

Scrutiny Briefing Note

Subject: Carbon Road Maps and Response to Climate Emergency Declaration

Background:

In September 2019, a climate emergency was declared in North East Lincolnshire (NEL). North East Lincolnshire Council (NELC) confirmed its ambition to reduce its carbon emissions to net zero by 2050, while also bringing new jobs to the local area. Elected members have also pledged to consider the environmental effects of all future decisions, to help make NEL a low carbon borough and mitigate the effects of climate change.

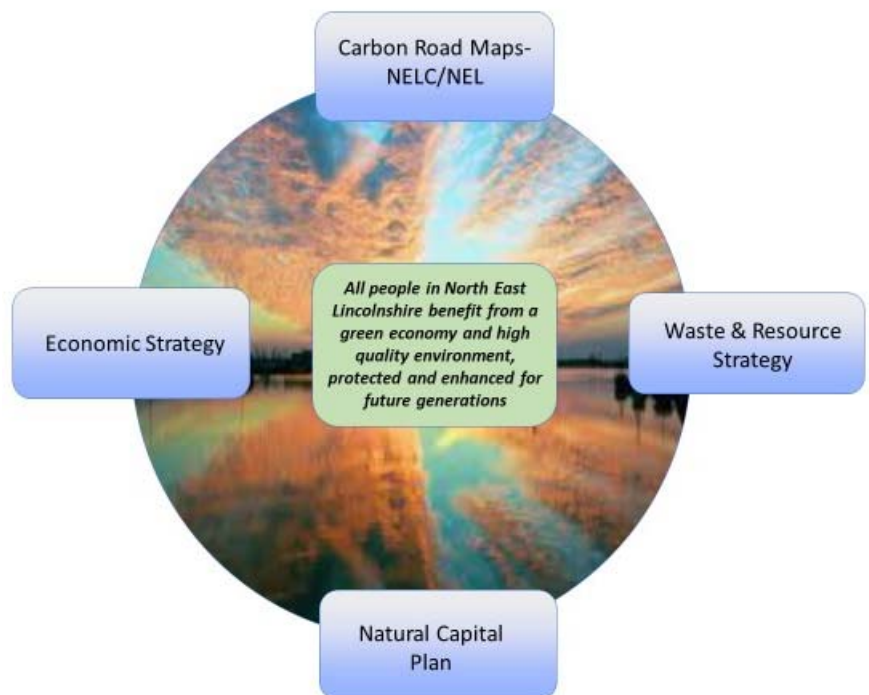
Following the declaration the Council, supported by our regeneration partner Engie, has undertaken an in-depth review of current policies, procedures and activity, to propose an approach to identify further opportunities to reduce our own carbon emissions as well as contribute to mitigation work and reduction of carbon emissions across North East Lincolnshire. As part of this work, we have looked closely at government direction such as the 25-year Environment Plan, the 10-point plan for green industrial revolution and the progressing Environment Bill. We have further considered the principles set out in the regional Estuary Plan, Humber Industrial Decarbonisation Plan and the direction provided by Yorkshire and Humber Climate Commission and Humber Zero. The work has resulted in two carbon road maps, one for the Council's internal activities and one for the wider borough. Work has further been expanded to ensure equal attention is given to the ecological impact of climate change and longer-term threat to biodiversity.

Future approach:

Based on the aspirations set by elected members and the regional/national direction, the following place-based outcome for the green agenda has been proposed:

"We want North East Lincolnshire to be a thriving low carbon economy powered by sustainable energy. A circular economy, where businesses and residents reject the throw-away society, instead reducing, re-using and recycling. A place where residents live in energy efficient, healthy homes and where it is enjoyable, accessible, and affordable for everyone to travel sustainably every day. A nature rich place, where wildlife abounds, and everyone has access to clean air and inspiring green and open spaces to protect health and enhance lives."

Delivery of these aspirations will require both policy and culture change. We intend to approach this by focusing on four delivery themes:



Carbon Road Maps:

The Council has committed to achieve net zero for carbon emissions in its own business by 2050 and is investigating whether it can commit to a target of 2040 instead. The Council also needs to work with others across our borough and region to reduce carbon emissions. We are focusing on what the Council can do to lead, enable and inspire. These two elements form our carbon roadmaps.

To become a Carbon Neutral Organisation, we will focus on 6 workstreams in our NELC carbon road map:

- Energy Efficient Public Buildings,
- Transition our fleet to sustainable fuels,
- Energy Efficient Street Lighting,
- Sustainable procurement,
- Place environmental impact at heart of decision making,
- Encourage staff behaviour change and a green culture.

We recognise that we are part of a larger system of change and need to work with others to achieve a sustainable future for our place. With limited resources, we must prioritise our actions to have greatest impact. We will do this by considering our strengths as an organisation and sphere of influence, to guide where our resources are best placed. The purpose of the NEL net zero carbon roadmap is to identify actions that can be taken by the Council to help drive emissions reductions within NEL. The ambition is to drive change and encourage all stakeholders in the region to work together in achieving the 2050 net zero carbon targets.

- Working as an enabler to ensure sufficient support is in place for businesses to improve efficiency of commercial buildings,
- Enable green transport through network investment and policy change,
- Support our partners in achieving industrial decarbonisation,
- As a policy maker and planning authority, enable sustainable new housing,
- Support our partners and residents to improve old housing stock to become more sustainable,
- In our role as a facilitator, encourage community engagement and sustainability actions.

Next steps:

To ensure our priorities are supported by partners, residents and businesses we will carry out a period of public consultation in July/August 2021. We expect the final carbon road maps to be presented to Cabinet in September 2021 for its decision to proceed.

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If you would like to find out more about scrutiny you can contact us:

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on our website www.nelc.gov.uk/council/councillors-democracy-elections-/scrutiny/

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North East Lincolnshire

Net Zero Carbon Roadmaps

Draft



Context



In September 2019, a climate emergency was declared in North East Lincolnshire (NEL). North East Lincolnshire Council (NELC) confirmed its ambition to reduce its carbon emissions to net zero by 2050, while also bringing new jobs to the local area. Elected members have also pledged to consider the environmental effects of all future decisions, to help make NEL a low carbon borough and mitigate the effects of climate change.

The Climate Change Act legally commits the UK to reducing greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050. The act requires the Government to set legally-binding ‘carbon budgets’ which act as stepping stones towards the 2050 target.

Budget	Carbon budget level	Reduction below 1990 levels	Met?
1st carbon budget (2008 to 2012)	3,018 MtCO ₂ e	25%	Yes
2nd carbon budget (2013 to 2017)	2,782 MtCO ₂ e	31%	Yes
3rd carbon budget (2018 to 2022)	2,544 MtCO ₂ e	37% by 2020	On track
4th carbon budget (2023 to 2027)	1,950 MtCO ₂ e	51% by 2025	Off track
5th carbon budget (2028 to 2032)	1,725 MtCO ₂ e	57% by 2030	Off track
6th carbon budget (2033 to 2037)	965 MtCO ₂ e	78% by 2035	To be legislated June 2021
Net Zero Target		At least 100% by 2050	

To support NELC action on climate change, ENGIE were invited to develop two roadmaps. Firstly, an internal roadmap to assist NELC to become a carbon neutral organisation. Secondly, a regional net zero carbon roadmap for the Borough of NEL. This roadmap will help to outline the Council’s role in supporting the Borough’s carbon reduction journey and sits alongside a detailed NELC net zero carbon roadmap, which was developed to inform the Council’s net zero carbon transition.



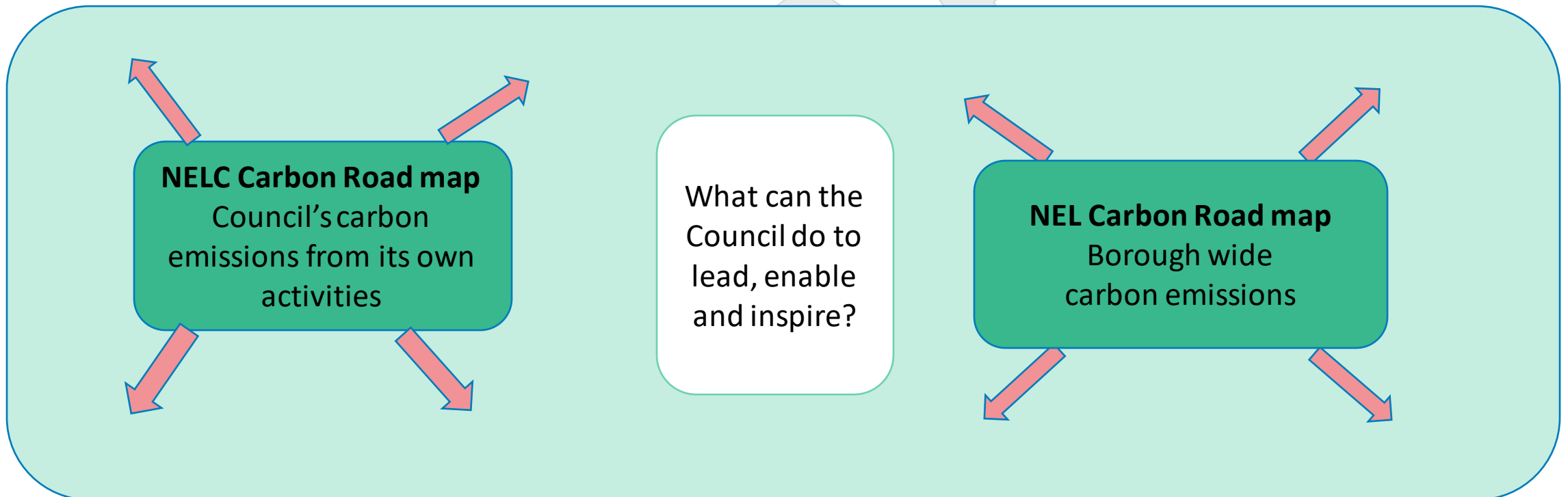
What are our carbon roadmaps all about?



