

Buckinghamshire Council Climate Change &

Air Quality Strategy

2021-2022 Progress Report

Contents

<u>Foreword</u>	3
Introduction	4
Progress against targets	5
Activity against actions Governance and Management 	17
The Council's emissions Behaviour The Council's Operational Estate Transport	23
Suppliers and partners • Partners • Suppliers	29
 <u>County-wide</u> <u>Transportation</u> <u>Buildings and Developments</u> <u>Economy</u> <u>Environment, Land and Water</u> <u>Health and Communications</u> 	36

Foreword

I am delighted to provide this update on the considerable activity undertaken to tackle climate change and poor air quality in Buckinghamshire. While giving some reassurance that all parts of our community are playing their part in tackling these significant environmental challenges, it also recognises the importance of continuing emission reduction and climate change adaptation work. Having only adopted the Climate Change and Air Quality Strategy last year, in October, it's good to see the innovation, enthusiasm and partnership initiatives already underway – from the creation of new larger woodland areas, to expanding the number of charging points to 1,000 by 2027, and delivering energy performance improvements to many more homes.

Our collective response to the COVID pandemic has proven that, together, we can introduce the necessary changes to address seemingly overwhelming challenges to our lives. Our efforts have contributed to decreasing levels of greenhouse gases and other air pollutants in Buckinghamshire and from the Council's operations. The health of those living and working in the area, and plants and animals, will have benefitted from NO₂ concentrations being lower than the 40μ g/m3 annual mean in 2020 and 2021. I'm also very conscious of the fact that initiatives that help communities transition to low or zero emissions can result in cost savings, especially with energy costs where they are. In the transport sector we have encouraged e-scooter and e-bike usage. In the home we have come up with ways

to help reduce energy consumption via the Green Homes Grant Local Authority Delivery and Buckinghamshire Solar Together schemes. Workplace energy usage has seen assistance from the Low Carbon Workspaces initiative.

Hopefully this report provides some inspiration to you all to explore new ways to reduce your environmental impact – there are some useful suggestions available on the AWorld App about some small lifestyle choices that everyone can make to save resources. It's great that 14 tonnes of CO_2 has already been saved by those using <u>it</u>.

We can all feel immensely satisfied with what has been achieved so far. The Council's '21/'22 carbon emissions ($6,095 \text{ TCO}_2 \text{e}$) were far less than the carbon budget that was set ($7,407 \text{ TCO}_2 \text{e}$). We have secured Government grants in excess of £10.3m to progress initiatives, introduced more electric vehicles into fleets and sizeable solar photovoltaic systems on buildings providing Council services, planted impressive number of trees with schools and community groups and we are now starting to buy renewable energy. I look forward to another year of successes, where we can share the benefits of securing a sustainable future.

Councillor Gareth Williams

Cabinet Member for Climate Change and Environment

Introduction

The UK experienced its hottest summer on record in 2022 - on <u>19 July 40.3°C was recorded at Coningsby</u> and temperatures recorded at 46 weather stations across the UK exceeded the previous record of 38.7°C. July 2022 has been the driest July in England since 1935 (and the driest on record for south-east England, according to provisional figures released by the <u>Met</u> <u>Office</u>) and every month up to September this year (apart from February) has seen below average rainfall.

These severe weather events have been a useful reminder of the urgent need to reduce global carbon emissions and implement measures to adapt to a changing climate. This document provides an update on the significant progress made against the aims, objectives, and actions set out in our Climate Change and Air Quality Strategy within the year following its adoption on <u>19 October 2021</u>. Details of 51 activities are provided, many of which address several actions in the Strategy. These have contributed to greenhouse gas emissions (GHG) decreasing by 10.61% from 2019 to 2020 and nitrogen dioxide concentrations staying within the annual mean value in the last two calendar years in Buckinghamshire; and, the Council's GHG emissions being 70% lower in '21/'22 compared to its emissions from 1990.

People and organisations' activities continued to be affected by the COVID pandemic in 2022, with Plan B measures being in place between 10 December 2021 and 26 January 2022 (inclusive). Emissions have been positively impacted by the changes - most notably the shift to home working has helped reduce transport emissions. The Council has continued to support this shift through its Work Smart programme, and the transition to low emission forms of transport. This includes: 111 employees using the Council's Cycle to Work scheme since May 2020, securing more than half a million pounds to upcycle and electrify a refuse collection vehicle, the introduction of battery electric vehicles into fleets operated by Family Times Services and a major supplier to the Council (Veolia), committing to more than 1,000 public charging spaces being available in the county by 2027, encouraging the use of low and ultra low emission taxis and private hire vehicles via a new licensing policy, implementing e-scooter and e-bike hire schemes, and extensions and improvements to active travel routes in Aylesbury, Wendover and Marlow.

The achievements outlined in this progress report wouldn't be possible without the cooperation and support of all stakeholders – from the Council's teams, suppliers and partners, to the third sector, businesses, and residents in Buckinghamshire. As result of collaborative working over £203k was secured to support tree planting projects by local organisations, water source heat pumps and solar panels have been installed at Chiltern Lifestyle Centre and Amersham Depot (which will save up to 228 tonnes of CO_2e per annum), 200 business have been assisted by Low Carbon Workspaces to reduce their carbon footprints and energy costs, and 64 accredited school travel plans have been established.

Results from several schemes have, once again, confirmed widespread interest in delivering a zero carbon future for Buckinghamshire. Environmentally friendly actions taken and recorded on the AWorld App have resulted in 14 tonnes of CO_2 being saved, 91 domestic properties have been retrofitted with energy efficiency measures with funding from the Green Homes Grant Local Authority Delivery scheme, and there were 6,990 registrations to the Buckinghamshire Solar Together initiative.

Over the forthcoming year many initiatives will come to fruition, for instance: the provision of support for 30 large employers to increase the number of electric vehicles in their fleets, and improving the energy performance of eligible homes under the Sustainable Warmth scheme. Activity is already underway to build on the success of implementing climate change adaptation measures and reducing emissions from the Council's estate (e.g. planting 5,860 trees, procuring 25% of electricity from renewable sources, and transitioning to cloud based servers) which includes the installation of air source heat pump technology funded by the Public Sector Decarbonisation Scheme, and establishing new woodland areas.

Progress against targets

The following section details the progress made against the aims and objectives of the Climate Change and Air Quality Strategy. It is of note that emissions over the reporting year have been influenced by changes to behaviours and the operations of organisations during the Covid-19 pandemic.

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 <u>UK local authority and regional greenhouse gas emissions</u> <u>national statistics: 2005-2020</u> and have been calculated using a generation based approach. These were published by the Department for Business, Energy & Industrial Strategy (BEIS) on 30 June 2022 and the data is presented in the graph 1 – confirming that emissions from the area the Council serves are decreasing at an average rate of 2.51% per annum. Emissions decreased by 10.61% from 2019 to 2020. There are notable changes to the way that emissions have been calculated compared to previous years, including the following:

- in addition to covering territorial emissions of carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) emissions have now been included for the first time. Fluorinated gases remain unaccounted for.
- the agriculture category now includes emissions from a large number of additional agricultural soils and livestock emission sources (accounting for these from 2018 onwards) (previously it only included CO₂ emissions from fuel combustion, liming and fertiliser application).
- unlike previous statistical releases of local authority greenhouse gas emissions data from BEIS, emissions from waste management have been separately accounted for. These are based on estimated distributions of where the waste arises rather than where the emissions occurred¹.



¹ Emissions associated with electricity used in the waste industry comes under Industrial and Commercial Electricity. This is also true for emissions from energy from waste plants for which the emissions are associated with the end user of the electricity

Emissions generated from all source categories have decreased between 2005 and 2020 apart from waste management 'other' emissions which is influenced by population growth in the area (489k people in 2005 and 547k people in 2020). Emissions from settlements, public sector, commercial and domestic gas and domestic 'other' increased between 2019 and 2020 reflecting the impact that lockdowns and home working arrangements associated with the COVID pandemic had. Table 1 provides details of the carbon emissions produced by various sources in Buckinghamshire in 2020.

