



Buckinghamshire Council

# Climate Change and Air Quality Strategy

2022 - 2023 Progress Report

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# Foreword

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It gives me great pleasure to present this update on our activities addressing climate change and air quality in Buckinghamshire over the past 12 months. From reading this report you will see that we have made progress across the whole spectrum; from nature based solutions such as large scale tree planting right through to initiating the prototype electrification of one of our refuse collection vehicles.

The year has seen what we believe to be a record level of tree planting across the County with over 145,000 trees in the ground. Planting at scale has seen three large woodlands created in Wing, Hazlemere and Amersham. At the same time, there has been plenty of community based tree planting happening from north (Bourton Park) to south (near Marlow) and right across Buckinghamshire. We are also delighted to host our first two "Tiny Forests", both embedded in and enjoyed by their communities.

Our officers and members have led our anti-idling campaign with grant funding from DEFRA enabling us to provide air quality toolkits to all 16 community boards. We were delighted to announce the contract award for the first upcycling of one of our refuse collection vehicles. It will be fully retrofitted with an all-electric drivetrain; by upcycling the vehicle we will save all of the embodied carbon in the rest of the vehicle.

Reporting on our own operational emissions shows that we are on track to meet our seven-year carbon budget. We are reporting a 73.4% reduction in emissions against our 1990 baseline; already well on our way to our 2030 target of 75%.

I hope you enjoy reading this report, highlighting the work we are undertaking on your behalf and for future generations and showcasing our local response to this global challenge.



**Councillor Gareth Williams**

Cabinet Member for Climate Change and Environment

# Introduction

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July 2023 saw extreme heat in North America, Europe and China, which research suggests would have been [extremely unlikely without climate change](#). In the UK, the Met Office report that the top [10 warmest years since 1884 have occurred since 2002](#).

Our second progress report since the adoption of our [Climate Change and Air Quality Strategy](#) in 2021, comes at a time when the effects of climate change are becoming increasingly apparent in our local and global climatic systems. In light of these events, it is important to recognise the significant progress that the Council have made against the aims, objectives and actions set out within the strategy.

Annual reported emissions from the Council's own operations of 5,401 tCO<sub>2</sub>e show a reduction of 73.4% against our 1990 baseline. This is already close, in 2023, to achieving our target of a 75% reduction by 2030. On a county wide basis, where emissions are reported by the Office for National Statistics one year in arrears, the data for 2021-22 showed an increase over 2020/21 as the recovery from the COVID-19 pandemic and relaxing of restrictions led to an uptick in economic

activity. We will monitor the short term trend as emissions stabilise following the pandemic. It is important to observe that the long term trend from 2005 is for a steady decrease in area based emissions.

This year, the report highlights five key themes within our societal journey towards net zero carbon emissions. The Energy Transition will see our economy move from a centralised, fossil based energy system to a distributed system based upon renewable and low carbon sources of energy. Solar PV, whether at large scale or rooftop generation is one example of this. The Solar Together scheme has seen the equivalent of 2.1 MW of generating capacity installed across Bucks; reducing emissions and bills while also improving local resilience and energy security.

The de-carbonisation of transport is another area of focus for the Council, with our first refuse collection vehicle electrification project underway and anticipated to start operations in December. The newly electrified vehicle will reduce emissions of carbon and particulates on its route in Aylesbury. Our commitment to active travel has seen the completion of the new Platinum Park Way and a host of



projects have seen the successful trial of alternative modes of transport such as e-scooters, e-bikes and the pick me up bus service for High Wycombe.

Our commitment to a sustainable built environment is being demonstrated through sustainable policies in planning such as the requirement in the Vale of Aylesbury Local Plan for new development in Aylesbury to source 10% of their energy from renewable sources. The Sustainable Warmth Scheme, aimed at retrofitting poorly insulated households in low-income areas has resulted in 203 properties in Buckinghamshire receiving energy efficiency measures and is forecast to save over 250 tonnes of CO<sub>2</sub> per year.

As a Council, community is at the heart of our work and this is true of our climate change focussed activities. Recognising the importance of stakeholder based solutions to climate change the Climate Response Team have attended 21 events, including speaking at 5, and facilitated 12 community tree planting volunteer days. We have also met with 35 climate and environmental community groups to understand their ambitions and how we can support and empower communities to make local progress toward net zero.

One of the most significant areas of progress has been in the area of nature based solutions to climate change with the planting of over 145,000 trees across Buckinghamshire. A large new woodland has been created in Wing which will eventually include over 130,000 trees. There will be further planting at Wing this autumn to include volunteering opportunities and the creation of a community orchard. Two new woodlands were planted in Hazlemere and Amersham with over 14,000 trees planted at both sites. Community based tree planting has also been undertaken across Bucks, including welcoming our first two “Tiny Forests” at Princes Risborough Combined School and Bourton Park in Buckingham.

# Progress against targets

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The following section details the progress made against the aims and objectives of the Climate Change and Air Quality Strategy.

## Progress against Aim 1:

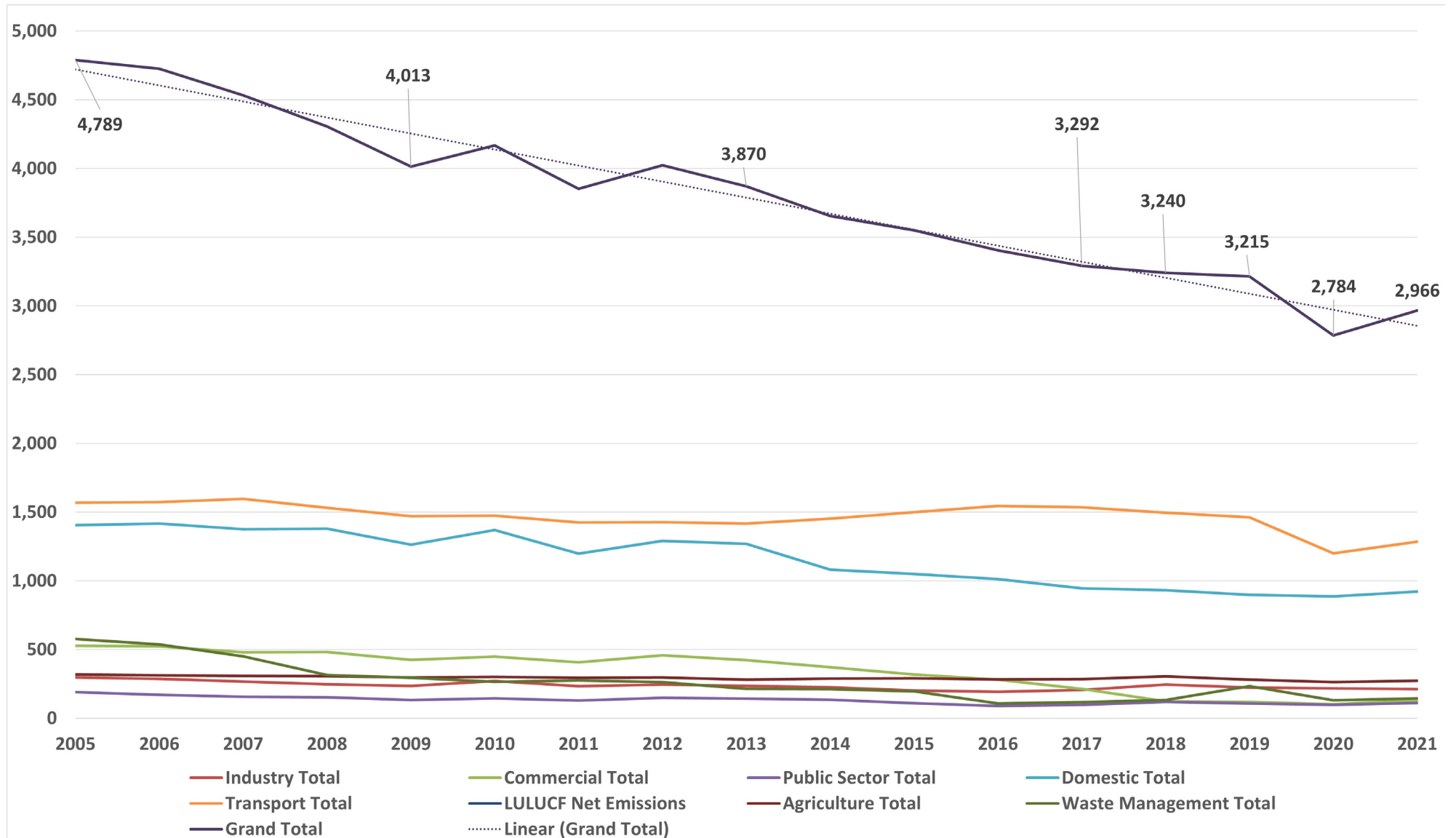
### **Work alongside national Government with the objective to achieve net zero carbon emissions for Buckinghamshire as a whole by 2050.**

Area greenhouse gas (GHG) emissions are taken from the [UK local authority and regional greenhouse gas emissions national statistics: 2005-2021](#) and have been calculated using a generation based approach. These were published by the Department for Business, Energy & Industrial Strategy (BEIS) on 29th June 2023 and the data is presented in Figure 1 – confirming that emissions from the area the Council serves are decreasing at an average rate of 2.8% per annum.

Emissions decreased significantly in 2020 largely due to restrictions on people and organisations' activities during the COVID pandemic - the first lockdown was announced by the Prime Minister on 23 March 2020. They increased in 2021 by 6.53% (related largely to an easing of restrictions and colder temperatures increasing the use of heating in buildings) but were 7.73% lower than 2019. The population grew by approximately 1.38% in the area between 2019 and 2021 and therefore per capita emissions fell by 0.6 tCO<sub>2</sub>e to 5.3 tCO<sub>2</sub>e per person.

Emissions generated from all source categories have decreased between 2005 and 2021 apart from waste management 'other' emissions which is influenced by population growth in the area. While emissions across most categories were higher in 2021 compared to 2020, emissions from industry continued to fall; and the amount of carbon emissions sequestered by grassland in the area increased. Levels of carbon emissions being sequestered by forested and grassland areas in Buckinghamshire have increased by an average rate of 0.57% per annum. Table 1 provides details of the carbon emissions produced by various sources in Buckinghamshire in 2021.

