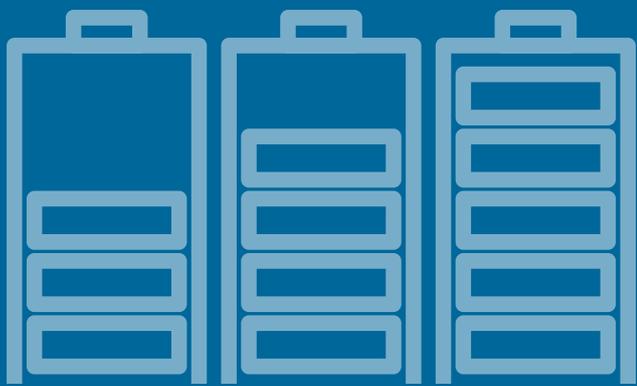
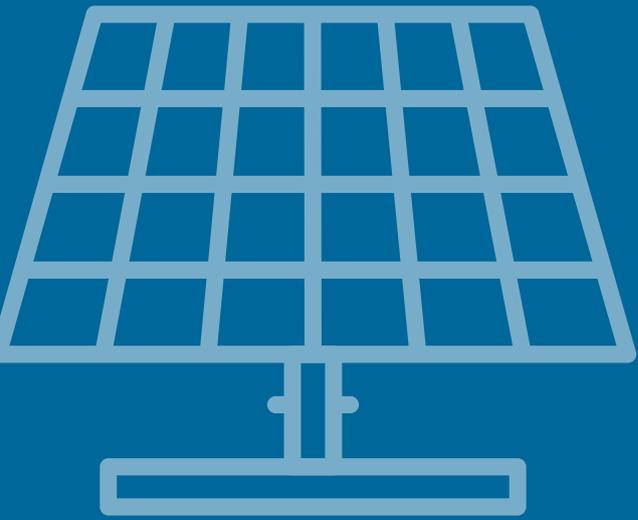


Environment Strategy

2020-2030



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1. Foreword

The challenge we all face with regard to climate change is recognised across the globe. There is an increasing need for action if we are to respond to the danger this poses to our people, our wildlife and our environment. Locally, we took an important step by acknowledging this when West Berkshire Council unanimously declared a Climate Emergency on 2nd July 2019. In doing so we highlighted the fact that the Council, our partners and our local communities all needed to play their part in response.

On 28th October 2019 we held our first West Berkshire Climate Conference at which we committed to taking a leading role locally. We asked for comments and suggestions at the conference which have now been built into the strategy that follows.

There are some initiatives we have already committed to making a start on since January 2019 which we know will make a positive contribution to protecting and preserving our natural environment as well as to becoming carbon neutral by 2030. These include:

- installing more solar panels across our estate, aiming for a significant contribution from solar energy towards the Council's energy consumption and beyond;
- continuing to increase the number of charging points for electric vehicles in West Berkshire;
- conducting a Council carbon audit so we understand our challenges and be better placed to become carbon neutral by 2030;

There are also other projects that we intend to explore in the coming years which, alongside offsetting and mitigation activities, will help us along the path to a greener and carbon neutral West Berkshire by 2030. These will be turned into a detailed delivery plan to accompany this strategy.

We also recognise the vital role the government has in creating an environment to enable delivery and we will lobby for changes to national planning policies and building regulations which will be key to our success.

While we want to lead on this important issue, we know the Council cannot deliver this strategy alone: everyone in West Berkshire has a role to play. The changes we are all able to make will vary in size but all are important as we work towards our shared aspiration. A comment was made at the recent conference that we all need to consider our own priorities and behaviours if we are to rise to the challenge that climate change presents to us all. The Council wants to do precisely this through the publication of this strategy, which we hope will act as a catalyst to residents, businesses and interested groups.

This Council, over successive administrations, has a strong record of responding to green issues. However with the declaration of a Climate Emergency we recognise that we need to accelerate activity in the face of growing concern for our planet's future. This will mean being bolder, and prioritising investment in environmental projects to a much greater extent than we have to date.

Most importantly, we know that trying to reach carbon neutrality without the active involvement of the residents, businesses and communities of West Berkshire would not be possible. I would therefore urge you to read this strategy and to join with others across our community to think about what action you can take to make its aims a reality.

Cllr Steve Ardagh-Walter
Portfolio holder for Environment





2. Introduction

The delivery of this document, West Berkshire Council's new Environment Strategy, has been accelerated as a result of the Council declaring a Climate Emergency in July 2019 and committing to the creation of a strategic plan to work towards carbon neutrality in the district by 2030.

This declaration was as follows:

This Council notes that:

1. All levels of government (national, regional and local) have a responsibility to limit the negative impacts of climate breakdown. It is important for the residents of West Berkshire and the UK that we commit to working towards carbon neutrality as quickly as possible.
2. The consequences of global temperature rising above 1.5°C are so severe that preventing this from happening must be of the utmost urgency.
3. Bold climate action can deliver economic benefits in terms of new jobs, economic savings and market opportunities (as well as improved health and wellbeing) but will also require changes in individuals' lifestyles and have a cost implication to both the individual and the state.

West Berkshire Council therefore:

- Declares a Climate Emergency.
- Will create a strategic plan for West Berkshire that aims to deliver carbon neutrality by 2030.
- Calls on HM Government to provide the Council with the powers and resources to make the 2030 target possible.
- Will work with other authorities to determine and implement where practicable best practice methods to limit global warming to less than 1.5°C.

This document reflects the comments made at the council's first Climate Conference on 28th October 2019 as well as evidence we have about the district's current carbon footprint. It has been made available to the whole community for a period of consultation. This detailed consultation and engagement has brought about changes to the strategy to form this final document, which has been approved by the Council's Executive.

This strategy sets out a Vision for the local environment in which we would like our communities to live by 2030. We have linked this to the needs for a strong local economy supported by responsible growth, and for our local population to be healthy and have a positive sense of wellbeing. Central to this Vision is the expectation that all of the district's residents and businesses will contribute towards the aspiration of becoming a carbon

neutral district by 2030. Achieving this goal will need all of us to prioritise care for the environment in our actions and decisions.

The strategy also contains a number of proposed actions which give an indication of how we are proposing to put the strategy into action. There is a lot to do and the Council will have neither the resources nor the time to do everything at once, or in isolation. Some of the issues that need to be addressed locally will be outside our direct control needing action by our partners and local communities. In recognising this, our aim is to be ambitious but also realistic in terms of what can be achieved in the face of a deliberately challenging target: carbon neutrality by 2030.

Over time, this strategy will adapt to reflect changes to the local and national picture. The impact of COVID19 will also be central to our thinking along with maximising the environmental benefits through our recovery plans.

Perhaps most importantly, the strategy highlights the need to engage all of our communities in taking action. The Council will seek to take the lead by putting our 'own house in order' but this strategy cannot be delivered by us alone. Throughout the lifespan of the strategy we will review progress annually to ensure the direction we have chosen is still appropriate.





3. Context

The Paris Agreement, which was signed on 12th December 2015, was the first time that the overwhelming majority of national governments acknowledged that climate change was a

tangible, severe and, importantly, man-made threat to the prosperity and wellbeing of current and future generations in all countries across the world.

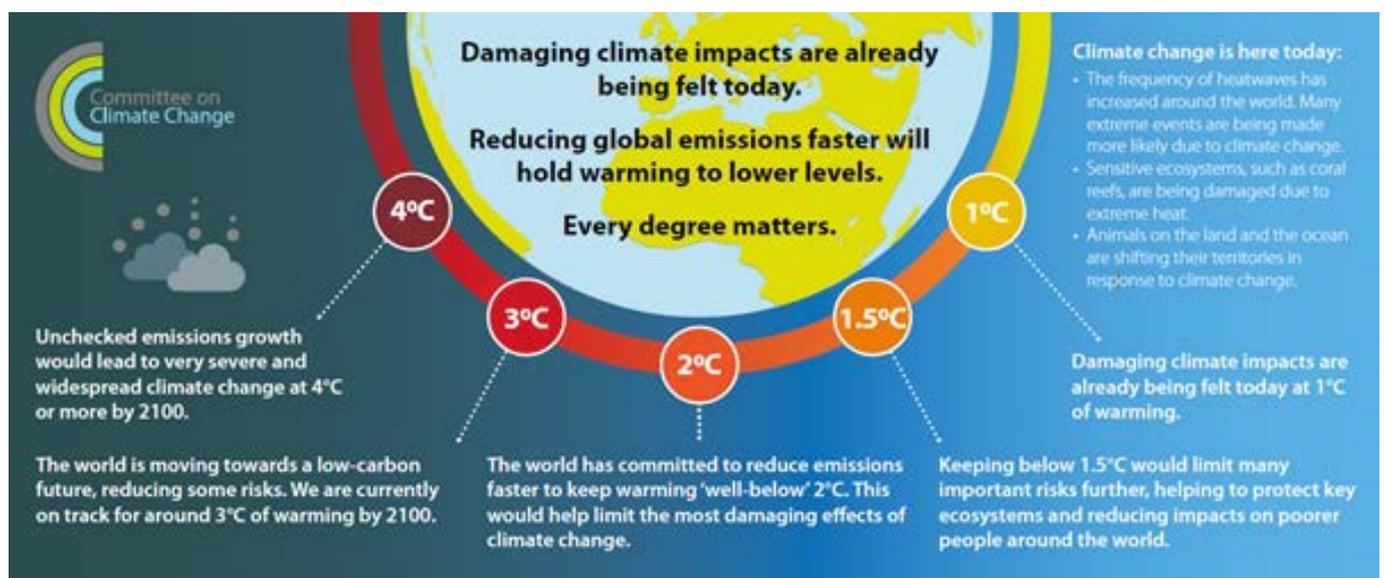


Figure 1. CCC Infographic¹

[1] https://www.ipcc.ch/site/assets/uploads/2018/05/ar4_wg1_full_report-1.pdf

Whilst it is true that the climate has and will continue to change naturally, the scientific evidence is clear that it is changing rapidly, primarily as a result of human activity. Global warming is evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising sea levels. Records also show that there is now almost 40% more carbon dioxide, the main greenhouse gas, in the atmosphere, than there was before the industrial revolution. This represents a level not experienced for at least the last 800,000 years. Consequently, the global average temperatures continue to rise. Indeed 2000 – 2009 was the warmest decade for over 150 years whilst 2010-2019 was the second warmest.

