City of Lincoln Council Decarbonisation Strategy and Action Plan

Responding to the Climate Emergency

2021-2025

Reviewed and updated July 2023 by Kate Bell

Introduction

What does carbon neutrality mean?

Carbon neutrality means reducing net emissions by at least 95% of 2008 levels, there may be a residual 5% of emissions that is not technically feasible to eliminate by 2030. The UK Government ambition is for carbon neutrality across the entire UK public sector, i.e. some public sector organisations may be able to achieve negative emissions, to balance out unavoidable emissions in other organisations. Our contribution to this ambition will reflect future UK Government guidance.

What is a Decarbonisation Plan?

The purpose of a Decarbonisation Plan is to describe how the City of Lincoln Council intends to replace fossil fuel reliant systems with low carbon alternatives (e.g. Electric Vehicles, renewable energy). To meet the challenge of net zero, the Council will need to decarbonise its buildings and transport over the next 10 years.

The Plan describes the current state of the Council's energy use and its plans for reducing and/or decarbonising its energy use. The plan outlines what the Council has already done, what it is currently doing, what it plans to do in the future. The plan explains what actions are going to be taken, over what timescales, and the intended outcomes.

Scope of the Decarbonisation Plan

The Plan looks at emissions that are in our direct control, i.e. the Council's transport fleet or how we heat our buildings, as well as the services that the Council provides such as managing parks and open spaces or waste collection.

We recognise that some elements of our emissions are not solely in our direct control and/or will require additional support to achieve, e.g. the availability of low carbon technology and decarbonisation of the power grid. We understand that the council's direct CO_2e emissions made up less than 1% of Lincoln's total CO_2e emissions. Therefore we will seek to collaborate with partners and advocate for actions in these areas. The Council are working closely with the Lincoln Climate Commission to produce the Lincoln 2030 Climate Action Plan Action Plan which outlines citywide challenges, opportunities and actions that collectively going to achieve a net zero Carbon target for Lincoln by 2030.

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Climate change and the need for decarbonisation

Source: NASA Climate Change

In 2015 the UK government joined an overwhelming majority of countries from around the world by signing the Paris Agreement. This consensus acknowledged the scientific advice and evidence of thousands of the world's best climate scientists and the need to ensure the average temperature of the earth's surface warms by no more than 1.5oC from the earth's temperature in approximately 1850-1900 (pre-industrial levels). The earth's average temperature is currently approximately 15oC. This shows why the constant human activity which causes additional increases to the global average temperature (in addition to any irregular but essential natural events that have a warming effect e.g. volcanic eruptions) must be addressed by mankind's next evolution to a new low carbon age.

Reducing emissions to safe levels can be done with existing technologies and knowledge. Governments know the cost and risk of inaction far outweighs the cost of action. After advice from the Committee on Climate Change, the UK government amended the Climate Change Act and made reaching a target of 'net zero' emissions by 2050 a binding target.

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City of Lincoln Council's Climate and Environmental Emergency Declaration

On the 23rd of July 2019 CoLC's Full Council unanimously resolved that, This Council;

- Acknowledge the reality of the climate and environmental crises and commits to urgent emergency action.
- Join with Parliament and other Councils in declaring a Climate and Environment Emergency, and commit to the vision of a carbon neutral LINCOLN by 2030 at the latest.
- Sign up to a science based carbon reduction target that is consistent with achieving the Paris Agreement of no more than 1.5oC global temperature increase.
- Call on central government to provide the funding and powers to make this possible, and ask local MPs to lobby government to achieve this.
- Call on Lincolnshire County Council to cooperate with the City and District Councils to enable the City & District Councils to deliver on the carbon neutral vision by 2030, especially in such critical areas as highways & transport, energy, waste, food and health & wellbeing.
- Work with partners in the area to deliver carbon reductions and support environmentally sustainable industry, business & employment.
- Ask the Lincoln Climate Commission to consider ways of involving all interested people to have a voice through a citizens assembly or something that serves this purpose.
- Facilitate the work of a Lincoln Climate Commission to drawn upon expertise in the community (industry, commerce, education, health etc.) and general public, to devise a carbon reduction road map with staged targets and policies consistent with carbon neutrality by 2030, and bring a report to the Council's Executive as soon as practicable.

The CoLC Decarbonisation Strategy covers all the Council's commitments within the declaration and a more detailed update on progress can be found in the Decarbonisation Progress Report, providing a quarterly update on progress for all actions set out in this strategy.

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Climate Emergency Actions

Since declaring a Climate Emergency the City of Lincoln Council have:-

- Published an Environmental Policy which is reviewed annually and available on the council's website. The policy sets out how the council are committed to include the climate emergency in all local authority decisions and actions.
- Prepared and published the CoLC's Decarbonisation Strategy and Action Plan which is reviewed annually by the Performance Scrutiny Committee and actions are updated quarterly.
- Worked with the Lincoln Climate Commission to produce the Lincoln 2030 Climate Action Plan and live Journey to Net Zero table of actions which is updated by the commission on a regular basis to capture citywide actions to address climate change. These documents are available on the City Council and Lincoln Climate Commission websites.
- Worked with Lincolnshire County Council to set out the policies and plans needed to tackle transport emissions in the Lincoln Transport Strategy and Local Transport Plan. The City of Lincoln Council attend the Lincoln Transport Strategy Board, working with local stakeholders to deliver the strategy.

In 2023 the council joined forces with Local Motion and the University of Lincoln to hold a series of public engagement events and climate assembly sessions to enable the community to be involved in climate decision making. We are also working with our partners on the climate commission to finalise and publish the Lincoln Climate Resilience and Adaptation Strategy in Summer 2023.