**Figure 1 - Buckinghamshire Carbon Emissions (kilotonnes CO<sub>2</sub>e) 2005-2021**



**Table 1 - Buckinghamshire 2021 Carbon Emissions by Source**

<b>Source</b>	<b>Annual Carbon Emissions (kilotonnes CO<sub>2</sub>)</b>	<b>% of Carbon Emissions</b>
Industry Electricity	73.2	2.47%
Industry Gas	34.1	1.15%
Large Industrial Installations	0.6	0.02%
Industry 'Other'	104.3	3.52%
<b>Industry Total</b>	<b>212.2</b>	<b>7.15%</b>
Commercial Electricity	72.2	2.44%
Commercial Gas	56.3	1.90%
Commercial 'Other'	2.1	0.07%
<b>Commercial Total</b>	<b>130.7</b>	<b>4.41%</b>
Public Sector Electricity	38.7	1.31%
Public Sector Gas	72.0	2.43%
Public Sector 'Other'	0.9	0.03%
<b>Public Sector Total</b>	<b>111.7</b>	<b>3.77%</b>
Domestic Electricity	212.1	7.15%
Domestic Gas	607.3	20.47%
Domestic 'Other'	102.0	3.44%
<b>Domestic Total</b>	<b>921.4</b>	<b>31.06%</b>
Road Transport (A roads)	384.9	12.97%
Road Transport (Motorways)	559.8	18.87%
Road Transport (Minor roads)	270.8	9.13%
Diesel Railways	50.0	1.69%
Transport 'Other'	19.5	0.66%
<b>Transport Total</b>	<b>1,285.0</b>	<b>43.32%</b>



**Table 1 - Buckinghamshire 2021 Carbon Emissions by Source** *continued*

<b>Source</b>	<b>Annual Carbon Emissions (kilotonnes CO<sub>2</sub>)</b>	<b>% of Carbon Emissions</b>
Net Emissions: Forest Land	-124.4	-4.19%
Net Emissions: Cropland	39.5	1.33%
Net Emissions: Grassland	-46.3	-1.56%
Net Emissions: Wetland	0.0	0.00%
Net Emissions: Settlements	19.6	0.66%
Net Emissions: Harvested Wood Products	0.0	0.00%
Net Emissions: Indirect N <sub>2</sub> O	0.8	0.03%
<b>Land use, land-use change and forestry Total</b>	<b>-110.8</b>	<b>-3.74%</b>
Agriculture Electricity	14.3	0.48%
Agriculture Gas	18.1	0.61%
Agriculture 'Other'	23.5	0.79%
Agriculture Livestock	165.5	5.58%
Agriculture Soils	50.9	1.72%
<b>Agriculture Total</b>	<b>272.3</b>	<b>9.18%</b>
Landfill	124.2	4.19%
Waste Management 'Other'	19.7	0.66%
<b>Waste Management Total</b>	<b>143.8</b>	<b>4.85%</b>
<b>Grand Total</b>	<b>2,966.2</b>	

**Progress against Objective A: Achieve net zero carbon emissions across council operations no later than 2050 and possibly before this, potentially by 2030, subject to resources.**

### Council Carbon Emissions 2022/23

We have calculated our own emissions for the period 2022-23 and the results are shown in table 2. In line with our reporting criteria, we include those emissions arising from the Council's operations such as the buildings and vehicles we operate or those associated with the transmission and distribution of electricity that the Council uses. Business travel emissions relate to staff and councillors travelling in their own vehicles where a mileage expense claim was made. Emissions from the use of public transport, such as train journeys, for work travel weren't captured as the data was not available. We have excluded emissions from our operations where our staff do not directly provide the service, for example waste collection vehicles operated around Wycombe, Chiltern and South Buckinghamshire areas.

The following table shows our 2022/23 emissions broken down into key components and reported on a gross basis:

**Table 2 - Buckinghamshire Council's Carbon Emissions (Gross)**

Activity	2022/23 Annual Carbon Emissions (tCO <sub>2</sub> e)	% of Annual Emissions
<b>Buildings - Gas Consumption</b>	2,046	29%
<b>Buildings - Electricity Consumption (Gross)</b>	1,668	23%
<b>Street Lighting - Electricity Consumption (Gross)</b>	1,528	21%
<b>Council Fleet</b>	931	13%
<b>Business Travel</b>	681	10%
<b>Transmission and Distribution</b>	294	4%
<b>Total (Gross)</b>	<b>7,148</b>	

Our total gross emissions for the reporting period were 7,148 tCO<sub>2</sub>e.

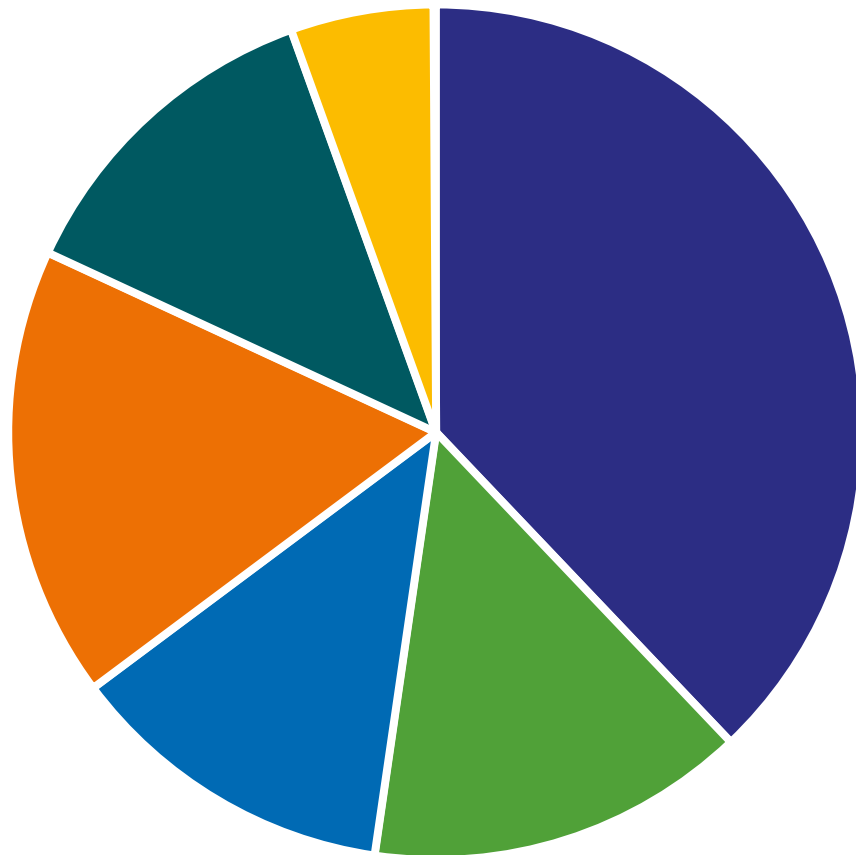
From October 2022 we have purchased our electricity using a 100% renewable tariff, fully backed by Renewable Electricity Guarantees of Origin (REGO) certificates. This has resulted in a substantial reduction in the emissions associated with electricity use due to the lower carbon intensity of the renewable tariff. In line with guidance and our commitment to transparency, we are reporting our “Gross” (shown previous page) and “Net” (shown right) emissions separately in the following table.

The net emissions for 2022/23 are 5,401 tCO<sub>2</sub>e. From this point on in the report, we will be referring only to “Net” emissions.

**Table 3 - Buckinghamshire Council’s Carbon Emissions (Net)**

<b>Activity</b>	<b>2022/23 Annual Carbon Emissions (tCO<sub>2</sub>e)</b>	<b>% of Annual Emissions</b>
<b>Buildings - Gas Consumption</b>	2046	37.9%
<b>Buildings - Electricity Consumption (Net)</b>	778	14.4%
<b>Street Lighting - Electricity Consumption (Net)</b>	673	12.5%
<b>Council Fleet (Non EV)</b>	924	17.1%
<b>Fleet (EV) (Net)</b>	5	0.1%
<b>Business Travel</b>	681	12.6%
<b>Transmission and Distribution</b>	294	5.4%
<b>Total (Net)</b>	<b>5,401</b>	

**Figure 2 - Chart showing Council emissions broken down on a net basis**



- Buildings - Gas Consumption
- Buildings - Electricity Consumption
- Street Lighting - Electricity Consumption
- Council Fleet
- Business Travel
- Transmission and Distribution



**The most significant source of emissions on a net basis is gas consumption for buildings representing almost 38% of the total, while the second largest source of emissions is the Council's non-electrified fleet.**



## Carbon Budget

On our journey to Net Zero Carbon by 2050 we have several way markers to ensure that we remain on track. Compared to our **1990 baseline of 20,550 tCO<sub>2</sub>eq** we will:

- Reduce our annual carbon emissions **by at least 75% by 2030, to no more than 5,137.5 tCO<sub>2</sub>eq**
- Reduce our annual carbon emissions **by at least 90% by 2040, to no more than 2,055 tCO<sub>2</sub>eq**
- Reach **net zero carbon emissions by 2050**
- For 2023 we are reporting a **reduction in emissions of 73.7%** as compared to our 1990 emissions, this compares favourably with and indicates that we are **on track to achieve our target** of a 75% reduction by 2030.
- We also set out a Carbon Budget for the seven year period from 2020-21 to 2026-27, in Table 5 of our Climate Change Strategy, with indicative **annual allocations and a total budget of 51,139 tCO<sub>2</sub>e**. The two graphs below show both the cumulative total against our seven year budget and annual totals against allocations:

Figure 3 - Remaining and used carbon budget

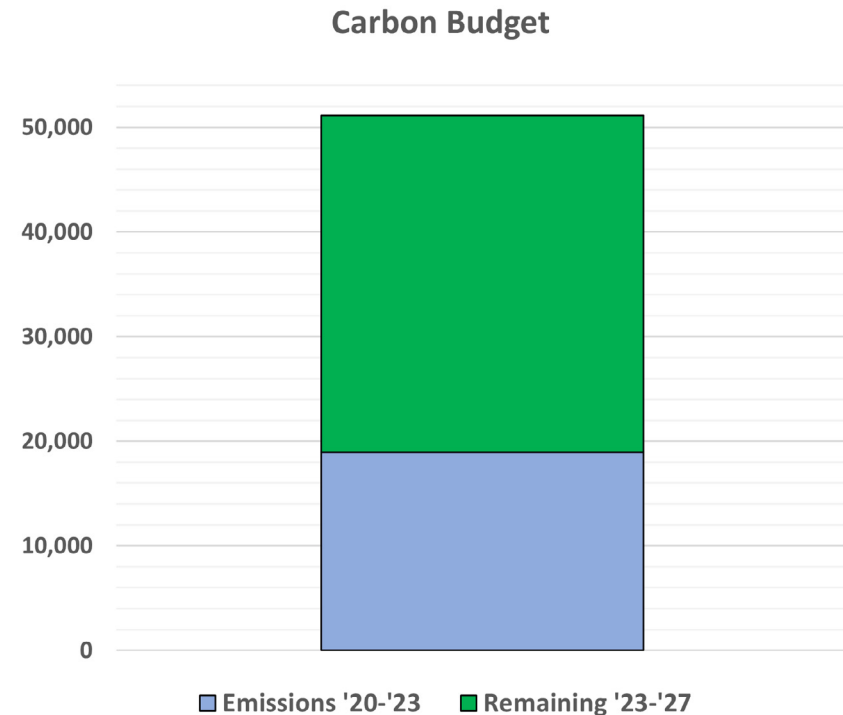
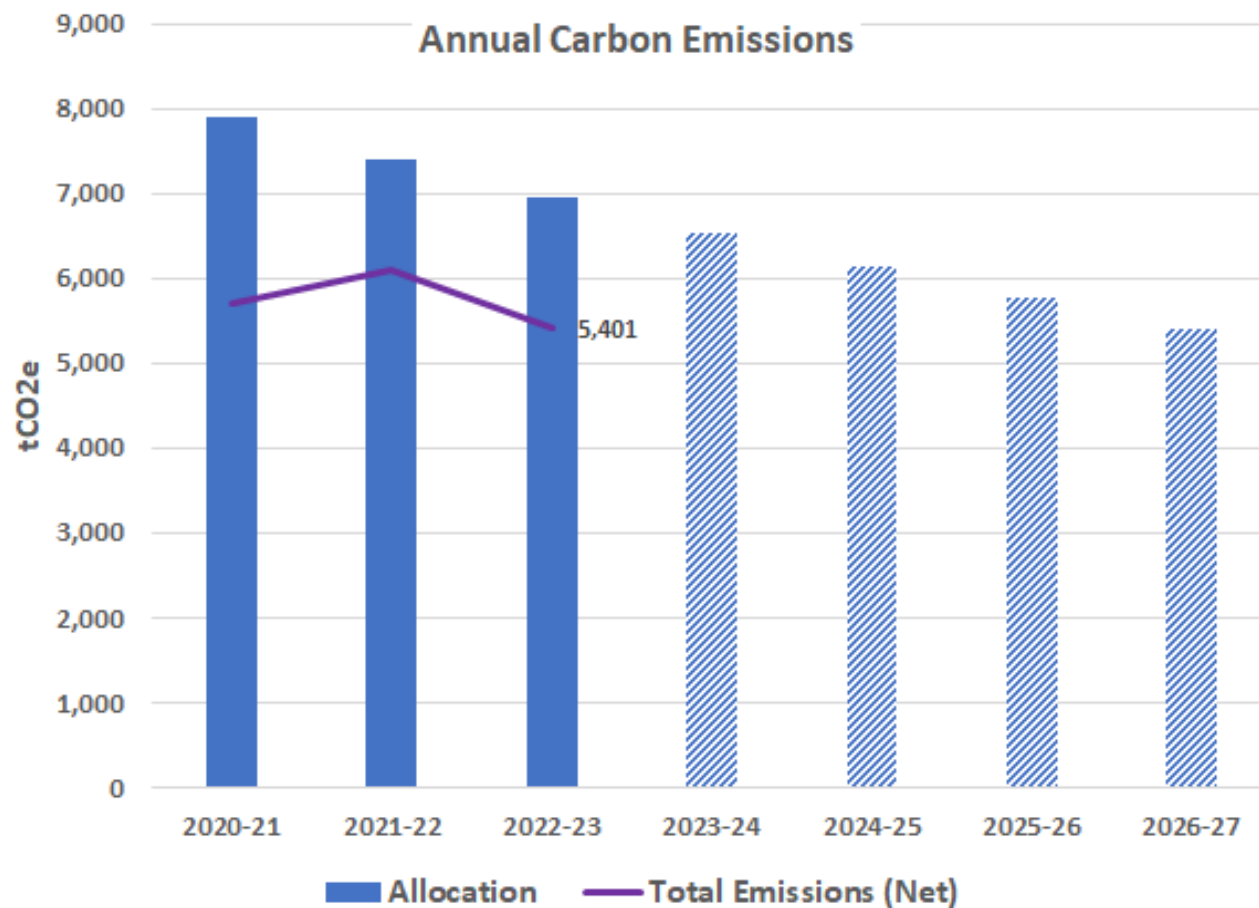


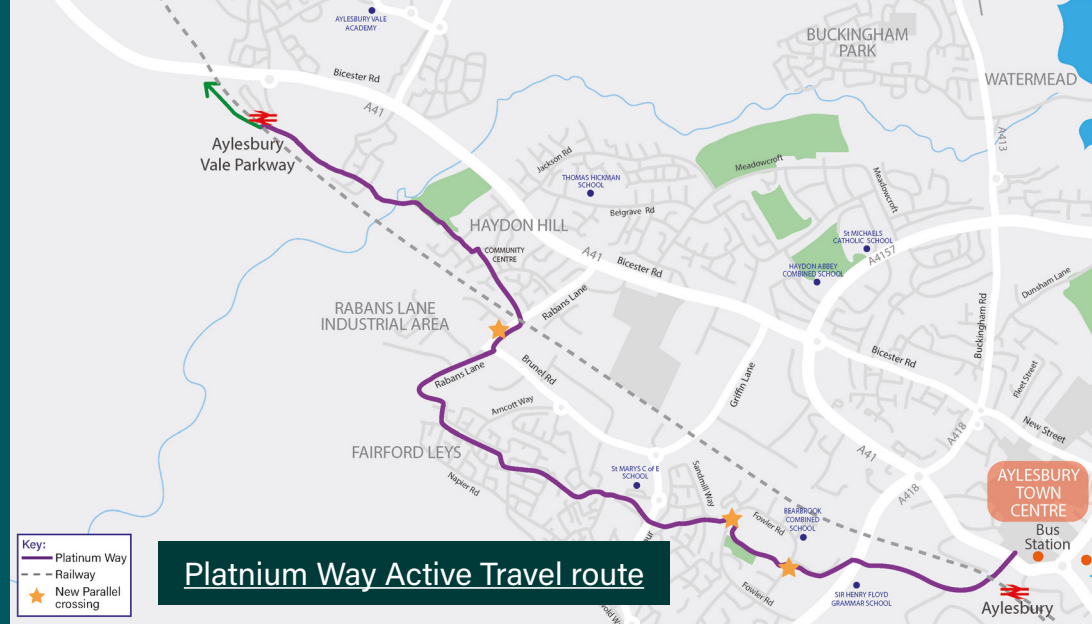
Figure 4 - Annual carbon emissions and allocations



Although we have seen an increase in gross emissions for 2022/23, this is consistent with the area wide trend referred to under Aim 1, emissions in 2020/21 and 2021/22 were both severely affected by the Covid pandemic. As shown left, we have seen a marked decrease in our net emissions for the reporting period 2022/23. This has been significantly driven by the procurement of low carbon electricity since October 2022.

## Progress against Objective B: Support communities to achieve net zero carbon emissions.

- As a Council we work with a range of different stakeholders to enable communities to make progress towards a net zero future. Here are just a few highlights of our work in this area:
- Local Authority Treescapes Fund Round 2 award of £184k secured for community tree planting across Buckinghamshire
- Working with Buckinghamshire Community Energy to progress the Wendover Wharf Road Campus Decarbonisation project
- Introducing more and better quality active travel routes (e.g. the recently opened [Platinum Park Way](#))
- Establishing e-scooter and e-bike rental schemes
- Promoting a solar PV system group-purchasing (Solar Together) scheme for resident and small business owner occupiers





- Working with the [Greater South East Net Zero Hub](#) to deliver the Sustainable Warmth Scheme to bring energy efficiency and low carbon measures to over 200 homes in Bucks
- Providing information and advice to businesses through Low Carbon Workspaces
- Establishing a quarterly Climate Change Newsletter with a potential reach of up to 4,000 readers
- Encouraging individuals to adopt more environmentally friendly behaviours via the AWorld app
- The Climate Response Team have attended 21 events, including speaking at 5 and facilitating 12 community tree planting volunteer days
- We have met with 35 climate and environmental community groups to understand their ambitions and how we can support and foster community activity across the Council

Further details are provided in the 'Activities against Actions' section, look out for the symbol indicating stakeholder based work throughout the report:



Climate Response Team are joined by Cllr Mimi Harker at the Princes Risborough Family Fun Day





## Progress against Aim 2:

### Progress against Aim 2: Improve air quality across Buckinghamshire pursuant to achieving national air quality objectives

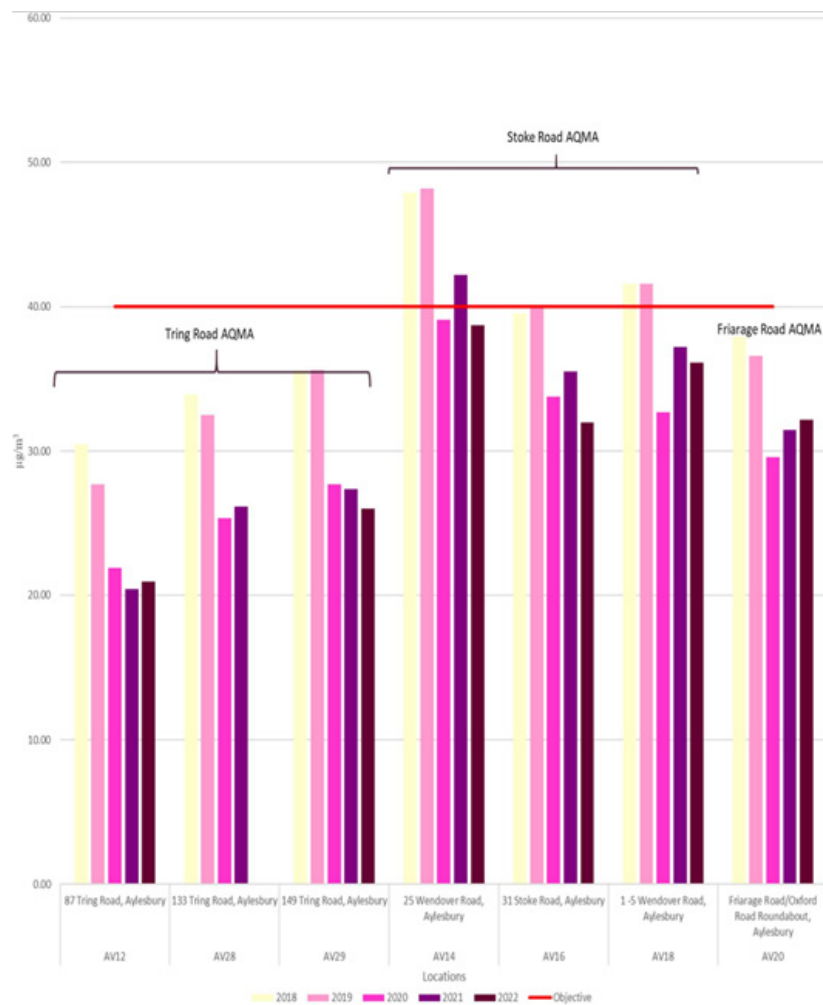
There has been a consistent reduction in recorded levels of nitrogen dioxide (NO<sub>2</sub>) at most monitoring locations for the last five years (2018 - 2022) (please see figures 5-8). In 2022, there was a general decrease in concentrations recorded at most monitoring locations with a few exceptions. Although some locations did see a slight increase in concentrations in 2022 when compared to 2021 data, it is noted that the concentrations have not returned to those levels seen before the COVID-19 pandemic.

In 2022, air quality monitoring showed there was only one exceedance of the annual mean National Air Quality Objective for NO<sub>2</sub> within Buckinghamshire. This was a new monitoring location added in 2022 located within the Friarage Road Air Quality Management Area (AQMA) in Aylesbury.