The Intergovernmental Panel on Climate Change (IPCC) in 2007 produced a very comprehensive and detailed scientific assessment of past, present and future climate change. As a result of this work, it was recognised that an average global temperature rise of no more than 2°C is required to avert the worst potential consequences of climate change.

The Paris Agreement formalised this recognition and has as its central aim to keep a global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C .

Nationally, the Climate Change Act 2008 provides the framework for UK climate change policy. Long term targets were subsequently set and the Committee on Climate Change (CCC) was established as an independent body to advise Government. The Government produced its Clean Growth Strategy in 2017 and the CCC has also produced a comprehensive range of reports about the issue. A central recommendation was a new emissions target for the UK – net zero greenhouse gas emissions by 2050.

In May 2019 a motion was passed by the UK Parliament seeking to declare an environment and climate emergency. This effectively endorsed the net zero by 2050 target previously recommended by the CCC. In addition, the CCC commented in response to the declared environment and climate emergency that:

- delivery must progress with far greater urgency;
- challenges that have not been confronted must now be addressed;
- were imports considered, statistics suggest that emissions would be much higher as countries increasingly import the goods that they consume;
- clear leadership is needed, right across Government, with delivery in partnership with businesses and communities; and
- overall costs are manageable but must be fairly distributed.

Encouragingly, national figures show that UK greenhouse gas emissions have decreased in recent years, with the exception of 2012 where emissions were 3.5% higher than in 2011, and that it has been possible to decouple economic growth and carbon emissions. However, these figures only take into account emissions produced in the UK, not the emissions from all the goods and services imported and consumed in the UK.

West Berkshire has not been immune from the impact of climate change. Flooding has become more prevalent with notable events in 2003, 2007, 2012 and 2013 impacting on thousands of residents and homes. The scale of the flooding was at a level which had not been witnessed in a generation. Whilst such events have been challenging, the general trend has been towards warmer and drier conditions with drought becoming an increasing concern. This has perhaps been most evident in the River Kennet where in recent years the river has run dry in its upper reaches.

One of West Berkshire's biggest strengths is its strong, balanced economy. This is, however, reliant on the district's several major transport arteries, most notably the M4 and A34. These two roads alone account for over 50% of all the CO² generated from transport activity each year, and around 30% of the district's total CO² emissions. This is a significant proportion and yet it is something that is entirely outside of the control of West Berkshire Council. For this reason, we will explore later on in the strategy what we have the power to actively change and, where this is not the case, how we can consider the power of persuasion to influence external factors such as these.

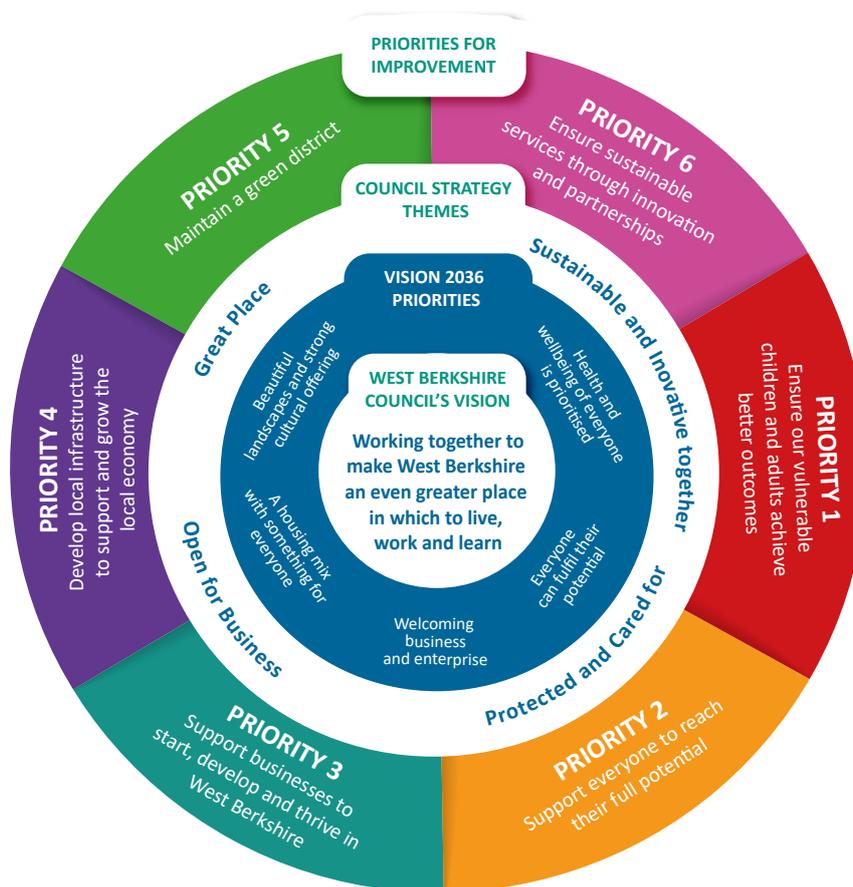


Figure 2: Council Strategy Framework

Another one of West Berkshire's greatest assets is its predominantly rural nature, with 74% of the district sitting within a designated Area of Outstanding Natural Beauty. As well as the lifestyle opportunities this offers, it also increases the potential for carbon capture and the exploration of carbon-free and renewable forms of energy. Not only this, but it will play a vital role in supporting and further enhancing the biodiversity of the district. We know that we will have to find better ways to engage with our many landowners, farmers and wider agricultural businesses to ensure a joined up approach.

Importantly, this strategy does not sit in isolation from what we are seeking to do to make West Berkshire a better place to live, work, learn and visit. Instead, it seeks to complement our wider work, as illustrated in Figure 2, which began with the development of the West Berkshire 2036 Vision and will continue with the publication of a range of strategies for the district's future.

Carbon reduction and wider environmental objectives will influence all aspects of the Council Strategy.

Risks and uncertainty associated with our journey are significant and as knowledge of and access to technical data increases, some assumptions may have had to be made along the way. As part of our journey through the delivery of this strategy there will need to be significant development of our knowledge, particularly on how both individual carbon reduction and carbon offset projects will contribute to the vision and our targets.

Information and data²

Inevitably it can be challenging to establish the right datasets to rely upon when making decisions or setting strategic direction. The government produced a 'National Atmospheric Emissions Inventory'³ to help design carbon reduction strategies and this, in our opinion, is the best overall summary to guide us at this stage in our journey. According to this, West Berkshire produced 1,294.5 ktonnes of CO² in 2017, or 8.2 tonnes of CO² per resident. The figure represents a 26.4% reduction since 2005 which represents a significant amount of progress.

When compared to the rest of the UK, however, CO² production per capita⁴ is at the higher

[2] <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-to-2017>

[3] <https://naei.beis.gov.uk/>

[4] i.e. 'per person' https://en.wikipedia.org/wiki/Per_capita

Emission estimates within the scope of Local Authorities⁵

As part of the National Atmospheric Emissions Inventory the Government also published a 'subset dataset' which represents CO₂ emissions within the scope of influence of Local Authorities. This amended dataset removed motorways (M4), EU Emissions Trading System (EU ETS) sites (e.g. AWE and other larger industrial sites), diesel railways and what are known as Land Use (direct human-induced land use such as settlements and commercial uses⁶), Land Use Change and Forestry (LULUCF) Chart 3 shows the significance of the impact on the picture for West Berkshire.

These amendments affect different Local Authorities in different ways but overall no local authority had an increase in emissions within this scope between 2005 and 2017. Table 1 gives a comparison with neighbouring Local Authorities.

^[5] <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-to-2017> Local Authority CO₂ emissions estimates within the scope of influence of Local Authorities 2005-2017 (kt CO₂) - Subset dataset (Excludes large industrial sites, railways, motorways and land-use)

^[6] http://unfccc.int/fr/processus-et-reunions/la-convention/lexique-des-changements-climatiques-acronymes-et-termes#

Table 1: Full Set and Sub Set* Per Capita Carbon Dioxide emissions (tonnes) at local authority level in 2017, listed by difference

LA area	Full Set data	Sub Set data	Difference
West Berkshire	8.2	5.8	2.4
Windsor & Maidenhead	5.7	4.5	1.2
Wokingham	4.7	3.6	1.1
South Oxfordshire	6.2	5.1	1.1
Slough	5	4.1	0.9
Reading	3.4	3.3	0.1
Vale of White Horse	6.5	6.4	0.1
Bracknell	3.7	3.7	0
National	5.3	4.5	0.8
England	5.1	4.3	0.8
South East	4.8	4.2	0.6

* The Full Set data contains all measured emission sources for each LA area whilst the Sub Set removes those that the LA has no influence over



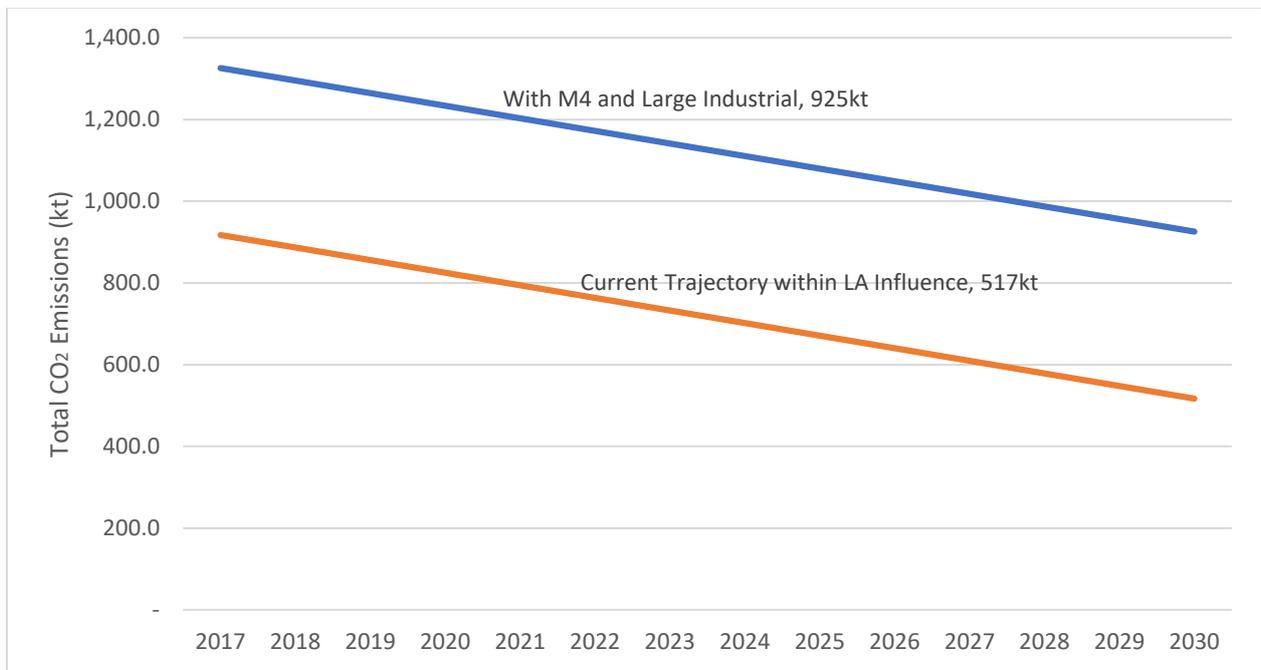


Chart 3: Current rate of Improvement in CO2 Emissions

Chart 4 below shows how, in West Berkshire, both Industry, Commercial and Domestic have seen a reduction in emissions since 2005, but transport has been steady since 2013, with small increases in recent years. This will help inform the Delivery Plan.