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Vision 2025 Strategic Plan

Let's Address the Challenge of Climate Change

Vision 2025 is a five-year plan, based on many conversations we have had with members of the public and our partners. The plan sets out in some detail what we think needs to be done to deal with the most pressing issues we face in Lincoln. Our plans aspire to achieve a dynamic, resilient, inclusive and carbon neutral city, but importantly as well, to have Lincoln as a place of advanced social progress, with a high degree of social cohesion, a city of cultural, generational and ethnic diversity. Having declared a climate emergency in 2019, Vision 2025 places a new focus on this priority as a key element of the council's strategic plan.

A Climate Challenge taskforce has been set up to deliver the following climate aspirations:-

- Let's ensure our development approach reduces our carbon footprint
- Let's set the Lincoln standard for sustainable zero carbon development
- Let's make walking, cycling and the use of public transport the best and favourite way to move around Lincoln
- Let's ensure the city's infrastructure is fully adaptable and resilient to the challenges of climate change
- Let's make our existing housing and business premises energy efficient

The taskforce is made up of officers representing all Directorates and service areas within the council with responsibility for environmental management, business support, property management, air quality, planning policy, communications, procurement and climate change.

This Decarbonisation Plan sets out how the Council intends to achieve some of its climate aspirations.

vision-2025-strategic-plan (lincoln.gov.uk)

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Lincoln 2030 – A Climate Action Plan

We know that we cannot address the climate emergency with a single idea. The City of Lincoln Council are part of **The Lincoln Climate Commission**, which aims to bring together minds, perspectives and expertise across disciplines and communities to foster the innovation needed to face the world's greatest challenge. To learn more about **The Lincoln Climate Commission** and how you can get involved by visiting the website at lincolnclimate.org.uk or follow the commission on social media #lincolnclimate.

Lincoln 2030 Climate Action Plan

To become a net zero carbon City by 2030 we need to make changes to our daily lives to reduce emissions, particularly from transport, energy use and the everyday items we all consume. No single organisation can directly influence all the emissions within the Lincoln area; the success of a **Lincoln 2030 Climate Action Plan**, produced by the Lincoln Climate Commission, will be down to all of us. You can find Lincoln 2030 on the commission and council's websites.

Lincoln's Journey to 2030 accompanies the Lincoln 2030 Climate Action Plan and provides further details on the objectives, actions and tables for each net zero carbon pathway. This is a live document, updated by members of the Lincoln Climate Commission on a regular basis.

#Climate Hope Lincoln was launched by the Lincoln Climate Commission and Local Motion in June 2023 to establish a stronger network across a range of individuals and organisation to coordinate climate campaigns and engagement across this city in an attempt to reach a wider audience. As part of Great Big Green week we hosted a range of events and activities to paint Lincoln green, this was launched by holding a flash dance on Lincoln High Street.

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Building on success

What we have already achieved

We have a strong track record of delivering emission reductions and financial savings. We have been monitoring our green house gas emissions from our own operations since 2010 using the Environmental Reporting Guidelines from Department for Environment, Food and Rural Affairs (DEFRA)[1] There have been significant reductions in emissions over time against both the target and business as usual (BAU) scenarios. Since 2008/9 the Council's Green House Gas emissions have reduced by 36% and the current reduction trend sets a solid foundation upon which to aim for carbon neutrality. Due to changes in the Council's operations and services we set a new baseline year in 2018/19,
since then CO2e emissions have reduced by 31% overall.

The graph below shows that the council's green house gas emissions (GHG), measured as **Carbon Dioxide equivalent (CO_2e)[2],** have reduced in all council buildings since 2008, public buildings have been slowest to reduce due to a significant increase in gas consumption at the Council's Crematorium between 2018/19 and 2019/20. In 2022 the Council's 50 year old Crematorium underwent a refurbishment, installing new low carbon cremators and a range of energy efficiency measures which have significantly reduced the council's overall CO_2e emissions.

[1] Environmental Reporting Guidelines (publishing.service.gov.uk)

[2] Emissions data includes all greenhouse gas emissions and not just carbon dioxide. 'Carbon dioxide equivalent' (CO2 e) is a term for describing different greenhouse gases in a common unit. For any type and quantity of greenhouse gas, CO2 e signifies the amount of carbon that would have an equivalent warming impact.

