



Carbon Reduction Delivery Action Plan 2023 - 2025



Carbon Reduction Action Plan 2023

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.

Priority Area 1: Operational Council Buildings					
Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO₂ reduction (direct / indirect)
Investigate opportunities, and funding, for further renewable generation schemes e.g. solar PV on Council owned buildings. Moving towards decarbonised energy	<p>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.</p> <p>Decentralised energy projects can generate lasting cost and carbon savings, and protect against future energy price rises.</p>	Long term ongoing projects up to 2030.	<p>Solar PV costs are currently around £1000 / KW. A £200k budget allocated for two large rooftop solar arrays on Council Multi-storey Car Parks for 2023/24</p> <p>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.</p>	<p>Depends on the usage of the site, typically under 10 years. Protects against electricity cost increases.</p> <p>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.</p>	Utilising renewable generated energy is vital to reducing CO ₂ and energy demand from our sites. To be fully green, our electricity and heating will need to come from renewable sources (direct).

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Improve/ Install energy efficiency and smart energy in existing buildings through Carbon Management Capital Scheme	Energy savings achieved, reduced energy consumption and costs.	Medium - long term ongoing projects up to 2030.	Capital Carbon Management Budget currently £351k for 2023/24. 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 CO ₂ reduction project savings dependant on technical feasibility surveys (direct).
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 CO ₂ emissions savings associated with different BREEAM ratings) (direct).
Consider adjustment to building opening hours	Energy will be saved when buildings are not in use.	Medium - long term ongoing up to 2030.	Unknown at this time, pending further evaluation and options.	Unknown at this time, pending further evaluation and options.	Unknown at this time pending further evaluation and options (direct).

Priority Area 1: Operational Council Buildings					
Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO₂ reduction (direct / indirect)
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).
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 CO ₂ savings would be 940 tonnes/year (direct).
Consideration of heat networks and moving away from natural gas heating	No new gas supplies are to be installed post 2035, Council needs to consider alternative technology to sufficiently heat buildings.	Long term 2035 onwards.	Unknown at this time, pending further evaluation and 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 CO ₂ . CO ₂ e 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).

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Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO₂ reduction (direct / indirect)
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 CO ₂ e emissions of each site by 20-80% by 2050, subject to electricity grid decarbonisation. (direct/ indirect).
Ensure Minimum EPC standards (MEES) across council owned buildings	Surveys and improvement work to bring existing buildings up to MEES standards.	Ongoing as regulations update.	Unknown at this time, pending further evaluation and options. This may be budgeted through Property Services maintenance budget.	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 CO ₂ (direct).
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.

Priority Area 2: Owned Transport					
Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO₂ reduction (direct / indirect)
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 (e.g. 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 CO ₂ emitted by fleet vehicles and therefore contribute to the carbon neutral target (direct).
Change diesel fuel across the fleet to Hydrotreated Vegetable Oil (HVO)	Reduce fleet emissions.	Short term 2024/2025.	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 CO ₂ by 1200 tonnes. The trial will reduce CO ₂ by an estimated 240 tonnes.
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 CO ₂ emitted by fleet and therefore contribute to the carbon neutral target, 1000 litres are roughly equivalent to 2.7tonnes CO ₂ (direct/ indirect).

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Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO₂ reduction (direct / indirect)
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 CO ₂ emitted by fleet and therefore contribute to the carbon neutral target (direct/ indirect).
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 (direct/ indirect).

Priority Area 3: Business Travel					
Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO₂ reduction (direct / indirect)
Salary Sacrifice Scheme for staff electric vehicle purchasing	Incentive for increased take up of EVs.	Scheme set up 2024, ongoing.	Unknown at this time, pending further evaluation	Unknown at this time, pending further evaluation.	This will reduce the CO ₂ emitted by staff travel and therefore contribute to the carbon neutral target (direct/ indirect).
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, or external training by SusTrans.	Potential reduction in staff business mileage claims.	This will reduce the CO ₂ emitted by staff travel and therefore contribute to the carbon neutral target (direct/ indirect).
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).
Improve cycling provision: secure bike parking / lockers and drying cabinet(s)	Promotes cycling as an alternative to one person car trips.	Short term.	Unknown at this time, pending further evaluation.	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 CO ₂ per year over a car driver) (direct/ indirect).