In 2005 West Berkshire’s emission estimate was 1,317 ktonnes of CO2 and by 2017 this reduced to 917.2 ktonnes of CO2 (30%) expressed in per capita terms this is 5.8 tonnes of CO2. The average reduction since 2005 has been 0.25 tonnes of CO2 per year (9.0 down to 5.8 tonnes per capita), this is slightly ahead of the national average at 0.22 (7.4 down to 4.5 tonnes per capita).

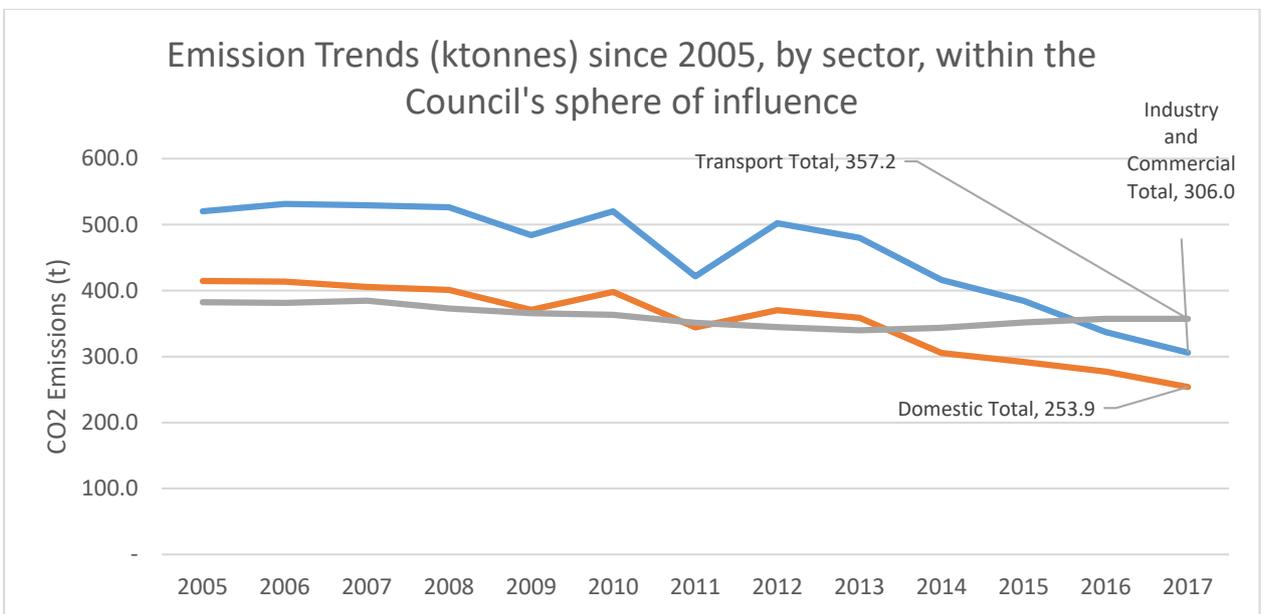


Chart 4: Per Sector Emissions Trends

In summary, the figures presented in this section go some way to highlighting the scale of the challenge in West Berkshire, as well as offering some global and national context. What follows in this strategy is a representation

of what we feel we must do, in partnership with our local residents, businesses and stakeholders, in order to address this.



4. Our Vision for the West Berkshire Environment in 2030

This strategy has a primary target of achieving carbon neutrality in West Berkshire by 2030.



*Mitigation of the effects of climate change and the restoration and protection of our environment will have **shaped our policy making and actions**, as well as those of our partners, and will have made a significant impact on the district's carbon footprint.*

*Our **environmental assets will have been protected** for future generations.*

*The **residents, businesses and communities** of West Berkshire will continue to be **active partners** in delivering positive change. These*

will have included lifestyle changes, more effective use of energy, the adoption of new technology, efficient running of our public services and new, or adapted, infrastructure.

*Progress towards carbon neutrality will have been made **alongside the district's other strategic priorities**, including protecting and supporting the vulnerable, improving educational outcomes, maintaining a high quality of life for residents, and a strong local economy.*

4.1 Key targets to deliver the Vision for the Environment

4.1.1 We will aim to reduce annual total emissions to less than 350 ktonnes by 2030

(Based on emission estimates within the scope of influence of Local Authorities)

- Per person, this is a reduction from around 6 tonnes (level in 2017⁷) to 2 tonnes of CO².
- This equates to an average annual reduction of more than 40 ktonnes over the period.
- This would leave total emissions, before additional activities, at 350 ktonnes in 2030.
- Information will be drawn from the Governments national and regional emissions dataset but we will seek to supplement this with wider data gathering with the support of technical advise and academic advice.

4.1.2 Carbon Neutrality will be achieved by a range of local energy generation and carbon sequestration⁸ projects equivalent to the projected emission level of 350 ktonnes.

- We will, at the same time as progressing our carbon reduction projects, implement a number of measures which aim towards a target of 350 ktonnes for carbon offset⁹.
- Examples will include solar and wind energy generation; tree planting; and other techniques
- This target needs to be achieved by the whole district: local residents, landowners and business will be encouraged to engage in energy generation or carbon sequestration where reduction is not possible.

4.1.3 The Council will be a carbon neutral operation by 2030.

- This will be established using a suitable methodology¹⁰.
- This does not include all Scope 3 emissions (indirect emissions are excluded but will be closely monitored to ensure we know where to focus our efforts when lobbying the government and influencing behavioural change initiatives).

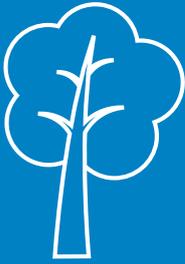
[7] 568 ktonnes compared with 917 ktonnes. West Berkshire's population is forecast to grow over this period.

[8] Is the long-term removal, capture or sequestration of carbon dioxide from the atmosphere to slow or reverse atmospheric CO₂ pollution and to mitigate or reverse global warming? https://en.wikipedia.org/wiki/Carbon_sequestration

[9] Is a reduction in emissions of carbon dioxide or other greenhouse gases made in order to compensate for emissions made elsewhere? https://en.wikipedia.org/wiki/Carbon_offset

[10] ISO 50,001 for example.

5. Strategic Objectives to Deliver the Environment Vision



CARBON NEUTRAL BY 2030

- AMBITIOUS BUT REALISTIC TARGETS.
- DELIVER A RANGE OF LOCAL ENERGY GENERATION AND CARBON SEQUESTRATION PROJECTS.
- THE COUNCIL WILL BE A CARBON NEUTRAL OPERATION BY 2030.
- TECHNICAL AND ACADEMIC ADVICE TO BE SOUGHT TO INFORM THE DELIVERY PLAN.



RESPONSIBLE ECONOMIC GROWTH

- INVESTIGATE HOW GREEN INCENTIVES FOR BUSINESS CAN BE INTEGRATED INTO THE COUNCIL'S ECONOMIC DEVELOPMENT STRATEGY.
- EMPHASISE FARMING AND AGRICULTURE IN THE LOCAL ECONOMY.
- INVEST IN DIGITAL INFRASTRUCTURE AND THE SKILLS OF YOUNG PEOPLE
- DESIGN EFFECTIVE COMMUNICATIONS TO HELP GROW NEW AND EXISTING LOCAL GREEN BUSINESS



HEALTHY COMMUNITIES

- MAINTAINING AND ENHANCING OUR GREEN AND BLUE SPACES AND ENCOURAGE PEOPLE TO USE IT.
- FOCUS ON IMPROVING LIFE OUTCOMES FOR THE CHILDREN, YOUNG PEOPLE AND ADULTS IN OUR DISTRICT.
- MAXIMISE ACTIVE TRAVEL OPPORTUNITY.
- DELIVER PROJECTS WHICH ENCOURAGE ACTIVE TRAVEL.



RESILIENT TO CLIMATE CHANGE

- MAINTAIN HIGH QUALITY FLOOD MANAGEMENT STRATEGIES AND SUSTAINABLE DRAINAGE FOR NEW AND EXISTING INFRASTRUCTURE WHICH IMPROVE COMMUNITY RESILIENCE.
- EXPLORE ADAPTATION MEASURES TO REDUCE VULNERABILITY TO CLIMATE CHANGE.
- DEVELOP GOOD RELATIONSHIPS WITH COMMUNITIES AND EFFECTIVE COMMUNICATION ON RISK.



WORKING WITH OUR COMMUNITIES AND PARTNERS

- IMPROVE THE OVERALL COMMUNICATIONS PROCESS TO ENSURE OUR COMMUNITIES HAVE THE INFORMATION THEY NEED TO MAKE GOOD ENVIRONMENTAL DECISIONS.
- IMPROVE OUR USE OF TECHNOLOGY TO IMPROVE ACCESSIBILITY TO ENVIRONMENTAL INFORMATION, EVENTS AND DEBATE.



5.1 Carbon Neutral by 2030

Most of the actions driven by this strategy will be to reduce local CO2 emission levels as much as possible. Achieving zero emissions is not a realistic target, so we will also seek to generate clean energy or sequester an equivalent amount of CO2 in order to achieve net zero.