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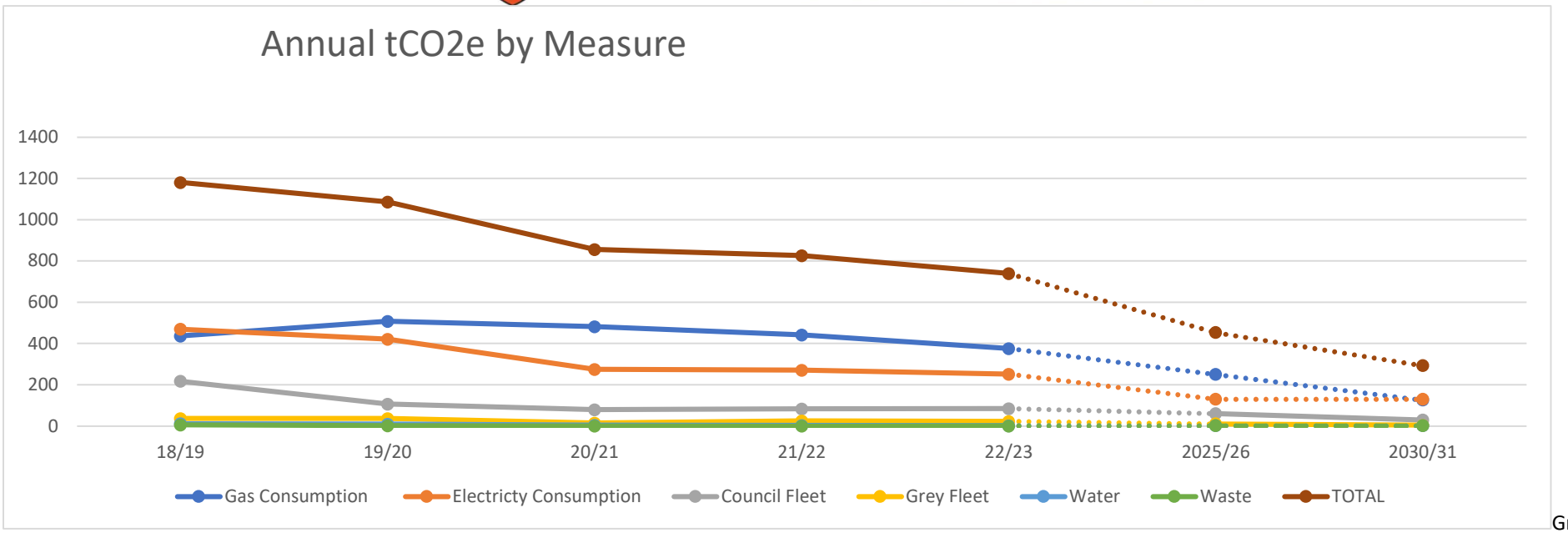

Graph 1

Some examples of successes we have had in reducing our carbon footprint to date include:

- An Environmental Management System to record monitor and identify opportunities to reduce the council's emissions produced directly or indirectly from gas, electricity, waste, waste and vehicle fuel.
- Replacing some of our IT servers with virtual servers significantly reducing electricity consumption.
- LED lighting and sensor controls in our MSCPs and offices.
- Electric fleet vans and recharge points in six council managed car parks.
- Solar thermal and PV projects on seven housing sites and four Council buildings.
- Rainwater harvesting, solar thermal hot water and ground source heat pumps at Yarborough sports pavilion.
- New Transport Hub completed in 2018, designed to absorb thermal heat and natural ventilation and shading to prevent overheating with on site Solar PVs.

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CITY OF Lincoln COUNCIL | Together, let's deliver Lincoln's ambitious future

Parking Services Electric Van

Photovoltaic Panels on the roof of City Hall

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In 2020 the Council undertook an independent audit of its Environmental Management System. An environmental management system (EMS) is **"a system and database which integrates procedures and processes for training of personnel, monitoring, summarizing, and reporting of specialized environmental performance information to internal and external stakeholders of a firm".**[3]

Having a recognised EMS accreditation demonstrates a continued environmental commitment to residents, contractors, suppliers, the wider business community and voluntary & community groups. In September 2020 Investors in the Environment announced that the City of Lincoln Council has achieved the Silver level accreditation with a score of 74%. In September 2021 the Council demonstrated significant improvements and were awarded a Green Award with a score of 94% and an 'Overall Outstanding Achiever Award.' The Council were able to maintain their Green Award in October 2022 with a score of 85%.

Overall Outstanding Achiever 2021

[3] Sroufe, Robert. "Effects of Environmental Management Systems on Environmental Management Practices and Operations." Production and Operations Management. 12-3 (2003): 416–431.

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Carbon Reduction Pathways – What are we doing now?

The Council has set an ambitious target to be net zero carbon in all its buildings operations and services by 2030. In order to achieve this ambition it is necessary to break decarbonisation down into six manageable pathways to identify the key actions required.

Decarb Pathway	What does this cover?	% CO2e
Electricity	This transition is now well underway, with the grid becoming increasingly green as a variety of forms of renewable power are installed (solar, wind, hydro). Energy efficiency is also improving, with the council making substantial investments in energy efficiency throughout its buildings. Low carbon electricity will also play a key area in decarbonising other areas such as heating and transport, placing pressure on supply.	34%
Heat	Decarbonising space and water heating (and cooling) in CoLC's buildings will be part of a wider transition away from a national heating system based on a standardised gas grid. It is very early in this transition but it seems clear that the switch will not be to a single technology, but involve a range of alternatives such as district heating networks, heat pumps, hydrogen and solar thermal to fit local circumstances.	51%
Transport	Direct transport includes all work related travel by ColC employees, whether in their own, or in CoLC fleet, vehicles or by public transport. This also overs indirect transport such as the refuse feet vehicles owned and operated by a contractor to deliver a council service.	15%
Waste	This pathway focuses on waste from council offices and depots as well as waste generated by the public at council owned and managed sites such as Hartsholme County Park. Public behaviour has a large impact on the volume and type of waste entering our waste system. Not just at the point of waste disposal, but in consumer choices made prior to this. Waste that is not recycled is converted to energy, at the Energy from Waste facility at North Hykeham.	0.1%
Water	Water is used on council sites for drinking and cleaning, the supply and treatment of water have a carbon impact. Due to the small volumes of water used at council office sites this is the lowest of the utility emissions. However we are working with our partners to identify opportunities to reduce water consumption at community and leisure sites across the city as they use larger quantities of water.	0.2%
Built Environment	The Council has some influence on Lincoln's built environment, through the building, renovation, repair and remodelling of over 7000 council homes as well as a new build programme to increase the provision of affordable housing. The Council is also the Planning Authority for Lincoln and has a joint Central Lincolnshire Local Plan with an ability to influence carbon neutral planning policy.	Captured in Citywide CO2e