Graph 1 Buckinghamshire Carbon Emissions (kilotonnes CO2e) 2005-2020

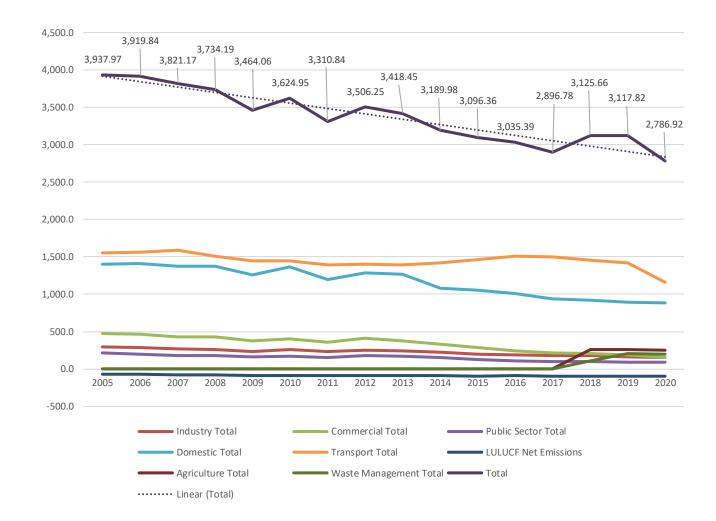


Table 1 - Buckinghamshire 2020 carbon emissions by source

Industry Gas 20.4 0.73% Large Industrial Installations 0.6 0.02% Industry 'Other' 83.4 2.99% Industry Total 153.3 5.5% Commercial Electricity 87.5 3.14% Commercial Gas 67.5 2.42% Commercial Other' 1.4 0.05% Commercial Total 156.4 5.61% Public Sector Electricity 29.0 1.04% Public Sector Cas 66.1 2.01% Public Sector Yother' 1.0 0.03% Public Sector Total 86.0 3.09% Domestic Electricity 203.7 7.31% Domestic Gas 575.2 20.64% Domestic Other' 105.2 3.77% Domestic Total 884.1 31.22% Road Transport (A roads) 321.1 11.52% Diesel Railways 44.8 1.61% Transport 'Other' 16.5 0.59%	Source	Annual Carbon Emissions (kilotonnes CO ₂)	% of Carbon Emissions
Large Industrial Installations 0.6 0.02% Industry 'Other' 83.4 2.99% Industry Total 153.3 5.5% Commercial Electricity 87.5 3.14% Commercial Gas 67.5 2.42% Commercial Yother' 1.4 0.05% Commercial Yother' 1.4 0.05% Commercial Total 156.4 5.61% Public Sector Electricity 29.0 1.04% Public Sector Gas 56.1 2.01% Public Sector Yother' 1.0 0.03% Public Sector Yother' 1.0 0.03% Domestic Electricity 203.7 7.31% Domestic Gas 575.2 2.064% Domestic Yother' 105.2 3.77% Domestic Yother' 105.2 3.77% Domestic Yother 313.3 11.24% Road Transport (Aroads) 313.3 15.5% Road Transport (Minor roads) 321.1 11.52% Diesel Railways 44.8 1.61%	Industry Electricity	4.89	1.76%
Industry 'Other' 83.4 2.99% Industry Total 153.3 5.5% Commercial Electricity 87.5 3.14% Commercial Gas 67.5 2.42% Commercial Other' 1.4 0.05% Commercial Total 156.4 5.61% Public Sector Electricity 29.0 1.04% Public Sector Gas 56.1 2.01% Public Sector Yother' 1.0 0.03% Public Sector Total 86.0 3.09% Domestic Electricity 203.7 7.31% Domestic Gas 575.2 20.64% Domestic Other' 105.2 3.77% Domestic Total 884.1 31.72% Road Transport (A roads) 313.3 11.24% Road Transport (Minor roads) 321.1 11.52% Diesel Railways 44.8 1.61% Diesel Railways 44.8 0.59%	Industry Gas	20.4	0.73%
Industry Total 153.3 5.5% Commercial Electricity 87.5 3.14% Commercial Gas 67.5 2.42% Commercial Other' 1.4 0.05% Commercial Total 156.4 5.61% Public Sector Electricity 29.0 1.04% Public Sector Gas 56.1 2.01% Public Sector Total 86.0 0.03% Public Sector Total 86.0 3.09% Domestic Electricity 203.7 7.31% Domestic Gas 575.2 20.64% Domestic Gas 575.2 20.64% Domestic Total 884.1 31.72% Road Transport (A roads) 313.3 11.24% Road Transport (Motorways) 461.4 16.55% Road Transport (Minor roads) 321.1 11.52% Diesel Railways 44.8 161% Transport 'Other' 16.5 0.59%	Large Industrial Installations	0.6	0.02%
Commercial Electricity 87.5 314% Commercial Gas 67.5 2.42% Commercial Yother' 1.4 0.05% Commercial Total 156.4 5.61% Public Sector Electricity 29.0 1.04% Public Sector Gas 56.1 2.01% Public Sector Other' 1.0 0.03% Public Sector Total 86.0 3.09% Domestic Electricity 203.7 7.31% Domestic Gas 575.2 20.64% Domestic Other' 105.2 3.77% Domestic Total 884.1 31.72% Road Transport (A roads) 313.3 11.24% Road Transport (Motorways) 461.4 16.55% Road Transport (Minor roads) 321.1 11.52% Diesel Railways 44.8 161%	Industry 'Other'	83.4	2.99%
Commercial Gas 67.5 2.42% Commercial 'Other' 1.4 0.05% Commercial Total 156.4 5.61% Public Sector Electricity 29.0 1.04% Public Sector Gas 56.1 2.01% Public Sector Yother' 1.0 0.03% Public Sector Total 86.0 3.09% Domestic Electricity 203.7 7.31% Domestic Gas 575.2 20.64% Domestic Gas 575.2 20.64% Domestic Total 884.1 3.77% Domestic Total 884.1 1.24% Road Transport (A roads) 313.3 11.24% Road Transport (Motorways) 461.4 16.55% Road Transport (Minor roads) 321.1 11.52% Diesel Railways 44.8 1.61% Transport 'Other' 16.5 0.59%	Industry Total	153.3	5.5%
Commercial 'Other' 1.4 0.05% Commercial Total 156.4 5.61% Public Sector Electricity 29.0 1.04% Public Sector Gas 56.1 2.01% Public Sector Yother' 1.0 0.03% Public Sector Total 86.0 3.09% Domestic Electricity 203.7 7.31% Domestic Gas 575.2 20.64% Domestic Other' 105.2 3.77% Domestic Total 84.1 31.72% Road Transport (Aroads) 321.1 11.52% Diesel Railways 44.8 16.1% Transport 'Other' 16.5 59%	Commercial Electricity	87.5	3.14%
Commercial Total156.45.61%Public Sector Electricity29.01.04%Public Sector Gas56.12.01%Public Sector Yother'1.00.03%Public Sector Total86.03.09%Domestic Electricity203.77.31%Domestic Gas575.220.64%Domestic Yother'105.23.77%Domestic Total884.131.72%Road Transport (Aroads)313.311.24%Road Transport (Mior roads)321.11.52%Diesel Railways44.81.61%Transport 'Other'16.50.59%	Commercial Gas	67.5	2.42%
Public Sector Electricity29.01.04%Public Sector Gas56.12.01%Public Sector Yother'1.00.03%Public Sector Total86.03.09%Domestic Electricity203.77.31%Domestic Gas575.220.64%Domestic Yother'105.23.77%Domestic Total884.131.72%Road Transport (A roads)313.311.24%Road Transport (Minor roads)321.111.52%Diesel Railways44.81.61%Transport 'Other'16.50.59%	Commercial 'Other'	1.4	0.05%
Public Sector Gas 56.1 2.01% Public Sector Yother' 1.0 0.03% Public Sector Total 86.0 3.09% Domestic Electricity 203.7 7.31% Domestic Gas 575.2 20.64% Domestic Yother' 105.2 3.77% Domestic Total 884.1 31.72% Road Transport (A roads) 313.3 11.24% Road Transport (Motorways) 461.4 16.55% Diesel Railways 44.8 1.61% Transport 'Other' 16.5 0.59%	Commercial Total	156.4	5.61%
Public Sector 'Other'1.00.03%Public Sector Total86.03.09%Domestic Electricity203.77.31%Domestic Gas575.220.64%Domestic 'Other'105.23.77%Domestic Total884.131.72%Road Transport (A roads)313.311.24%Road Transport (Motorways)461.416.55%Diesel Railways44.81.61%Transport 'Other'16.55.9%	Public Sector Electricity	29.0	1.04%
Public Sector Total86.03.09%Domestic Electricity203.77.31%Domestic Gas575.220.64%Domestic 'Other'105.23.77%Domestic Total884.131.72%Road Transport (A roads)313.311.24%Road Transport (Motorways)461.416.55%Road Transport (Minor roads)321.111.52%Diesel Railways44.81.61%Transport 'Other'16.50.59%	Public Sector Gas	56.1	2.01%
Domestic Electricity203.77.31%Domestic Gas575.220.64%Domestic 'Other'105.23.77%Domestic Total884.131.72%Road Transport (A roads)313.311.24%Road Transport (Motorways)461.416.55%Road Transport (Minor roads)321.111.52%Diesel Railways44.81.61%Transport 'Other'16.50.59%	Public Sector 'Other'	1.0	0.03%
Domestic Gas 575.2 20.64% Domestic 'Other' 105.2 3.77% Domestic Total 884.1 31.72% Road Transport (A roads) 313.3 11.24% Road Transport (Motorways) 461.4 16.55% Road Transport (Minor roads) 321.1 11.52% Diesel Railways 44.8 1.61% Transport 'Other' 16.5 0.59%	Public Sector Total	86.0	3.09%
Domestic 'Other'105.23.77%Domestic Total884.131.72%Road Transport (A roads)313.311.24%Road Transport (Motorways)461.416.55%Road Transport (Minor roads)321.111.52%Diesel Railways44.81.61%Transport 'Other'16.50.59%	Domestic Electricity	203.7	7.31%
Domestic Total884.131.72%Road Transport (A roads)313.311.24%Road Transport (Motorways)461.416.55%Road Transport (Minor roads)321.111.52%Diesel Railways44.81.61%Transport 'Other'16.50.59%	Domestic Gas	575.2	20.64%
Road Transport (A roads)313.311.24%Road Transport (Motorways)461.416.55%Road Transport (Minor roads)321.111.52%Diesel Railways44.81.61%Transport 'Other'16.50.59%	Domestic 'Other'	105.2	3.77%
Road Transport (Motorways)461.416.55%Road Transport (Minor roads)321.111.52%Diesel Railways44.81.61%Transport 'Other'16.50.59%	Domestic Total	884.1	31.72%
Road Transport (Minor roads)321.111.52%Diesel Railways44.81.61%Transport 'Other'16.50.59%	Road Transport (A roads)	313.3	11.24%
Diesel Railways44.81.61%Transport 'Other'16.50.59%	Road Transport (Motorways)	461.4	16.55%
Transport 'Other' 16.5 0.59%	Road Transport (Minor roads)	321.1	11.52%
	Diesel Railways	44.8	1.61%
Transport Total 1,157.1 41.52%	Transport 'Other'	16.5	0.59%
	Transport Total	1,157.1	41.52%