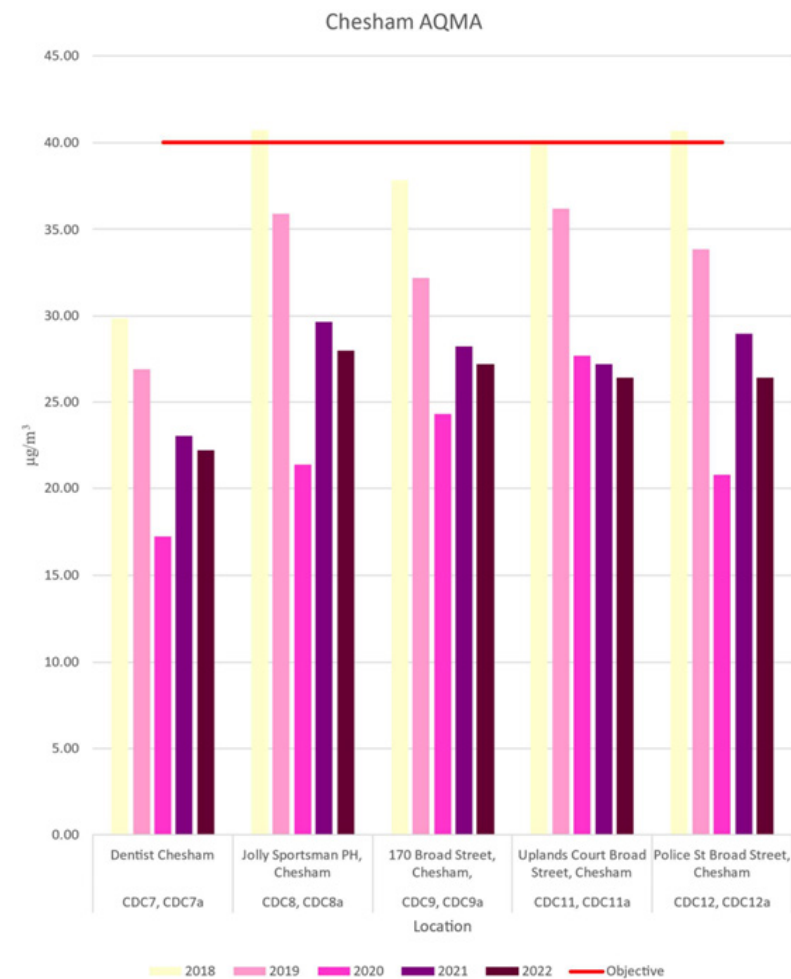
Monitoring completed in the Tring Road AQMA over the last five years has shown that concentrations of NO<sub>2</sub> have consistently been below the annual mean objective level of 40 µg/m<sup>3</sup>. The trends for all AQMAs since 2018 follow from page 18 - 19.



**Figure 5 - Trends in annual mean NO<sub>2</sub> concentrations (Aylesbury Area AQMAs)**

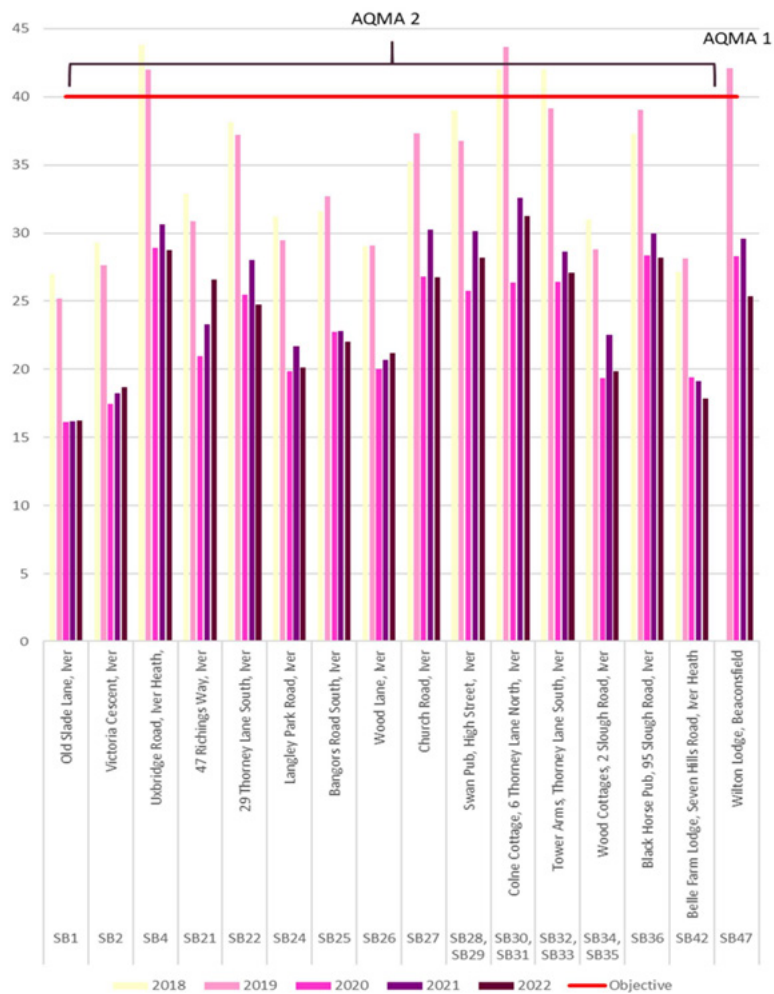


**Figure 6 - Trends in annual mean NO<sub>2</sub> concentrations (Chesham AQMAs)**



N.B. Results from new monitoring locations set up in January 2022 have not been included in the graphs. The following figures show the results for the Chesham and South Bucks AQMAs:

**Figure 7 - Trends in annual mean NO<sub>2</sub> concentrations (South Bucks AQMAs)**



**Figure 8 - Trends in annual mean NO<sub>2</sub> concentrations (Wycombe Area AQMAs)**



The following shows the data for the Wycombe Area AQMAs. There is a period without data for 2021/22; diffusion tube W4 at Abbey Accommodation was not accessible during the COVID-19 pandemic. Monitoring has resumed in 2022.



## **Progress against Objective C: Reduce emissions to air from all council operations.**

As mentioned in the progress made against objective C there has been a 20.4% reduction on a gross basis and a 41.5% reduction on a net basis of the Council's greenhouse gas (GHG) emissions compared to our emissions from '18/'19. Compared to our baseline emissions from 1990 we have seen a reduction of 65% on a Gross basis. Similar reductions have been achieved regarding emissions of nitrogen oxides, particulate matter, and other air pollutants.

## **Progress against Objective D: Reduce human exposure to harmful levels of air pollution.**

As there has been a consistent reduction in recorded levels of nitrogen dioxide (NO<sub>2</sub>) at most monitoring locations for the last five years (2018 - 2022) (please see graphs 2-7) and annual mean NO<sub>2</sub> concentrations at most recorded locations are below the National Air Quality Objective (the exception being a new monitoring location for 2022 within the Friarage Road AQMA in Aylesbury) human health will generally benefit. The Council's Strategic Environmental Protection Team continues to provide comments on planning applications regarding the air quality impacts of proposed developments with the aim of mitigating human exposure to harmful levels of air pollution.





# Activity against actions

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## Table 4 - The Five Themes

Where a specific action or area of work is especially relevant to one or more of these themes, you will see the icons above. You will also find “Insight” boxes throughout the report, explaining how a specific action being reported is relevant to the highlighted theme.

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### The Energy Transition



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### De-carbonisation of Transport



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### The Built Environment



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### Stakeholder Based Solutions



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### Nature Based Solutions



# Governance and Management

## Response to Defra's consultation on the draft revised national Air Quality Strategy (re Action 1)

Defra carried out a national consultation from 11th to 21st April 2023 to seek views on the revised draft Air Quality Strategy, to which Buckinghamshire Council issued a response.

The revised Strategy sets out the actions the government expects local authorities to take in support of achieving our long-term air quality goals, including Defra's ambitious new PM2.5 targets. It provides a framework to enable local authorities to make the best use of their powers and deliver for their communities. The Council's Strategic Environmental Protection Team provided a detailed response to the consultation.

## Researching a Carbon offsetting fund and options (Re Actions 2 and 11)

The Climate Response Team have been looking into the options available for carbon offsetting, such as sequestration by tree planting to generate Woodland Carbon Units which can be used to offset emissions from the Council's own operations (see Actions 13 and 14).

## Interdepartmental Working Groups (re Action 3)

A total of seven interdepartmental working groups have been created since the adoption of the Climate Change & Air Quality Strategy.





## The Council Land Tree Planting

Programme Board oversees the programme of works to plant 543,000 trees on Council Land by the end of the 2031 planting season. During the current reporting period over 145,000 trees have been planted.



## Domestic Retrofit Programme

This Board meets on a bi-monthly basis and includes representatives from Climate Change, Energy Management, Environmental Health, Communications, Regulatory Services and Housing. It is concerned with emissions mitigation and climate change adaptation initiatives for domestic properties across all tenures and receives reports from relevant initiatives such as Better Housing Better Health and the Sustainable Warmth Scheme.



## Electric Vehicle Charging Infrastructure Working Group

The Electric Vehicle Charging Infrastructure (EVCI) Working Group deals with matters related to public, Council fleet and staff electric vehicle charging. Included are representatives from Parking Services, Transport Strategy, Air Quality, Energy Management, Waste Management, Highways, Property & Assets, and Climate Response Teams to name just a few! During this reporting period the group have met 6 times, serving as an opportunity to co-ordinate existing EV infrastructure work across the Council. It has facilitated closer collaboration on the Wendover EVCI and in-pavement cable channel trial, which is currently open to expressions of interest from residents. The Group has also contributed to the submission of our Local Electric Vehicle Infrastructure (LEVI) fund expression of interest and will continue to drive the wider deployment of EV infrastructure through LEVI and other schemes.





## Council Estate and Climate Change



The Council Estate and Climate Change Board oversees initiatives to reduce emissions from and enhance the resilience of (regarding climate change) the Council's estate (and includes representatives from Property and Assets, Climate Response, and Energy Management Teams).



## Cost of living

In September 2022 the Council started a programme to coordinate a response to the cost of living crisis - to ensure that residents can keep warm, have sufficient food and essentials for themselves and their families, and know where to find support if required (such as the Energy Doctor scheme). This is a cross-council effort involving various service areas: Service Improvement; Communications; Community Support; Energy and Climate Change; Culture, Sport and Leisure; Revenues and Benefits; Community Boards; Public Health; and Human Resources and Organisational Development.



## Staff Climate Change Network

The Staff Climate Change Network is led and facilitated by Nick Graham, Service Director for Legal & Democratic Services, demonstrating the commitment to climate change across senior levels of our organisation. With over 266 officers signed up to the mailing list, the network has met four times during the reporting period. The purpose of the network is twofold: 1) To raise awareness internally of climate change activities within the council, whereby the network are regularly briefed on work such as the tree planting programme and domestic energy efficiency projects and; 2) To promote behavioural change and encourage the sharing of ideas and best practice across the Council. A meeting in July prompted helpful discussion about sustainability and recycling along with questions about opportunities for staff to participate in tree planting activities coming up in the next planting season.



## Fleet De-carbonisation Co-ordination Group



July 2023 saw the adoption of Terms of Reference for the Fleet De-carbonisation Co-ordination Group. Featuring representatives from across the Council's fleet operations, this group will focus on identifying the optimum approach to reducing, and eventually eliminating, the carbon emissions associated with our own fleet vehicles. In the very first meeting, Officers agreed to work on the development of a strategy to determine the best way of achieving this.