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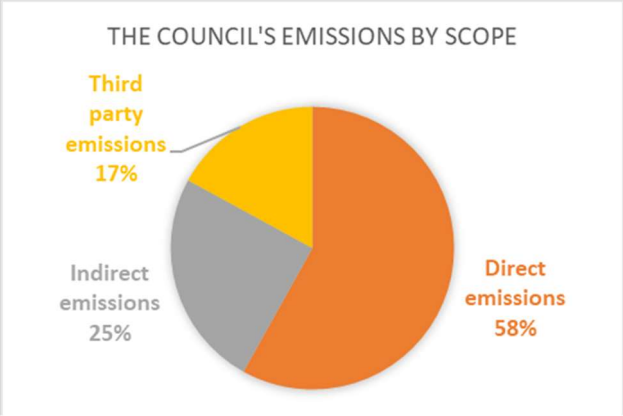
Natural Environment	There are 47 Local Wildlife Sites, making up 740 hectares and account for 21% of the land in the City of Lincoln administrative boundary. The natural environment plays an important role in decarbonisation, removing emissions from the atmosphere, these negative emissions are crucial to achieving carbon neutrality. In addition, as land owner the council is responsible for substantial carbon stocks already captured, grasslands, wetlands, trees and soil are the main natural carbon stores in the city.	-2%

The Council's emissions are calculated depending on whether they are classed as scope 1, 2 or 3.

- Scope 1 covers emissions from sources that an organisation owns or controls directly – for example from burning fuel in our gas boilers.
- Scope 2 are emissions that a company causes indirectly and come from where the energy it purchases and uses is produced. For example, the emissions caused when generating the electricity that we use in our buildings would fall into this category.
- Scope 3 encompasses emissions that are not produced by the company itself and are not the result of activities from assets owned or controlled by them, but by those that it's indirectly responsible for up and down its value chain. An example of this is when we buy, use and dispose of products from suppliers.

The pie chart shows the breakdown of the council's 22/23 scope 1,2 and 3 emissions the council monitors and has set carbon reduction targets. The following action plan breaks down the emissions.



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Decarbonisation Action Plan 2021-2026

Electricity – Council Buildings

In 2022/23, the Council consumed 460,824 kWh of electricity in its operated buildings. These emissions calculated for electricity generation are associated with the generation, and transmission and distribution of electricity and are scope 2 emissions. Scope 2 emissions are indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling. Although scope 2 emissions physically occur at the facility where they are generated, they are accounted for in the Council's GHG inventory because they are a result of the Council's energy use.

First and foremost, this should be reduced through energy efficiency measures. However the emission factor for purchased electricity is reducing as conventional power generation from coal and gas is replaced by low-carbon generation (e.g. from renewables and nuclear). This will result in reduced emissions, even during a business as usual approach.

As the carbon intensity of electricity reduces it will become more beneficial in terms of emissions to use electricity as a fuel in the place of gas, diesel etc. This electrification of heating and transport sectors will likely cause this electricity consumption to increase by 2030.

Overall target to reduce CO^2e emissions from electricity by 52% by 2025. Aspirational target to reduce CO^2e by 90% by 2030, more detailed plans to be included in the next Decarbonisation Plan (2025-2030)

Target 5% Green House Gas emissions (CO^2e)
Annual percentage reduction of CO^2e since 2018 - 9.6%
Total reduction since 2018 – 48%

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Council Buildings						
Year	**Kg CO2 e**			**Total Percentage Reduction/Increase on baseline (+/-)**		
18/19 Baseline	**175,037**					
19/20	**158,773**			**-10%**		
20/21	**110,475**			**-37%**		
21/22	**93,049**			**-47%**		
22/23	90,870			**-48%**		
Priority Objective	**Actions**	Measure	**Target and Timescale**	**RAGB**	**Outcome**	**Responsible service area**

1.1	Transition to new workstyles and agile working practices	Reduce the number of IT Servers Reduce the Air Conditioning in the server room. Roll out new ICT devises to teams for remote working. Transforming the way we work through the new workstyles – making more efficient use of our assets.	Carbon Dioxide equivalent (CO2e) emissions	1750kg Co2e (10%) reduction by March 2022. **TARGET ACHIEVED 21004kgCO2e (12%) reduction attributed to agile working practices** **PROJECT COMPLETE**	Blue	Reduce electricity demand from IT servers and air conditioning. Reduce office space and improving energy efficiency. Reduce the Council's overall CO_2e emissions.	Fraser Trickett, Organisational Change Lead.(1FTE) /Agile Working Group
1.2	Switch to Automated Meter Readings (AMR)	Upgrade meters	Number of sites with AMR	100% completion by June 2022	Blue	AMRs help with more accurate recording and monitoring of energy consumption and CO2 emissions. This helps identify any variation on energy consumption and enable planned energy efficiency measures.	Kate Bell/Martin Kerrigan, Property Service Manager with support form individual site

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						Improve electricity consumption recording and monitoring	responsible officers.
1.3	LED lighting and motion sensors in all council buildings.	Replace T5 lighting with LED and fit motion sensors in communal areas	Electricity consumption and CO2 emissions	4% CO2e reduction on baseline	Green	Replace all internal and external lighting with LED	Martin Kerrigan, Property Services Manager
1.4	Procure 100% clean energy by 2030 at the very latest.	Review cost of green electricity supply when contract is due for renewal in 2023. Due to the additional internal cost associated with this project approval would have to be secured before proceeding.	CO2 emissions	100% switch by 2030	Amber	On hold due to procurement exercise for new energy supplier. Currently 42% of electricity from the National Grid is produced from renewable sources. Target 2030 to 100% renewable electricity through energy contracts.	Heather Carmichael, Procurement Manager and Kate Bell Climate Change Manager
1.5	Consider opportunities for renewable energy generation	Review opportunities for onsite renewable energy generation. External Funding would need to be secured from the Public sector decarbonisation Fund or	Electricity generation and CO2e	5% of electricity generated on site by 2025 20% by 2030	Green	Current onsite renewable energy reduces the council's CO2 by 9 tonnes a year	Kate Bell/Martin Kerrigan, Property Service Manager with support from individual site

		a Local Climate Bond for this project to proceed.					responsible officers.
1.6	Deliver a staff awareness programme on saving energy.	Intranet messages. Laminated or framed notices in shared areas/offices. A1 Poster in stairways Publish a net zero carbon sharepoint site	Electricity generation and CO_2e	1% reduction of CO2e	Green	Engage staff in net zero programme Reduce electricity consumption. Achieve behavioural change.	Kate Bell/Sam Redgate Large (0.2 FTE)