Table 1 - Buckinghamshire 2020 carbon emissions by source continued

Source	Annual Carbon Emissions (kilotonnes CO ₂)	% of Carbon Emissions
Net Emissions: Forest Land	-117.5	-4.22
Net Emissions: Cropland	47.3	1.70%
Net Emissions: Grassland	-47.7	-1.71%
Net Emissions: Wetland	0.0	0.00%
Net Emissions: Settlements	23.4	0.84%
Net Emissions: Harvested Wood Products	0.0	0.00%
Net Emissions: Indirect N ₂ O	0.9	0.03%
Land use, land-use change and forestry Total	-93.7	-3.36%
Agriculture Electricity	7.4	0.26%
Agriculture Gas	14.8	0.53%
Agriculture 'Other'	19.9	0.72%
Agriculture Livestock	155.7	5.59%
Agriculture Soils	52.6	1.89%
Agriculture Total	250.4	8.98%
Landfill	174.2	6.25%
Waste Management 'Other'	19.2	0.69%
Waste Management Total	193.3	6.94%
Grand Total	2,786.9	

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

The emissions shown in table 2 are those from the Council's operations, such as the buildings and vehicles we operate, and those associated with the transmission and distribution of electricity that the Council uses. Business travel emissions relate to emissions from staff and Councillors 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 is 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.

There have been significant emission savings across all aspects of our operations in '21/'22 compared to our emissions from '18/'19, including 52% and 50% reductions of CO_2 e emissions from the Council's fleet and building electricity consumption respectively, and bringing emissions from business travel down by 40%.

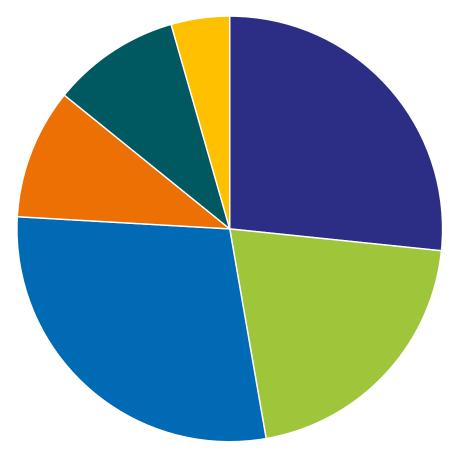
This has led to a 32% reduction of greenhouse gas (GHG) emissions compared to our emissions from '18/'19 and a 70% reduction of GHG emissions compared to those from 1990. We have kept comfortably within our carbon budget for '21/'22 (7,407 TCO₂e) and are on track to reduce our carbon emissions by at least 75% by 2030.



Table 2 - Buckinghamshire Council's Carbon Emissions

Activity	2021/22 Annual Carbon Emissions (TCO ₂ e)	% of Annual Emissions
Buildings – Gas Consumption	1,624	27%
Buildings - Electricity Consumption	1,257	21%
Street Lighting - Electricity Consumption	1,746	29%
Council Fleet	604	10%
Business Travel	593	10%
Electricity Transmission and Distribution	271	4%
Total	6,095	

Buckinghamshire Council '21/'22 Carbon Emissions



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

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

There are numerous examples of where the Council has supported various communities to date to achieve net zero carbon emissions, including the following:

- Financial support for community tree planting (as a result of a successful bid to the Local Authority Treescapes Fund)
- Provision of Travel Plans and ad-hoc support for Schools
- Supporting Buckinghamshire Community Energy regarding the Wendover Wharf Road Campus Decarbonisation project
- Providing new and innovative electric vehicle charging infrastructure for use by the public
- Introducing more and better quality active travel routes (e.g. the Haydon Hill extension to the Waddesdon Greenway and Wendover Cycleway improvements)
- 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

- Funding the installation of energy efficiency measures in eligible homes via the Green Homes Grant Local Authority Delivery Scheme
- Launching a Zero Waste Map that shows all the shops, recycling points and businesses in Buckinghamshire that can help people reduce their waste
- Providing information and advice to businesses and community groups regarding funding opportunities (e.g. Low Carbon Workspaces) and means to reduce emissions from fleet vehicles (e.g. the Electric Vehicles for Businesses Project)
- Encouraging individuals to adopt more environmentally friendly behaviours via the AWorld app
- Instigating large-scale communication activities (e.g. the Green Wheels in Motion event, and Bucks' Climate Challenge) to make information about tackling climate change more prevalent and accessible

Further details are provided in the '<u>Activity against Actions</u>' section.

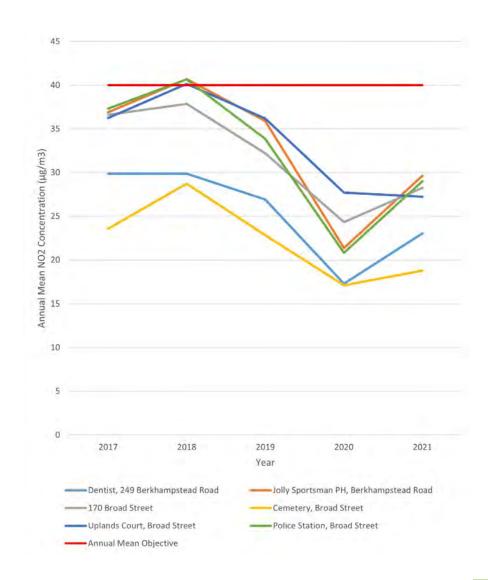
Progress against Aim 2:

Improve air quality across Buckinghamshire pursuant to achieving national air quality objectives

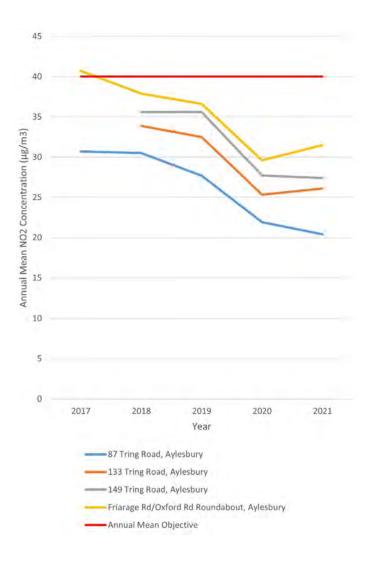
There has been a consistent reduction in recorded levels of nitrogen dioxide (NO_2) at most monitoring locations for the last five years (2017 - 2021) (please see graphs 2-7) and in 2020 there was a significant reduction in recorded NO_2 . In 2021, air quality monitoring showed there was only one exceedance of the annual mean <u>National Air Quality</u> <u>Objective</u> for NO_2 within Buckinghamshire. This was located within the Stoke Road Air Quality Management Area (AQMA) in Aylesbury. However, once the data was bias adjusted and the distance was corrected an exceedance was no longer recorded.