# Monitoring and Reporting

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## Council Emissions

### Automatic Meter Reading Rollout - Update (re Action 7)

An Automated Meter Reading (AMR) meter captures and transmits accurate meter readings to energy suppliers on a monthly basis, with some meters reporting far more often (e.g. every half hour). This provides consumers, such as the Council, with far more granular data which helps improve the monitoring and analyses of gas and electricity consumption across our estate. We have been managing a roll out of AMR meters across our gas and electricity supplies to enable the realisation of these benefits. Another advantage is that the AMR's reduce the burden of taking manual meter readings, saving valuable officer time which can be invested in other areas of work. Finally, the AMR meters eliminate the need for estimating energy consumption which improves billing accuracy and data accuracy for carbon emissions reporting (see Objective A). Of the 401 non-half hourly (not automatic) electricity meters that are AMR compatible, 295 have been upgraded to AMR. Of our 275 gas meters, 245 have been upgraded, representing 89% of the total.



## County-wide Emissions

### 'Clean Up Our Air' initiative (re Actions 8, 16 & 59)

The Council's Strategic Environmental Protection Team, in conjunction with Spelthorne Borough Council and Ricardo, was awarded a grant of £91,273 from Defra's Air Quality Grant in 2021/22 to create air quality toolkits which will be provided to each community board area within Buckinghamshire. To coincide with Clean Air Day on 15th June, Buckinghamshire launched a new initiative called 'Clean Up Our Air'

The air quality toolkits provide participating Community Boards with materials to enable them, local schools and organisations to carry out campaigns and to raise awareness of local air quality issues. Included will be access to the use of one air quality sensor per community board area, campaign materials, advice, and toolkits on how to run campaigns.

The results from the sensors will help to illustrate and monitor the impact of campaigns carried out during the year. The toolkits will also improve participants' knowledge about air quality and educate on what steps individuals can take to reduce their exposure to air pollution.

The team have also been attending community board meetings to introduce the 'Clean Up Our Air' initiative.

Installation of Airly Air Quality Sensor at Millbrook Combined School, High Wycombe



Officers, Councillors and Community Board Members at Juniper Hill School, Flackwell Heath



To learn more about the Clean Up Our Air Initiative and Air Quality please visit [Buckinghamshire Council's Air Quality webpage](#).

## NO<sub>2</sub> Diffusion Tube Monitoring Locations Review (re Action 8)

In December 2022 the NO<sub>2</sub> diffusion tube monitoring locations present throughout the county were reviewed. This is completed annually to establish if any additional monitoring points are required where there is the potential for breaches of the national air quality objectives to occur. This may be following significant developments such as new housing or new road schemes within the county or from an increase in observed levels of traffic.

The diffusion tube monitoring data collected is also reviewed. Where significant data exists to show there are low levels of pollution present and that there will be no breaches in the national air quality objectives, that monitoring may be closed, and the diffusion tube moved to a new monitoring location. A map showing the NO<sub>2</sub> diffusion tube monitoring locations can be found on the [air quality pages of our website](#).

## Air Quality Annual Status Report (re Action 9)

The submission of an Annual Status Report (ASR) is a statutory requirement under the Local Air Quality Management Framework as set out in Part IV of the Environment Act (1995) and the relevant Policy and Technical Guidance documents. The report provides an annual review of air quality, the results of all air quality monitoring undertaken and outlines the actions the council has taken in the previous calendar year to improve air quality within the county.

The latest Annual Status Report (ASR) for Buckinghamshire was submitted to Defra on 30th June 2023. The report is available to view on the [air quality pages of our website](#).





# The Council's Emissions

## Implementation of Telematics & monthly league tables to encourage economical driving (Re Action 10)

Telematic systems providing digital feedback to drivers on the efficiency of their driving, such as pointing out when braking too hard, have been fitted on the majority of waste collection vehicles in the North Waste Service. Additionally, monthly league tables are published internally to recognise the most economical drivers, which further incentivises behavioural change leading to reduced emissions.



## Council Land Tree Planting Programme: Creation of two new woodlands at Bury Farm and Grange Farm (re Action 13)

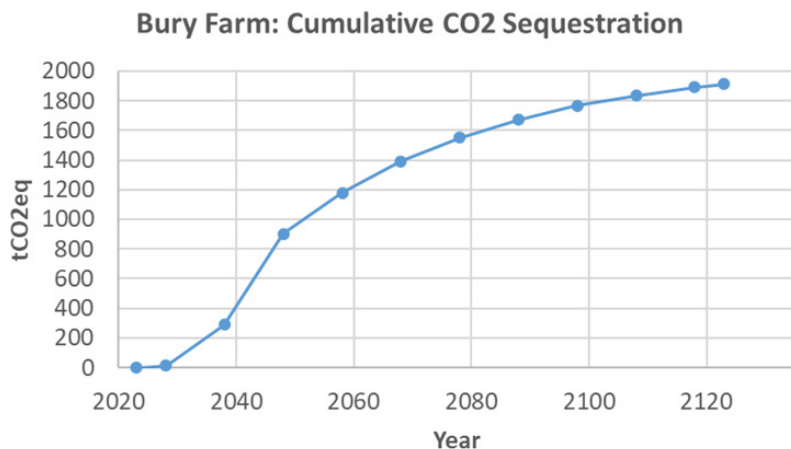
Over 33,000 trees were planted on Council land in the 2022-2023 planting season through our contractor planting model. Two new woodlands were created with 14,300 trees planted at Bury Farm and 14,700 trees planted at Grange Farm. A volunteer planting day was organised at Grange Farm in conjunction with Chiltern Rangers, one of our key partners. Despite the inclement weather the event was a great success

with local Councillors, Cabinet Members, Officers from the Climate Response Team ably assisted by willing volunteer students and teachers from a nearby school coming together to plant some of the site and enjoy time in nature.

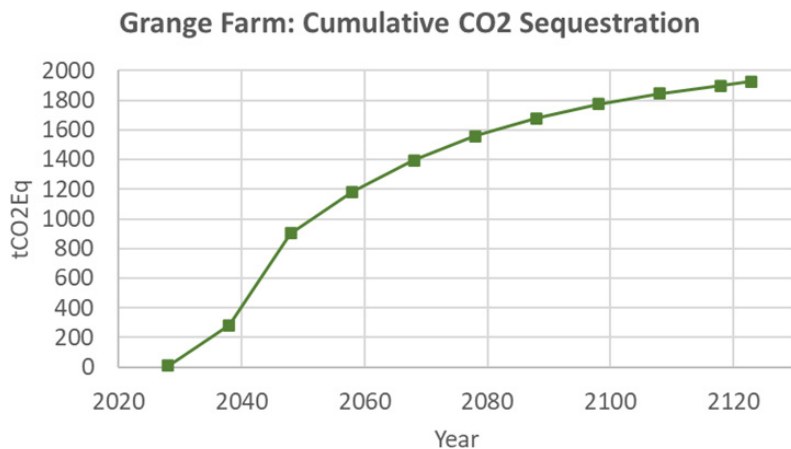


Volunteer planting day at Grange Farm, Hazlemere

Both sites are registered with the [Land Carbon Registry](#) which provides independent quality assurance for UK based woodland creation projects. The WCUs will be used to offset the Council's own emissions as part of our commitment to reaching net zero carbon for our own operations by 2050 (see Aim 1, Objective A). The following figures show the cumulative sequestration of both sites forecast over the next century:



**Figure 7: Cumulative carbon sequestration for Bury Farm (top) and Grange Farm (below)**



## Forestry England Partnership: Wing Wood Community Woodland (re Action 13)

The Council were only the second local authority in England to enter into a partnership with Forestry England under the Forestry England Woodland Partnership Scheme, signing a lease leading to the creation of a new 51Ha community woodland near Wing. Planting for this site is already underway and over 110,000 trees are already in the ground. Completion of the 132,000 tree site featuring a community orchard and areas of wetland to increase biodiversity is anticipated in the 23/24 planting season.



The Council and Forestry England meet at Wing Wood



The Council continues to manage the maintenance of the Billet Field site at Black Park Country Park in the south of the County, where new EV charging infrastructure has also been installed this year.

The latest forecasts indicate that a total of 15,354 tCO<sub>2</sub>eq will be sequestered through to 2124. This includes 411 tCO<sub>2</sub>e at Billet Field, 1914 and 1925 tCO<sub>2</sub>e from Bury Farm and Grange Farm respectively and a remarkable 10,984 tCO<sub>2</sub>e at Wing Wood.

Following on from the successful application to the England Woodland Creation Offer (EWCO) for Billet Field, reported last year, of £28,380 we are delighted to report that a further £105,000 and £110,000 were secured from EWCO for Bury Farm and Grange Farm respectively.



## Insight #1: Nature Based Solutions and Tree Planting

According to the World Economic Forum, Nature Based Solutions refers to activities that “protect, manage and restore ecosystems to address socio-environmental challenges”. Woodland creation, such as the Council’s own tree planting programme, achieves this in myriad ways: The trees planted will sequester carbon, removing it from the atmosphere, as they grow; The new woodlands will restore woodland habitat fostering bio-diversity and can provide benefits to the local climate through for example greater water retention to prevent flooding and naturally manage rainfall.



## Blue and Green Infrastructure on Council Land (Re Action 14)

Within the Council Land Tree Planting Programme (see Action 13 above), the Woodland Creation Design Plan for Grange Farm includes work to restore a pond on site. This will include vegetation management to reduce shading and de-silting, with a grassland margin maintained to conserve habitat and deter access by dogs. There will also be a 4m buffer around the pond where no tree planting will take place. Once accessible by the public, the walk through the woodland will take visitors around the edge of the pond area. The location of the pond is shown in the following figure:

Figure 9: Plan view of Grange Farm showing location of pond that will be restored as part of the Grange Farm establishment



# Behaviour

## Guidance on climate change and sustainability for procurement (re Action 15)

The Climate Response Team engage with services to provide advice on the procurement of goods and services with regard to climate change and sustainability matters. One example of this was the provision of guidance to Leisure Services. Organic cotton workwear has also been procured for Domestic Resource Efficiency Officers.

## Climate Change Awareness and Carbon Literacy Training (re Action 16)

Since adoption of the CCAQS a total of 24 Officers and Members have received and completed Carbon Literacy Training with an external organisation certified by the Carbon Literacy Project. In June 2023 Buckinghamshire Council attended the annual Carbon Literacy Project Awards to celebrate our certification as a Bronze tier Carbon Literate Organisation.

Training sessions for a further 30 individuals have been booked and an Officer will undergo masterclass training, equipping them to deliver training in-house to our members and staff.