Electricity - Public Buildings

In 2022/23, the Council consumed 817,216 kWh of electricity in council owned public buildings. These emissions calculated for electricity generation are associated with the generation, and transmission and distribution of electricity and are scope 2 emissions.

First and foremost, this should be reduced through energy efficiency measures. However the emission factor for purchased electricity is reducing as conventional power generation from coal and gas is replaced by low-carbon generation (e.g. from renewables and nuclear). This will result in reduced emissions, even during a business as usual approach.

As the carbon intensity of electricity reduces it will become more beneficial in terms of emissions to use electricity as a fuel in the place of gas, diesel etc. This electrification of heating and transport sectors will likely cause this electricity consumption to increase by 2030.

Overall target to reduce CO2 emissions from electricity by 52% by 2025. Aspirational target to reduce CO_2e by 90% by 2030, more detailed plans to be included in the next Decarbonisation Plan (2025-2030)

Annual percentage reduction of Green House Gas emissions since 2018 - 9.4%
Annual Target – 5% CO^2e
Total CO^2e reduction since 2018 – 47%

Year	Kg CO2 e	Total Percentage +/-
18/19 Baseline	**301,454**	
19/20	269,579	- **11%**
20/21	195,307	- **36%**
21/22	180,933	- **40%**
22/23	161,174	- **47%**

2.1	Priority Objective	Actions	Measure	Target and Timescale	RAG	Outcome	Responsible service area
	Crematorium Refurbishment	Install internal and external LED lighting and PIR sensors as part of the	Electricity consumption and CO2 emissions	20% CO2e reduction (7831kg CO2e)	Blue	Improve quality of the lighting, reduce electricity demand and carbon	Maria Clayton, Major Developments

		building and car park refurbishment.		from electricity consumption on site baseline by 2022/23.		**Target Exceeded - 34% reduction achieved in 2023.**	
	Central Market refurbishment	Decarbonisation project including installation new lighting and air source heat pumps, double glazed windows and improve fabric efficiency.	Electricity consumption and CO2 emissions	Expected to remain the same due to ASHP but achieve carbon savings for gas	Green	Due to the replacement of gas heating with Air Source Heat Pumps (ASHPs). There is likely to be an increase in electricity but overall a decrease in CO2e. Central Market due to reopen in November 2023.	Maria Clayton, Major Developments
	Decarbonisation of council owned public buildings.	Prepare Decarbonisation Plans Secure capital funding for delivery of decarbonisation projects by 2030	Carbon Dioxide equivalent (CO_2e)	52% by 2025 90% by 2030	**Green**	Achieve net zero for all public buildings by 2030	Martin Kerrigan, Property services / Kate Bell, Climate Change.
	Hartsholme Country Park Restoration	Prepare a feasibility Study to identify energy efficiency measures for existing office and visitor	Electricity consumption and CO2 emissions	TBC on completion of	TBC	Improve the thermal comfort and efficiency of existing office space and visitors centre. Improve	Community services TBC

		centre and opportunities for renewable energy.		feasibility Study		the visitor experience to the park. There has been a 14% reduction in electricity consumption for the visitors centre, but this is due to reduced usage indoors and the café only serving food outside. Activities generally taking place outside.	

Heat – Public and Council Buildings

Gas is required for space and water heating in buildings, this is a scope 1 emissions. Scope 1 emissions are direct greenhouse (GHG) emissions that occur from sources that are controlled or owned by the Council (e.g., emissions associated with fuel combustion in boilers, furnaces, vehicles)

The Council consumed 2,090,224 kWh of gas in 2022/23, 44% of which was in Council office buildings. As the national grid decarbonises, it is recommended that heat sources are electrified where possible (e.g. through the installation of heat pumps). The Council are committed to installing electric heating for all new council buildings to a high energy efficiency performance or operationally net zero standard. For existing buildings, where possible a fabric first approach should be taken and retrofit actions should be performed to reduce heat loss and drafts before electrification.

Overall target to reduce CO^2e emissions from electricity by 43% by 2025. Aspirational target to reduce CO^2e by 90% by 2030, more detailed plans to be included in the next Decarbonisation Plan (2025-2030)

Annual target 2%
Annual percentage reduction of Green House Gas emissions since 2018 - 3.4%
Total reduction since 2018 – 17%

Year	**Kg CO2 e**	**Total Percentage +/-**
18/19 Baseline	**455,747**	
19/20	**529,591**	- **+14%**
20/21	**541,466**	- **+16%**
21/22	**461,615**	- **+1%**
22/23	**376,240**	- **-17%**

	Priority Objective	Actions	**Measure**	**Target and Timescale**	**Outcome**	**RAG**	**Responsible service area**
3.1	Crematorium low carbon refurbishment	Construct new plant room, install new fuel efficient cremators and heat recover unit.	$kgCO^2e$	10% reduction of CO^2e on site baseline by 2021/22	**Target Exceeded** 22% reduction achieved in 21/22	Blue	Maria Clayton, Project Manager