Firstly, we need to better understand the district's and the Council's emissions. We have started this process as part of the research for this strategy i.e. What are they, where are they, how are they measured and reported, who is responsible for them and how can these be influenced. We know that we will need to have answered these before we can move forward with any certainty and ability to measure how we are doing.

As mentioned earlier in the Context section, the Government already produces national and regional CO2 emissions data down to level of local authority administrative areas. This data helps identify the key sources of CO2 emissions in each area and allows changes in

CO2 emissions over time to be monitored and can help mitigation actions to be targeted.

There are two limitations to this dataset. The first is that it is solely concerned with carbon dioxide emissions and doesn't take into account other greenhouse gas emissions. The second is that the various sources of information, coupled with the complexity and amount of data collected, all takes time to analyse and calculate for each Local Authority area. As a result, the final statistics are only released a full two years after the actual year they concern. This means that we won't have confirmed data for 2030 until 2032.

We recognise these limitations but feel that this dataset is the best currently available method for measuring the district's carbon footprint and will work with it for now.

The actions and detail behind what will need to be implemented in order to achieve the 2030 target will come later with the creation, adoption and launch of the associated 'Delivery Plan'.

Actions currently being considered include, but are not limited to, the following:

- Exploring the use of 'Climate Change Bonds' to help deliver a wide variety of infrastructure projects;
- Energy Mapping and Master Planning - It has been established that one of the key areas to significantly reduce the districts carbon emissions is decarbonising the way in which the district's homes and businesses are heated;
- Replacing existing internal combustion engine (ICE) vehicles on the Council's fleet with Ultra Low Emission Vehicles (ULEV) along with the early development and adoption of a low emission vehicle strategy.
- Waste reduction activities;
- Setting individual 'Carbon budgets' for Council based operations (see 'Managing our own carbon budget');
- Implementation of Council and district wide energy efficiency schemes;
- Increasing the deployment of renewable energy technology across the Council's estate; and
- Carbon sequestration such as large scale tree planting e.g. through schemes such as the Woodland Carbon Code and Associated Fund¹¹.
- Renewable energy infrastructure will be installed on all Council sites where it is feasible to do so.

5.2 Responsible Economic Growth

In the West Berkshire 2036 Vision and in our Economic Development Strategy, we made it clear that our local economy is strong, diverse and resilient. This is at the heart of our success as a district and is something we are committed to maintaining so that everyone is able to benefit from it.

The emerging threat of climate change and the need to address it need not change this stance. Decoupling emissions and economic growth is already a reality in the world's major economies. In recent years, most of the countries that have cut their emissions have also grown their economies. The UK cut its emissions by 128m tonnes of CO₂ between

2000 and 2014, a 20% reduction whilst experiencing GDP growth of 27%¹².

Making this leap was no accident. It came as the result of a combination of deliberate environmentally friendly policy making and a shift of the UK economy from more carbon-intensive manufacturing to less carbon-intensive service-based industries.

Although the shift in our local economy's industrial makeup has not moved as significantly as this national trend given that manufacturing is not one of the district's primary industries; we are committed to using our own policy making and influence locally as we work alongside our businesses to accelerate this at a local level.

In April 2018, the Thames Valley Berkshire Local Enterprise Partnership assessed Berkshire's future energy needs relating to economic growth¹³. The study assessed both the impacts of the future energy needs of existing communities and businesses and the potential impact of new growth. The results showed that the success and speed of economic growth in the area is likely to out-pace energy infrastructure provision as currently planned. This presents a significant risk to our local economy and we will need to redress this.

Although much of this activity will be market-led, there are a number of ways in which we are able to influence the direction of the economy and the behaviour of our businesses to ensure that our target of carbon neutrality can be combined with continued economic success.

For instance:

- We will continue to use our planning system to ensure that all commercial developments meet a minimum environmental standard so that any adverse impacts associated with new buildings are minimised.
- We will lobby Government to enforce higher standards and encourage the adoption of modern building techniques e.g. factory built eco housing, where possible.

[11] <https://www.gov.uk/guidance/the-woodland-carbon-code-scheme-for-buyers-and-landowners>

[12] <https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/compendium/economicreview/october2019/thedecouplingofeconomicgrowthfromcarbonemissionsukevidence>

[13] <http://www.thamesvalleyberkshire.co.uk/getfile/Public%20Documents/Programmes/International/Sector%20propositions/Energy%20and%20Environment.pdf?inline-view=true>

- We will invest in digital infrastructure and Smart Cities initiatives so that businesses are able to take advantage of the benefits this brings, such as at home working and connected devices.
- We will improve signposting on our website and social media channels as well as through the literature we publish so that businesses of all sizes are able to access the information they need in order to make the most environmentally conscious choices available to them.
- Through investment in the skills of our young people, we will also ensure that employers have access to a workforce which is well-informed about the impact of climate change and is equipped to carry out the green jobs of the future.
- We will provide designated business advice to new and existing green businesses so that those who are innovating in this area are given the opportunity and support to grow.
- We will explore initiatives to incentivise good practice among our businesses such as business rate reviews, environmental excellence awards or accreditations and the use of 'greening' bursaries.
- We will investigate how 'Green Incentives' for businesses may be applied within West Berkshire and incorporated in the Council's Economic Development Strategy.

Through the development of the delivery plan we will set out how we intend to carry out these actions; securing inclusive and responsible economic growth for our district.

5.3 Healthy Communities

As we mentioned in the West Berkshire 2036 Vision, we are committed to continuing to support the achievement of healthy communities and positive life outcomes by every single local resident.

Given that the links between an active lifestyle, good air quality, access to green and blue space and health are clear, we intend to promote and continue to deliver these benefits by working alongside our Health and Wellbeing Board.

As we have mentioned in other chapters,



we have seen significant investment in infrastructure that enables residents to use more sustainable transport options. Integral to this is Cycle Route 422, which runs east to west through Berkshire, as well as our work to ensure that our footpaths are kept in good order. We have also implemented (in partnership with Reading Borough Council) a Local Cycling and Walking Infrastructure Programme (LCWIP), introduced as part of the Government's Cycling and Walking Investment Strategy, which will enable a long-term approach to developing local cycling and walking networks.

Alongside this infrastructure, we have rolled out a number of initiatives to encourage active travel, such as Go Kinetic, Walk to School Week and Bikeability. Encouraging active travel in this way is beneficial for the overall health and wellbeing of children and also results in reduced vehicle emissions and improved local air quality. Through better use of communications and engagement, we will build on this work to further enhance the health and wellbeing of our residents.

Maintaining and enhancing our green and blue spaces so that future generations are able to enjoy them and, importantly, are equipped to take on their stewardship will also be vital to the continuation of good health and wellbeing opportunities.

This will then further improve the life outcomes for the children, young people and adults in our district.

We will work with schools, businesses, charities and other partner organisations to:

- Help our residents to improve their health and wellbeing by using our green and blue spaces, taking advantage of our outstanding natural environment and by working in partnership with available wellbeing and mental health services;
- Encourage more people to spend time in our green spaces to benefit their health and wellbeing;
- Encourage children to be closer to nature, in and out of school;
- Plan a year of action for the environment, working with our partners to encourage local children and young people to interact with nature and help

- improve the natural environment;
- Continue to provide active travel (e.g. cycling) training to school children
- Use available LCWIP funding to further expand the provision of cycling infrastructure

5.4 Resilient to Climate Change

The ability to adapt to a change in climate is at the forefront of work being conducted by the Adaptation Committee¹⁴ (part of the Committee on Climate Change) and has resulted in long-term planning for flood risk and water resources management, increased investment in flood defences, changes in policy to improve sustainable drainage systems (SuDS) and reviewing policies related to overheating in buildings through the Building Regulations and National Planning Policy Framework.

- Help our residents to improve their health and wellbeing by using our green and blue spaces, taking advantage of our outstanding natural environment and by working in partnership with available wellbeing and mental health services;
- Encourage more people to spend time in our green spaces to benefit their health and wellbeing;
- Encourage children to be closer to nature, in and out of school;
- Plan a year of action for the environment, working with our partners to encourage local children and young people to interact with nature and help improve the natural environment;
- Continue to provide active travel (e.g. cycling) training to school children
- Use available LCWIP funding to further expand the provision of cycling infrastructure

West Berkshire has experience of this and, through the Local Flood Risk Management Strategy¹⁵, there has been a concerted effort to minimise the effects of future flood events on residents and businesses because we have seen the direct impact on people's lives, possessions, and their physical and mental health.

A series of flood management plans have been developed, looking at site specific risks and the different types of flood risk that West Berkshire

[14] <https://www.theccc.org.uk/our-impact/resilience-to-climate-change/>
 [15] <https://info.westberks.gov.uk/floodriskmanagement>

is likely to experience (ground water, river, surface water, sewer and highway). We have worked with all of the affected communities in developing these plans and there is a comprehensive response plan in place should such an event happen in the future. As with all major incidents, this is a multi-agency response and we work through the Thames Valley Local Resilience Forum¹⁶ to ensure that communities are provided with the very important information they need to prepare themselves.

We have also progressed a comprehensive approach towards SuDS and policy has been developed to ensure adequate protections are in place for new development¹⁷, this is a key part of our work to improve adaptation and resilience.

Adaptation measures will be explored to help reduce vulnerability – for example by lowering sensitivity or building adaptive capacity – as well as allowing communities and partners to benefit from opportunities of climatic changes.

5.5 Working with Our Communities

We recognise that we have an important part to play in achieving carbon neutrality but we cannot fulfil this ambition alone. From everyday behaviours and lifestyle choices such as the mode of transport we use and the food that we eat, to longer term investments in new buildings and infrastructure, all of our decisions need to consider the carbon impact.

We will therefore work closely and inclusively with those that represent the diverse nature of West Berkshire to not only understand what their priorities are and to learn from these but also to increase awareness and enable informed decisions. In doing so our Town and Parish Councils will be important partners, as will our businesses.

We will also work closely with landowners and farming/ agricultural communities to explore opportunities for natural sequestration through environmental land management techniques.

If we are to meet our target of carbon neutrality by 2030, however, it will be necessary to accelerate our work. As such, we will continue

to use available tools e.g. social media platforms and info-graphics as well as events and a strategic communications strategy to engage better with our residents, businesses and visitors about transport, waste and resource use in the future as we look towards a carbon neutral future in West Berkshire.