The Council has committed to achieve net zero for carbon emissions in its own business by 2050, and is investigating whether it can commit to a target of 2040 instead.

The Council also needs to work with others across our borough and region to reduce carbon emissions. We are focusing on what the Council can do to lead, enable and inspire.

These two elements form our carbon roadmaps.



North East Lincolnshire (NEL)



NEL has gained a reputation as a place to invest, develop and deploy new low carbon technologies. This has also resulted in the creation of a variety of jobs, such as the offshore wind maintenance sector that has developed in Grimsby. The revival of Grimsby port was highlighted as a case study in the Government's Energy White Paper (released December 2020) as a player in the offshore wind power sector.

There is clearly a significant opportunity within NEL for the low carbon and energy sector to act as a driver of economic growth for the region, creating jobs and enhancing the quality of life for its residents.

NEL has already set itself a strong vision around energy, with clear ambitions to 2050, as set out in its 2016 energy vision.

Leading Region

By 2032, NEL will be nationally and internationally recognised as the UK's leading region for low-carbon energy and the UK capital of the renewable energy industry

Renewable Solutions

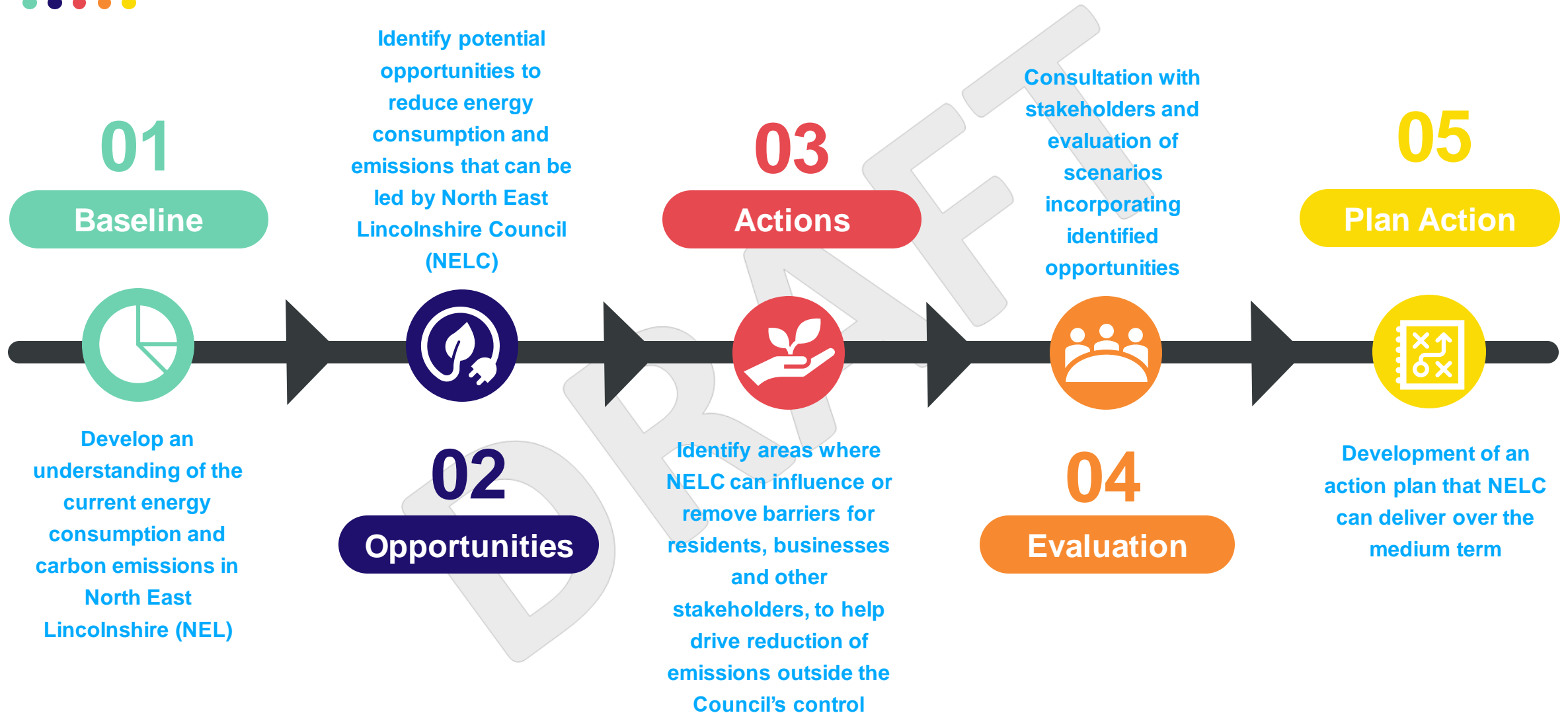
NEL will have developed a range of low-carbon, high-efficiency, renewable solutions to regenerate the region. This will deliver strategic and economic advantage for its businesses and affordable heat and power for its communities

Carbon Neutrality

The region's energy programme will have enough impetus that by 2050 NEL will not only be able to achieve its 80% carbon reduction target but will also be able to declare itself carbon neutral



Project Objectives



Purpose of the NEL Roadmap



The purpose of the NEL net zero carbon roadmap is to identify actions that can be taken by the Council to help drive emissions reductions within NEL. The ambition is to drive change and encourage all stakeholders in the region to work together in achieving the 2050 net zero carbon targets.

The Council's role in taking action will vary dependent on the level of influence they have over emissions and the organisations they are engaging with. Actions that could be taken by NELC include:

- Building upon existing NEL initiatives
- Facilitating adoption of new technologies
- Targeting local implementation of national initiatives
- Accessing funding for schemes for local implementation
- Facilitating initiatives across different stakeholders

The actions in the roadmap are designed to provide a medium-term action plan for NELC. Actions will not deliver all of the emissions reductions required to meet the regional targets, but aim to drive change within the region, as well as support national initiatives and government policies around climate change.



NORTH
EAST
LINCOLNSHIRE
COUNCIL

LEAD

•Direct Control

ENABLE

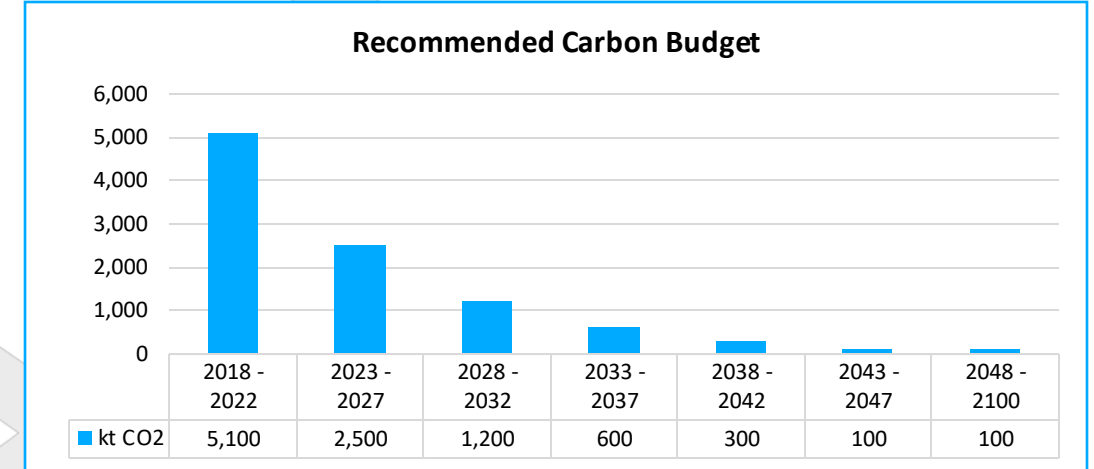
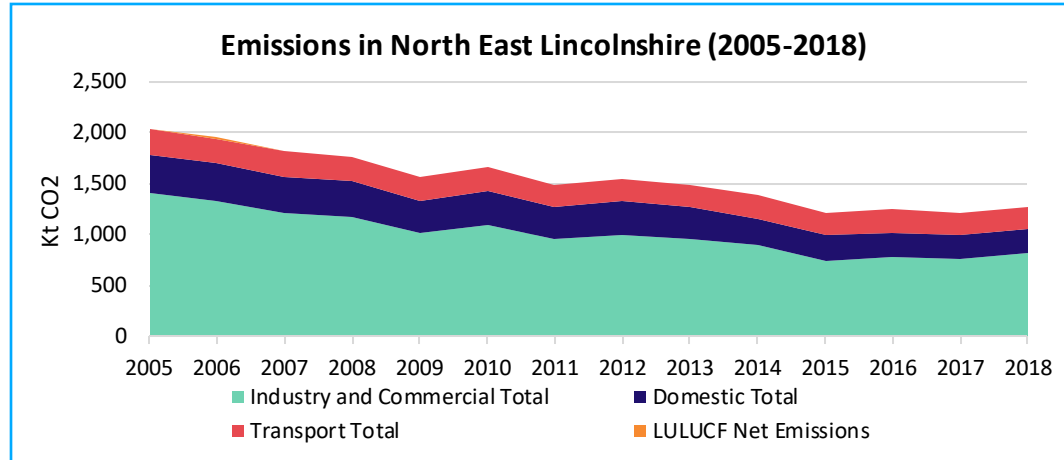
•Stronger
Influence