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3.2	Central Market Decarbonisation	Complete feasibility study and secure planning permission. Deliver Decarbonisation Plans including insulation, double glazing, new extension, and low carbon heating.	$kgCO^2e$	100% reduction of CO^2e from gas heating in 2023/24 onwards site baseline	To replace gas heating with a low carbon heating system.	Green	Maria Clayton.
3.3	Heat Decarbonisation Plans	Review heating of all buildings and identify appropriate low carbon solutions by 2025, measures to be implemented by 2030 to achieve net zero.	$kgCO^2e$	To complete HDPs for all fossil fuel heated sites (10) by 2024	HDPs will determine future pipeline of investment in council buildings and help to secure capital funding.	Green	Martin Kerrigan, Property services / Kate Bell, Climate Change.

Transport – Council's direct and indirect GHG emissions

The Council lease and operate a fleet of 84 vehicles which deliver the council's housing repair services, as well as community support, environmental health and parking services. Lease vehicles which are controlled by the council are considered scope 1 emissions.

In addition the Council have a contract to deliver the Council's refuse, recycling and street cleansing services which requires 11 refuse vehicles and 16 vans and account for 65% of total fleet emissions due to their size and high mileage. As these are owned and managed by a third party contractor they are classed as scope 3 emissions. Most vehicles are diesel powered, with two electric vehicles used by

the parking services team and the mayor's office. The common decarbonisation pathway for transport is electrification, and the share of electric vehicles in the Council's fleet will have to grow to achieve decarbonisation targets over the next 10 years.

Overall target to reduce CO2 emissions from Council/staff travel by 73% by 2025 and aspirational target of 90% by 2030 (full details to be included in the 2025-2030 version of the Decarbonisation Plan).

Overall target to reduce CO2 emissions from Refuse fleet by 60% by 2030.

Annual Target for transport 5%
Annual percentage reduction of Green House Gas emissions from transport since 2018 - 12.6%
Total reduction since 2018 – 63%

Year		**Kg CO2 e**	**Total Percentage +/-**
18/19 Baseline	Council/Staff Travel	256,427	
	Refuse vehicles	382,483	
19/20	Council/Staff Travel	145,432	**-43%**
	Refuse vehicles	377,702	**-1%**
20/21	Council/Staff Travel	93,766	**-63%**
	Refuse vehicles	370,702	**-3%**
21/22	Council/Staff Travel	109,295	**-57%**
	Refuse vehicles	365,795	**-4%**
22/23	Council/Staff Travel	107,523	**-58%**
	Refuse vehicles	365,456	**-5%**

	Priority Objective	**Actions**	**Measure**	**Target and timescale**	**Outcome**	**RAGB**	**Responsible Service Area**
4.1	Agile Working Policy	Introduce Agile working practices to enable staff to work	Kg CO^2e	Reduce CO2 emissions from electricity at City	45% reduction of CO2 since baseline	Blue	F. Trickett Agile Working group

		from home, attend virtual meetings on a long term basis.		Hall and Hamilton House by 20% by 2022 (42372 kg CO^2e)	18.19 211862 21.22 116490		
4.2	Transition to ultra low emission fleet vehicles (ULEV)by 2030	Review Council fleet contract and opportunity to increase the number of ultra low emission vehicles.	Kg CO^2e	10% reduction on fleet emissions baseline by 2023. 30% reduction by 2025 10% ULEVs within the fleet by 2023 60% ULEVs within the fleet by 2030	61% CO2e reduction achieve since 2018, exceeding target set. Working towards 60% ULEV's as part of the council's next fleet vehicle lease. A review of EV infrastructure requirements is currently underway.	Green	Matt Hillman, Housing Repair Service
4.3	Trial new working practices for housing repair service	Introduce a new area based working for the housing repair service to improve efficiency of repair work and reduce vehicle mileage.	$kgCO^2e$	20% reduction on CO^2e baseline in 21/22	**Target Exceeded** 21/22 61% reduction	Blue	Matt Hillman, Housing Repair Service
4.4	CoLC Staff Travel Plan(TP)	Complete staff travel survey every 2 years Review and update TP annually	Kg CO2e	Annual 5% reduction of CO^2e emissions from grey fleet.	2021/22 achieved a 39% reduction of grey fleet CO2e since 18/19, annual reduction of 7.8% currently exceeds the 5% target.	Green	Kate Bell/ Travel Plan Working group (M. Souter,

		Deliver new sustainable travel initiatives					T.Beesley, H.Carmicheal)
4.5	Working with Refuse contractor to reduce refuse fleet vehicle emissions.	Review of refuse contract and opportunity for introducing fuel efficient vehicles	Kg Co2 e	TBC following tender exercise, applications due May 2023, to be awarding contract July.		Blue	C.Bird, Community Services

Transport – City Wide

Green house gas emissions from vehicles travelling within the City of Lincoln local authority area are not counted as part of the council's own emissions. However we have decided to include citywide transport emissions in this action plan as the council has some influence on decarbonising transport within the city, as a Local Planning Authority, provider of parking provision, through owing and managing the Lincoln Transport Hub and its ability to support active travel initiatives and electric vehicle charging infrastructure.

The Council is not responsible for highways infrastructure such as cycle routes and bus lanes which is the responsibility of Lincolnshire County Council. More detailed information about sustainable transport and aims to encourage people to use non motorised forms of transport can be found in the Lincoln transport strategy – Lincolnshire County Council.