6. The Path to a Greener West Berkshire in 2030

6.1 Key Themes



6.1.1 Sustainable Transport

West Berkshire has a successful local economy which owes much to its strategic location within the Thames Valley with its close proximity to the M4, good- and improving- rail links and access to Heathrow Airport and London. Living in the district also brings with it excellent lifestyle opportunities, many of which are linked to its rural nature and proximity to the North Wessex Downs Area of Outstanding Natural Beauty.

What is clear, however, is that these advantages bring with them carbon emissions.

As indicated in our context section, local transport currently accounts for a significant proportion of our emissions and we know this is something we can seek to influence. The M4 and A34, our two most important strategic roads, account for a large amount of emissions from transport yet sit mainly outside of Local Authority control. As such, the further development of sustainable transport solutions will be key as we look to reduce the district's carbon footprint and fulfil our ambitions to

preserve and enhance our natural environment.

Much of this work has started as part of our Local Transport Plan (LTP) to 2026. The Vision of this plan is:

“To deliver effective transport solutions for all by increasing choice and minimising congestion”

We have already made progress in this area. For instance, we have installed a large number of electric vehicle charging points in residential streets across the district and have one of the highest numbers per capita in the country, far exceeding any other Berkshire Local Authority area. We have also, with the Thames Valley Berkshire Local Enterprise Partnership, seen significant investment in cycle paths and, with the help of a Department for Transport grant, established a car club in Newbury. That said, there is scope to do more.

We will review our Local Transport Plan in order to build on the progress we have made. As part of this, we are considering a number of projects which will reduce carbon emissions

and environmental harm whilst offering a greater number of transport options to our residents. These include:

- Working with public transport operators to improve the use of public transport.
- Establishing greater connections between sustainable travel options.
- Encouraging more sustainable car travel options where use of public transport and active travel is not practical.
- Supporting active travel especially for shorter journeys.
- Working with local businesses to promote sustainable travel by staff.
- Encouraging uptake of electric vehicles by continuing to provide exemplar levels of charging points.
- Increasing our use of more sustainable road surfacing options e.g. low-temperature asphalt.
- Working with our stakeholders and partners to develop and adopt sustainable transport innovations
- Working with the Government, regional and local partners to enhance rail infrastructure.
- Lobbying national Government and relevant agencies in areas where emissions are outside of our control (e.g. Highways Agency in the case of the M4 and A34).

6.1.2 Buildings

The Council will move to buying green energy for all its buildings and will seek to influence others to do the same. All our own services and support functions will be encouraged to review their use of buildings with a view to improving our chances of success in achieving carbon-neutrality within our infrastructure.

All of our new build or refurbishment projects shall take into consideration the carbon impact of their proposal, both in construction and operation. The positive and negative impacts, in line with the intentions of this strategy, will be measured and managed in a move towards 'whole life' carbon costing and decision

making. We acknowledge that there will be difficult decisions to make in achieving this, but want to show ambition and determination in our approach. To help achieve this we will:

Energy used to heat homes accounts for a substantial percentage of the Districts carbon emissions. Whilst we will commit to lobbying government to improve energy performance standards in new builds, we are also conscious that huge reductions in carbon emissions and energy requirements of current housing stock is achievable and needs to be done. Retrofitting insulation and energy efficient heating systems will deliver multiple benefits to homeowners and the environment and we will engage, lobby and support for the necessary changes to make retrofitting economical.

- Review and assess emerging technology and share our knowledge with stakeholders and communities.
- Communicate with local landlords (in our capacity as enforcing agency for the Energy Performance of Building Regulations 2012) and owners/occupiers of public buildings to ensure they are aware of their obligations to improve energy efficiency.
- Advise residents and businesses of best practice where possible.
- Explore ways to make retrofitting insulation and energy efficient heating systems more economically viable.

6.1.3 Energy

The Council's electricity consumption in 2018/19 was estimated to be 11,630 MWh, equivalent to 3 kTonnes CO₂. Across West Berkshire as a whole, the Industry and Commercial sector emitted 141.0 kTonnes CO₂ as a result of electricity consumption compared with the Domestic sector which emitted an equivalent 81.7 kTonnes of CO₂.

We recognise, therefore, that of the district's total of 222.7 kTonnes of CO₂ in 2017 (resulting from electricity consumption) our CO₂ emissions only account for 1.35% and we need to show leadership to positively influence others.

The UK's plans to reduce carbon emissions

[18] <https://www.bbc.co.uk/news/business-40198567>

[19] <https://www.gov.uk/government/statistics/renewable-sources-of-energy-chapter-6-digest-of-united-kingdom-energy-statistics-dukes>

have relied on ensuring that we generate our electricity and heat from low or zero carbon sources instead of the coal and gas currently used. Good progress is being made nationally. In June 2017¹⁸ National Grid reported that for the first time power from wind, solar, hydro and wood pellet burning supplied 50.7% of UK energy for a brief period during 1 day. Renewable sources provided a third (33.0 per cent) of the total electricity generated in the UK in 2018 compared to 29.2 per cent in 2017¹⁹

West Berkshire is a rural authority and this brings its own particular challenges and opportunities when considering the impact of the district's existing energy consumption and the potential for renewable energy.

As a district, in 2018, for renewable energy sources, West Berkshire had 34.2 MW installed capacity, the vast majority of which came from solar photovoltaics (33.1 MW)²⁰. Table 3 on the right shows how this compares with others.

Whilst the potential for renewable energy generated from solar photovoltaics appears to be well established, things are not so clear with regards the ability to provide low and zero carbon heat for homes and businesses. A large proportion of the district's existing homes are reliant on liquid fuels and have no cost efficient way of connecting to the local gas grid, a less carbon intensive method to heating homes. To overcome this we will:

- undertake energy mapping and master planning for the district in order to better understand what opportunities and limitations there are for district heating schemes with existing buildings and future developments. The results of this exercise would be used to inform any relevant future policy for the district
- work with local suppliers, community energy co-operatives and similar groups to invest in renewable energy in the district, and will lobby Government to change the tax system to favour low and zero carbon solutions.

6.1.4 Waste and Resource Efficiency

As the world's population has grown in recent decades, and with it material consumption and waste generation, it has become increasingly obvious that major changes are required to conserve the earth's finite resources.

As a unitary authority, we have statutory duties for both waste collection and disposal. We have set out a Waste Strategy 2002 – 2022²¹, but we recognise a lot has changed in the UK waste sector since it was published. We are committed to providing residents with a good quality of waste collection and recycling service. In the medium term, we will

LA area	MW
Wiltshire	593.5
Vale of White Horse	149.6
South Oxfordshire	46.3
West Berkshire	33.1
Wokingham	28.3
Windsor & Maidenhead	8.3
Reading	5.7
Bracknell	4.2
Slough	3.4

Table 3: Solar PV Installed Capacity (MegaWatt, MW) at local authority level - as at end of 2018

also have to ensure that our collections and recycling approach is compliant with emerging government requirements, which are expected to apply from April 2023.

According to the United Nations²², if the global population reaches 9.6 billion by 2050, the equivalent of almost three planets could be needed to provide the natural resources required to sustain current lifestyles. For this reason, there has recently been greater emphasis on the need to transition economies from the historical linear (“take, make and dispose”) model of resource use, to a more circular economic model where materials are kept in use for longer to minimise the need for raw materials. This is demonstrated in Figure 3 overleaf:

[18] <https://www.bbc.co.uk/news/business-40198567>

[19] <https://www.gov.uk/government/statistics/renewable-sources-of-energy-chapter-6-digest-of-united-kingdom-energy-statistics-dukes>

[20] <https://www.gov.uk/government/statistics/regional-renewable-statistics>

[21] <https://info.westberks.gov.uk/CHhttpHandler.ashx?id=36818&p=0>

[22] <https://www.un.org/sustainabledevelopment/sustainable-consumption-production/>

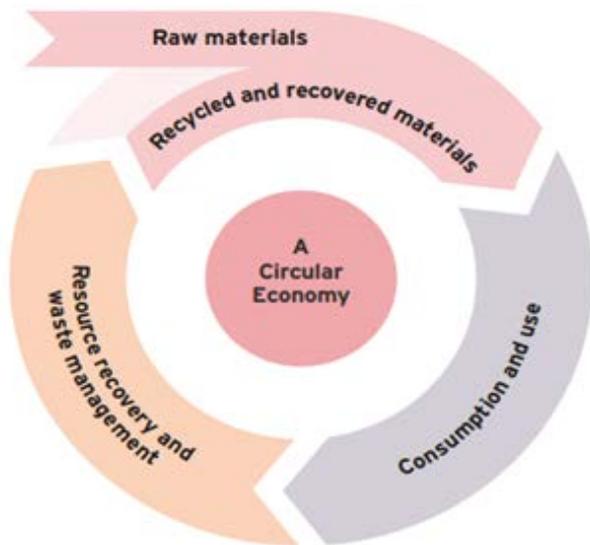


Figure 3: A Circular Economy (Image source: Resources and Waste Strategy, Defra)

The Resources and Waste Strategy for England (RWS)²³ was published in December 2018 and seeks to deliver the waste and resource management elements of the UK Government's 25 Year Environment Plan. The RWS has the overall aim of making the UK a world leader in resource efficiency and to facilitate the transition to this circular economy.

Two of the key targets set out in this RWS are:

- for all plastics to be reusable, recyclable and compostable by 2025; and
- to eliminate avoidable plastic waste by 2042.

In addition, according to information available in the Government's initial consultation on the RWS during spring 2019, some of the changes that may be required to our existing collections include:

- A requirement to collect food waste separately from the kerbside on at least a weekly basis; and
- A requirement for all English local authorities to collect the same core set of dry recyclable materials

We know that plastic waste is something our residents feel very strongly about. We intend to look at how we can tackle this locally.

We are aware from compositional surveys of the residual waste bins in West Berkshire that about 25% of the contents is comprised of

food waste. By providing separate food waste collections, we have given the community the tools they need to improve this statistic. We will therefore encourage them to consider how changes might be made to their own recycling habits so that the amount of waste unnecessarily sent to landfill is minimised.

Recycling in the commercial and industrial sector has traditionally been much lower than for household and municipal waste so it is likely that there is scope to undertake significant work in this area. Major UK business are adopting numerous initiatives to reduce plastic pollution such as the launch of the Plastics Pact²⁴, whose signatories include some of the leading UK retailers, producers and Non-Governmental Organisations but, as always, there is a pressing need to do more. Effective communications and engagement will be key to this, as we discuss in other parts of this strategy.