It's of note that recorded concentrations of NO₂ have not returned to pre-Covid pandemic levels. This may be a result of a shift of people's/organistions behaviour following the pandemic to work from home more or to use alternative forms of transport.

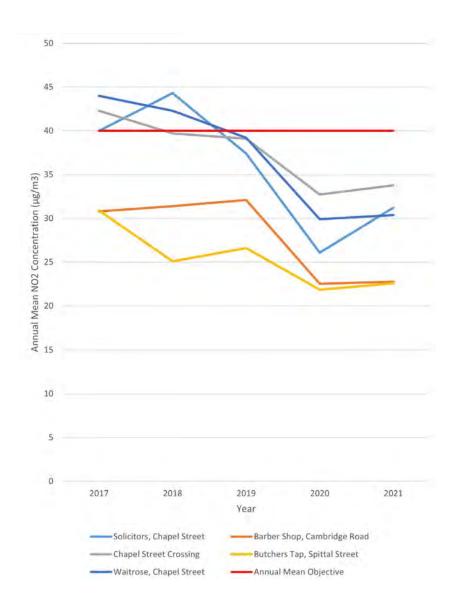
Graph 2 Annual Mean NO₂ Concentrations Recorded in Chesham AQMA



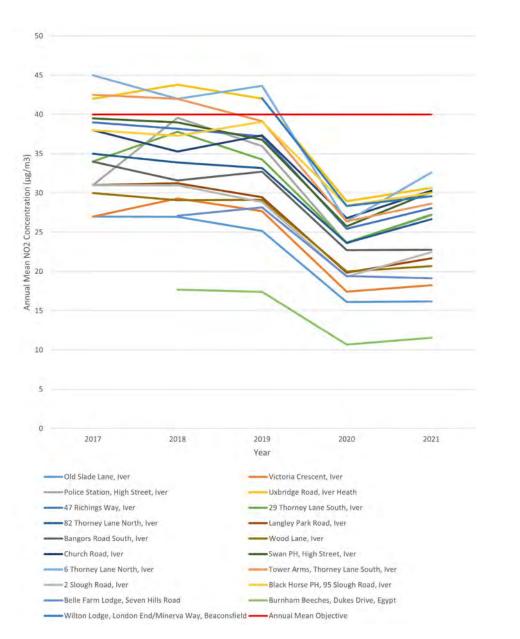
Graph 3 Annual Mean NO₂ Concentrations Recorded in Friarage Road and Tring Road AQMAs (Aylesbury)



Graph 4 Annual Mean NO₂ Concentrations Recorded in Marlow AQMA

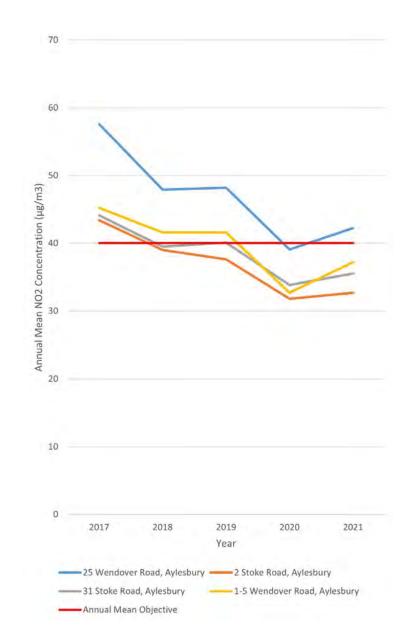




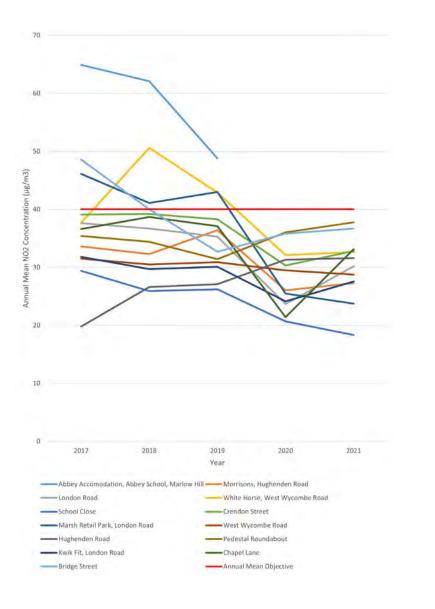


Graph 6

Annual Mean NO₂ Concentrations Recorded in Stoke Road AQMA (Aylesbury)



Graph 7 Annual Mean NO₂ Concentrations Recorded in High Wycombe AQMA



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 32% reduction of the Council's greenhouse gas (GHG) emissions compared to our emissions from '18/'19 and a 70% reduction of GHG emissions compared to those from 1990. 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_2) at most monitoring locations for the last five years (2017 - 2021) (please see graphs 2-7) and annual mean NO_2 concentrations at all recorded locations are below the <u>National Air Quality Objective</u> (including the Stoke Road Air Quality Management Area where, once the data was bias adjusted and the distance was corrected, an exceedance was no longer recorded) 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

Details of activities against the actions Climate Change and Air Quality Strategy are provided in the following sections.

Governance and Management

Response to Minimum Energy Efficiency Legislation consultation (re Action 1)

In December 2020 the Council issued a response to a consultation by the Department for Business, Energy and Industrial Strategy (BEIS) - "Improving the energy performance of privately rented homes". The consultation asked for views on a range of options for improving the Minimum Energy Efficiency Standards legislation which currently requires landlords in the private rental sector to ensure properties have a minimum EPC (Energy Performance Certificate) rating of "E". The most likely option would see this raised to "C" between 2025 and 2028, alongside an increase in the financial penalties for non-compliance.

The council was broadly supportive of the proposals, while also raising concerns about the risk of a decrease in the available PRS stock should landlords seek to exit the sector following the changes.

Response to Defra's consultation on the Designation of the National Highways as a Relevant Public Authority (re Action 1)

Defra carried out a <u>national consultation</u> from 28 March to 6 June 2022 on their proposal to designate National Highways as a relevant public authority thereby bringing National Highways into the statutory Local Air Quality Management Framework. The consultation also outlined proposed statutory guidance setting out how local authorities and National Highways should work together. The Council's Strategic Environmental Protection Team, working with other key departments provided a technical response.

Response to Defra's consultation on the review of the Local Air Quality Management Policy Guidance (re Action 1)

Defra carried out a second national consultation from 28th March 2022 until 6 June 2022 to seek views on the planned revision to the statutory Local Air Quality Management (LAQM) Policy Guidance.

The LAQM statutory guidance sets out what local authorities should do and the legal duties with which they must comply under Part IV of the Environment Act 1995, to improve local air quality. The guidance is being revised to reflect the legislative changes introduced through the Environment Act 2021 and clarify roles and responsibilities within local government. The Council's Strategic Environmental Protection Team provided a detailed response to the consultation.



Interdepartmental Working Groups (re Action 3)

In addition to the establishment Council Land Tree Planting Programme Board (which oversees matters in relation to the planting of 543,000 trees on Council Land) 3 interdepartmental groups have been created so far to oversee and progress initiatives relevant to the Climate Change and Air Quality Strategy:

- The Domestic Retrofit Programme Board is concerned with emissions mitigation and climate change adaptation initiatives at domestic properties (and includes representatives from the Climate Response and Housing Teams)
- The Electric Vehicle Charging Infrastructure (EVCI) Working Group deals with matters related to public, and Council fleet and staff electric vehicle charging (and includes representatives from the Parking Services, Transport Strategy, Air Quality, Energy Management, Waste Management, Highways, Property & Assets, and Climate Response Teams).
- 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 & Assets, Climate Response, and Energy Management Teams).