Priority Area 3: Business Travel					
Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO₂ reduction (direct / indirect)
Continue to monitor and promote the EV pool car scheme	Reduce number of miles staff travelling within Bedford as part of workday.	Ongoing.	Unknown at this time pending further evaluation.	<p>Mileages, fuel consumption and traffic incidents can be better monitored and managed.</p> <p>Reducing unnecessary travel as not incentivised by mileage reimbursement rates.</p> <p>Facilitating car sharing if the pool car booking system allows this and understood by staff.</p> <p>Reducing demands for parking for private vehicles and reduces the need for private car ownership for some staff, depending on their circumstances.</p>	This will reduce the CO ₂ emitted by staff travel and therefore contribute to the carbon neutral target (direct/ indirect)
Promote online (Intranet) pool car booking service to monitor bookings and unavailability electronically. Review guidance, use pool cars rather than private cars preferred option	Incentivise and simplify use of EV pool cars and reduce number of petrol/diesel cars on the roads.	Ongoing.	Depending on demand of the cars, may result in purchasing additional pool cars to meet demand.	<p>Allows for car sharing where travelling at identical times (might be flagged in the booking system).</p> <p>Prevents concurrent booking of the same car to different drivers.</p> <p>Allows car share for those travelling at nearby times or could go in one car and return with someone else.</p>	This will reduce the CO ₂ emitted by staff travel and therefore contribute to the carbon neutral target (direct).

Priority Area 3: Business Travel					
Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO₂ reduction (direct / indirect)
Continue to monitor and promote the pool electric bike scheme	Reduce number of staff travelling in cars within Bedford as part of workday.	Ongoing.	Unknown at this time, pending further evaluation.	<p>Reduced travel expenses for workplaces (companies have reported savings of between £25-£80 per bike, per month).</p> <p>Improved accessibility (allows employee to travel door to door).</p> <p>Help to ease parking problems for staff.</p> <p>Health and fitness benefits for staff, reduces the need for private car ownership for some staff, depending on their circumstances.</p>	This will reduce the CO ₂ emitted by staff travel and therefore contribute to the carbon neutral target (direct/ indirect).
Actively Promote car sharing for journeys to meetings	Halves the business miles claimed by staff and reduces number of cars travelling.	Ongoing.	<p>Minimal cost, staff promotion and communications.</p> <p>Explore incentives for car sharing by staff traveling in to work (as well as to meetings/ events).</p>	Two people car sharing frees up a car park space, saving several hundreds of pounds per space annually.	Carbon emissions reduced for the Council and for local area. 100 people car sharing = average 51 tonnes CO ₂ per year (direct/ indirect).

Working Practices					
Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO₂ reduction (direct / indirect)
Establish an informal staff environmental group	Increased awareness and engagement.	Short term.	None.	Enabling Action - empowering individuals.	Enabling Action - empowering individuals (direct/ indirect).
Incorporate environmental awareness online induction training for staff	Increase awareness of environmental impacts and behaviour change for all staff.	Climate Change course mandatory training module – complete. Induction training ongoing for future staff.	Complete.	Could save up to 10% in energy costs.	Complete.
Review and update the corporate policies e.g. Corporate Plan, Local Plan etc.	Ensure Carbon Reduction is a whole Council objective of importance.	Ongoing.	Incorporated in existing resources.	Enabling Action - empowering individuals.	Enabling Action - empowering individuals (direct/ indirect).
Embed the 2030 carbon neutral ambition across the entire council	Ensure Carbon Reduction is a whole Council importance, developing strategies and plans for each department within the Council.	Ongoing.	Incorporated in existing resources.	Enabling Action - empowering individuals.	Enabling Action - empowering individuals (direct/ indirect).
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 CO ₂ reduction linked to reduced travel, however potential for increase in direct emissions through own energy use (indirect).

Working Practices					
Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO₂ reduction (direct / indirect)
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 CO ₂ emissions (direct/ indirect).
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 CO ₂ emissions (direct/ indirect).
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.	Medium term.	Potential costs to ensure IT services sufficient at remote sites.	Savings on utilities at central office base, reduced car mileage, business mileage claims.	Carbon emissions reduced for the Council and for local area (direct/ indirect).
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 don't 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 CO ₂ 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 CO ₂ emissions from transport.

Carbon Offsetting and Climate Resilience through Council Practices					
Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO₂ reduction (direct / indirect)
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.	None.	A conifer forest can sequester around 14 tonnes of carbon dioxide per hectare per year (direct/ indirect).
To develop and implement a maintenance programme for newly planted and established trees	Reduce the failure rate of newly planted and established trees due to drought or damage.	2024/2025.	£50,000 plus any government funding available.	A newly planted tree absorbs more carbon faster and more efficiently than mature trees.	One tree could remove 1 tonne of carbon dioxide from the air over its lifetime.
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).
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).
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).

Carbon Offsetting and Climate Resilience through Council Practices					
Action	Planned outcome / impact	Timeframe (Short-Long term)	Total estimated cost / resource requirement	Estimated saving per year / payback / benefit	Estimated CO₂ reduction (direct / indirect)
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).
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.	None.	Enabling Action.
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 – trial.	Estimate £100,000 in 2024/2025.	This will be fully considered as part of the emerging waste strategy.	Unknown at this time, these will need to offset the increase in waste collection vehicles on the road.
Investigate the carbon impacts of introducing doorstep food waste collection	Reduction in black bin waste and the recycling of food waste	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.

Finding out more

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