## Internal Communications and Behaviour Change (re Action 16)

The Council have encouraged staff to adopt more sustainable behaviours through a variety of means including:

- Staff Vlog about reducing single use plastic consumption (see Action 60) (July 2023)
- Promotion of two new e-bike schemes launched in Bucks via the Council wide weekly update newsletter (July 2023)
- A range of tips to reduce food waste including a competition with prizes during Food Waste Action Week (March 2023)
- Promotion of the Cycle to Work Scheme "Get cycling this Spring" (Feb. 2023)
- Two part staff blog about sustainable fashion and how to "buy new sustainably" (Nov - Dec 2022)
- Volunteering opportunities for tree planting promoted by internal newsletter (October 2022)

You can  
*reduce waste*



Sustainable fashion blog



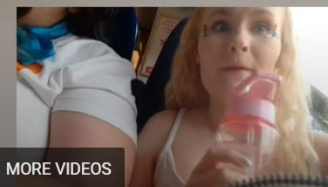
Cycle to Work Scheme

Buckinghamshire Council  
405 subscribers

Millie



Copy link



Staff Vlog - Millie's journey one year later reducing single-use plastic

MORE VIDEOS

0:11 / 3:02

Full screen (f)

YouTube



# The Council's Operational Estate

## Operational Buildings

### Transition to Cloud Based Servers (re Action 17)

We reported last year upon the replacement of over 260 of our traditional on-site computer servers with the Microsoft 'Azure' Cloud service. Moving these out of sites in Aylesbury, Amersham and Wycombe to more energy efficient servers based in the cloud saved 156 tonnes of carbon during the previous reporting period. This, and other benefits associated with the [Microsoft Azure platform are estimated to be up to 98% more carbon efficient than on-premises solutions.](#)



## Insight #2: Renewables and The Energy Transition

The Energy Transition refers to the switch from a centralised, fossil fuel based energy system to a distributed, renewables based energy system which is essential to reaching the goals of the Paris Agreement. The roll out of renewables at a range of scales, from rooftop solar to large scale wind parks in the North Sea, will play a crucial role in enabling the move to electrify heat (through eg. heat pumps) and transport. The entire system will undergo enormous change over the next decades and Buckinghamshire Council works closely with for example our electricity distribution companies to enable this change.





## Sustainable Energy Measures Feasibility and Assessment Study (Re Action 17)

The following Council buildings have been subject to surveys by an external consultant to assess the feasibility of a wide range of energy efficiency and renewable energy measures:

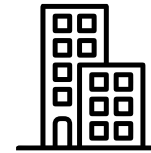
- Aylesbury Day Opportunity Centre
- Aylesbury Family Time Service
- Burnham Day Opportunity Centre
- Castlefield Family Centre
- Chesham Library
- Hazelmere Library

The range of measures included:

- Air Source Heat Pump for domestic hot water and space heating
- Fabric insulation
- Improved zoning, controls and implementation of a building management system (BMS)
- Solar PV and Battery installation
- Lighting and controls

All measures were assessed with respect to their capital costs, projected energy, carbon emission and financial savings, payback periods, and abatement cost (in terms of pounds invested per tonne of CO<sub>2</sub> saved.)

Initial conclusions suggest that solar PV may offer the optimum combination of carbon saving and cost savings.



## Kingsbrook Secondary School Embodied & Operational Carbon Savings (Re Action 18)

[Kingsbrook Secondary School](#) opened to accept its first students for the 2022/23 academic year. This new build represents a flagship project within Buckinghamshire and included state of the art principles and technology to minimise both the embodied and operation carbon emissions associated with the school.



Image of Kingsbrook Secondary School

The architects and contractors who designed and built Kingsbrook Secondary School were tasked by Buckinghamshire Council's Commissioning Team, supported by colleagues from Strategic Infrastructure and the Housing Infrastructure Fund, with developing a building that would have low carbon credentials. A wide range of measures were implemented including optimising the layout of the school for maximum solar gain (natural heating from the sun), the highest levels of insulation, leading edge energy efficiency controls and low carbon heating measures such as air source heat pumps. Additionally, design features such as re-engineering the structural frame to allow for a lighter steel construction and the use of pad, instead of pile foundations.

The results are impressive. The embodied carbon from the stage 3 design was 817 kgCO<sub>2</sub>e/m<sup>2</sup>, as compared to an average of 1000 kg/CO<sub>2</sub>e/m<sup>2</sup> for a typical educational building. The Energy Strategy deployed for minimising operational emissions for the building forecasts annual emissions of 103.1 tonnes CO<sub>2</sub>/annum versus a regulation baseline level of 173.0 tonnes CO<sub>2</sub>/annum, a saving of up to 69.9 tonnes CO<sub>2</sub>/annum. This could save as much as 1747.5 tonnes CO<sub>2</sub> over the next 25 years.



### Insight #3: The Built Environment and Embodied Carbon

“Embodied” or “Capital” carbon refers to all of the carbon (or equivalent GHG) emissions that arise during the fabrication, construction and/or manufacturing of a product or other infrastructure. For example, a new building may require a significant amount of concrete to be poured to establish its foundations, but concrete production is a carbon intensive process, accounting for **around 8% of global emissions**. These emissions are known as “embodied”, as they result from the creation or “embodiment” of the product or building. Among the many measures at Kingsbrook Secondary School, reinforced concrete and traditional pre-cast concrete were replaced with hollow-core slabs, reducing the amount required and minimising the embodied carbon.



# Transport

## Internal Communications and Staff Travel (re Action 22)

Internal emails to staff this year have included items on:

- Volunteering opportunities for tree planting, highlighting the work performed by volunteers from Planning, Growth and Sustainability regarding the tree planting at Platinum Park Way
- The benefits of the Cycle to Work Scheme
- Inviting staff to contribute to the High Wycombe Transport Strategy and Local Cycling and Walking Infrastructure Plan (LCWIP) consultation
- Posts encouraging staff to consider walking or cycling to work

## Travel for Work Purposes

### Upcycling and Electrifying a Refuse Collection Vehicle (re Action 24)

Following the award to the Council from Defra [of an Air Quality Grant of £578,000 to upcycle and electrify a refuse collection vehicle \(RCV\) procurement of a supplier for the contract for the retrofit](#) work has been awarded to [Lunaz Applied Technologies Ltd.](#) Delivery of the upcycled vehicle is expected before the end of 2023. It is anticipated that the zero tailpipe emissions RCV will travel 412 miles a week on collection routes in the north of Aylesbury, including roads in three air quality management areas. It's forecast that over 10 tonnes of greenhouse gases (CO<sub>2</sub>e), 69 kgs of oxides of nitrogen (NOx), and half a kilo of particulate matter emissions will be saved per year.



Buckinghamshire Council social media post from June 2023, announcing the up-cycling of an RCV.



## **Family Time Services' New Electric Vehicles (EV) and EV Charging Infrastructure (re Action 24)**

Since the installation of the fleet electric vehicle charging points at the Family Time Services' sites in High Wycombe and Aylesbury, two battery electric multi-purpose vehicles have been used for operations to transport families throughout the County. During this period, it is estimated that the vehicles have resulted in GHG emission savings of 2.04 tonnes of CO<sub>2</sub>e over a 12 month period, compared with the diesel vehicles previously used. There have also been air quality benefits, with reductions of carbon monoxide (by 10.99 kgs), oxides of nitrogen (by 1.76 kgs) and airborne particulate matter (by 0.10 kgs) per annum.

## **New Fleet Vehicles on Order (re Action 24)**

Buckinghamshire Council is moving to electrify its fleet and has ordered 8 electric vans to replace the diesel vans currently used for operations. With assistance from the Council's Fleet Management team, six battery electric vans will be delivered to the Highways Team, along with one vehicle each for the Crematoria & Cemeteries Service and the South Waste & Street Scene Service.

## **New Fleet Vehicle & Charging Infrastructure for Country Parks Service (re Action 24)**

A new electric vehicle has been delivered for the Country Parks Service at Black Country Park. This will be used to travel between country parts across the County and replaces the use of a Diesel pick up. The requisite charging infrastructure has also been installed.

## **Commuting and Working from Home**

### **Work Smart (re Actions 26 and 46)**

The "Work Smart" practices, reported upon in last year's Progress Report, continue - allowing Council operatives to work from home, where operationally feasible, approximately 60% of the time. This has been enabled by IT systems and hardware that allow for effective remote working, such as Microsoft Teams. Managers decide on how best to balance the home/office working patterns of teams to ensure that required performance standards can be met while social and environmental benefits can still be realised.

# Suppliers and Partners

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## Partners

### Local Authority Treescapes Fund (LATF) Round 2 (re Action 27)

Buckinghamshire Council secured £184k from the 2022/23 [Local Authority Treescapes Fund \(LATF\)](#) Round 2. The bid this year included partners from across Buckinghamshire including:

- Earthwatch LLP & Princes Risborough Combined School
- Dorneywood Scout Camp
- Releaf Marlow
- Earthwatch LLP & Buckingham Town Council
- Longridge Activity Centre
- Transport for Bucks

These organisations planted almost 1,500 trees across the County. Our first “Tiny Forests” in Bucks were created as part of this work. These were established in line with the [“Miyawaki” Method](#) - packing 600 trees into an area no bigger than a tennis court. The dense planting helps accelerate tree growth (and therefore achieves greater biodiversity and carbon sequestration rate improvements sooner), while their small size allows for these forests to be planted in urban areas – allowing for much needed exposure to nature in our towns and cities. The first tiny forest was planted by students and volunteers at Princes Risborough Combined School.





We partnered for the second year in a row with Releaf Marlow, who planted trees across a range of sites in their locality including two sites on Farmland. A second tiny forest was also planted at Bourton Park, near Buckingham, by volunteers including local councillors from Buckingham Town Council:



## HS2 Tree Giveaway Day (Re Action 27)

The Council received 1,000 trees from HS2 Ltd in May 2022. These were cared for by [Chiltern Rangers](#) who kept them in good shape throughout the dry summer. The Climate Response Team organised a “tree giveaway day”, in conjunction with Chiltern Rangers, where over 20 groups from across the county collected the trees for onward planting. Several were parish councils, alongside other organisations such as the [Lindengate Charity](#) and [Hogshaw Farm](#). Chiltern Rangers also received several hundred trees for onward planting as part of their vital work in the county.



## Tree planting along Platinum Park Way (Re Action 27)

Funded by Buckinghamshire Council, 4,000 trees and shrubs were planted along the recently opened Platinum Park Way active travel route (see Action 42 for further details). Over a period of two weeks, volunteers from the Council and community came together in spite of the cold weather to carry out the planting in conjunction with Chiltern Rangers.

Tree planting at Platinum Park Way



## Wharf Road Decarbonisation Project, Wendover (Action 27)

Buckinghamshire Community Energy (BCE) have been developing a project to decarbonise the Wharf Road Campus in Wendover, which includes seven buildings: John Colet School, John Hampden School, Wendover Junior School, Wendover Swimming Pool, Wendover Youth Centre, Wendover Memorial Hall and Little Acorns Kindergarten. Following a feasibility study in 2021, Buckinghamshire Council has been supporting BCE to progress the project which will focus on installations of solar PV in its first phase.

This is a community energy model whereby the community group attains a lease from the freeholder to put solar PV onto buildings which are funded through a share offer from the local community. The community group then installs and maintains the solar PV while the building user receives cheaper electricity.

The Council has been working to develop an internal process which will create space for community energy projects on council assets. This will both support the Council's net zero targets and build capacity of community energy organisations in the County. The strategic significance of this project is to develop a flourishing community energy community in Buckinghamshire to support decarbonised, resilient energy systems.



## Schools and Academies

### School Travel Plan Success (re Action 28)

The Council's Travel to School team provides advice to schools on travelling sustainably. While their primary focus is to encourage active travel and reduce the number of car journeys to school altogether, they also provide information on anti-idling. Information is provided in newsletters and to schools in the course of working with them on their [school travel plans](#).