INSPIRE

•Weaker Influence



Emissions Baseline



NELC and NEL emissions



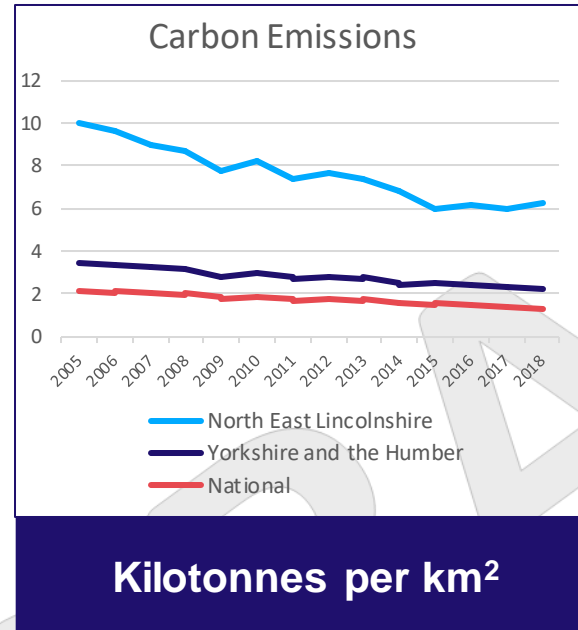
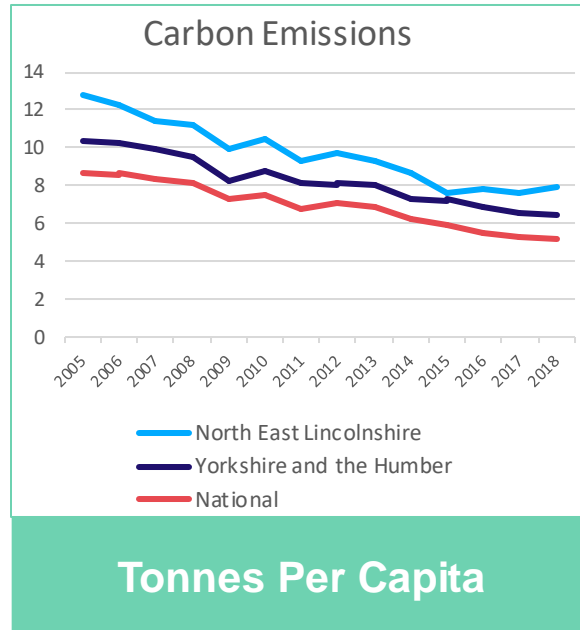
- A climate emergency was declared in NEL in September 2019.
- NELC has confirmed its ambition to reduce its carbon emissions to zero by 2050 and is currently exploring a net zero target by 2040.
- These ambitious targets for emissions reductions are in line with the broader national target of net zero by 2050.
- While emissions reductions have been seen since 2005, the rate of reduction has slowed in recent years.
- Action is required now to stimulate greater rates of emissions reduction.

Carbon Budgets

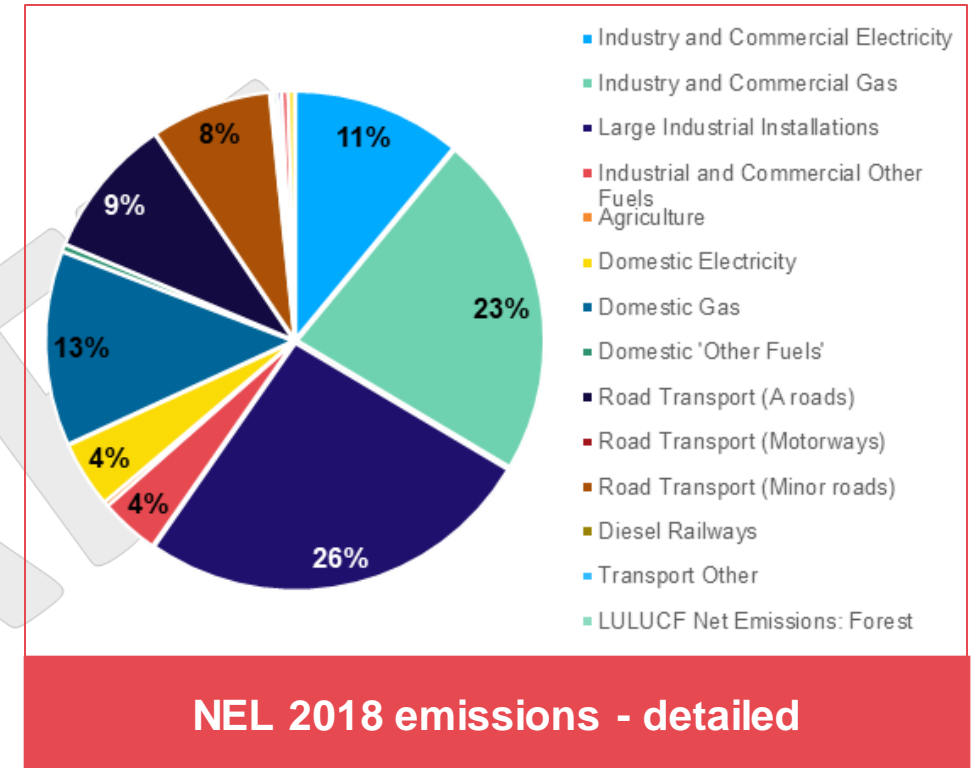


- The Paris Agreement's global temperature target of "well below 2°C and pursuing 1.5°C" has been translated into a national UK carbon budget.
- Analysis has been carried out for each UK local authority to determine contribution towards this budget. NEL's target is to emit no more than 9.9 MtCO2 between 2018 and 2100.
- Progress has already been made in reducing emissions, with 2018 emissions being 37.6% lower than 2005 levels.
- This equates to ~3.4% reduction year-on-year. At this level of annual reduction NEL's carbon budget would be exceeded by 2026.

Baseline Insights – Overview



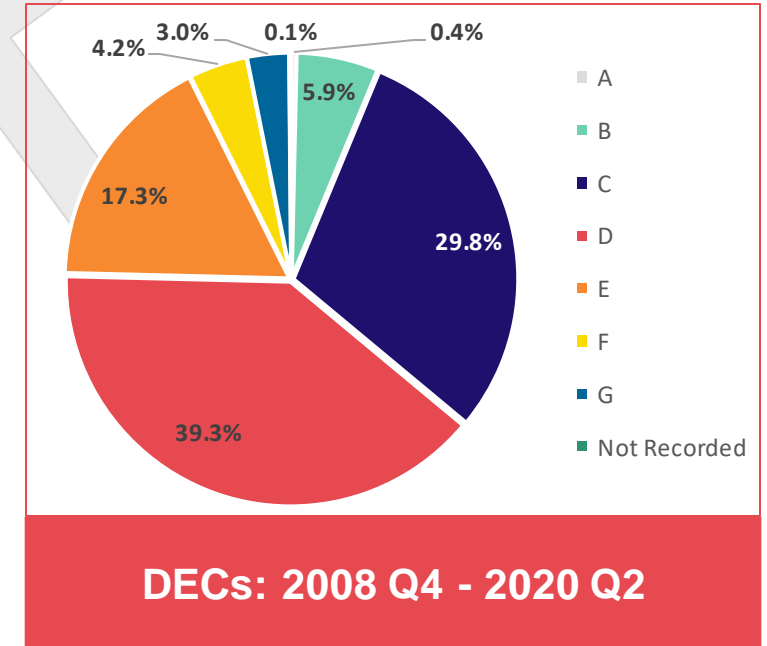
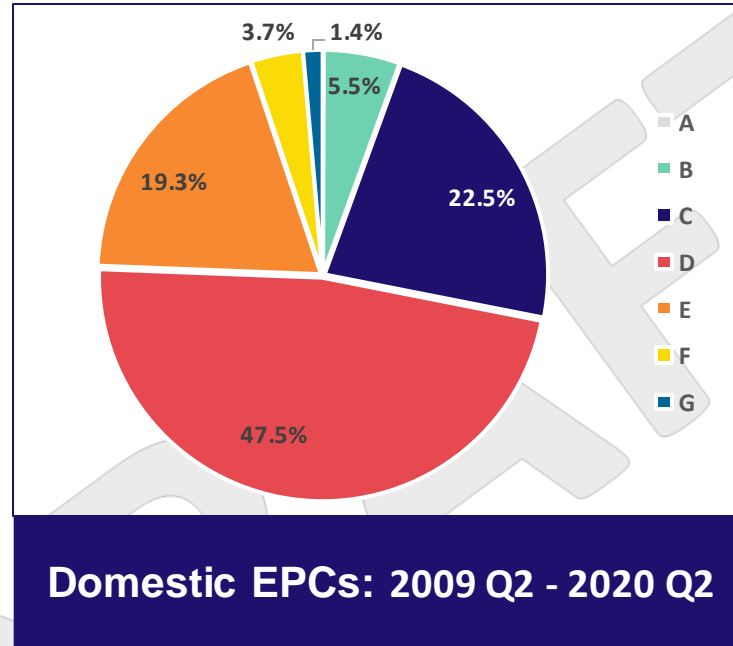
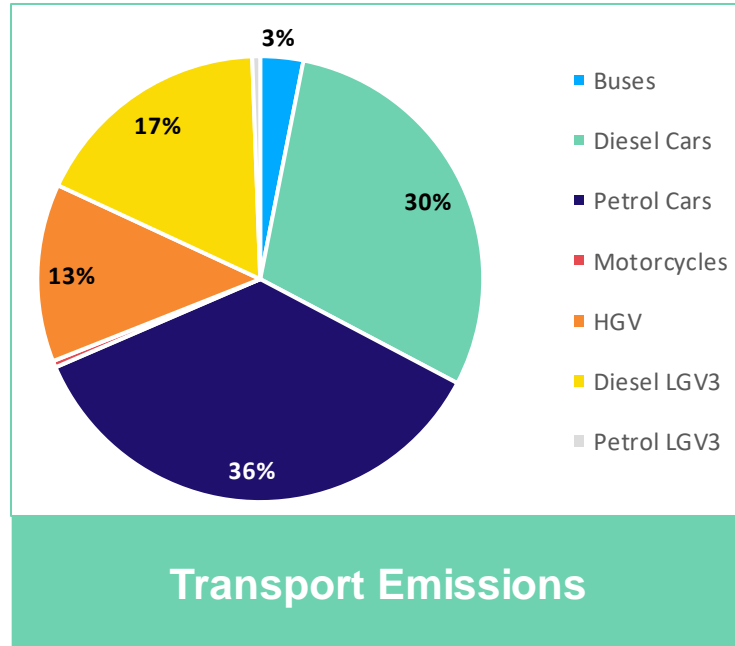
- Emissions per capita and per km² are both higher in NEL than the average in Yorkshire and the Humber and nationally.
- This is mainly due to higher levels of industrial emissions within the Borough.
- However, other industrial and commercial emissions sources, particularly gas and electricity consumption, are also significantly higher than the regional and national averages.



