



Carbon Reduction Delivery Action Plan 2024 - 2026



BEDFORD
BOROUGH COUNCIL

Carbon Reduction Action Plan

The actions detailed in the table below will have both direct and indirect benefits that will be realised during this work to reduce carbon. These benefits will be reported on whether they have been measured as affecting the CO2 emissions of the Council, or, if they have benefitted the local community and environment.

Legend

Stage	Description
Assignment and Conceptualisation Stage	Action has been assigned – moving towards the preparatory conceptual phases.
Planning Stage	Action is in between the conceptual and the operational phase.
Execution and Performance Monitoring Stage	Action is in being operationalised or monitored through a trial and control phase to understand the impact and feasibility of undertaking the approach
Completed	Action has been completed or successfully implemented in the Council's operations
On Hold	Action is on hold due to a temporary lack of resources or feasibility. Reassessment needed.

1. Operational Council Buildings

REF	Action	Planned outcome / impact	Timeframe (Short / Long Term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO2 reduction (direct / indirect)	Progress
1A	Investigate opportunities, and funding, for further renewable generation schemes e.g. solar PV on Council owned buildings. Moving towards decarbonised energy	Installation of renewables will substitute carbon emissions from fossil fuels. On-site renewables will lead to self-sufficiency. A decarbonised energy supply would see energy which is renewably generated, locally, off-grid, and supplied directly to the usage demand on site. Decentralised energy projects can generate lasting cost and carbon savings, and protect against future energy price rises	Long term ongoing projects up to 2030	Solar PV costs are currently between 1000 and 1750 per KW. A £500k budget was allocated for two large rooftop solar arrays on Council Multi-storey Car Parks for 2023/24. Technical advice and project feasibility studies need to be undertaken to help the council to identify, quantify and progress the most cost-effective sustainability and carbon reduction projects. Consultant fees in the region of £15,000 - £60,000.	Depends on the usage of the site, typically under 10 years. Protects against electricity cost increases. Significant benefits in supporting operational costs and security of supply for Council buildings where heat pumps, batteries and EV charging points are installed in future	Utilising renewable generated energy is vital to reducing CO2 and energy demand from our sites. To be fully green, our electricity and heating will need to come from renewable sources can be (direct)	Execution and Performance Monitoring Stage
1B	Improve/ Install energy efficiency and smart energy in existing buildings	Energy savings achieved, reduced energy consumption and costs	Medium - Long term ongoing projects up to 2030	Further technical advice and project feasibility studies need to be undertaken to help the council to identify, quantify and progress the most cost-effective sustainability and carbon reduction projects. Consultant fees in the region of £15,000 - £60,000.	Individual measures required to have a pay-back period of 10 years or less	Will contribute to the Councils Carbon Neutral target – exact CO2 reduction project savings dependant on technical feasibility surveys (direct)	Planning Stage

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REF	Action	Planned outcome / impact	Timeframe (Short / Long Term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO2 reduction (direct / indirect)	Progress
1C	Improved design of new and refurbished buildings – ‘BREEAM Outstanding’ desired	Higher standard buildings result in lower maintenance costs and lower energy bills, ensuring the running costs of the building are low	Long term ongoing up to 2030	The cost uplift of achieving BREEAM UK Excellent ratings is typically less than 1% of the total construction cost (0.4%), Outstanding rating is around 5%-10% cost uplift. Building Design Advice to work with the council property unit to achieve low and zero carbon buildings, with low running costs and whole life costs. Building Design Advice fees in the region of £10,000 - £50,000.	Excellent rating -Typically less than five years for energy and less than two years for water	66% for Outstanding rated buildings, Excellent 32% (Average CO2 emissions savings associated with different BREEAM ratings) are 66% for Outstanding rated buildings, Excellent 32% (direct)	Execution and Performance Monitoring Stage
1D	Consider adjustment to building opening hours	Energy will be saved when buildings are not in use	Medium - Long term ongoing up to 2030	To be determined pending further evaluation and available options	Unknown at this time pending further evaluation and options	Unknown at this time pending further evaluation and options (direct)	Execution and Performance Monitoring Stage
1E	Complete Asset Management task	Upon completion, decisions on retaining buildings, conditions of buildings and subsequent works can be realised and costed in association with the Council roadmap to net zero	Short term	Costs for net zero projects unknown at this time, pending further evaluation	Savings will be based on avoided costs (removal of assets) as well as savings attributed to energy efficiency works	Unknown at this time pending further evaluation and options (direct)	Execution and Performance Monitoring Stage