The team also deliver initiatives such as the Footsteps training scheme, bikeability and balanceability training, and Walk Once a Week (WOW) incentive scheme. In December 2022, Buckinghamshire Council came [1<sup>st</sup> in the Modeshift STARS \(Sustainable Travel Accreditation and Recognition for Schools\) scheme league table](#) for the county with the council having the highest percentage of schools with a sustainable travel plan. There are a total of 64 accredited school travel plans across the county with three of the schools achieving platinum status.

### Ad-hoc Support for Schools (re Action 29)

Ad hoc support for schools from the Council's Energy and Climate Change Team continues. In addition to several webinars, forms, and processes being provided to help matters in relation energy contracts, information about the [additional capital funding provided by the Department for Education to improve school energy efficiency](#) and a guidance regarding energy efficiency measures in schools was published on SchoolsWeb in January and February 2023.

The Energy Management Team have also provided advice to schools on how to reduce their energy usage, whether gas or electricity.

### Lease & Power Purchase Agreement (PPA) with Solar for Schools at Spinfield School, Marlow (re Action 29)

In early 2022 the Council completed a lease and corresponding Power Purchase Agreement (PPA) with an organisation called [Solar for Schools](#) at Spinfield School near Marlow. Solar for Schools has subsequently installed 122 solar PV panels at the site with a maximum output of 50kWp. Generation from the system can meet up to 43% of the school's electricity needs. Over 25 years the installation is

forecast to save the school over £37,000 and reduce emissions by 217 tonnes of CO<sub>2</sub>. The amount of electricity generated and carbon saved from the project can be checked by [visiting the Solar for Schools website](#).

The Council are excited to be working on further similar schemes that are already in the pipeline.

## The Council's Investment Estate

### HQube Development Wins RICS Award (Re Action 30)

[In 2022 the HQube project in High Wycombe won an award from the Royal Institute of Chartered Surveyors](#). The 12 industrial/business units: incorporate repurposed shipping containers; include roof-mounted solar PV systems on every roof (ranging from 2.1 - 2.7 kWp) and north roof lights to help maximise use of natural light; and have sanitaryware and fittings that help contribute to a 40% improvement in water efficiency against required standards. 6 electric vehicle charging points and external LED lighting have been installed at the site in addition to storage spaces for up to 60 bicycles.

## Suppliers

### Gas and Electricity Supplies

#### Purchased Electricity from Renewable Sources (re Action 33)

As of 1 October 2022, the Council has purchased electricity which is 100% backed by REGO certificates, certifying it as being generated from a renewable source. The reduced carbon emissions are reported as a net figure in the emissions tables.



The HQube project, High Wycombe

# County-wide

## Transportation

### New and Innovative Electric Vehicle Charging Infrastructure (re Action 42)

The Council have received £70,200 to support installation of in-pavement cable channels and around 10 EV lamppost chargepoints in Wendover.

### Completion of Platinum Way in Aylesbury (re Action 42)

[In May 2023 the Platinum Way was launched](#) which aims to promote active travel and to reduce environmental impacts. The upgrade was possible due to £1.4 million funding from the Department for Transport's Active Travel Fund.

Formally the Emerald Way, The Platinum Way features an array of enhancements aimed at improving safety, accessibility, and the overall user experience. This includes quieter road routing, wider footways, clearer signage, additional lighting, more accessible curbs, and three new parallel road crossings which give priority to Platinum Way users over road traffic. Emphasising walking, wheeling and cycling, the Platinum Way aims to foster public health and

reduce congestion. The route, stretching from the Town Centre to Aylesbury Vale Parkway railway station offers users seamless connections to the Waddesdon Greenway and access to local attractions like Waddesdon Manor.



Chairman Dev Dhillon and Cabinet Member for Transport Steven Broadbent at the launch of the Platinum Way



## Completion of Aylesbury Canal Towpath (re. Action 42)

The Aylesbury Arm, a spur of the Grand Union Canal, has [seen a significant improvement in its towpath condition, thanks to an £800k investment](#). The towpath improvements are on the section between locks 15 and 16, resulting in improved conditions for walking, cycling and wheeling.

The Aylesbury Arm canal towpath improvements which have been made possible thanks to a £621,846 grant from the Housing Infrastructure Fund (HIF) from Homes England and £178,154 of funding from Section 106 developer contributions, are part of wider plans for active travel improvements in Aylesbury and form a main spine route between the town centre and the new developments of Kingsbrook and Woodlands.

Improvements for walking, cycling and wheeling include widening the towpath to 7 feet, resurfacing the towpath, improving accessibility onto the towpath and installing new signs along the route.

The improvements aim to encourage active travel, improve people's health, and reduce carbon and air pollution.





## Electric Scooters (re Action 44)

Buckinghamshire Council, as part of the Department for Transport (DfT) trials, have implemented an [Electric Scooter rental trial](#) to help support a 'green' alternative to local travel that is convenient, clean, and affordable. E-scooters can also reduce reliance on car trips, reduce congestion and improve air quality.

The trial has been extended by the Department for Transport until May 2024 and is currently taking place in Aylesbury, High Wycombe, and Princes Risborough. Estimates suggest that the scheme saves 28.9 tCO<sub>2</sub>eq per month across Aylesbury (19 tCO<sub>2</sub>e), High Wycombe (9.5 tCO<sub>2</sub>e) and Princes Risborough (0.4tCO<sub>2</sub>e).

## Launch of Electric Bike Hire Scheme (re Action 44)

[Two electric bike \(e-bike\) hire schemes were launched](#) in Aylesbury and High Wycombe in July 2023. Twenty-five e-bikes will be available for public hire across the towns through the Zipp Mobility app, the same app used for the e-scooters.

The Zipp e-bike trial provides a new sustainable travel option for residents and visitors to the towns. The pedal-assist bikes will make cycling more accessible, helping people get around town in an affordable and eco-friendly way. The addition of e-bikes to our existing e-scooter offering, means that people now have a choice of which wheels they want to use for commuting or leisure trips.

The trial scheme will be evaluated in the coming months to assess the viability of making e-bike hire a permanent feature in the towns.



## 'Pick Me Up' Demand Responsive Transport (DRT) Service (re. Action 44)

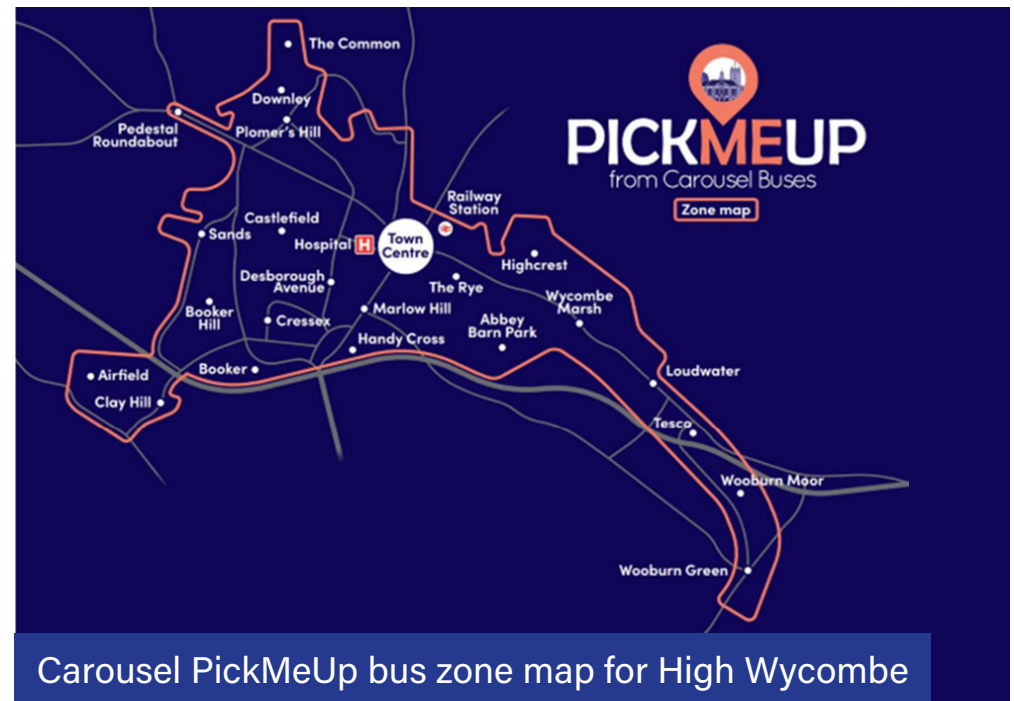
Buckinghamshire Council and Carousel Buses have launched a new 'demand responsive transport' (DRT) service in and around High Wycombe. Described as a cross between a bus and taxi service, the new DRT service comes as part of a pilot scheme funded by the Government's Rural Mobility Fund. The new service will run for the next 3 years, with scope to run for longer if the pilot is successful.

Sitting under Carousel's 'PickMeUp' brand, the Wycombe pilot will serve several communities, including Booker, Daws Hill, Wooburn Green, Wycombe Marsh, Loudwater and Downley. These either have a limited bus service or a route which only serves part of the community.

Users will be able to book one of the five fully accessible minibuses to collect them from one of the 500+ pickup points – also known as 'virtual bus stops' – out and about in the local area. Buses can be booked in advance of a trip via the app, through which you can also pay for your ticket and track your bus in real time.



The Carousel PickMeUp Bus



Carousel PickMeUp bus zone map for High Wycombe



## Upgrading of traffic signals at Stoke Road Gyratory, Aylesbury (re Action 47)

Since reporting on this project in last year's progress report the upgrading of the traffic light signals at the Stoke Road gyratory was [completed in February 2023](#). The project involved the installation of new 'intelligent' traffic lights to improve traffic flow at the Aylesbury gyratory, using some of the latest technology to reduce congestion and make the busy junction safer for all users.

By responding as needed to traffic flow, the system helps to reduce congestion and avoid potential build ups, keeping traffic moving as freely as possible. For example, on clear roads the system will minimise delays by changing lights more frequently and where there is congestion in a particular area, the lights can adjust to get more traffic away from that location.

Cllr Steven Broadbent and Rob Butler MP visiting the newly installed intelligent traffic lights at Aylesbury gyratory



As part of the scheme a new signalised pedestrian crossing has also been installed on the Wendover Road, adjacent to the police station, leading to the existing central refuge island. This new crossing provides a safer and more convenient way for pedestrians, including many school children, to get across the busy route. The £500,000 funding also covered some resurfacing work on the Wendover Road.

The Gyratory junction forms the Stoke Road Air Quality Management Area (AQMA) and it's anticipated that these upgrading works will also benefit air quality in the local area.

# Buildings and Developments

## Housing

### Sustainable Warmth and Home Upgrade Grant (re Actions 52 and 53)

£4.97m was secured through the Sustainable Warmth scheme to provide energy efficiency and clean heating upgrades in both eligible on and off-gas grid homes. Funding was awarded following submission of a consortium bid with the Greater South East Net Zero Hub and the scheme was delivered by City Energy (as the Managing Agent). The government grant funding supported the installation of 261 retrofit measures in 203 properties in Buckinghamshire. The installation of the energy efficiency measures is anticipated to result in a reduction of over 250 tonnes of CO<sub>2</sub>/year.

The Home Upgrade Grant 2 will follow the Sustainable Warmth scheme. The Council has secured £576k which will support energy performance improvements in off-gas grid homes up until March 2025. The scheme will be largely managed by the Greater South East Net Zero Hub.