Monitoring and Reporting

Council Emissions

Automatic Meter Reading Meter Rollout Update (re Action 7

Automated Meter Reading (AMR) meters send accurate meter readings to energy suppliers on a monthly basis (or more frequently). The Council has been managing a roll out of AMR meters on its gas and electricity supplies to: reduce the burden of taking manual meter readings and managing matters in relation to estimated energy consumption (e.g. financial reconciliation regarding energy bills), and improve the management of energy and data accuracy for carbon emissions reporting. To date AMR meters have been installed on 75% and 80% of the Council's gas and electricity supplies respectively.

County-wide Emissions

Air Pollutant Sensor Trial (re Action 8)

The Council's Strategic Environmental Protection Team, in conjunction with Spelthorne Borough Council, Ricardo E&E and Heathrow Airport, <u>was awarded a grant of £124,399 from</u> <u>Defra's Air Quality Grant in 2020/21</u> to test new real time air quality monitoring sensors including electrochemical and particulate sensors, and electronic diffusion tubes (EDT) to monitor air pollution around Heathrow Airport. Several factors including a delay in receiving the funding, EDTs no longer being available to test and complications in purchasing multipollutant sensors, in addition to the arrival of the Covid-19 pandemic, resulted in a review and amendment to the original grant proposal. (N.B. a full copy of the report is available on the Council's website <u>Air Quality Review and Assessment -</u> <u>Buckinghamshire Council – South Bucks Area</u>).

Following the review, several different types of sensors were deployed and tested to establish how reliable the results of the monitoring obtained were. It was concluded that the sensors tested were not yet a 'fit and forget system' as the air quality data obtained required ongoing quality control. Therefore, caution is required when utilising raw data from such sensors. In addition, issues with operational requirements, reliability, drift and the expense in purchasing and completing the required quality control meant there were several major limitations to running such sensors/systems. As the sensors are such a new technology manufacturers also produce updated models quite frequently resulting in older models being out of date quickly and no longer being supported by the manufacturer so they can have a short lifespan.

The Council along with Ricardo E&E are however eager to work with the manufacturers of multi-pollutant sensor to enable them to be a more viable option in the future.

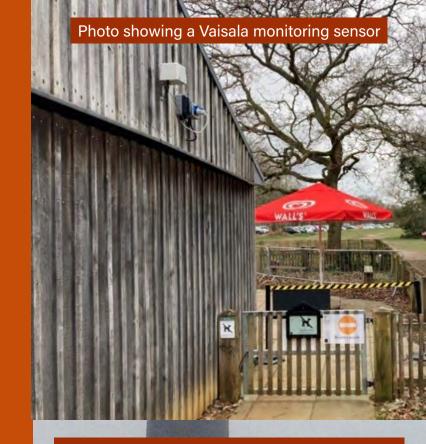


Photo showing a Praxis Cube monitoring sensor



NO₂ Diffusion Tube Monitoring Locations Review (re Action 8)

In December 2021 the NO₂ 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. Maps showing the NO₂ diffusion tube monitoring locations can be found in the latest <u>Annual Status Report</u>.

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 30 June 2022. The report will be made available on our website shortly. However the report from 2021 is <u>currently available to view.</u>

The Council's emissions

Modular Solar PV, Battery Storage and Electric Vehicle Charging Infrastructure (EVCI) Solution (re Actions 10 and 20)

The Council has been exploring the potential to site standard solar PV canopies and battery storage technologies alongside EVCI solutions. Standard solar canopy products offered by the market: require high capital investment or complex lease and power purchase agreements to be established; can cause significant disruption to car park operations while being constructed; and may not be suitable for some car park sites [due to shading, size, or matters affecting the ability to attain planning permission for their installation (such as heritage impacts)]. One company has developed a prototype modularised solution that can help overcome these barriers, and has recently started trialling it in a private car park.

On 17 June 2022, the Council submitted a bid for £320,076.24 of LEVI pilot funding trial the modularised hybrid EVCI solution for eight years at Wendover Library Car Park. It predominantly uses solar photovoltaic canopies (16.56kWp total installed capacity), battery storage (240kWh battery capacity) and energy management technologies to provide power to 12 charge points (CPs). The solution would be connected to the Library's supply and any excess renewable energy could be either used by the Library or exported, thereby reducing the Council's emissions.

Solar Car Ports (re Action 12 and 20)

The Council has engaged with two suppliers regarding the potential for solar car ports on Council-owned car parks. Initial feasibility work, conducted at the same time the carbon audit, indicated that 13 systems could be installed on public car parks with a total installed capacity of 2,675kWp (subject to supplier surveys). An additional desktop assessment has identified the potential to site a 428kWp system on a car park next to one of the Council's operational buildings.

Council Land Tree Planting Programme (re Actions 13 and 14)

Five thousand eight hundred and sixty trees were planted on Council Land in the 2021-2022 planting season. This includes trees planted: at <u>Billet Field</u> (on the Council's agricultural estate) (3450 trees); next to Spade Oak Nature Reserve and the public highway [with funding from the <u>Local Authority</u> <u>Treescapes Fund</u> (LATF)] (586 trees); as part of <u>Queens</u> <u>Green Canopy</u> (QGC) work in Buckinghamshire (168 trees); and, by Chiltern Rangers (1656 trees). The Council's Climate Response Team secured an England Woodland Creation Offer grant of £28,380.00 for the Billet Field Wood project and has registered it with the UK Land Carbon Registry. It's calculated that the project will remove ~411 TCO₂e by 2122.



Behaviour

Guidance on the management of supplier contracts for environmental betterment draft (re Action 15)

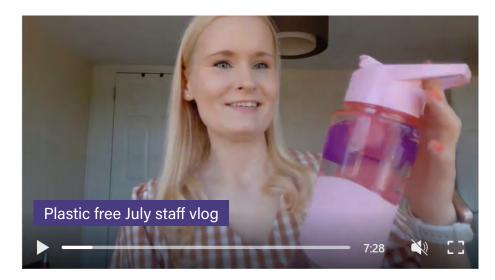
Following the adoption of the Climate Change and Air Quality Strategy, services across the Council have acknowledged and responded to it. One notable example is Neighbourhood Services – representatives from this service engaged the Council's Climate Response Team regarding options to reduce the environmental impacts of a contract to replace cremators at Chilterns Crematorium. This prompted the Climate Response Team's production and dissemination of draft guidance on the management of supplier contracts for environmental betterment.

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

On 28 April two~1 hour internal climate change awareness training sessions were held for members, which included details of how the carbon mitigation hierarchy is applied to decision-making to help reduce emissions from individuals' activities. The sessions were attended by 52 members. An external training provider was engaged to deliver a day's worth of training in June to help 13 individuals become certified as Carbon Literate against the requirements of the <u>Carbon Literacy Project</u>. It's hoped that the Council can become a <u>Bronze tier Carbon Literate Organisation</u> as a result of the training.

Internal Communications and Behaviour Change (re Action 16)

Weekly 'Together' internal emails to all staff have included messaging to encourage staff to 'waste less and save more' (on Earth Day); adopt emissions reducing behaviour (on Clean Air Day); use active travel modes (for National Walking Month); use the <u>AWorld App</u>; and go plastic free in July.



The Council's Operational Estate

Operational Buildings

Heat Decarbonisation Work (re Action 17)

Our work to decarbonise heating systems across our operational estate since the adoption of the Strategy includes the following:

- the production of heat decarbonisation plans for 13 sites (using a third party)
- taking forward two air source heat pump projects with grants of £127,690 and £86,580 from the Public Sector Decarbonisation Scheme
- submitting an application to the Public Sector Low Carbon Skills Fund for heat decarbonisation plans/detailed design plans for 7 sites

Transition to Cloud Based Servers (re Action 17)

Over the past 18 months, we have replaced 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 is estimated to save over 156 tonnes of carbon a year.



Transport

Internal Communications and Staff Travel (re Action 22)

Weekly 'Together' internal emails to all staff have included items on:

- the Cycle to Work scheme
- one staff member's experience of driving an electric car for 12 months
- the benefits of securing an electric car via the car benefit scheme from CPC Drive/Tusker

111 employees have used the Cycle to Work scheme since May 2020 and in 2021 20.6% of all bikes purchased under the scheme were e bikes; and 56% of all orders placed with CPC Drive/ Tusker since October 2018 have been for either electric or hybrid vehicles.



Travel for Work Purposes

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

Following submission of a bid in 2021 to <u>Defra's Air Quality Grant</u>, <u>the Council was awarded £578,000 to upcycle and electrify a</u> <u>refuse collection vehicle (RCV)</u>. Once the retrofit work has been completed it's 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. As a result it's estimated over 10 tonnes of greenhouse gases (CO₂e), 69 kg of oxides of nitrogen (NOx), and half a kilo of particulate matter emissions will be saved per year.