1. Operational Council Buildings

REF	Action	Planned outcome / impact	Timeframe (Short / Long Term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO2 reduction (direct / indirect)	Progress
1F	Further investment such as large solar (e.g. Elstow Landfill Site) and battery schemes. Either installed by the Council or a PPA with a local company is arranged	Power Purchase Agreements (PPA) can be arranged to ensure that the Council is buying 100% local renewable energy, which will reduce its overall carbon footprint.	Long term ongoing up to 2030	Depending on size of system if Council installed. Technical advice and project feasibility studies need to be undertaken to help the council to identify, quantify and progress the most cost-effective sustainability and carbon reduction projects. Consultant fees in the region of £15,000 - £60,000.	Unknown at this time pending further evaluation and options	Unknown but an example would be that 3.5MW of solar at 3,325MWh/year, expected CO2 savings would be 940 tonnes/year (direct)	Assignment and Conceptualisation Stage
1G	Consideration of heat networks and moving away from natural gas heating	No new gas supplies are to be installed post 2025, Council needs to consider alternative technology to sufficiently heat buildings	Medium to Long term (2025 onwards)	To be determined pending further evaluation and available options. Access specialist technology expertise to undertake project feasibility studies to identify, the most cost-effective projects. Consultant fees in the region of £10,000 - £50,000.	Unknown at this time pending further evaluation and options. A heat network could offer higher reductions than individual systems with lower capital and operational costs.	Moving away from gas will have reductions on CO2. CO2e reduction depends on which buildings are connected. A heat network could offer higher reductions than individual systems with lower capital and operational costs. (direct/ indirect)	Planning Stage
1H	Heating system replacements to heat pumps	Review heating replacements for council buildings to identify opportunities to switch to heat pumps	Medium to long term	Indicative costs of installing a heat pump are around £500-1000/kW for non-domestic buildings. (If replacing with a gas boiler costs are around £60-100/kW for non-domestic)	Unknown at this time pending further evaluation and options	Research indicates that switching to heat pumps could potentially reduce the CO2e emissions of each site by 20-80% by 2050, subject to electricity grid decarbonisation. (direct/ indirect)	Execution and Performance Monitoring Stage

1. Operational Council Buildings

REF	Action	Planned outcome / impact	Timeframe (Short / Long Term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO2 reduction (direct / indirect)	Progress
1I	Ensure Minimum EPC standards (MEES) across council owned buildings	Surveys and improvement works to bring existing buildings up to MEES standards	Ongoing as regulations update.	AAn allocation will be in the internal budget to deliver EPC improvement works.	Unknown at this time pending further evaluation and options. Improvements to building fabrics will improve efficiency and reduce running and maintenance costs of buildings	Improvements to building fabrics will improve efficiency of buildings, therefore reducing CO2 (direct)	Planning Stage
1J	Fuel switching	Procurement of green electricity (100% renewable) through existing electricity contracts.	Short term – 100% Green electricity by April 2020	Up to £10,000/ year on BBC sites invoices. No additional staffing required.	No expected savings. Additional benefit - Utilising purchasing power to shift the UK power supply to renewable energy, reducing GHG emissions nationally and reducing the carbon footprint associated with purchased electricity.	Direct impacts may include the carbon conversion factor is adjusted in line with the amount of electricity produced through Fossil Fuels vs renewables (indirect)	On Hold

2. Owned Transport

REF	Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO2 reduction (direct / indirect)	Progress
2A	Consider funding opportunities for increasing the number of EV, hydrogen, or alternative fuel fleet vehicles	Reduced fleet emissions, supporting Local Transport Plan, Sustainability strategy	Medium to Long term – up to 2030	Costs will depend on technology readiness, the state of the EV market and Government incentives at the time of investment (plug in van grant)	Lower running costs (3p/mile). Electric vans are also exempt from vehicle exercise duty (VED) = £750 saving over three years.	This will remove the CO2 emitted by fleet vehicles and therefore contribute to the carbon neutral target (direct)	On Hold
2B	Change diesel fuel across the fleet to Hydrotreated Vegetable Oil (HVO)	Reduce fleet emissions	Short term 2024/25	The estimated cost of this change across the whole fleet is £500,000 per annum. It is proposed that the initiative be introduced initially on a trial basis during 2024/2025 and, if the trial is successful, this could be rolled out on phased basis having regard to affordability in the period to 2030. The estimated cost of the trial is £100,000 in 2024/2025.	The fuel is a fossil-free alternative to mineral diesel, resulting in up to 90% reduction in Greenhouse Gas emissions.	Full implantation will reduce CO2 by 1200 tonnes. The trial will reduce CO2 by an estimated 240 tonnes.	On Hold
2C	Hold awareness raising sessions and/or campaigns for staff to drive efficiently. (Alongside regular awareness via internal communications).	Increasing the efficiency of the fleet will reduce both carbon emissions and fuel costs.	Ongoing	Subsidy payment, funded by the Department for Transport, is £25 (inc. VAT) per person trained. Courses are free for instructing drivers on electric vehicle driving (Energy Saving Trust).	Eco-driving training delivers average fuel savings of 15% on the day of training and up to 6% in the long-term for fleets. Potential cost savings due to lower demand for fuel, maintenance etc.	This will reduce the CO2 emitted by fleet and therefore contribute to the carbon neutral target, 1000 litres are roughly equivalent to 2.7tonnes CO2 (direct/indirect).	Completed