## Energy Doctor scheme (re Action 53)

An 'Energy Doctor' scheme (Domestic Resource Efficiency Service) was approved by Cabinet on 5 January 2023. Just under £2 million has been allocated to support the initiative until the end of March 2025 from the Government's UK Shared Prosperity Fund (UKSPF).

Energy Doctors (Domestic Resource Efficiency Officers) have been visiting eligible homes (since 5 April 2023) to:

- Identify whether households are paying too much for their energy and/or water (benchmarked against average prices and taking into account legislation relating to energy and water supplies);
- Provide advice on support available (including funding and grants) to assist with the implementation of resource efficiency measures;
- Suggest appropriate behavioural and control changes that can help reduce resource consumption; and
- Implement suitable low cost easy retrofit resource efficiency (LCERRE) measures such as draught proofing (for windows, doors, letterboxes, and chimneys), hot water cylinder insulation jackets, reflective radiator panels, secondary glazing film, portable solar generators, electricity consumption monitors, thermometer cards, and LED lights.



Over 400 visits will be made by the Energy Doctors and it's estimated that the scheme will reduce carbon emissions in the area by 300 tonnes per year. It's estimated that the visits made so far are helping people save over £100 on their energy bills per year on average. New energy and water saving measures will be provided by the Service in 2023 that will provide even better cost and carbon savings for residents.

### **Buckinghamshire Solar Together Scheme (re Action 53)**

A Buckinghamshire Solar Together scheme was launched in May 2022, with the aim of helping residents and small business owner-occupiers interested in installing solar PV and battery storage. [Solar Together is a group buying initiative run by iChoosr](#), which may result in savings of up to 30% less than those typically provided by the market.

During the 2022/23 Solar Together scheme a total of 584 installations have been confirmed including a total of 5,356 solar PV panels. This is equivalent to an additional peak generating capacity of 2.1MW being installed in Buckinghamshire, increasing household's energy security and reducing emissions and bills at the same time. Over a period of 25 years, it is projected that this will result in

Greenhouse Gas (GHG) reductions of as much as 9,600 tonnes CO<sub>2</sub>eq. Additionally, a further 463 batteries have been installed to allow the storage of the electricity generated for later consumption, alongside 44 EV chargepoints. Anybody installing solar panels across Buckinghamshire can benefit from the [Government's Smart Export Guarantee \(SEG\), which sets a minimum price for electricity exported back to the grid.](#)





# Economy

## Supporting the Local Green Economy (re Action 55)

The Council is working closely with UK Power Networks, Homes England, Ofgem and the Dept. for Energy Security and Net Zero to bring forward significant investment to upgrade the electricity grid in Aylesbury. The additional capacity will be needed to enable provision for the electrification of domestic heating and transport, supporting the green economy by allowing for new and existing homes to become more sustainable.

Following an invitation to quote (ITQ) procurement process [Lighting and Mains Power Solutions Ltd](#), a local supplier, was awarded the contract to supply LED light bulbs for the 'Energy Doctor' scheme. They will be supplying 7790 LED lightbulbs per annum over a two year contract (which can be extended for a further three years, in one year extension periods). The procurement exercise will save the scheme just under £4,000 per year.

The majority of products used for LCERRE measures are from suppliers based in England and most of them also manufacture the products e.g. Technical Converters Ltd (regarding reflective radiator panels), Allmand-Smith Ltd t/a Stormguard (regarding door and window draught exclusion and secondary glazing products); Create Studios (regarding magnetic letterbox draught excluders); Good Life Innovations Ltd (regarding the thermometer cards); and Chimney Balloon Ltd. Procurement from these companies is a contribution to the UK's green economy.



Zero Waste Map -  
[recycleforbuckinghamshire.co.uk/zerowastemap](https://recycleforbuckinghamshire.co.uk/zerowastemap)

## Low Carbon Workspaces (re Action 56)

Low Carbon Workspaces helped business to reach their net zero goals through grant funding for projects at commercial premises that reduce carbon emissions. Projects which lower on-site carbon emissions, reduce energy usage, or divert waste from landfill were supported by the scheme, which closed in June 2023 after allocating over £3.3m in funding to over 900 projects, saving 5,000 tCO<sub>2</sub>e and £2.25m per year. The scheme ran across Beds, Herts & Bucks as well as Berkshire and Northamptonshire.

## Environment, Land and Water

### Environment Agency Supported Flood Risk Management Projects (re Action 57)

Flood risk management projects ongoing with Environment Agency support and funding include those in Marlow (Newt Ditch), and Property Flood Resilience (PFR) packages for property owners, and Willows estate in Aylesbury. Feasibility studies are underway to determine if there are viable options for a business case in Sands (High Wycombe), Hughenden (High Wycombe), West Marlow, Gawcott and Tingewick. Natural Flood Management projects are ongoing in and around Buckingham and Winslow areas.



### AWorld App (re Actions 58 and 60)

On 22 April 2022 (Earth Day) Buckinghamshire Council became the first local authority in the UK to run a campaign through the AWorld app. AWorld is the official platform in support of ActNow, the United Nations campaign for individual action on climate change and sustainability. The app guides users towards living sustainably. It does this by showing people how much energy or water they can save by making small changes to their daily lives and creating new habits – such as putting the washing machine in eco wash mode or unplugging a charger as soon as a mobile phone is fully charged.

It's estimated that 14,466 kgs of CO<sub>2</sub>, 1.11m litres of water and 5346 kWhs of electricity were saved so far as a result of environmentally friendly actions taken and recorded as part of the campaign in 2022.



# Health and Communications

## Monitoring Personal Exposure to Air Quality Pollutants (re. Action 59)

On Clean Air Day 15 June 2023, Ricardo, in conjunction with Buckinghamshire Council, used air quality sensors to undertake monitoring between The Gateway Office and the Walton Street Office in Aylesbury. Two different routes were walked, one along Gatehouse and Friarage Roads [through the Friarage Road Air Quality Management Area (AQMA)], and one on quieter back roads and through White Hill Park. The aim was to investigate how changing your route may affect the quality of the air you breathe. The initial data obtained showed a significant difference in exposure to nitrogen dioxide between the two routes, see graph below.

The data obtained is currently being processed and validated and once available will be used to illustrate how people can manage their own exposure to air quality pollutants simply by altering the routes they walk. The findings will also be promoted to internal staff and to the community through the 'Clean Up Our Air' initiative.


 **Ricardo Air Quality**  
@RicardoAirQ

For #cleanairday, our team is monitoring in Aylesbury with a Praxis Cube and a camera. We're investigating how changing your route may affect the quality of the air you breathe. Follow the team's progress in this thread!

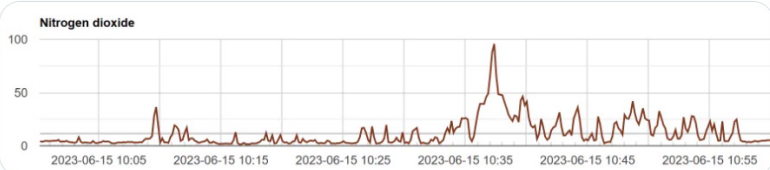
[@BucksCouncil](#) [@SouthCoastSci](#) [@brianstacey](#) [@Ricardo\\_AEA](#)




9:27 AM · Jun 15, 2023 · 1,093 Views

 **Ricardo Air Quality**  
@RicardoAirQ

This plot for nitrogen dioxide shows the difference in exposure when walking on quiet streets (10:10 to 10:35) and walking along the A41 (10:35 to 11:00). #CleanAirDay #AirQuality



 You and 5 others

## National Tree Week Campaign (Re Action 60)

During National Tree Week (26 Nov. to 4 Dec. 2022) we ran a focussed media campaign to celebrate and raise awareness of the vital role that trees play in our eco-system. This included social media highlighting our "Tree Giveaway Day" (see Action 27 for further detail), and an opportunity for volunteers to help plant trees and shrubs along the Platinum Park Way. The campaign concluded with a video published on social media to highlight all the events of a packed schedule and raise awareness of the Bucks Climate Challenge:



## Have yourself a "Green" Christmas (re Action 60)

The Council ran a campaign promoting a "Green Christmas" through social media channels. A series of "top tips" were shared over a three week period in November and December 2022. The advice was also featured in a 2-page spread within the "Hiya Bucks" magazine.



## #EarthDay 2023 (Re Action 60)

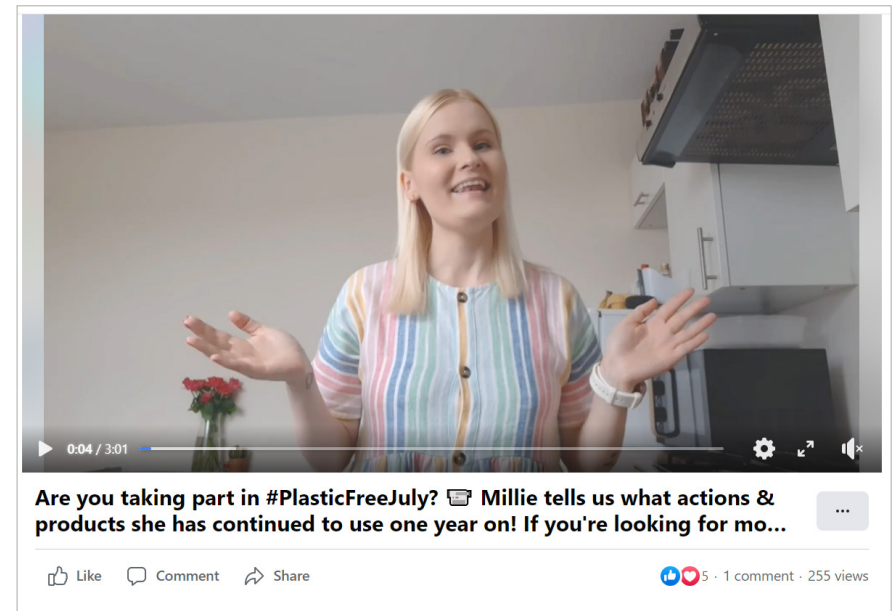
A series of posts were placed in social media to mark Earth Day 2023 (22 April). These highlighted the annual theme “Invest in Our Planet”, our commitment to plant 543,000 trees in a decade, the 30% increase in public charge points across car parks in Bucks and our commitment to encouraging active travel through local cycling and walking infrastructure, to name but a few!



The total number of impressions, across all platforms, from the four posts celebrating earth day was over 25,000.

## #NetZeroWeek and Plastic Free July Social Media Campaign (re Action 60)

To mark NetZeroWeek and the first week of Plastic Free July, Millie reprised her role from last year, sharing a series of Vlogs (Video Blogs) about her journey reducing single-use plastic in her day to day life – picking up a journey we reported on in last year’s Progress Report:



We also highlighted the launch of two new e-bike schemes in Buckinghamshire and celebrated our Bronze Carbon Literacy Award. Over the whole of NetZeroWeek, our posts made a total of 30,000 impressions across all platforms - X (formerly Twitter), Facebook and Instagram.



Buckinghamshire Council

# **Climate Change and Air Quality Strategy**

2022 - 2023 Progress Report