We already have some strong examples of good practice in our waste operations. In 2018/19, about 50% (c. 37,000 tonnes) of the waste we collected was either recycled or composted, about 34% (c. 25,000 tonnes) was sent to an energy recovery facility and 16% (c. 12,000 tonnes) was landfilled. This places us among the better performing local authorities in England. Nevertheless, we are determined to recycle even more in the lifetime of this strategy. We are also committed to ensuring that only materials for which a proven offtake market exists are collected for recycling and that, wherever practicable, waste is sent to facilities within the UK for treatment and/or disposal.

In order to work towards the aim of carbon neutrality by 2030 and to ensure that we are mitigating the effects of waste and resource management on our natural environment, we will:

- Reuse, recycle and compost at least 60% of municipal waste we handle by 2030;
- Implement a kerbside collection system that is fully compliant with the minimum service standards required by the UK Government by 2025. This commitment includes:

[23] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765914/resources-waste-strategy-dec-2018.pdf

[24] <http://www.wrap.org.uk/content/the-uk-plastics-pact>

- Separate food waste collections to all eligible households by 2025, subject to the availability of funding from the Government.
- Collection of at least the core set of dry recyclable materials by April 2025.
- The continuation of the provision of separate garden waste collections from households.
- Increase our reuse figures by 2030 (current rate is 0.16%).
- Landfill less than 10% of municipal waste by 2030.
- Work with local businesses to improve resource efficiency in the commercial sector.
- Work with our key stakeholders and partners to develop a new waste strategy for West Berkshire before 2022.
- Continue to monitor the introduction of new technologies and innovations for future waste collections and management.
- Explore the ability to shred bulky waste and send this stream to Energy from Waste facilities for energy generation instead of landfill
- Review the potential to collect more plastic waste streams.
- Explore the feasibility of using Anaerobic Digestion for the treatment of separately collected food waste in future.

These commitments, in combination with the other factors outlined in this strategy, will help us to move towards a circular economy in which West Berkshire's natural environment is protected and its carbon emissions are minimised.

6.1.5 Protecting and Enhancing our Natural Environment

West Berkshire has a beautiful and diverse natural environment. It is one of our biggest assets. The benefits it offers for our wildlife, our habitats and our health and wellbeing cannot be questioned. As a council, we want to work with others to protect and enhance it so that it can be used by, enjoyed, and cared for by everyone.

We have several existing strategies and plans that are relevant for protecting and enhancing

the natural environment but also recognise that a significant amount more must be done in order to meet our targets.

The UK Government's 25 Year Environment Plan (25 YEP) , which we mentioned earlier in this strategy, provides the strategic framework for good environmental stewardship in England. At its heart is the aspiration for "improving the environment within a generation and leaving it in a better state than we found it". This is an aspiration that we support and are looking to fulfil locally through the implementation of this strategy.

As with all of the measures contained in this strategy, this is not something the council can do alone. We must work with our partners to protect and enhance our natural environment. We must also use land and soils sustainably to ensure that they are preserved for future generations, deliver cleaner air and water in our towns and rural landscapes and protect threatened species and provide richer wildlife habitats.

Biodiversity is a key component of the natural world, but it is being eroded around the globe. Our Local Plan provides the planning framework for conserving and enhancing the natural environment in the district and covers the period up to 2026. More balanced ecosystems are more robust when faced with environmental changes and it is therefore imperative that we all as individuals and communities protect and preserve what we have currently in and around the district. The actions outlined later in this section will explain how we intend to do this.

Earlier in this strategy, we mentioned that we intended to undertake carbon sequestration measures. One of these will be a programme of tree and wildflower planting in our open spaces and on our urban highways, which will also add to the character and the biodiversity of our district. This will include:

- Schools tree planting;
- Woodland creation;
- Street tree planting and management;
- Orchard planting;
- Role of tree wardens;
- Role of volunteers; and
- Links with the North Wessex Downs AONB organisation.

In terms of Public Rights of Way, we have a large network of approximately 1,100km of footpaths, byways and bridleways. We have a duty to assert the rights of the public to the use and enjoy the network. The primary aim of the network is to provide easy recreational and functional access to the countryside and opportunities for contact with nature. We actively encourage residents and visitors to use these routes for health improvement purposes and produce a number of walking leaflets for this purpose. Through our delivery plan, we will outline how we can continue to maintain this and enhance it where possible.

As we have mentioned throughout this strategy, we are committed to protecting and enhancing our natural environment. In order to do so, we will work with partners to:

- Safeguard and enhance the beauty of our distinctive landscape and improving its environmental value while being sensitive to considerations of its heritage.
- Expand our tree planting programme in suitable locations across the district to enhance the natural environment and help reduce greenhouse gases and impurities in the atmosphere.
- Develop a Nature Recovery Plan which will further improve biodiversity and wildlife in the district.
- Encourage our residents to explore the natural environment, to become active partners in the protection and enhancement of biodiversity and to take ownership of the management of the natural environment.
- Apply emerging Government requirements for environmental protection and improved biodiversity through the planning process.
- Continue working with volunteers and partners to take care of the natural environment.
- 'Green' our towns by supporting the creation of more green zones and planting more urban trees.

This is by no means an exhaustive list but we look forward to using these projects, and others as new suggestions emerge, to better protect

and manage our natural environment so that those who follow us can enjoy it and care for it as we have done.

6.2 How we will deliver

6.2.1 Obtaining and utilising environmental information

This strategy provides us with a clear vision and we need to consolidate key information to help make better environmental decisions. We will signpost the work of partner organisations, government research and any data sources that increase the likelihood of positive behaviour change on the journey to carbon neutrality in 2030.

We will ensure that all future proposed policy is aligned and supports the move towards carbon neutrality. We know that broader assessment of our environmental impact of our own operations, policies and projects is needed and that transparency will be key to getting communities and business to contribute. It is important to us that we are knowledgeable in the key areas and research is already underway, working with partners, to understand how all forms of effective carbon capture, storage and offsetting could work for our own activities and encourage all members of the community to routinely consider how they can do the same. We know we need to improve in capturing our own environmental information and development work to produce this has started. Feedback from the 2019 Climate Conference demonstrated that this was important for our residents and businesses, they wanted to feel that we are all in this together.

6.2.2 Managing our own carbon budget

It is acknowledged that we must show ourselves as a leader in the difficult shared challenge of working towards carbon neutrality by 2030.

We will therefore review current best practice within the public sector and engage with sector specific experts to agree the boundaries of the organisation:

- Define the types of emissions that should be included;
- Understand these emissions by our operations;

- Provide greater certainty on how emission levels will change in a business as usual scenario; and
- Develop a series of options and actions for delivery of a carbon neutral Council by 2030.

The accepted practice, and one that we will be adopting for our own footprint, is that when measuring, the resultant values will be expressed in carbon dioxide equivalents or CO₂e. CO₂e is used to express the impact of each different greenhouse gas in terms of the amount of carbon dioxide that would create the same amount of warming. Therefore, our carbon footprint will consist of lots of different greenhouse gases expressed as a single number.

Once a suitable baseline for our own emissions has been established, one of the first actions we are proposing is to introduce a series of 'Carbon Budgets' for our own activities and estate. For example we know that we consume about 11.6M kWh which if we were to ensure that was generated in district with 100% renewable energy we would save just under 3,000 tonnes of CO₂ per year, which demonstrates the scale of the challenge i.e. this is less than 0.5% of the total carbon offset target for West Berkshire as a whole.

The concept is to allocate an allowance of tonnes Carbon Dioxide Equivalent (tCO₂e) emissions for each financial year. We will then be required to keep within this allowance in each of our operational areas. The CO₂e allowance will be reduced each year in order to achieve carbon neutrality for the Council by 2030.

In order to monitor performance against the Carbon Budgets, CO₂e emissions will be reported annually through our Key Performance Indicators and published on our website.

6.2.3 Communicating with and influencing our stakeholders

As we have discussed in this strategy at length, we are not in a position to deliver our aims and targets in isolation. We must bring our community along with us and give them the tools and knowledge they need to take their own actions.

As a council, we regularly consult our residents and our business on the policies we implement and seek feedback about the work we do. After we declared a Climate Emergency in July 2019, however, we decided early on that the extent of the challenge facing us meant that we had to do as much as possible to bring the public with us on the journey to carbon neutrality by 2030.

When we hosted the inaugural Climate Conference in October 2019 we took the first step towards this. Over 300 local people joined us to hear from experts, to share ideas and to start the conversation about what action we can, and must, take locally to meet our target. Much of what we heard at the conference made it clear that although carbon neutrality and the actions it will necessitate are likely to be challenging, many people locally are ready to play their own part.

We will hold similar events at regular intervals in order to inform residents and businesses of our progress and the projects we are likely to be undertaking as well as to hear about their own progress, ideas and feedback.

Alongside our efforts to communicate with and engage our residents and businesses, we must also look at ways to improve accessibility to greener options. Much of this will be about ensuring that our own services, such as Waste and Recycling, are as low carbon and user friendly as possible. It will also mean we must aim towards having partnerships, such as with the Thames Valley Berkshire Local Enterprise Partnership, which help the community to access technologies and infrastructure that will mitigate the impact of their daily activity on the district's carbon footprint.

We will actively encourage residents, businesses and our partners to engage in carbon audits, footprint assessments and ongoing carbon budgeting. In doing so, we will encourage data sharing and best practice exchanges to ensure the whole of West Berkshire benefits from the collective effort. We will also explore how to use our existing financial models to encourage grant funding sensible environmental projects through, for example, the Community Infrastructure Levy, Elected Member grant bids and third party grants.

Our delivery plan will show how we plan to do this and will adapt over time as we engage with our residents and the impact of all of our actions become clearer.

6.2.4 Working with young people

What has perhaps been most impactful both before and since the declaration of the Climate Emergency is that the district's young people are engaged with this cause. It is clear that they feel it is their future that is most in jeopardy if we do not take meaningful action to address the effects of climate change and to protect our natural environment.

The interest our young people have taken in climate-related issues in recent years is unprecedented and is something that we as a council are keen to highlight. The enthusiasm and knowledge of our young people is something we want to use and to develop over time so that the quality and scope of the local debate on climate change reflects the needs of all generations who live in West Berkshire.