The 2018 national emissions data has been analysed to identify key emissions sources in NEL. The largest emissions sources are:

- Large industrial installations (26%)
- Industrial and commercial gas (23%)
- Domestic properties (17% - gas and electric)
- Transport (17%)

Baseline Insights – Sectors



- Transport emissions are made up of three main vehicle types: petrol cars (36%); diesel cars (36%); heavy and large goods vehicles (HGV/LGV) (31%).
- Data from 51,013 domestic Energy Performance Certificate (EPC) lodgements have been analysed to determine breakdown of emissions from domestic properties:
 - Analysis shows an estimated 224,154 tCO₂ from heating and electricity in these domestic properties.
 - 71.9% of EPCs are rated D-G showing that there is considerable scope for improvement in domestic properties.
- Data from 1,426 non-domestic property Display Energy Certificate (DEC) lodgements have been analysed for to determine breakdown of emissions from these properties:
 - Analysis shows 166,702 tCO₂ from heating and 176,959 tCO₂ from electricity in these non-domestic properties.
 - 63.8% of EPCs are rated D-G showing that there is also considerable scope for improvement in non-domestic properties.

What Do We Want To Achieve?



Net Zero Carbon Ambitions



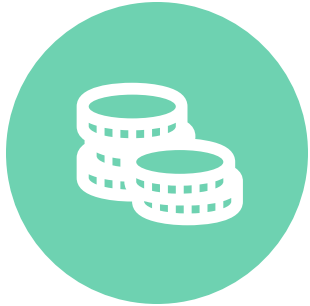
As part of our internal Carbon Road Map, the Council is working to make its own estate and assets net zero carbon. However, direct emissions from Council activities are relatively low, accounting for only ~0.5% of total NEL emissions.

The Council is therefore also seeking to support the climate change agenda by taking a leading role in supporting NEL in driving emissions reductions. The council can:

- Showcase actions and technologies at its sites
- Influence stakeholders across the Borough
- Provide appropriate information and support
- Facilitate and remove barriers for climate action
- Create drivers and incentives to drive reductions in emissions from commercial and domestic properties, as well as from transport.

Energy intensive industries comprise a large proportion of overall emissions. While these are outside the Council's control, the Council can still have a key role influencing and facilitating emissions reductions. Actions will mainly involve working with, supporting and providing information for stakeholders, such as work the Council is already undertaking with CATCH, the industry led partnership supporting the process, energy, engineering and renewable industries in Yorkshire and Humber.

Why Do We Want To Achieve This?



Green Recovery

In a post-Covid-19 world it is likely that the jobs market will see large challenges. However, green recovery presents a huge opportunity to reset the economy and redirect it towards a better, more sustainable future. National Grid have recently estimated that an additional 400,000 jobs will be required to deliver the 2050 net zero carbon target in the energy sector alone. Fostering the right conditions to support the creation of new jobs that provide progressive and useful employment in support of the climate change agenda will help NEL build back better and achieve its carbon reduction aspirations.



Health & Wellbeing

Tackling climate change and reducing carbon emissions will add value beyond these goals alone. The actions developed as part of this roadmap will encourage residents to live sustainable lifestyles through things like active travel, waste reduction and other actions that will improve the quality of life. The Council will also seek to work with local community groups and provide increased access and connection to nature, support more flexible working and encourage a healthy, sustainable lifestyle.



Fuel Poverty

In 2019, 16.7% of households in NEL were in fuel poverty, which is above average for England. Economic impacts in the wake of Covid-19 hold the potential to worsen existing poverty and deprivation in communities. Actions around reducing carbon, such as lobbying for funding to improve energy efficiency in domestic housing and using existing partnerships to carry out the work required, will have multiple benefits. Not only will housing stock be decarbonised, but fuel bills will be reduced (helping alleviate fuel poverty) and people's physical and mental wellbeing will also benefit.



Air Quality & Biodiversity

Climate change and air quality are closely linked. For example, encouraging the uptake of electric vehicles will reduce emissions from cars, which has both carbon and air quality benefits. This will help reduce air pollution and supporting a district. Internally, the Council is acting on greening its own fleet and actions can be taken to encourage greener forms of transport in the wider population. The Council can also take action to support wider biodiversity— particularly through local offsetting and creation of green spaces. This will have wider benefits around biodiversity, flood alleviation and general sustainability.



Sustainable Communities

Working to reduce carbon emissions should be considered in the context of 'placemaking'. Actions should seek to follow the aspiration set out in NEL's local plan, which is to plan for growth and aim to ensure NEL becomes a sustainable location in which people can live, work, and enjoy their recreation, both now and in the future. Where possible, actions can be taken in local communities and in conjunction with local community groups to create a sense of place and have positive impacts on not only carbon emissions, but elements like congestion, pollutants and improved community cohesion.

How Will We Achieve This?



To help drive carbon reductions throughout NEL, a wide range of actions from multiple stakeholders will be required. In determining appropriate actions for the Council to take to support the region's net zero carbon drive, the principles of the Institute of Environmental Management and Assessment (IEMA) Greenhouse Gas (GHG) Management Hierarchy have been considered and adapted. Actions identified will first seek to eliminate emissions, then reduce, substitute and finally compensate.

01 ELIMINATE

Influence decisions and actions to prevent emissions across the lifecycle. Maximise potential for eliminating emissions in existing development or change. Transition to new models of operating that maximise emissions reduction.

02 REDUCE

Seek opportunities for real and relative reductions in carbon and energy. Seek efficiency in operations, processes, fleet and energy management. Optimise approaches using technology and digital as enablers.



03 SUBSTITUTE

Adopt and enable renewables and low-carbon technologies on sites and in transport. Reduce the carbon intensity of energy used and purchased. Purchase goods and services with lower embodied or embedded emissions.

04 COMPENSATE

Compensate 'unavoidable' residual emissions through mechanisms such as carbon offsets. Investigate land management, value chain, asset sharing and carbon credits. Support local climate change actions.

How Will We Achieve This?



CHALLENGE Net Zero Carbon Emissions by 2050	Priority 1 Low Carbon Estate, Public Buildings and Businesses	1.1: Council Estate and Assets – net zero carbon roadmap delivery
	Priority 2 Industrial Sites	1.2: Commercial Estate / Leased properties – EPC ratings
		1.3: Wider Public Estate and Businesses
		2.1: Support for CATCH
	Priority 3 Domestic Properties	2.2: Information to support local action
		2.3: Participation in local groups / partnerships
		3.1: Local Planning
	Priority 4 Transport	3.2: Support for Homeowners
		3.3: Work with external stakeholders
		4.1: Green Cycle Highways and Active Travel
	Priority 5 Local Sustainability	4.2: Green Public Transport
		4.3: Electric Vehicle (EV) Charging Network
		5.1: Sustainability Actions on Council Assets
		5.2: Local Carbon Offsetting
		5.3: Work with Community Stakeholders



Delivery Priorities and Key Actions

Priority 1: Low Carbon Estate, Public Buildings and Businesses



Ambition

To reduce carbon emissions and energy consumption across Council buildings and fleet, improve the efficiency of the wider commercial estate and support actions in the wider public estate and with businesses.

The Council will look to move its estate and fleet to net zero carbon in line with the NELC Net Zero Carbon Roadmap and aspirations outlined in the Climate Emergency Declaration from 2019.

The Council wishes to act as an exemplar and enabler to help drive change in public and commercial buildings across the region.

Net zero carbon transition – leadership role

The Council is ideally placed to act as a role-model for North East Lincolnshire, leading the way to net zero carbon. Through action on its own estate, the Council can demonstrate how an organisation can transition towards net zero carbon. Council progress can also test out and demonstrate innovative approaches.

Through the Council demonstrating its commitment, a standard will be set for others to follow. The commitment has already been set through the declaration of a Climate Emergency in September 2019 and actions now need to be taken to work towards reducing carbon across the region.

As well as actions within its own estate and assets, the Council can enable others to act through information provision and development of supporting policies.

Impacts and benefits

The key impact from the Council's action will be a reduction in the energy consumed across the estate and in Council assets, as well as a corresponding reduction in carbon emissions.