2. Owned Transport

REF	Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO2 reduction (direct / indirect)	Progress
2D	All fleet vehicles to be minimum Euro 6 standard, or ultralow emissions, where possible	Reduce fleet emissions	Ultra-low by 2028	All fleet vehicles that are not Euro 6 have been identified as a priority for disposal. Unknown at this time pending further evaluation and options	Unknown at this time pending further evaluation and options	In some cases, there are no direct BEV equivalent, so the physical replacement may take a longer period to accomplish. This will reduce the CO2 emitted by fleet and therefore contribute to the carbon neutral target (direct/ indirect)	Execution and Performance Monitoring Stage
2E	Review BBC fleet and replacement plans – audit conducted in collaboration with CLS Energy	Review audit of vehicle fleet to assess opportunities for renewal with zero emission alternatives	Ongoing	Internal action	This action relies upon the technology to become available and cost effective by the time the replacement is due	Enabling Action	Execution and Performance Monitoring Stage
2F	Assessing opportunities to optimise fleets' fuel usage	Reduce Carbon emissions from vehicle use	Ongoing	Use of Consultants	Savings on fuel use	Carbon offset to be quantified (direct/ indirect)	Planning Stage

3. Business Travel

REF	Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO2 reduction (direct / indirect)	Progress
3A	Salary Sacrifice Scheme for staff electric vehicle purchasing	Incentive for increased take up of EVs	By 2025	To be determined pending further evaluation and available options	Unknown at this time pending further evaluation	This will reduce the CO2 emitted by staff travel and therefore contribute to the carbon neutral target (direct/ indirect)	Planning Stage
3B	Hold awareness raising Sessions and/ or campaigns for staff on sustainable transport (alongside regular awareness via internal communications)	Increased take up of sustainable transport modes	Short term	Internal staff training – transport team	Potential reduction in staff business mileage claims	This will reduce the CO2 emitted by staff travel and therefore contribute to the carbon neutral target (direct/ indirect)	Execution and Performance Monitoring Stage
3C	Review if facilities and cycle networks within the borough are fit for purpose, to make cycling an attractive option for staff	Increased take up of sustainable transport modes	Short term	Internal staff checks	None	Unknown at this stage (direct/ indirect)	On Hold
3D	Improve cycling provision: secure bike parking / lockers and drying cabinet(s)	Promotes cycling as an alternative to one person car trips	Short term	To be determined pending further evaluation and available options	Each cyclist frees up a car park space, saving several hundreds of pounds per space annually.	1% year on year increase in cycle mode share. (Each cyclist saves 0.22 tonnes CO2 per year over a car driver) (direct/ indirect)	On Hold

3. Business Travel

REF	Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO2 reduction (direct / indirect)	Progress
3E	Continue to monitor and promote the pool electric bike scheme	Reduce number of staff travelling in cars within Bedford as part of workday	Ongoing	To be determined pending further evaluation and available options	Reduced travel expenses for workplaces (companies have reported savings of between £25-£80 per bike, per month). Improved accessibility (allows employee to travel door to door). Help to ease parking problems for staff. Health and fitness benefits for staff, reduces the need for private car ownership for some staff, depending on their circumstances.	This will reduce the CO2 emitted by staff travel and therefore contribute to the carbon neutral target (direct/ indirect).	On Hold