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

Two new fleet electric vehicle charging points were installed at Family Time Services' operational sites in High Wycombe and Aylesbury (in March and June) to support the replacement of two diesel multipurpose vehicles (MPVs) with battery electric vehicle alternatives. Just one of these replacements will result in the following emission savings over the next 5 years: 6.97 tonnes of CO_2e , 62.36 kgs of carbon monoxide, 9.97 kgs of oxides of nitrogen (NOx), and 0.56 kgs of particulate matter.

Commuting and Working from Home

Work Smart (re Actions 26 and 46)

Office based Council employees worked from home during COVID-19 pandemic lockdown periods as a result of the swift introduction of IT systems and hardware that enabled remote working. Exceptions to this were those who did not have a suitable working environment at home, or access to equipment only available in the office, or had wellbeing reasons. Work Smart was introduced in October 21 – reducing the time 'any desk' employees must be in the office to 40% of their working week, working from home for the remainder of the week. 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

Partners

Local Authority Treescapes Fund (LATF) 2021 Bid (re Action 27)

In 2021, the Council's Climate Response Team secured over £203k from a LATF bid to support tree projects led by several organisations including: Transition Town Marlow, Sue Ryder Prayer Fellowship, Chiltern Rangers C.I.C., Haddenham Parish Council, Buckland Parish Council, and Transport for Buckinghamshire. 817 trees were planted in the '21/'22 planting season as a result.



Wendover Wharf Road Campus Decarbonisation project (re Action 27)

The Council has supported <u>Buckinghamshire Community</u> <u>Energy</u> regarding the Wendover Wharf Road Campus Decarbonisation project – which assessed the feasibility of establishing a district heat network (powered by a groundsource heat pump) for seven buildings: John Colet School, John Hampden School, Wendover Junior School, Wendover Swimming Pool, Wendover Youth Centre, Wendover Memorial Hall and Little Acorns Kindergarten. It also identified the potential for installing insulation and other energy efficiency measures (to reduce energy demand) and a solar PV system. The feasibility study was conducted by ReEnergise and funded by the Rural Community Energy Fund.

In July 2022 the results of the assessment were published. It concluded that the best option would be for air source heat pumps to be installed when the (relatively new) existing boilers reach the end of their lives. Cavity wall, loft or roof insulation, and point of use (PoU) water heaters could reduce heat and hot water demand on the Campus by nearly 20%. The installation of solar PV panels on the roofs could provide as much as 450MWh of electricity, which equates to about 63% of actual demand.



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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 <u>school travel plans</u>.

The team also deliver initiatives such as the Footsteps training scheme, bikeability training and Walk Once a Week (WOW) incentive scheme. In April 2022 <u>Buckinghamshire Council came 2nd place in the Modeshift STARS</u> <u>league table</u> for the country, with a total of 64 accredited school travel plans across the county. Three schools have also achieved platinum status.

Ad-hoc Support for Schools (re Action 29)

While a specific service for schools hasn't been formalised, ad hoc support for schools from the Council's Energy and Climate Change Team continues. This included helping Stony Dean School explore the potential to transition its vehicles over to electric alternatives in Sept/Oct 2021. Information was provided regarding the emission and financial savings that could be achieved.



The Council's Investment Estate

Planned New Ambulance Resource Facility in High Wycombe (re Action 30)

The Council approved a proposal in July 2021 regarding a state-of-the-art new ambulance resource facility in High Wycombe (subject to a successful planning application). Under the existing agreement the Council will build a sustainable and environmentally focused new facility (including high levels of insulation, a heat pump and electric vehicle charging points) to South Central Ambulance Services' design and specification. South Central Ambulance Services would then lease the facility through a long-term rental arrangement.



Suppliers

Solar PV at Amersham Depot, Highways Term Maintenance Services Contract, Electric Vehicle Charging Point Investigation at Leisure Centres (re Action 32)

In March 2021 it was announced that Veolia (which delivers the South Buckinghamshire Waste Collection and Street Cleaning Contract) had completed work on a <u>large solar PV system at the</u> <u>Amersham Depot</u>. The system includes 136 solar PV panels and saves 12.25 tonnes of CO₂e per annum.

Work with other suppliers has included: building in emission reduction considerations in the <u>highways term maintenance contract</u> <u>that has been awarded to Balfour Beatty (and commences on 1 April</u> <u>2023)</u>, and asking Everyone Active (in May 2022) to explore the potential to install electric vehicle charge points at leisure centre sites in Buckinghamshire.

Water Source Heat Pumps and Solar PV at the Chilterns Lifestyle Centre (re Action 32)

Funding of £345,386 was awarded to Buckinghamshire Council by BEIS via the Public Sector Decarbonisation Scheme. The funding was used to install water source heat pumps and 450 roof-mounted solar photovoltaic panels at the new <u>Chiltern's Lifestyle Centre</u> in Amersham (operated by <u>Everyone Active</u>). The water source heat pumps are the main source of heat for the two new swimming pools, providing heating to both the pool water and pool hall environment. The system is highly efficient and will save up to 180 tonnes of CO_2e per annum, compared to a traditional gas boiler system. The photovoltaic solar panel system is estimated to save 36.74 tonnes of CO_2e per year.



Gas and Electricity Supplies

25% of Purchased Electricity from Renewable Sources (re Action 33)

As of 1 October 2022, 25% of the electricity we use will be purchased from renewable sources. This decision helps support the renewable generation sector, reduces emissions of greenhouse gases and other air pollutants, and our dependence on fossil fuels. The extraction, processing, and transportation of fossil fuels has various negative environmental impacts so this purchasing decision helps improve the Council's environmental performance overall.

This change is forecast to save nearly 1,000 tonnes of carbon emissions per year.



(left to right) Councillor Gareth Williams, Cabinet Member for Climate Change and Environment and Councillor Steven Broadbent, Cabinet Member for Transport, at one of Buckinghamshire's EV charging points

South Buckinghamshire Waste Collection and Street Cleaning Contract

South Buckinghamshire Waste Collection and Street Cleaning Contract Vehicle Emission Reductions Activities (re Actions 34, 35, and 36)

Several emissions reduction projects have been implemented by Veolia since the company took on the contract to deliver <u>household</u> waste collections and street cleansing services in the Chiltern, Wycombe and South Bucks areas from 7 September 2020. All of their vacuum sweepers in operation in Buckinghamshire have dust suppression systems, <u>electric vehicle charging points have been</u> installed at their waste depots, electric vans were introduced to their fleet in 2020, and they started to use hybrid street sweepers in 2021. In addition all their new vehicles are automatically fitted with telematics systems.



County-wide

Buckinghamshire Council Electric Vehicle Action Plan 2022-2027 (re Action 38)

On 7 June 2022 the Council adopted a <u>5-year Action Plan</u> to support the transition of the county to electric vehicles (EVs). The Action Plan covers a range of measures, including doubling the number of EV charging parking spaces across Buckinghamshire by 2023/4 and an ambition to have more than 1,000 publicly-available charging spaces across the county by 2027. This addresses the government's <u>electric</u> <u>vehicle infrastructure</u> strategy, which aims to have 300,000 publicly-available charge points across the UK by 2030.

Response to Defra's consultation on Environmental Targets (re Actions 1 and 39)

The Environment Act 2021 requires the government to set at least one long-term target in each of the following areas: air quality, water, biodiversity, and resource efficiency and waste reduction. <u>The Clean Air Strategy</u> 2019 also gives a commitment to set a legally binding target for PM2.5. Defra therefore carried out a <u>national consultation</u> from 16 March 2022 until 27 June 2022 on these new proposed targets.

For air quality the consultation proposed to introduce the following target for PM2.5:

- Annual Mean Concentration Target ('concentration target')

 a target of 10 micrograms per cubic metre (μg m-3) to be met across England by 2040.
- Population Exposure Reduction Target ('exposure reduction target') – a 35% reduction in population exposure by 2040 (compared to a base year of 2018).

The Council's Strategic Environmental Protection Team, working with other key departments provided a technical response.

Transportation

2021 Hackney Carriage and Private Hire Licensing Policy (re Action 40)

A new <u>Hackney Carriage and Private Hire Licensing Policy</u> <u>came into force in September 2021</u> with the aim of improving the environment and air quality by encouraging the use of low and ultra-low emission [such as electric, hybrid or liquefied petroleum gas (LPG)] taxi and private hire vehicles (PHVs). From the date of the implementation of the policy zero and ultra-low emission vehicles will be licensed for up to 15 years, and all other vehicles will be licensed for up to 10 years (except for wheelchair accessible and prestigious vehicles which can also be licensed for 15 year).