The Climate Conference in October 2019 was deliberately timed to take place during half term so that our young people could attend and we will continue to ensure that they are able to become involved with our decision making and our actions. We feel there are more possibilities to explore, linking with groups such as Newbury Youth Council and those who organised recent youth protests to find a platform that encourages constructive debate.

We will also, through our schools, communicate with them, seek their views and work with them to bring about the greener district they deserve. Embedding an understanding of climate change in their studies from a very early age will be key to this as they will be equipped to become custodians of our natural environment in the future.

6.2.5 Planning and development

Addressing the issues and impact of industrial, transport and domestic carbon emissions requires a robust and ambitious Local Plan (LP) for West Berkshire. The LP sets out the local planning policies for West Berkshire and is currently going through a process of review, in preparation for submission to the Secretary of State and independent examination. Once adopted it will guide planning and development

up to the year 2036, beyond the 2030 date for carbon neutrality in West Berkshire. It is therefore vital that we take this opportunity to put in place policies that will help the district achieve its aims.

As part of this review process we will look to challenge our existing policies and approaches, and work with local area specific stakeholders, to evaluate the potential for adoption of broader renewable technologies. We will also consult our peers across the country to determine what they are doing with regards to sustainable transport and development, and look to adopt best practice.

We will also explore the possibility of including 'allowable solutions' which seeks to use financial measures e.g. Community Infrastructure Levy where on-site measures are not considered viable and instead contribute to a carbon sequestration/offset funds such as re-forestation. This is an approach that has been explored by other local authorities but requires careful consideration in relation to our developing Housing Strategy and existing planning policies.

On a wider point, we will lobby government to ensure that the National Planning Policy Framework and Building Regulations take into account the latest Climate Change scientific evidence, the increased public awareness and concern and provide us with the tools to affect change.

6.2.6 Nature Recovery Network

The 25 Year Environment Plan (25YEP) proposes the creation of a Nature Recovery Network²⁶. A Nature Recovery Network is a joined-up system of places important for wild plants and animals, on land and at sea. It allows plants, animals, seeds, nutrients and water to move around more freely and enables the natural world to adapt to change. It provides plants and animals with habitats to live, feed and breed. The Network would include nature reserves and local wildlife sites. It would also contain peat bogs, heaths, meadows and cliffs; road verges, parks, gardens, hedges and woods; and rivers, streams, ponds and lakes.

We have recently reduced our grass and verges cutting frequency to aid wildlife establishment. The current regime is to cut the urban highway 8 times a year, which is

[25] <https://www.bristol.gov.uk/documents/20182/3368102/>

Carbon+Offsetting+in+the+West+of+England.pdf/894f7c11-33e4-a8b4-ec89-383828553184

[26] https://www.wildlifetrusts.org/sites/default/files/2018-06/Nature_recovery_network_final.pdf

already down from 10 in 2017 in most urban areas, this appears to be acceptable to the residents and keeps the majority of the grassed areas under control.

In more rural locations and in areas of open spaces, across the district there are opportunities to reduce this cutting regime and introduce space for a mix of wildflower and natural regeneration .

6.2.7 Working with business

Just as our residents need support to make responsible choices, so do our businesses. It is clear that businesses of all sizes in West Berkshire appreciate the scale of the challenge with respect to climate change and that they recognise that they too have a role to play in meeting it.

West Berkshire's businesses vary in size, industry and scope. Across our district there are examples of businesses taking responsibility and showing leadership on this issue and grasping the market opportunities arising from a low carbon global economy.

Our larger employers, such as Vodafone, AWE and Microfocus, are taking action to minimise their own impact through long-established environmental corporate social responsibility schemes. Other West Berkshire businesses such as Fuel Cell Systems are at the forefront of developing new technology which will be vital to the local, and global, response to climate change. At the other end of the spectrum, innovative start-ups such as Thatcham Refillable are promoting choices with a lower environmental impact and plastic free living to their growing community.

The policy decisions we make and the infrastructure we provide should enable our businesses to grow in a responsible and sustainable way. To support this, facilities such as remote working, a wider range of travel options and access to sustainable utilities will be made readily available to them. Equally, the

existing support offered to businesses through our work with the Thames Valley Berkshire Local Enterprise Partnership will help new and existing green businesses to grow and develop within the district.

Emerging technology and the accompanying infrastructure, including 5G connectivity, electric and autonomous vehicles and the Internet of Things will be integral to this. So too will be a transport network that helps employees to travel to work in sustainable way. Similarly, through our work on the education and training agenda we will give the workforce's next generation the skills they need to thrive and carry out the green jobs of the future as they respond to the Climate Emergency.

Not only this, but we will actively seek out examples of innovation or new ways of working among our businesses to consider whether these could be used in or adapted for our own activities. Collaborating and sharing learning in this way will be increasingly important in the coming years as we work towards this shared target.

Through adaptation and resilience planning we can reduce risks from weather related and safeguard business productivity, as identified in the government's risk assessment for business.



7. Governance

Work is underway, to develop a more comprehensive and technically robust discussion on how we measure and report progress to work towards achieving the vision and the associated objectives.

We recognise, however, that this needs to evolve; bringing together voices from a variety of backgrounds and listening to experts to complement the work of the Council. Our first Climate Conference has given us valuable insight and we see it as a first step towards conducting a more open conversation with our community. We also recognise that future events must drill down into the details that matter in West Berkshire, with clearer links to the work of the council and how we can share our learning.

It is widely acknowledged that, when it comes to environmental engagement, we have an active community which we see as a strength for West Berkshire. Effective and positive contributions from this network will be key to our success and every effort must be made to enable people be part of the solution.

We will make sure there is ample opportunity for this to take place and everyone feels part of the conversation.

An annual report will be produced to set out progress against the Delivery Plan. This will help to monitor the achievement of the objectives of this strategy and be another opportunity for dialogue between all those coming together to deliver the shared vision.

8. Measuring and Reporting Progress

We recognise that the continued inclusion of the wider community is vital to achieving the aims of this strategy. Our first Climate Conference has given us valuable insight and we see it as a first step towards conducting a more open conversation with our community. We also recognise that future events must drill down into the details that matter in West Berkshire, with clearer links to the work of the council and how we can share our learning.

It is widely acknowledged that, when it comes to environmental engagement, we have an active community which we see as a strength for West Berkshire. Effective and positive contributions from this network will be key to our success and every effort must be made to make people feel part of the solution.

The vision demands a clear progress check on the path to carbon neutrality by 2030 and while this is an ambitious target that we are determined to achieve, we have to acknowledge that there are a number of unknowns and risks in the journey ahead. Chart 5 below will help guide our understanding on progress and gives a demonstration of the level of uncertainty we are facing. Where we identify that our projects are not delivering what we need, we can re-assess and look for more effective alternatives. The key should be to find a balance between constant re-evaluation, which is resource intensive, and avoiding waiting until 2030 only to find out we didn't do enough. To ensure progress is tracked we will report annually to full Council against the milestones in the Environment Delivery Plan.

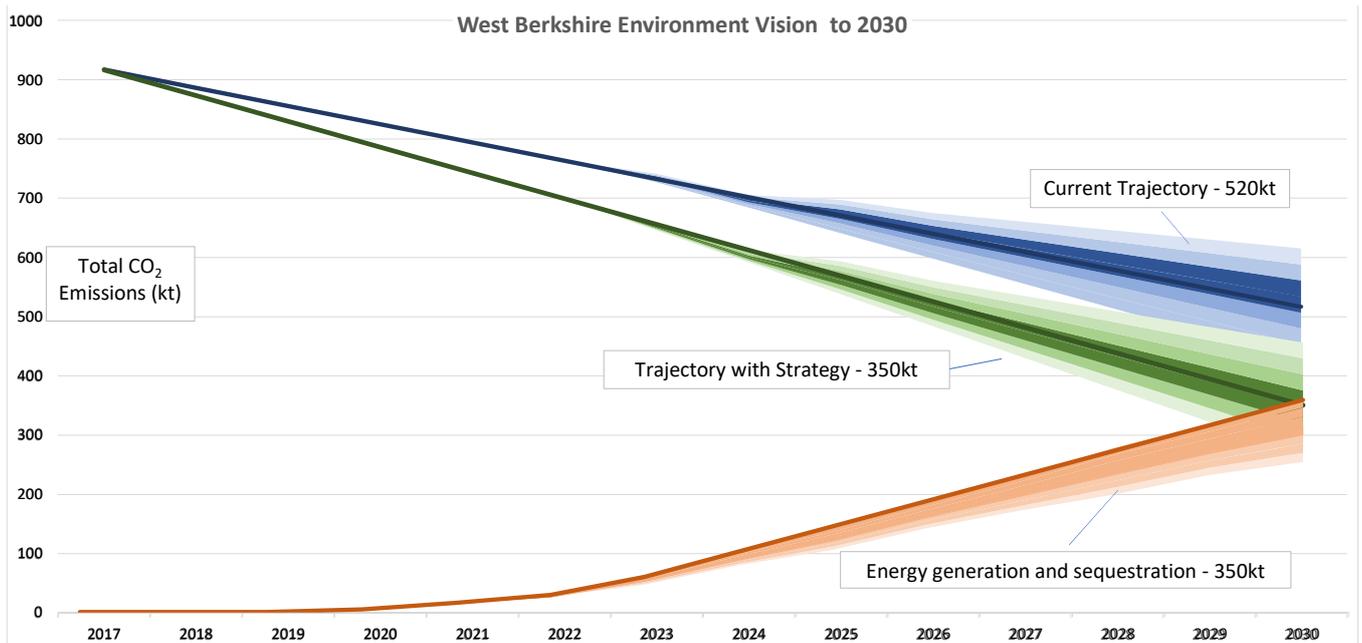


Chart 5: Our Path to Carbon Neutrality

It is important to show an outline of the work we intend to do. Based on the research, knowledge and experience we have to date there are projects we believe will start contributing to the path we have laid out.

Where we have cited numbers, these are to indicate scale and ambition but also a degree of pragmatism about delivery, this is a difficult balance and realise that we cannot satisfy everyone in what we are aiming for.