4. Working Practices

REF	Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO2 reduction (direct / indirect)	Progress
WP1	All Council reports to consider the carbon impact/ environmental impacts from any recommended decision and included on all executive reports	Guidance on providing information on carbon impact of decision to be developed	Complete	Complete	Savings would be attributed to the whole life cost of the decision. Savings likely to be a result of maintenance savings and lower/ avoided energy costs	Increased awareness and assessment of potential impacts will lead to better management and reduction of CO2 emissions (direct/ indirect)	Completed
WP2	Update procurement policy to include carbon and environment considerations within tenders	Tenders over £100,000 to have an Environmental Impact Assessment, reviewed and signed off by the Energy Team to ensure considerations on Energy, Waste, Transport etc. for all contracts	Complete	Likely to impact costs of tenders, with the assumption that more environment conscious contracts will cost more, but this is subject to a case-by-case evaluation	Savings would be attributed to the whole life cost of the contract. Savings likely to be a result of maintenance savings and lower/avoided energy costs	Increased awareness and assessment of potential impacts will lead to better management and reduction of CO2 emissions (direct/ indirect)	Completed
WP3	Establish more 'hub' areas around Bedford, support and encourage home working for staff	In addition to home working expand remote working in other / partner locations across the borough to reduce unnecessary travel and the need for central office accommodation	Long term	Potential costs to ensure IT services sufficient at remote sites	Savings on business mileage claims	Carbon emissions reduced for the Council and for local area (direct/ indirect)	Execution and Performance Monitoring Stage

4. Working Practices

REF	Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO2 reduction (direct / indirect)	Progress
WP4	Establish an active travel team	To support the carbon reduction programme as Active travel is all about getting you moving from A to B in ways that do not use fossil fuels.	Short term	Estimated £190,000 per annum	The benefit will be that resources will be in post to encourage active travel, thus reducing CO2 emissions	Emission targets are unlikely to be met without a significant move away from motorised transport, and shifting to active transport could save as much as a quarter of personal CO2 emissions from transport.	Planning Stage
WP5	Climate Change and Public Health synergy	Formalise climate change and sustainability responsibilities and activities across Public Health Department	2024/2025 onwards	To be determined pending further evaluation and available options	Pending on outcomes of engagement	TBC	Assignment and Conceptualisation Stage
WP6	Publish Health and Climate Change impact assessment	Ongoing public health support to consider carbon/environmental impacts across council reports and strategies.	2024/2025 onwards	To be determined pending further evaluation and available options	Strategic impact on carbon reduction	TBC	Execution and Performance Monitoring Stage
WP7	Reducing carbon emissions from front line operations	Assessing opportunities for electrification of work equipment	2024/2025 onwards	purchase of electric equipment	Savings on paper usage	Carbon emissions reduced for the Council and for local area (direct/ indirect)	Execution and Performance Monitoring Stage

4. Working Practices

REF	Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO2 reduction (direct / indirect)	Progress
WP8	Implementing strategies to reduce demand of single-use paper and plastic	Behavioural change with lasting effect on council operations	Ongoing	Cost-saving measure	Carbon reduction from behavioural change	Carbon emissions reduced for the Council, and production area (direct/ indirect)	Execution and Performance Monitoring Stage
WP9	Establish an informal staff environmental group	Increased awareness and engagement	By 2025	None	Carbon reduction from behavioural change	Enabling Action - empowering individuals (direct/ indirect)	Completed
WP10	Incorporate environmental awareness online induction training for staff	Increase awareness of environmental impacts and behaviour change for all staff	Complete	Complete	Could save up to 10% in energy costs	Unknown at this time (direct/ indirect)	Completed
WP11	Work with ICT and facilities to maximise potential for web and video conferencing	Reduces the need to travel to face-to-face meetings. The widespread adoption of webinars, Jabber and teleconferencing will remove the need to travel between sites for meetings. Provision of hybrid meeting rooms at Borough Hall also allow for more flexibility and inclusion	Complete	Complete	Teleconferencing instead of travelling to a meeting could save £240 per person per year.	Indirect CO2 reduction linked to reduced travel, however potential for increase in direct emissions through own energy use (indirect)	Completed