As a result of the Council's vehicle age policy, over 90% of taxis and PHVs now meet Euro 5 emission standards as a minimum and a third now meet the higher Euro 6 emission standards. The Council aims to only issue licences to ultralow or zero emission vehicles by 2030.



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

The Council secured £105k in 2021 from the On Street Residential Chargepoint Scheme to install 32 new electric vehicle chargepoints (EVCPs) in car parks in Buckinghamshire. In addition, the On-Street Residential Induction Charger demonstrator project resulted in cutting edge induction charging bays and specialised electric hire vehicles being introduced in Liston Road Car Park (Marlow) in September 2021 and in Summer's Road Car Park in Burnham in October 2021.

On 17th June 2022 the Council submitted an application for £2.47m to the LEVI Fund for in-pavement cable channels, lamp post/bollard style chargepoints (20 EVCPs), an EV car club with induction charging, and a solar canopy car port with battery storage and 12 EVCPs. The Council has also submitted another bid to the <u>On Street Residential Chargepoint Scheme</u> (on the 20th July 2022) which should fund an additional 64 chargepoints in 16 public car park locations.



Haydon Hill Extension to the Waddesdon Greenway (re Action 42)

A <u>650m extension to the 'Waddesdon Greenway' was opened in</u> <u>August 2021</u> for people using active travel modes (e.g. walking and cycling). It runs from Gogh Road, Haydon Hill to Aylesbury Vale Parkway railway station, providing an important connection from the <u>Emerald Way cycle route through to the Waddesdon</u> <u>Greenway.</u>

It includes a new 15 metre long bridge over the River Thame, four new bench seats, additional flood mitigation measures and special solar eye lights to illuminate sections of the pathway at night; and was funded with a £400k grant from the Department for Transport.





Wendover Cycleway Improvements (re Action 42)

Improvements have been made to the existing Amber Way in Wendover (connecting Wendover to Aylesbury town centre) in order to provide a better route for both pedestrians and cyclists (including priority side road crossing). A new link to Wendover Rail Station has been included to help improve connectivity to rail services. The scheme was delivered using £500k from HS2 Ltd.

Emergency Active Travel Fund Schemes Made Permanent (re Action 42)

Following £514k investment from the Department for Transport into Emergency Active Travel Fund Schemes (trial schemes to reallocate road space and encourage active travel during the pandemic), two of the schemes were made permanent in April 2022.

In Southcourt (Aylesbury) the 'Jet Way' cycle route was diverted (following previous severance due to the closure of the railway crossing at Old Stoke Road) providing a new walking/cycling link from Stoke Mandeville to Aylesbury town centre. The scheme includes a segregated cycle lane on Churchill Avenue and a 'point closure' on Old Stoke Road to remove through traffic (to provide a safer environment for pedestrians and cyclists).

The second initiative was a 'quietway' created on Trinity Road in Marlow by closing the road off to traffic and only allowing access for pedestrians and cyclists.

Electric Scooters (re Action 44)

Buckinghamshire Council has implemented an <u>Electric Scooter</u> <u>rental trial</u> to help support a 'green' alternative to local travel in Aylesbury, High Wycombe, and Princes Risborough.

It is due to operate until the end of November 2022 and since it began in November 2020 there have been over 190,000 rental e-scooter journeys covering over 210,000 miles (with average journey distance of 2 miles).

As approximately 20%-30% of rides are replacing motorised vehicle trips it's estimated that the scheme has saved 21.7 tonnes of carbon emissions.





Electric Bikes (re Action 44)

The Council <u>successfully implemented the first e-bike rental</u> <u>scheme in the county</u> in March 2021. The bikes charge up at docking stations located at Aylesbury Vale Parkway railway station and Waddesdon Manor and are available 365 days a year. The scheme is operated by Smoove, and the bikes receive repair and maintenance work from Cyclefleet (an organisation based in Great Missenden).

The trial is being conducted for an initial period of 12 months and was funded through a grant provided by the Department for Transport. From August 2020 until December 2021 a total of 20 bikes were in operation. During this period the bikes were hired 3,552 times and covered a total distance of 33,995 kilometres.

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

In 2021, the Council secured a £500k traffic signals maintenance grant from the Department of Transport for refurbishing the signals at the Walton Street Gyratory in Aylesbury. SCOOT (split cycle offset optimisation technique) sensors enable groups of traffic lights to pick up traffic data which is then used to synchronise the lights to reduce delays. MOVA signals are used at standalone junctions, altering the length of time a light stays red according to traffic volume. The SCOOT and MOVA (microprocessor optimised vehicle actuation) systems will be installed as part of the work to make the lights work more efficiently to reduce traffic jams.

New Puffin crossings will also be installed with sensors which adapt the length of time the lights stay red according to how fast a pedestrian crosses the road.

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

Buildings and Developments

Housing

Green Homes Grant Local Authority Delivery Schemes and Sustainable Warmth (re Actions 52 and 53)

£7.4m has been secured to deliver energy saving measures in local domestic properties with <u>Energy Performance Certificate</u> ratings of D, E, F, and G and where the household income is \leq £30k (from 2020 to March 2023). The funding is split across three consecutive schemes – the Green Homes Grant Local Authority Delivery Scheme (GHGLAD) 1b, GHGLAD2, and Sustainable Warmth. <u>GHGLAD1b funding was awarded following</u> <u>submission of a consortium bid with Watford Borough Council</u> and the scheme was delivered by the National Energy Foundation (as the Managing Agent) – it has resulted in 91 properties in the area being retrofitted with energy efficiency measures.

The Council has worked with four major Residential Social Landlords (RSLs) to maximise the opportunity under GHGLAD2 to improve the energy performance of their eligible housing stock. The scheme requires a landlord to match fund a third of the cost of the measure(s) installed and the outcomes of GHGLAD2 will be known after the scheme closes in September 2022.

<u>Sustainable Warmth</u> will follow GHGLAD2 and support energy performance improvements in both eligible on and off-gas grid homes with more funding being available for measures in off-gas grid homes with lower EPC ratings. GHGLAD2 has largely been managed by the <u>Greater South East Net Zero Hub</u> and this will continue to be the case for Sustainable Warmth.



Buckinghamshire Solar Together Scheme (re Action 53)

A Buckinghamshire Solar Together scheme was launched on 9 May 2022. The aim of the initiative is to help resident and small business owner-occupiers interested in installing solar PV and battery storage (with an option for an electric vehicle charging point) receive offers for installing these measures that are up to 30% less than those typically provided by the market. Following a postal mailout to 151,340 addresses (identified as potentially being eligible for the scheme), there were 6,990 registrations to the scheme. Installers, approved by IChoosr, competed (via a reverse auction process in summer 2022) to have their offer presented to registrants, and registrants received their offers by 28 July 2022. As of 15th August 2022 over 950 offers have been accepted and it's projected that the scheme will result in 675 tonnes of carbon emissions being saved per year.



Zero Waste Map - recycleforbuckinghamshire.co.uk/zerowastemap

Economy

Zero Waste Map (re Actions 54 and 55)

<u>The Council marked Zero Waste Week in 2020 (7 – 9</u> <u>September) by launching its own local zero waste map</u>. The <u>map</u> shows all the shops, recycling points and businesses in Buckinghamshire that can help people reduce their waste (e.g. a nappy library, zero waste refill shop, furniture repairs or just somewhere to recycle a carrier bag).

Low Carbon Workspaces (re Action 56)

Low Carbon Workspaces helps businesses 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 are supported by the scheme. These include the installation of LED lighting, solar PV systems, heating upgrades, insulation/glazing, and many more. The team also provide free energy saving advice to those who engage with the scheme, and are able to suggest further actions that can be taken to decrease carbon emissions and save energy costs. Since 2017 200 businesses in Buckinghamshire have been assisted by the scheme (with £589,546 in grant funding) leading to 662 tonnes CO_2e and £394,337 energy cost savings per year.

Electric Vehicles for Businesses Project (re Action 56)

The Council's Strategic Environmental Protection Team were awarded £97,900 from Defra's Air Quality Grant 2021/22 in Spring 2021 to work with Global Action Plan (GAP) and local business engagement groups, to lead a campaign to accelerate the mode shift to electric vehicles and e-bikes in Buckinghamshire. Under the scheme 30 large employers will receive tailored, high quality, and independent support to implement actions to increase EV and e-bikes in their own operations and to encourage and enable 10,000 of their staff to buy or lease EVs and e-bikes taking advantage of attractive incentives on offer.