8.1 Indicative projects to contribute towards carbon reduction targets:

- We will generate 11.5MW (equivalent 2,018 kt CO₂e)²⁷ of renewable energy in the district to use for our own operations (equivalent to current total demand).
- We will work with partners and encourage residents and businesses to produce 20MW (equivalent 3,510 kt CO₂e) of renewable energy in the district to use for their own consumption.
- The number of charge points we will installed will significantly increase (actual number to be agreed on first strategy review).
- The number of registered Ultra Low Emission Vehicles (ULEV) in our fleet will significantly increase (actual number to be agreed on first strategy review).
- Carbon emissions related to our travel will significantly reduce (actual number to be agreed on first strategy review).
- The number of ULEV vehicles registered in the District will significantly increase (actual number to be agreed on first strategy review).
- The amount of our land converted to wildflower verges will significantly increase (A4 trial under way, feasibility of rolling this out to the rest of the District to be commissioned).
- The number of 'impressions' generated by communication projects on carbon reduction initiatives will significantly

increase (actual number to be agreed on first strategy review).

8.2 Indicative projects to achieve energy generation and carbon sequestration targets:

- The Council will produce an additional 10MW (equivalent 1,755 kt CO₂e) of renewable energy beyond existing demand.
- The number of hectares of trees planted in the district will significantly increase.
- The number of urban trees planted will significantly increase (actual number to be agreed on first strategy review).
- Working with landowners and agricultural industry to investigate soil sequestration.

8.3 Indicative projects to improve the Natural Environment:

- Establish wild flower verges throughout West Berkshire's highway network;
- Support and encourage community sequestration and carbon reduction initiatives;
- Investigate a joined up approach to natural regeneration including comprehensive mapping of the District to identify opportunities for rewilding, tree planting, carbon capture and habitat conservation and creation across West Berkshire.

[27]

based on forecast regional carbon intensity of 234 gCO₂/kWh <https://carbonintensity.org.uk/>



9. Conclusions

Climate change is an internationally recognised challenge and we need to play our part in addressing it. As a result we are aiming for carbon neutrality in West Berkshire by 2030.

The Council's declaration of a Climate Emergency in July 2019 was an important marker. It was a commitment to leading efforts to mitigate the impact of climate change locally, and to bring our residents, businesses and communities along with us.

We are under no illusions about the level of ambition this will require. The changes to our lifestyles, to our use of resources and to the way in which we deliver our services will be extensive. We recognise, however, that this must be done. This Council is ready to make these changes and to assist others in our district to do the same.

The projects we have alluded to in this strategy will address the impact man-made climate change is having on our environment. We will use our delivery plan to manage these projects, to track their progress and to measure their impact.

Measuring this impact will be fundamental as we embark on the journey towards carbon neutrality. In order to do so, we have developed a number of key performance indicators (KPIs) which we will use alongside the emissions figures that national government publishes annually. This will allow us to transparently show where things are going well and where more needs to be done to keep us on track.

Over the lifetime of this strategy there are likely to be a number of developments which will affect our ability to achieve our target. Some will have a positive impact, some a negative one. Equally, some will be within our control while others are outside of it. We don't currently have detailed answers for getting all the way to our target. Regardless of what happens, however, we must ensure that we are able to respond both proactively and reactively.

We are confident that the work we have done already and the commitments we have made in this strategy are the right ones but it is also important for us to recognise that the impacts of climate change are wide-ranging and not entirely predictable. For this reason, we will track our progress and monitor developments where they affect this strategy.

Working towards this ambition will require us to be creative, determined, and to make use of emerging technology. Most importantly of all, however, it will require everyone in the district to take responsibility for the impact their choices have on the environment.

10. Achievements

What has been achieved since the Council unanimously declared a climate emergency on 2nd July 2019?

As well as developing this Environment Strategy, there have been other actions and changes being made to work towards reducing carbon and enhancing our environment in West Berkshire. Whilst by no means an exhaustive list, a flavour of what has been achieved since the declaration of a climate emergency in July 2019 is set out below.

Projects

- Delivered the A4 wild flower verges project.
- Launched the UK's first Community Municipal Investment - an opportunity to invest directly in a greener future for the district.
- Installed solar photovoltaic panels to the first phase of Council buildings in order to generate and use sustainable energy
- Undertaken a carbon audit of the Council to establish the Council's current carbon footprint

Engagement / information

- Held a successful Climate Conference with over 300 people in attendance
- Wide ranging consultation on a draft Environment Strategy through an online survey, community conversations with Parish Councils, interested groups and individuals, drop-in sessions at selected District libraries and direct responses and representations.
- Set up a new Environment Delivery Team within the Environment Department at the Council to support the work on delivering this Environment Strategy.

Infrastructure

- Progressed the West Berkshire sections of the new National Cycle Network Route 422.
- Completed the Hermitage to Hampstead Norreys foot/cycle link.
- Successfully bid for our full emergency active travel fund allocation.
- Commissioning of 18 on street electric charge points (in addition to the 18 commissioned early 2019).
- Increased the percentage of fully electric vehicles in the Council's fleet from 10% to 20%.
- Introduced an Intelligent Traffic Signal system on the A4 in Thatcham to reduce congestion and improve air quality.
- Continued with the LED replacement of street lighting units (96.13% of total stock).
- Increased our use of recycled materials in road construction (e.g. In our road re-surfacing programme all sites now use asphalts with an increased percentage of recycled material content; Use of recycled rubber speed cushions in Turnpike Road, Newbury).
- Completion of the Dunstan Park and South East Thatcham Flood Alleviation scheme protecting 573 properties from the effects of climate change.
- Increased use of warm asphalts and cold lay recycled asphalts in surfacing works. This provides a significant reduction in CO2 in its production and use. As much as 25kg of CO2 can be saved per tonne of material when used in place of hot mix materials.
- Implemented a more efficient way of identifying areas of carriageway repair in order to reduce waste.
- Purchasing products for particular projects from local suppliers to reduce CO2 delivery emissions

11. Glossary

Abbreviation	Term	Explanation
	Anaerobic Digestion	A process in which organic matter is broken down by micro-organisms in an oxygen free 'tank' to produce fuels.
AONB	Area of Outstanding Natural Beauty	Area of countryside designated for conservation in recognition of its national importance.
	Baseline	A fixed point of reference used as a starting point for comparison purposes.
	Biodiversity	The variety of plant and animal life.
	Carbon budget	The maximum amount of greenhouse gases that can be emitted over a certain period.
CCS	Carbon capture and storage	Trapping carbon at its emission source, and then storing it long term.
CO2e	Carbon Dioxide Equivalent	A term used to describe different greenhouse gases in a common unit. For any greenhouse gases and their amount, it is the amount of carbon dioxide which would have the equivalent warming impact.
	Carbon footprint/carbon audit	The total greenhouse gas emissions caused by a person/event/organisation/product, expressed as the carbon dioxide equivalent.
	Carbon neutral/ carbon neutrality	The act of reducing a person's/events/ organisations/products carbon footprint to zero through energy efficiency measures and external emission reductions projects.
	Climate change	The long-term shift in the planets weather patterns and temperatures.
CCA	Climate Change Act 2008	Provides the framework for the UK's climate change policy
	Climate Change Bonds	Fixed income bonds, linked to climate change solutions.
	Climate Emergency Declaration	The Declarations vary for each organisation. The Council's Declaration is set out in the Introduction section of the Environment Strategy.
	CO2 emissions within the scope of influence of Local Authorities	The UK produces a breakdown of carbon dioxide emissions by Local Authority area as a subset of its annual inventory of greenhouse gas emissions. The emissions deemed to be within the scope of Local Authorities exclude large industrial sites, railways, motorways and land-use.

CCC	Committee on Climate Change	Independent body to advise the government on climate change.
CIL	Community Infrastructure Levy	A charge which can be levied on new developments within the Local Authority's area. It helps deliver required infrastructure.
	Delivery Plan	The Council's plan on how the objectives of the Environment Strategy will be achieved.
	Economic Development Board	Newly formed Economic Board which will oversee the Economic Development Strategy, implementing an action plan to fulfil its objectives.
EU ETS	European Union Emissions Trading System	The first and largest greenhouse gas emissions trading system in the world. It works on a 'cap and trade' principle where allowances are set. Allowances are auctioned off or allocated for free. Emitters must ensure they have enough allowances to meet their emissions or purchase more. Those who reduce their emissions and have spare allowances can sell off their credits.
	Green energy	Definitions would usually mean the gas or electricity were from 100% renewable sources.
GHG	Greenhouse gases	Gases in the atmosphere that absorb and re-emit heat. They occur naturally in the Earth's atmosphere but human activity increases these, leading to increased warming and climate change.
GDP	Gross Domestic Product	The total monetary/market value of the finished goods and services produced within a country's borders in a specific time period.
	Health and Wellbeing Board	A partnership that brings together West Berkshire's leaders of the health and social care system.
KPIs	Key Performance Indicators	A measurable value/outcome to gauge how well an organisation is meeting its key objectives.
LULUCF	Land Use, Land Use Change and Forestry	A greenhouse gas sector defined by the United Nations Framework Convention on Climate Change.
LCWIP	Local Cycling and Walking Infrastructure Programme	Sets out the Council's long-term approach to developing local cycling and walking networks
	Local Plan	The plan is part of the overall Development Plan for West Berkshire, setting out our local planning policies.
LTP	Local Transport Plan	Aims to deliver effective transport solutions for all by increasing choice and minimising congestion.

NAEI	National Atmospheric Emissions Inventory	The Inventory is compiled by Ricardo. It is the standard reference inventory for the UK and includes emission estimates for a wide range of important pollutants.
	Nature Recovery Plan	The plan defines the objectives and key actions required to improve biodiversity and wildlife in the district
	Net zero	There is no commonly agreed definition. However it is the intention that the activities of the Council should result in no net impact on the climate from greenhouse gas emissions .
	Per capita	The district's emissions divided by the number of people to give a value per person. This can be useful in comparing other areas of differing population size.
SME	Small medium enterprises	Small or medium businesses are generally defined as businesses with less than 250 employees.
SuDs	Sustainable drainage systems	Systems designed to manage the drainage of surface water.
	Thames Valley Berkshire Local Enterprise Partnership	An organisation bringing together business, public sector, education and community together to drive the local economy.
	Thames Valley Local Resilience Forum	A Forum to help prepare, respond and recover from emergency incidents.
	The National Adaptation Programme	This sets out the actions that the UK government and others will take over the next five-yearly cycle to adapt to the challenged of climate change.
ULEV	Ultra low emission vehicle	A vehicle that emits no more than 75g/km CO ₂ , based on the NEDC test, at the tailpipe. This includes pure electric, hydrogen, range-extender and plug in hybrid vehicles.
	Whole life carbon	The emissions created for every stage of an item/buildings production, use and disposal.