4. Working Practices

REF	Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO2 reduction (direct / indirect)	Progress
WP12	Assess the status of the current corporate risk register and undertake a climate risk gap analysis on all climate risks associated with the Council's operations	Assess all climate risks associated with the Council's own operations, mapping the respective impact on estate assets, staff, and service delivery against the Local Partnerships Adaptation Tool. Research extreme weather monitoring tools embedded with impact assessment methods.	Short Term Initial Assessment Then Ongoing	To be determined pending further evaluation and available options. Potential to reduce costs through internal expertise and external voluntary research partnerships.	Savings to be determined through a whole life cost analysis of each risk. Savings likely to be a result of preventive and adaptive measures, saving costs and future-proofing the material assets and procedures.	Direct CO2 reduction from mitigating control measures, monitoring, and prevention.	Assignment and Conceptualisation Stage
WP13	Reducing greenhouse gas emissions which are generated by food systems across council owned buildings	Explore how we can adopt healthier, more plant-based and environmentally friendly eating habits in catering facilities and hospitality for events.	Medium to long term.	Working hand in hand with our suppliers and growers is essential to achieving our goal of a reduction in greenhouse gas emissions by 2030.	Unknown at this time, pending further evaluation and options.	The Benefits of Local Foods, eating locally will shorten the distance that goods have to travel. This reduces the carbon emissions produced in the transportation process.	Planning Stage

5. Carbon Offsetting and Climate Resilience through Council practices

REF	Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO2 reduction (direct / indirect)	Progress
CORP1	Tree Planting and increasing biodiversity	Increased tree planting in the borough and maintaining existing woodland	Ongoing	Several government grants and other funding available to plant trees	Pending on tree species, age, location.	A conifer forest can sequester around 14 tonnes of carbon dioxide per hectare per year (direct/ indirect)	Execution and Performance Monitoring Stage
CORP2	To develop and implement a maintenance programme for newly planted and established trees	Reduce the failure rate of newly planted trees due to drought or damage	2024/2025	£50,000 plus any government funding available	Pending on tree species, age, location.	A newly planted tree absorbs more carbon faster and more efficiently than mature trees	Execution and Performance Monitoring Stage
CORP3	Rewilding scheme	Increase biodiversity habitats, introduce more wildflower areas, leaving areas with minimal maintenance	Ongoing	Unknown at this time pending further evaluation and options	Saving based on maintenance savings on green areas	Carbon offset (direct/ indirect)	Execution and Performance Monitoring Stage
CORP4	Environmental improvements and provision of green areas/ natural areas	When refurbishing playground or pitches, ensure there is provision for green or natural areas	Ongoing	Unknown at this time pending further evaluation and options	Saving based on maintenance savings on green areas	Carbon offset (direct/ indirect)	On Hold
CORP5	Encourage any Council developments to include green open spaces, green roofs, and water harvesting	Supports the 'greening' of the environment, encouraging carbon sinks and biodiversity	Ongoing	Unknown at this time pending further evaluation and options	Unknown at this time pending further evaluation and options	Carbon offset (direct/ indirect)	On Hold

5. Carbon Offsetting and Climate Resilience through Council practices

REF	Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO2 reduction (direct / indirect)	Progress
CORP6	Undertake assessment of opportunities for offsetting residual CO2 emissions	Review specific project opportunities for delivering carbon savings through investment in renewables or other projects, both within and outside of the Local Authority area, including a review of costs and benefits. Opportunities could include e.g. investing in largescale PV or wind generation, woodland creation etc.	Long term – 2028-2030 - note that energy demand reduction measures, and reducing the use of fossil fuels are a higher priority than Carbon offsetting.	1 Tonne Carbon = 1 Carbon Credit this is roughly equal to around £10/year when looking at investing in external projects	None	Carbon Offset residual emissions (direct/ indirect)	Planning Stage
CORP7	Investigate the carbon emissions through waste collection and removal across the Borough	To quantify scope 3 emissions associated with waste transfer not just from our own fleet	Short term – method Ongoing – monitoring and reporting in greenhouse gas report	None	Unknown at this time pending further evaluation of resources	Enabling action borough-wide.	Planning Stage
CORP8	Investigate the carbon impacts of introducing doorstep glass recycling vs. bottle bank collection	Improved recycling rates and lower contamination. Reduce black bin waste	Short term – 2024/2025 trial	Estimate £100,000 in 2024/2025	Unknown at this time pending further evaluation of trial	Unknown at this point, these will need to offset the increase in refuse vehicles on the road	Execution and Performance Monitoring Stage
CORP9	Investigate the carbon impacts of introducing doorstep food waste collection	Reduction in black bin waste and the recycling of food waste	Short-term - 2025/2026	Service delivery costs tbc. To be implemented by 31 March 2026	This will be fully considered as part of the emerging waste strategy	Analysis work to be undertaken	Execution and Performance Monitoring Stage

Finding out more

If you would like further copies, a large-print copy or information about us and our services, please contact us at our address below.

Për Informacion

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Informacja

Per Informazione

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Environmental Services

Bedford Borough Council
Borough Hall
Cauldwell Street
Bedford
MK42 9AP



Energy.Team@bedford.gov.uk



www.bedford.gov.uk