This success will act as an exemplar for other organisation, helping to drive corresponding energy and emissions reductions across the wider public estate and in businesses.

Challenges and barriers

Each building and asset will require development of its own unique blend of solutions to ensure the best possible approach to decarbonisation. However, the approach to specific technologies and actions can be streamlined and good practice across these shared to maximise benefit.

Some assets may be difficult to decarbonise due to age or unsuitability for energy conservation measures (ECMs). However, offsetting strategies could be considered for such hard-to-treat buildings.

Decarbonisation of the public and commercial estate in NEL will require significant investment over several years, with some measures having long payback periods. Therefore investment strategies will need to be considered, as well as plans to maximise on funding availability.

Opportunities

Net zero carbon projects on the Council estate can align with existing maintenance and refurbishment plans, as well as Council new-build schemes across the council.

There is also considerable scope for the Council to achieve carbon reductions through considering the commissioning, procurement and management of contracts.

Priority 1.1: NELC Net zero carbon roadmap delivery



Overview

A net zero carbon roadmap has been developed for NELC. The purpose of this roadmap was to provide a masterplan for achieving net zero carbon by 2050 and to investigate whether it can commit to a target of 2040

The roadmap was produced through the following steps:

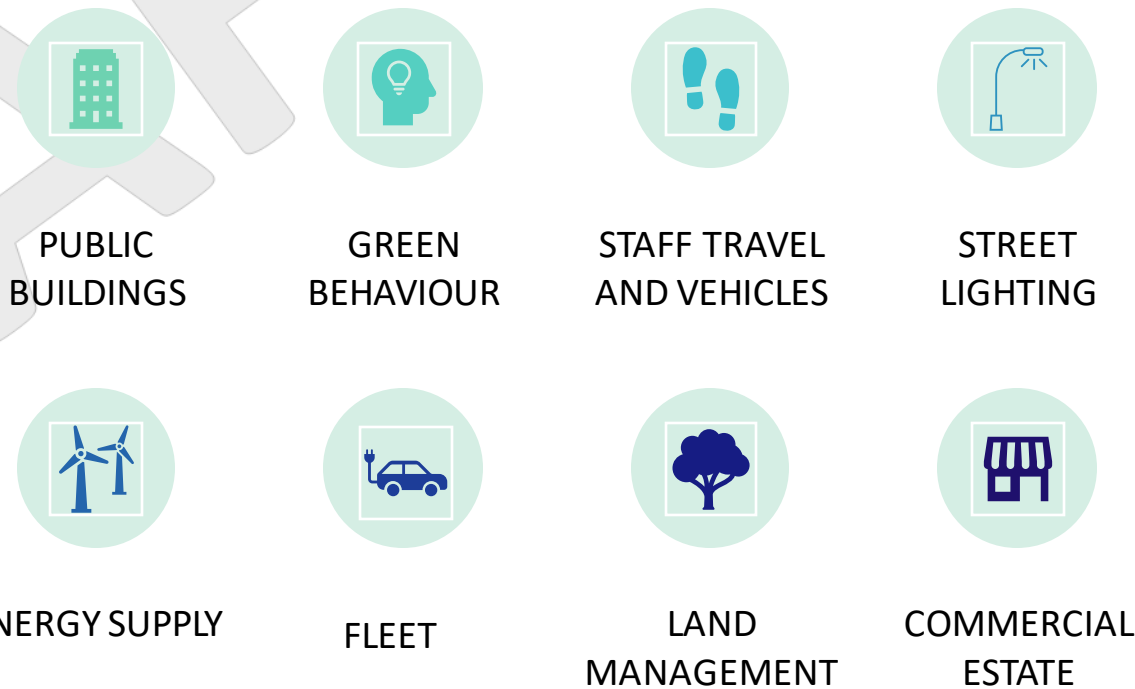
- Measuring energy use in previous years to determine NELC's baseline carbon emissions by scope.
- Analysing data on emissions sources to determine all potential opportunities for carbon reduction.
- Further analysis and site visits to firm up opportunities.

Throughout the roadmap, opportunities were sought to:

- **Reduce:** opportunities to reduce emissions, focusing on energy efficiency measures and the possibility of implementing low carbon technologies.
- **Generate:** Proposals for NELC to generate its own renewable energy, with a focus on onsite generation.
- **Offset:** Good quality offsetting projects will allow the remaining emissions after reduction to be offset, while providing value to the local community, the environment and the economy.

Key actions

Following development of the roadmap the findings were analysed and an initial delivery plan developed to support with delivery of net zero carbon goals outlined in the roadmap. The key actions identified fall across eight key areas.



Priority 1.1: NELC Net zero carbon roadmap delivery



Key actions (continued)

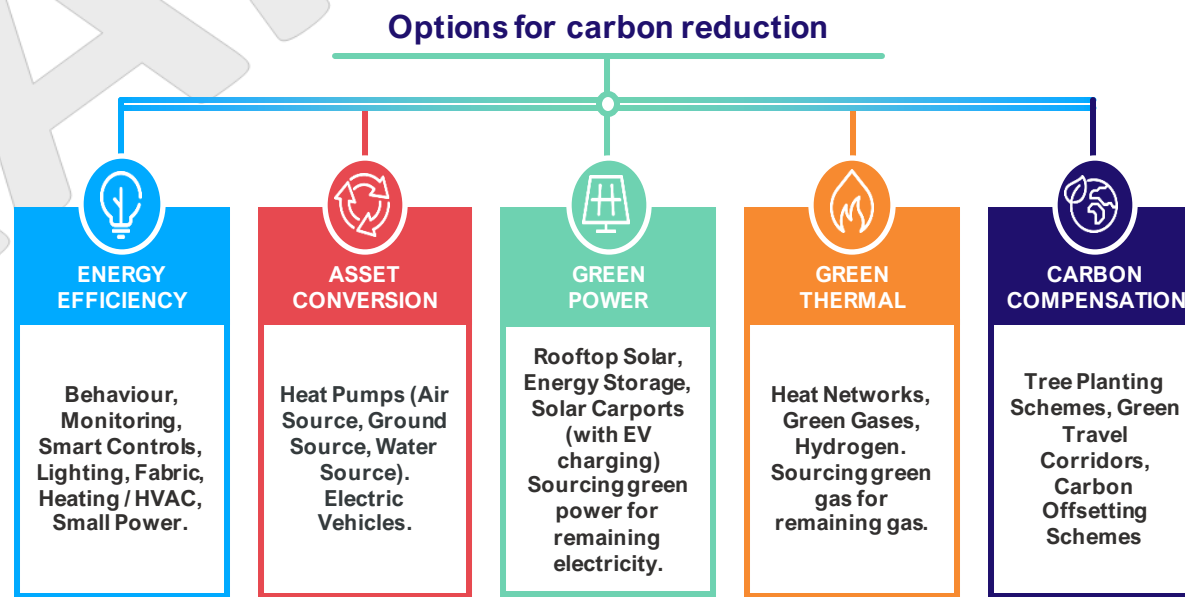
Delivery of the actions in the net zero carbon roadmap aligns with existing maintenance and refurbishment plans, as well as existing action being taken on carbon reduction across the Council. The majority of actions are around the decarbonisation of public buildings and the Council's fleet. There are also some longer-terms exploratory actions that have been identified:

- Actions for **Public Buildings** focus around energy efficiency, heat decarbonisation and energy supply (predominantly via rooftop solar PV and solar carports). However, increasing green behaviour amongst staff and users of buildings via education, culture change and volunteering also has a focus.
- Decarbonisation of NELC's **fleet** is another key priority of the roadmap, A plan is being put in place for conversion of vehicles to electric vehicles (EV), with consideration being given to green fuels for HGVs and LGVs. Potential for a pilot project around hydrogen refuelling could also be considered by the council.
- Remaining emissions on the public estate will require **carbon compensation** or **offsetting**. Actions around this workstream are picked up Priority 5.
- Actions such as incentivisation, staff vehicle conversion and remote working are being considered to help decarbonise **staff travel and vehicles**.
- Significant work has already been carried out to convert street lighting to LED and other actions such as around controls are being considered to further drive emissions reduction.

- Future exploration of potential for **energy supply** through larger-scale renewable energy or renewable technologies on the Council's own land are also highlighted as opportunities for future consideration.

