate change cannot be pitched head-to-head against other issues and shouldn't be a binary choice. The co-benefits of environmental action for the economy, for health and wellbeing and for the community are more pressing than ever.

There's no doubt that zero carbon will be challenging. However, we are in a strong position and clearer than ever what needs to be done to leverage much needed carbon reductions. Ongoing collaborative working plus the identification of vital external and innovative funding mechanisms will continue to be crucial to this agenda.

And by working together to make changes to the way we live and work, no matter how small, we can all make a positive difference.

17.0 Glossary

Term	Definition
Adaptation	The action or process of recognising inevitable changes and adapting to them.
Biodiversity	Biological diversity – or biodiversity – is the term given to the variety of life on Earth. It is the variety within and between all species of plants, animals and micro-organisms and the ecosystems within which they live and interact. (WWF)
Carbon neutral	The removal of the equivalent amount of CO ₂ as emitted through activities and operations.
Green infrastructure	A network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities (NPPF).
Greenhouse gas emissions (GHG)	Gases in the Earth's atmosphere that absorb and emit radiation. This process is considered a fundamental cause of the greenhouse effect. The primary greenhouse gases are carbon dioxide, methane and nitrous oxide. Greenhouse gases affect the temperature of the Earth.
Net zero	The elimination of all associated greenhouse gases (not just carbon) generated by an activity or operation.
Renewable	In terms of resources, those that are renewable are not limited in availability. Their source will never run out. Coal and gas are finite resources as their stocks are exhaustible. Wind is renewable as it will forever be available.
Resilience	In the context of this Strategy we consider community resilience and our duty to ensure the community is able to withstand, and recover quickly from, an event or situation which threatens serious damage to human welfare or the environment.
Sustainable	This can refer to development or the use of a resource – its use or existence must be able to be continued without being detrimental to the environment, or endangering the resource for its use by future generations.