Annual percentage reduction of Green House Gas emissions since 2018 - 9.2%

	Total reduction since 2018 – 46%		
	Year	Carbon Dioxide equivalent in kilotons	**Percentage +/- 2018 baseline**
	2018	67 kt CO2	
	2019	65 kt CO2	-3%
	2020	55 kt CO2	-18%
	2021 (latest available data)	67kt CO2	-0%

	Priority Objective	Action	Measure	Target and timescale	Outcome	RAG	Responsible service area
5.1	Ensure Lincoln is Electric Vehicle ready	Work with Lincolnshire Highways Authority to secure ORCS funding for EV charge points for use by city centre residents without access to off road parking.	No of EV charge points (EVCP)	100 EVCPs by 2025	72 EVCPs in 2023 and further 50 planned by 2024	Green	Rod Williamson, Parking Services/Kate Bell, Climate Change Manager
5.2	Let's make walking, cycling and the use of public transport the best and favourite way to move around Lincoln (V 2025 Strategic Plan)	Launch the online Lincoln sustainable toolkit. Work with Lincolnshire County Council to secure funding for cycling infrastructure and secure cycle storage.	Proportion of people walking and cycling once per week.	1% increase on 2016 data (76.4) by 2025	4% decrease (73) in 2022. Further improvements to cycle ways in Lincoln planned and	Green	Kate Bell, Climate Change with support of Major Developments and LCC Highways to secure infrastructure funding.

					resourced as part of Lincoln Town Deal. £20m secured for new bridge to allow a new road, pedestrian and cycleway to make travelling by bike and on foot into Lincoln centre from residential areas south of Lincoln safer.		
			City tCO^2 e Transport	2% reduction on 18/19 baseline by 2025	17% reduction achieved in 2020		

5.3	Work with our strategic partners on the Lincoln Transport Taskforce to deliver the Lincoln Transport Strategy.	Prepare Cycling and Walking Network Plans to identify priority routes for investment for 2020-2025	tCO2 e	2% reduction of city wide CO2e on 2018 level	17% reduction achieved (2020 data[4])	Blue	Kate Bell through liaison with the Lincoln Transport Board/LCC Highways

Waste - Council Offices

Waste and recycling is produced from council offices, the volume of waste is recorded on a monthly basis and the CO2e emissions are calculated based on the volume and type of waste. The emissions from waste is categorised as scope 3 because waste management services are purchased by the council.

Annual percentage reduction of Green House Gas emissions from waste since 2018 - 18.6%
Total reduction since 2018 – 93%

Year	Kg CO2 e	Total Percentage +/-
18/19 Baseline	5887	
19/20	1539	-74%
20/21	844	-85%
21/22	416	-93%
22/23	832	

6	Priority Objective	Action	Measure	Target and timescale	Outcome	RAGB	Responsible service area
6.1	Reuse and recycle all IT waste where possible.	IT Recycling Contract	kg CO_2e	All IT waste to be reused or	Contract in place to collect IT equipment, clean and fully	Blue	Neil Stait, IT Services.

[4] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1086980/UK-local-authority-ghg-emissions-2020.xlsx
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				recycled by 2025	refurbished prior to being re-sold for personal or business use.		
	Promote recycling in offices to reduce waste.	Ensure all office communal areas have access to recycling for plastic, cans and glass. Reduce, reuse and recycle paper waste Undertake an audit of general waste and recycling bins to establish content and extent of contamination.	Kg CO2e	50% reduction in CO2e from office waste by 2025	In 2021/22 there was a 93% CO2e reduction from office waste. Seek to maintain this through revised working practices.	Green	Martin Kerrigan, Property services /Sam Redgate, Community Services
	Review of Housing Repair Service to identify opportunities to reduce waste materials.	Research and Development group set up to identify the next generation of materials and products within the housing stock.	kgCO2e	0% landfilled waste.	Reduce overall volume of household waste and all waste to be recycle/Reuse Derived Fuel.	Green	Matt Hillman, Housing repair Service

Water - Council Offices

Water is used within council office buildings and recorded on a quarterly basis and the carbon emissions are calculated for supply and treatment of waste water. For the year 2020/21 the BEIS GHG calculations for water supply and treatment were adjusted to ensure they were providing a more accurate reflection of emissions and this resulted in the significant reduction in emissions the following year. The emissions from water is categorised as scope 3 because water is purchased by the council.

Annual percentage reduction of Green House Gas emissions from water since 2018 - 15%
Total reduction since 2018 – 74%%

Year	Kg CO2e	Total Percentage +/-
18/19 Baseline	11,679	
19/20	9,718	-17%
20/21	3558	-69%
21/22	2837	-66%
22/23	1858	-74%

6	Priority Objective	Action	Measure	Target and timescale	Outcome	RAGB	Responsible service area
6.1	Reduce waste water.	Push taps installed. Reduce volume of water for flushing toilets. Low water shower heads.	kg CO^2e	To reduce water usage by 50% by 2025	Reduce water	Blue	Martin Kerrigan, Property services
	Promote efficient water usage.	Coms messages promoting 4-5 min showers.	Kg CO^2e	As above	Reduce Water.	Green	Sam Redgate, Communications

	The Natural Environment We have a responsibility to conserve Lincoln's natural environment and enhance it, not only for the fabric of the natural environment, but for the health of our future economy. Lincoln has 47 Local Wildlife Sites, making up 740 hectares and account for 21% of the land, including grassland, woodland and wetlands areas which sequestrate carbon, act as shade reducing the Urban Heat Island effect and an important blue water footprint to reduce flooding.					
7	**Priority Objective**	**Action**	**Measure**	**Target**	**RAG**	**Responsible Service area**
7.1	Maintain and enhance biodiversity, green spaces, woodlands, wetlands in the City.	Complete audit of local wildlife sites. Brayford Pool Environment Plan CoLC Rewilding programme	**TBC**	**TBC**	**Green**	Community Services/ Planning Policy/Development Management
7.2	Boultham Park Restoration Project	Improving the water quality of the lake Improvements to the biodiversity of the plants and wildlife Restoring the lake banks.	**NA**	**NA**	**Blue**	C. Bird with Linkage Trust
	Biodiversity Net Gain Project	£12k funding secured from the Local Government Association and	**TBC**	**TBC**		Kate Bell, Climate Change and Toby