Options for carbon reduction – Council estate and assets

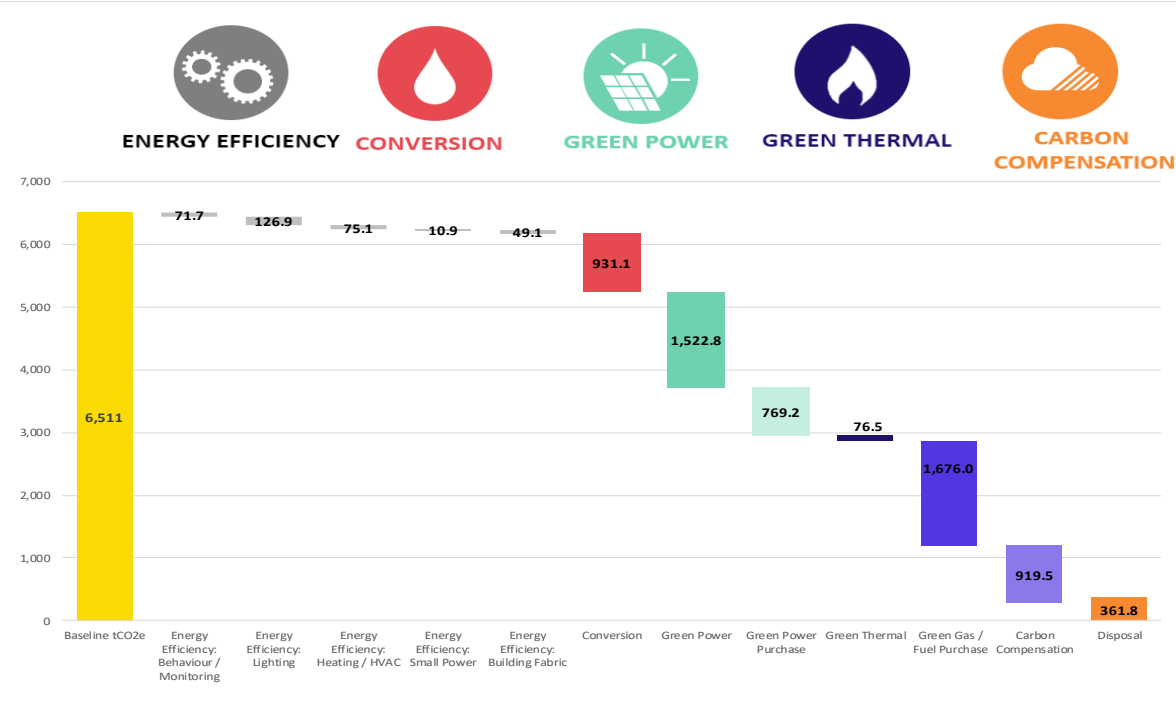
Suitable interventions across the Council's estate has fallen into five categories:



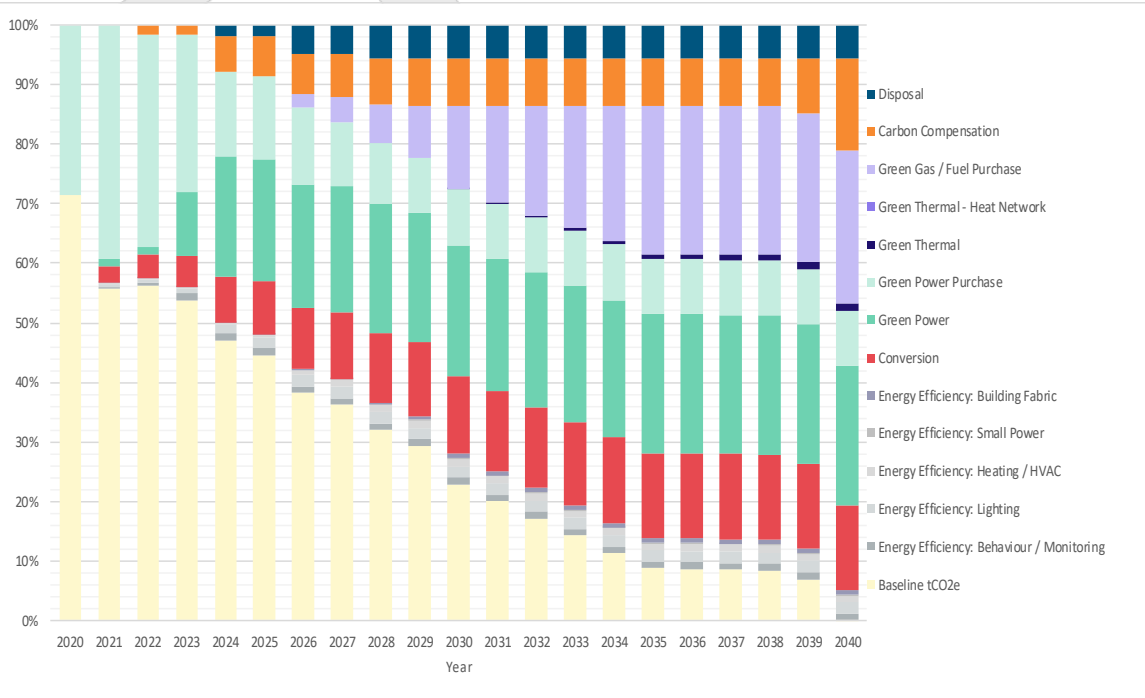
Priority 1.1: NELC Net zero carbon roadmap delivery



Carbon waterfall of target reductions (all sites)



NELC's net zero carbon journey (indicative timeline of 2040 as an end date)



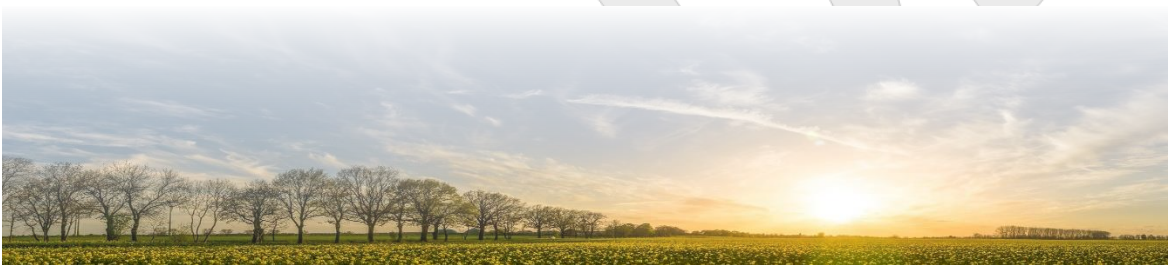
Priority 1.1: NELC Net zero carbon roadmap delivery



What has been achieved to date?

Significant action has already been undertaken by the Council to drive emissions reduction across the estate. Some key achievements include:

- Successful application for grant funding under the Public Sector Decarbonisation Scheme (PSDS). Six buildings with projects identified through the roadmap project were included in the application and delivery of these is now underway. These projects are targeting some of the Council's highest consuming buildings and will result in good levels of carbon reduction.
- The Council manages approximately 19,000 lamp-posts and nearly 3,500 illuminated traffic signs and bollards. Since September 2017 the Council has been upgrading the street lighting to LED and this project is now complete and has resulted in high carbon savings.
- Several sites and business centres in the Council's estate have received funding for LED upgrades and these project have now been completed.



Project delivery – buildings

A key aspect of delivering carbon reduction across the Council is identification and assessment of delivery requirements for potential carbon reduction projects. The roadmap provides a baseline of technically viable options and an initial delivery plans has been identified from this. Buildings and potential projects are now being assessed against maintenance and other planned works to ensure that a programme of works is developed. This programme of works will, where appropriate, link into existing programmes of work, such as the long-term maintenance plan and any ongoing building rationalisation, refurbishment or repurposing.

In addition to actions on the existing estate, the Council will ensure any new or refurbished buildings adhere to high environmental and sustainability standards. Actions are already under consideration for upgrade or depot sites within the Council.

Another key action is the decarbonisation of heating (reducing reliance on natural gas). The PSDS projects currently underway are acting as pilot projects demonstrating low carbon heating systems and the incorporation of renewable energy into these. Where possible, all buildings should be considered for conversion from carbon intensive heating fuels to renewables based or low carbon heating systems. This action will require incorporation into the Council's asset management strategy.

In the longer term the Council should consider potential for heat networks or potentially hydrogen to support the decarbonisation of heating.

Priority 1.1: NELC Net zero carbon roadmap delivery



Project delivery – fleet

The Council wishes to embrace technology and create suitable infrastructure to allow the Council's fleet to be converted to or replaced with ultra-low emission vehicles (ULEVs).

The Council has already made good progress with decarbonising their fleet, with fifteen electric vans and ten electric cars in use by the end of 2020. The Council will seek to convert non-electric cars to Electric Vehicles (EV). Suitable vans for conversion to electric vans have been identified and a strategy for gradual replacement will be put in place.

Challenges

Opportunities to move larger or specialist vehicles to electric drivetrains can be limited due to the lower power density of a lithium ion battery in comparison to petrol and diesel fuels, which presents challenges regarding space on the vehicle and the potential range the vehicle can offer. Options for green mobility should start with detailed fleet insights. This will allow detailed business cases to be developed for options such as green refuelling stations which could feature a range of low and zero emission fuels to complement the Council's net zero carbon strategy. This concept could be further developed into green mobility hubs, which could include options for technologies such as hydrogen plant, solar photo voltaic and anaerobic digestion.

In addition to consideration of alternative fuels, it has been suggested that NELC's transport strategy should also look at the potential to invest in other lighter and behaviour change measures to reduce emissions. These measures include:

1. Eco Driver Training
2. Route optimisation
3. Caps on emissions, with league tables or incentives for achieving
4. Telemetry systems
5. HGV modifications to reduce drag
6. Low rolling resistance tyres
7. Automatic tyre pressure systems



Priority 1.1: NELC Net zero carbon roadmap delivery



Stakeholders

To deliver carbon reductions across the Council estate and assets will require actions from a range of stakeholders.

It is important that all Council employees and elected members understand the climate emergency and the need for action to drive carbon reductions. This will allow them to be aware and responsible in their day-to-day decisions and actions. Ensuring this level of knowledge will also help to embed energy and sustainability actions into longer-term visions and plans across the whole Council. This will, in turn, start to filter into services to the wider region and provide a strong exemplar on climate action. Climate change action and discussions are already regular topics of discussion at various levels across the Council.

In the longer term, the procurement of goods and services across the Council will need to be considered and appropriate action taken to embed carbon reduction within the supply chain and engaging partners and suppliers in the region's climate change goals. As a start to this process procurement guidelines should be reviewed in line with the internationally-recognised guidance standard set out by ISO20400. PAS 2050 specification for the assessment of the life cycle greenhouse gas emissions of goods and services could also be considered.