The initial stages of the project including research into the provision of EVs were concluded in 2021. Global Action Plan working with Bucks Business First and Globe BID (Business Improvement and Delivery) are now in the process of engaging with the companies who have joined the scheme.

More information including FAQ's on the project can be found on our <u>website</u>.

2022 Clean Air Day Event (re Action 56)

Buckinghamshire Council in conjunction with Bucks Business First, Global Action Plan and the University of Buckingham held an event on Clean Air Day (16 June 2022) for local businesses.

The day included a 'Focus on Marketing Your Green Credentials' workshop and a Networking Lunch, where attendees joined representatives from Buckinghamshire Council, Buckinghamshire Business First and Global Action Plan for an update on the support available for businesses adopting electric vehicles and creating low-carbon workspaces. One-to-one advice was also available from Low Carbon Advisers and Global Action Plan to help businesses reduce their energy and associated cost, measure their carbon footprint, and find out what resources are available to start the transition to adopting electric vehicles for individual businesses.



Clean Air Day Event - Keith Cotton from Global Action Plan



What is Clean Air Day!

The UPS suggest in polyton orthogra-

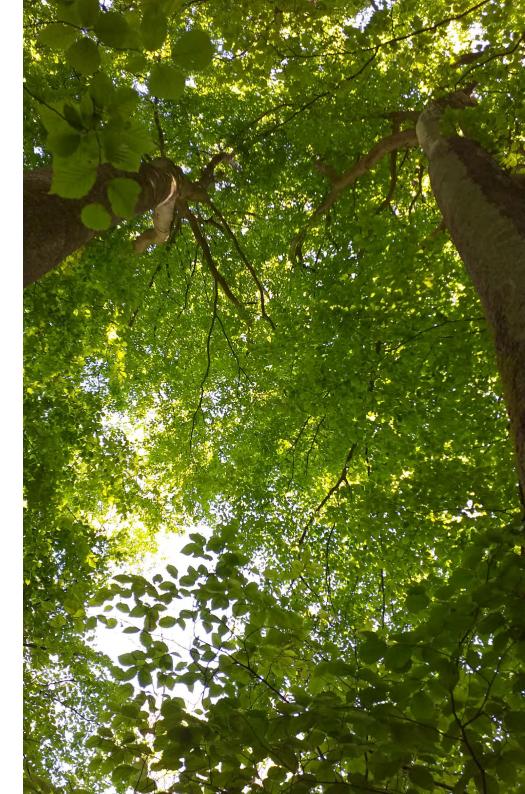
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- #Casadolicition



Communication of Opportunities to Community Boards and Businesses (re Action 56)

Community Board Coordinators have passed on information provided by the Council's Climate Response Team to <u>Community</u> <u>Boards</u> regarding funding and other opportunities that can help organisations address climate change, including details of the following: <u>Rural Community Development Fund</u>, <u>The Greening</u> <u>Campaign</u>, <u>HS2 Community and Environment Fund</u>, <u>The Tree</u> <u>Council Branching Out Fund</u>, <u>Urban Tree Challenge Fund</u>, <u>Veolia</u> <u>Environmental Trust Grants</u>, <u>Gawcott Solar C.I.C.'s Bee Green</u> <u>Grant Fund</u>, and <u>Heart of Bucks</u> funding.

The Buckinghamshire Solar Together scheme was advertised on the Low Carbon Workspaces website and promoted in an e-shot to businesses from Low Carbon Workspaces. Furthermore the £250 vouchers offer to businesses by Visit Buckinghamshire to reduce their carbon footprint was promoted in an e-shot, and the Clean Air Day Networking Lunch was mentioned in a Council press release.



Environment, Land and Water

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

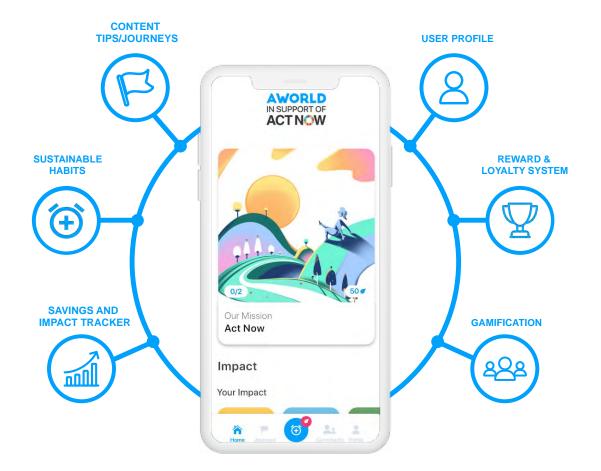
Flood risk management projects ongoing with Environment Agency support and funding include those in <u>Marlow (Newt</u> <u>Ditch</u>), at <u>Pednormead End in Chesham</u> [which includes culvert replacement construction work (now planned for summer 2023), and Property Flood Resilience (PFR) packages 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 22nd April 2022 (Earth Day) Buckinghamshire Council became the first local authority in the UK to support 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 $CO_{2'}$ 1.11m litres of water and 5346 kWhs of electricity have been saved so far as a result of environmentally friendly actions taken and recorded on the app.



Health and Communications

Community Board Air Quality Campaign Toolkits (re Action 59)

The Council's Strategic Environmental Protection Team in conjunction with Spelthorne Borough Council and Ricardo E&E, were <u>awarded a grant of £91,273 from Defra's Air Quality</u> <u>Grant</u> in 2021/22 to create air quality campaign toolkits for use by Community Boards. The toolkits will contain materials, advice, and information packs on running campaigns, which will enable the Boards, and other organisations/groups within their areas, to raise awareness of local air quality issues. An air quality sensor will also be included in each pack which will record air pollution levels.

The packs will help educate residents, businesses, and visitors (to the area) regarding how they can reduce emissions, and provide a basic understanding on air pollutant dispersion and how to reduce exposure to air pollution, and what the Council is doing to reduce air pollution in their area and how they can help. The packs are due to be rolled out in September 2022.



'Green Wheels in Motion' Event (re Action 59)

A <u>UN Climate Change Conference (COP 26)</u> related transport decarbonisation event was held on Wednesday 10 November 2021 at the <u>Lunaz Group's</u> headquarters. It featured presentations from <u>Buckinghamshire Council</u>, <u>England's</u> <u>Economic Heartland</u>, <u>Buckinghamshire Business First</u> (BBF), the Lunaz Group, <u>Buckinghamshire Local Enterprise</u> <u>Partnership</u>, and <u>Buckinghamshire Community Energy</u>, and videos from <u>Robert Bosch Ltd</u>. These organisations had formed a partnership, led by Buckinghamshire Council, for the purpose of submitting a bid for funding for the event from the <u>Greater South East Energy Hub</u>. The Council was notified on 10 September that the bid submitted for £28,500 on 27 August had been successful. Local businesses were contracted by the Council to stage the event, including <u>Cube Video</u> (event production) and <u>Brickhill Bistro</u> (catering). <u>Char.gy</u>, <u>Zipp Mobility</u>, and CycleFleet, suppliers of sustainable transport solutions in Buckinghamshire, provided electric vehicle charging, e-scooter and e-bike displays and interactive demonstrations. <u>Cue</u> facilitated a <u>livestream</u> of the proceedings (which was connected to the Council's <u>YouTube</u> and <u>Facebook</u> pages) and a school pupil from <u>Stony Dean School</u>, who submitted the winning design for the 'Design a Green Bus' competition for schools, enjoyed a tour of Lunaz's vehicle upcycling and electrification facility.





Bucks' Climate Challenge (re Actions 59 and 60)

In September 2021, Buckinghamshire Council launched a new public awareness campaign to help tackle climate change, called the <u>Bucks' Climate Challenge</u>. The campaign aims to generate more environmentally sustainable behaviour and activity in Buckinghamshire to contribute to the net zero carbon emissions goal and improve air quality.

A new campaign page on our website was launched, to gather all the information in one easily accessible place, including grants and schemes to improve the energy performance of homes and links to calculators or tips to work out individual carbon footprints. We have also updated our refuse vehicles with campaign artwork, used social media ads and organic posts to carry messaging that will help people respond and/or adapt to climate change, and ran a radio ad urging people to take action.

Buckinghamshire Council

Climate Change & Air Quality Strategy

2021-2022 Progress Report