		UCL for a join City of Lincoln Council and University of Lincoln project to establish a Biodiversity Net Gain mapping tool for Lincoln to highlight opportunities for enhancement. Deliver a community engagement campaign to raise awareness about the value of biodiversity and carbon assets in the city.				Forbes Turner, Planning policy
	Prepare and deliver an Environmental Plan for the Brayford Pool	Work with the EA, Canal and Rivers Trust and UoL to develop and implement an environmental plan to improve biodiversity opportunities on the Brayford Pool	**TBC**	**TBC**		Toby Forbes Turner, Planning Policy.
7.3	Climate Adaptation and resilience	Work with our partners on the Lincoln climate Commission to prepare a climate adaptation and resilience Strategy	**NA**	**Due to be complete in Summer 2023**		Kate Bell, Climate Change.

8	**The Built Environment** The City of Lincoln Council is responsible for various aspects of the built environment through the planning process as well as the Council's New Homes Programme. Domestic properties in Lincoln make up 35% of Lincoln's total emissions and so if we are to meet a net zero target for the whole city, all new homes need to be 'zero carbon.' It is also important to take into account the embodied carbon in new buildings as well as ensure new housing developments are 'climate ready' and can adapt to our changing climate.

	The Council are committed to installing electric heating for all new council owned or managed housing which will be built to a high energy efficiency performance or operationally net zero standard.						
	Priority Objective	**Action**	**Outcome**	**Measure**	**Target and timescale**	**RAG B**	**Responsible Service area**
8.1	Raise the standard of all existing council homes to an average EPC 'C' rating by 2022 and all council homes to a 'C' by 2030.	Prepare a new 30yr HRA Business Plan to include a commitment the energy performance of Council homes. Undertake Retrofit Assessments for various property types. Establish cost for works and include in the 30yr business plan.	Improve the energy efficiency of all council homes. Estimated cost of works for remaining D rated properties based on completed retrofit assessments is £17.3m	EPC	To achieve an average C rating by 2022 To achieve a 100% C rating by 2030	**Green**	Matt Hillman (project lead) and project team includes:- Kevin Bowring, Investment Manager Kate Bell, Climate Manager Paula Burton, Housing Strategy Manager Social Housing Retrofit Programme allocated 1 FTE
8.2	Deliver new homes on the Hermit St site to a high energy efficient standard.	10 new council homes on Hermit Street	Achieve a 20% carbon uplift on current Building	EPC	To achieve an 'A' rating on completion of the project		Project Lead Jenny Crane, Major Developments (0.3FTE)

			Regulation requirements. Includes:- -EV charge points for each property. -Sustainable Urban Drainage -Mechanical Heat Recovery.		(estimate Summer 2024)		Project Team Yvonne Fox, Marie Smyth, Keving Bowring, Kate Bell. Project allocated 1 FTE
8.3	Deliver new homes on the Rookery Lane site to a high energy efficient standard.		Achieve a 20% carbon uplift on current Building Regulation requirements. Includes:- -Low Carbon Heating - Solar PV -EV charge points for each property -Sustainable Urban Drainage -Mechanical Heat Recovery.	EPC	To achieve a 'A' rating on completion of the project (Spring 2023)	**Blue**	Maria Clayton, Capital Projects Manager, Major Developments. Project allocated 0.3 FTE

8.3	All new Council Homes to be 'zero carbon' ready.	Review opportunities for ensuring the council's new homes are net zero carbon or 'A' rated.	Raise the standard of all new council homes to an EPC 'A' rating by 2030 Commence zero carbon ready homes	EPC	To achieve an A rating on all new homes completed from 2024 onwards	Commence 2022/23	Project Leads Kate Ellis and Daren Turner
8.4	Consider deep retrofit solutions to raise the EPC of existing Council homes.	Commence retrofit trials (subject to funding)	Identify solutions to retrofit 'hard to treat' homes to the net zero standard.	EPC	To achieve an A rating on all council homes from 2030 onwards.	Amber	Matt Hillman (project lead) and project team includes:- Kevin Bowring, Investment Manager Kate Bell, Climate Manager Paula Burton, Housing Strategy Manager Project allocated 1 FTE
8.5	Central Lincolnshire Local Plan (CLLP) review	CLLP review underway	Adopt new policies related to climate change.	Citywide CO2	New climate policies in the Local Plan to be adopted by Spring 2023.	Blue	Toby Forbes Turner, Planning Policy Manager working alongside the Central Lincolnshire Local Plan Team.
8.6	Affordable Warmth Strategy	Prepare Affordable Warmth Strategy	Reduce fuel poverty and raise the standard of private housing	No of Households received retrofit	200 Homes to have received retrofit measures by Sept 2023.	Green	Resources allocated to deliver the Sustainable Warmth Programme:-

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		Secure Sustainable Warmth Funding and delivery private sector housing retrofit scheme.		measures	Additional 200 homes to have received retrofit measures by March Sept 2025.		Kate Bell (0.2FTE) project lead. Leah Cooper (0.2FTE) project assistant YES Consultants (1.6 FTE) appointed to deliver Home Energy Upgrade Scheme (funded from Sustainable Warmth)