Climate awareness actions

The Council will ensure that Council-wide employee awareness campaign is regularly carried out and updated. This will be based on the Carbon Literacy Project framework and will ensure all staff and elected members have good understanding of the issues and aspirations. Climate change champions will be identified in each service area to help drive climate change aspirations throughout the Council.

The Council will seek to promote and recognise good practice and raise awareness of climate change-related activities and events. It will also continue to track metrics relating to energy and carbon and communicate these appropriately to inform of progress.



Priority 1.2: Commercial Estate / Leased properties – Energy Certificate ratings



Why is action required?

As determined through the baseline analysis of NEL emissions, there are a large number of properties, both domestic and non-domestic, that have energy ratings of D or below on their Energy Performance Certificates (EPCs) or Display Energy Certificates (DECs).

The Minimum Energy Efficiency Standards (MEES), which set out a minimum level of energy efficiency for private rented property in England and Wales came into effect in April 2018. This legislation made it an offence to grant, extend or renew a lease of a commercial property with an EPC rating of below E from 1 April 2018 and from the 1 April 2023 it will be an offence to continue to let a commercial property with an EPC rating of below E. This legislation will tighten over time, with all landlords requiring a valid EPC by 1 April 2025 and a minimum EPC rating of C by the 1 April 2027. By 1 April 2030 buildings improvements will be required to bring the EPC rating to at least a B.

Risks and barriers

In terms of the Council's commercial estate, the MEES presents a risk to revenue streams should it not be possible to lease out properties due to not meeting MEES.

A key barrier to mitigating the risk is that there is no current budget assigned to carry out EPC surveys and upgrades to the poorest performing properties.

What actions are required?

A programme of action has been set out to ensure the Council's commercial estate is brought up to standard and avoid issues around not meeting the MEES. Key actions identified are:

- A programme of EPCs is being planned to ensure that all properties required have an up-to-date EPC.
- Analysis of EPC data for NEL has been carried out as part of this work to help provide initial analysis of the poorest performing properties and help with early identification of possible projects.
- Consideration is being given to how to use backlog maintenance and other budgets to fund improvement projects
- Categorisation and prioritisation will then be carried out to bring the commercial estate up to standard ahead of changes in legislation.

Wider opportunity

The Council has a role to play in enforcing MEES within the region and this could help to drive emissions reductions across the borough. Actions regarding the wider estate and the Council's role in provision of advice and support is outlined in Priority 1.3.

Priority 1.3: Wider Public Estate and Businesses



Why is action required?

There is a need for all organisations in the region, whether public sector or commercial businesses to take action in the decarbonisation in NEL. However, some organisations will need assistance to help them to understand and address their carbon impacts.

To help support decarbonisation for these organisations, NELC will seek to take an enabling role and provide appropriate and timely advice to support change. An important part of the Council's role in supporting decarbonisation in the wider public estate and with businesses in the region will be around engagement. Engaging with stakeholders across sectors will help them gain an understanding of the support required and actions needed to overcome challenges. This work should build on and support efforts already made around economic growth, as well as existing collaborative relationships.

Challenge

There was smart energy programme funding for small and medium enterprises in NEL. However, this funding has now expired and the support is due to end in September 2021.

Across all types of organisations, there are typically three main challenges that prevent action on climate change – a lack of finance, lack of time or resource or a lack of knowledge, particularly with where to start.

There is clearly a need for action to help drive carbon reductions across organisations. The Council is well placed to act as an enabler and role model.

What actions are required?

The Council's role as an enabler to support action in the wider public estate and businesses will focus on a number of key areas.

Firstly, the Council should seek to enforce MEES within the region. The Council could also support this agenda by providing access to an EPC service at low cost (so organisations can benefit from economies of scale). However, this offer would require assessment to determine viability.

As part of this project, analysis has been carried out of all DEC's and non-domestic EPC's within NEL. This will allow the active identification of commercial properties with potential for action, such as those with poor energy efficiency or solar potential.

The Council should also explore who else in the area is working with small businesses and supporting decarbonisation of buildings. Once this exploration has been carried out the Council can evaluate the offer to support smaller businesses and support and enable, as appropriate. It is anticipated that the offer of support would be delivered by other parties.

Another action could be to deliver focus group sessions with local businesses to better understand the gaps in their knowledge and any concerns they have, and to gain insights into what they need from the council to make their own net zero carbon transitions easier.

Priority 1.3: Wider Public Estate and Businesses



Information sharing

The Council has a role to play in the provision of information. This would include actions such as:

- Support the development of the Green Hub at Grimsby library. This is funded via the Stronger Towns Fund (£4.2m). CATCH are leading this work and will operate the Hub.
- Support with advice and guidance to go beyond compliance. This could be via the Council's website or through other methods of communications, such as the Green Hub in Grimsby.
- Provision of advice on applying for grant funding or other support that could be accessed by organisations.

If a commercial building / property advice service were to be set up, this could help to identify and provide advice to commercial landlords and tenants on implementation and delivery of behavioural advice, energy efficiency measures and rooftop solar PV opportunities.

In terms of the wider public estate the Council should look to promote discussion of the climate change and sustainability agenda through forums such as the One Public Estate planning meeting (with stakeholders such as the Clinical Commissioning Group, police and fire services). Through these means the Council can find out who is doing what on the climate change agenda and determine where there are gaps that require support.

The Council should continue to play an enabling role for other large emitters such as schools and leisure centres. This will be mainly around provisions of information on how to plan for net zero carbon and support stakeholders ability to access funding.

Challenges

The key challenge with provision of support for the climate change agenda with organisations across the region this is current lack of resource.

Benefits

Taking action to support organisations in decarbonisation has the potential to make significant carbon savings. Helping organisations to calculate potential energy savings and carbon reduction emissions can serve to inspire change.

Priority 2: Industrial Sites



Ambition

While emissions from energy intensive industries form a significant part of overall emissions in NEL, there is already significant action being carried out by stakeholders in the industrial sector. There are there limited actions that can be taken by NELC and the Council's role will mainly be to support and enable action, where appropriate.

Net zero carbon transition – industrial action in NEL

There is already significant action being taken around decarbonising industry in the Humber region. Two key projects include:

- The Humber Cluster Plan – a route to Net Zero, which has secured £1.7m of government funding to show how the Humber cluster can achieve net zero carbon emissions by 2040
- Humber Zero – a large scale decarbonisation project backed by world scale partners which aims to remove up to 8 million tonnes of CO₂ per annum from the Immingham industrial site by the mid 2020s.

NELC is already taking action around supporting these significant projects.

The Council is also involved in the £42 million South Humber Industrial Investment Programme (SHIIP) project to deliver major infrastructure investments, industrial sites and employment creation in NEL. In addition to other action in this programme, a 40ha ecological mitigation Site, Cress Marsh, has been developed. This wetland is intended to help offset industrial development within the SHIIP area.

Challenges and barriers

To achieve emissions reductions targets for NEL there has to be significant reduction in industrial emissions, with a focus on the largest emitters. The challenge is to ensure that these emissions reductions are not achieved through a reduction in economic activity. Instead actions should be sought that support local jobs and stimulate the economy while also delivering carbon savings.

Opportunities

Even relatively small projects could have large impact relative to NEL's total emissions. The Council's role should focus on three key areas:

- **Priority 2.1:** Support for local industrial action, including the work of CATCH
- **Priority 2.2:** Provision of appropriate information to support local action
- **Priority 2.3:** Participation in local groups / partnerships.



Priority 2: Industrial Sites



What actions are required?

The Council does not have direct remit to reduce emissions in the industrial sector. However, the scale of the emissions as well as the regional economic impact of industrial companies means that there is likely to be real value in the Council actively liaising with these companies. As part of this, the Council can have a key role in bringing stakeholders together, helping to build local partnerships, raise the profile of proposed schemes and leading funding and feasibility studies for shared infrastructure.

Supporting local industry to develop a low emissions future is key to economic development of NEL. Some initial funding may be required to support action but once initial actions have been taken the Council could seek to gain funding from industrial partners. The Council's key role will be acting as a facilitator and enabler. Potential action could include the creation a proactive industrial liaison group. Liaison should focus on areas where the Council can have input, such as shared infrastructure, creating partnerships (including with academic institutions), resolving barriers (such as potential planning issues and enable through the planning process where possible), undertaking feasibility studies and leading grant funding applications for shared projects.

The Council could also work with partners to identify areas where renewable energy could be produced onsite to meet energy requirements or where renewable energy could be used. This could be for individual sites or an energy hub model supplying several neighbouring sites.

Overall, the Council should seek to pride trusted, intelligent data to understand options and local issues, as well as exploring what is there and what needs to be done to improve. There is the opportunity to link industrial action to the Green Hub at Grimsby Library or link into talks at the Grimsby Renewable Partnership. Actions should seek to support green recovery from COVID-19 and development of a strong local green economy.



Priority 3: Domestic Properties



Ambition

As shown from the baseline analysis, domestic properties account for a significant proportion of the region's carbon emissions (17%). There is a desire for the Council to support the strategic direction on carbon reduction through actions around domestic properties.

The Council wishes to target all E, F and G properties within NEL with support to improve their energy rating. Analysis of domestic EPC data through this project has identified many of the properties that will require targeting. Hard-to-treat homes will also be targeted.

Other aspirations in relation to domestic properties include:

- Working with developers to increase the use of Modern Methods of Construction, to reduce carbon emissions during construction.
- Exploring opportunities to increase renewable energy use for new and existing homes.
- Exploring opportunities to deliver community heating or district heating networks from renewable sources (in both retrofit and new housing).
- Working closely with Registered Providers and Private Sector Landlords to drive forward innovative schemes and driving the zero-carbon agenda.

Council as an enabler in driving action

The Council has a role in enabling improvements in domestic properties, particularly through the planning process.

Action on improving energy performance of the region's housing stock is already well underway within NEL, with significant support already being made available or in planning for householders and other works underway with partners. Actions are outlined under priorities 3.2 and 3.3.

Challenges

While action in this area is already well developed, a key challenge will be ensuring that appropriate resource is available to continue to support this agenda.

Impacts and benefits

An analysis of domestic EPC data currently being finalised so that the scope for impact and plans for action can be identified.



Priority 3.1: Local Planning



What actions are required?

Local planning decisions will play a key role in supporting the overall carbon reduction agenda in NEL. It is important that these support sustainable developments and projects and challenge those that don't take account of sustainability and carbon reduction.

At the basic level, local planning should actively support and enforce existing regulations and drive for higher energy ratings in all developments.

On the larger scale, planning should work to support renewable energy schemes, such as wind, solar, energy from waste and anaerobic digestions. At the smaller, builder scale, planning should encourage development and refurbishment schemes to incorporate energy considerations, such as energy efficiency, passive energy, car charging facilities and onsite renewable generation.

Challenges

Developers are likely to challenge the viability of going above current building regulation standards. However, the Council could take the decision to put in supplementary requirements locally to drive improvements in building fabric, energy efficiency and use of renewable energy. Requirements could also be put in place around the creation of green spaces, particularly in larger schemes.

What planning actions can be around climate change?

In February 2021, the UK Green Building Council (UKGBC) released their New Homes Policy Playbook, which is a resource for local authorities that seeks to drive sustainability in new homes. They also host an interactive policy map on their website with links to policies and actions that local authorities have taken both in relation to new build and retrofit of existing properties.

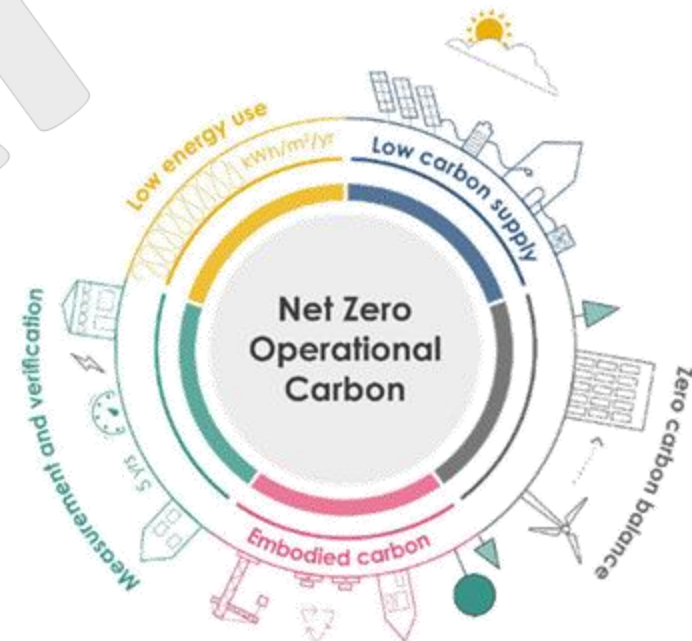


Figure 1: The component elements of achieving a net zero carbon new home (Credit: LETI)

Priority 3.2: Support for Homeowners



What actions are already underway?

The Council already signposts to a range of support available for homeowners, such as:

- The Greater Lincolnshire Energy Efficiency Network (GLEEN), which is a partnership across Greater Lincolnshire covering two unitary and seven district councils and delivers energy efficiency advice and improvements. This scheme is publicly branded as Lincs 4 Warmer Homes and accesses ECO funding and government initiative schemes to provide energy efficiency improvements such as boiler replacement, cavity wall and loft insulation.
- Warm Homes Fund, which has provided funding of £327,000 to install new central heating systems to homes that heating.
- Providing advice to households via the Big Community Switch, which assists residents in switching gas and electricity providers to more a more competitive tariff

The Council also offers discretionary housing assistance grants and loans through its current Housing Assistance and Disabled Adaptations Policy. Support for eligible homeowners includes:

- Emergency Housing Grants, providing £175,000 of funding to assist residents who have Category 1 hazards under the Housing Act 2004.
- The Health Scheme, funded through DFG fund, which assists residents with a cold related medical condition to improve the thermal warmth of their property.
- Home Appreciate Loans for eligible households who have multiple hazards in the property (which could impact on the health of the occupants).
- Energy Repayment Loans of up to £4,000 to assist owners in funding energy improvements.
- Landlord Energy Repayment to fund home improvements that will improve the EPC rating of a property. Loans can be made available up to £4,000.

Challenge

While schemes have been available to improve the energy efficiency of homes, some technologies available are not the most appropriate for driving emissions reductions, such as the installation of new gas boilers. Schemes should be reviewed regularly to ensure that measures offered are appropriate, futureproofed and in line with net zero carbon aspirations.

Priority 3.2: Support for Homeowners



Future action – housing energy efficiency and fuel poverty

The Council and its partner ENGIE intend to produce a Housing Energy Efficiency and Fuel Poverty Strategy, with accompanying Action Plan.

Future action – Minimum Energy Efficiency Standards (MEES)

MEES legislation came into effect during 2020 and the Council has determined a requirement for additional resource to work with landlords to improve properties that currently fail to meet MEES standards. Subject to a funding bid award, the team intend to employ two additional members of staff. If the funding bid is not successful, the Council will not be able to work collaboratively with landlords, but still intends to take action on ensuring compliance through the powers made available to local authorities under MEES.

Future action – Local Authority Delivery Scheme, Phase 2 (LAD 2)

The proposed LAD 2 scheme will require identification of residents who are living properties with a Energy Performance Rate of E and below, which is a good indication of households maybe living in fuel poverty. This identification has been carried out as part of the roadmap works.

The scheme will provide funding up to the value of £850,00, with eligible improvement works including external wall insulation, cavity wall insulation, loft insulation (subject to funding approval). The scheme would be open to homeowners and private rented landlords. However landlords would be required to make a contribution, which can be offered in the form of a Landlord Energy Repayment Loan.



Priority 3.3: Work with external stakeholders



What actions are underway?

The Council is currently working with a range of stakeholders to raise awareness of grants and funding availability. This includes delivering training to front line staff in the NHS, Council Services and third sector partners, as well as delivering community talks to residents across NEL.

The Council also deliver support as part of the excess winter death campaign, where the health service are a lead partner.

There is also action happening around privately rented homes where the Council are currently delivering energy efficiency support for District/Unitary Councils in Greater Lincolnshire. NELC also act as a facilitator delivering new housing on unused Council Assets.

In other local actions, NELC are working as a facilitator with East Marsh United in supporting development of a Community Housing Organisation. As part of this ways of reducing carbon emissions have been discussed and the Council aspires to take this approach to other community and housing organisations.

Current actions – design guidance

The Council are looking to work in partnership with developers, to bring several sites forward for the purpose of increasing housing stock. As part of this, the Council intends to put in place a contractual obligation to build properties to a specified standard, with all sites having infrastructure capacity for each property to have an electric vehicle charging point.

Current actions – Shared Green Spaces

The Council are currently working with local developers to take care of shared spaces in new developments. These are usually managed by an out of town management company, who mows the lawns and maintains shrub beds. It is intended that the Council take on responsibility for the shared spaces, through a similar management agreement. While this action doesn't currently have an energy or sustainability benefit, it does present an opportunity to maximise ecological net gain and enhance the sustainability of local areas.



Priority 4: Transport



Ambition

NEL's Local Transport Plan (LTP) capital programme includes several schemes that support and encourage cycling, walking, public transport use and electric vehicles. Funding has been provided for the LTP with the purpose of improving road safety, public transport, carriageways and footpaths, along with improving our electric vehicle infrastructure and the uptake of sustainable transport methods.

This will help to support decarbonisation of the transport sector in NEL, which accounts for around 17% of the region's emissions.

What actions are required?

Actions are required across a wide range of areas, but three areas of focus have been identified where the Council can support and enable change:

- Priority 4.1: Developing a network of green cycle highways and encouraging active travel
- Priority 4.2: Providing affordable green public transport
- Priority 4.3: Developing an EV charging network throughout the region.



Challenges and barriers

Actions to reduce emissions from transport do require a modal shift for a large number of stakeholders outside of the Council's control. The level of behaviour change required will present a challenge, but enabling people to make these changes will help to drive the shift over time.

Opportunities

There is an opportunity to develop a staff travel plan for NELC. This should consider both 'travel to work' and 'travel for work'. The Council have previously tried to gain traction with this through various channels but requires championing at a high enough level to make it happen. Senior leadership should provide support to ensure that staff engage with the project. Actions on a staff travel plan should be considered alongside any property rationalisation being considered and action should probably be deferred until there is a return to 'normal' ways of working post COVID.

Priority 4: Transport



Opportunities (continued)

NELC should seek to deliver projects such as '20 minute neighbourhoods' and 'School streets' that see meaningful reallocation of road space in favour of pedestrians and cyclists. These projects support the idea that cycling and walking should be the first choice travel modes for short local journeys where they present the biggest opportunity to replace less sustainable modes. Action needs a significant change in public mindset and strong leadership from Members.

There may also be an opportunity for the creation of low emission zones in NEL to reduce traffic and encourage conversion to greener transport modes.

Cross-cutting actions

Development of new LTP strategy in 2021/22 should take a strong lead from the wider 'zero carbon' agenda. There is an opportunity for NELC to bring its key transport strategy more in line with the broader green agenda and climate change targets. The LTP will require formal Member support and sign off once drafted, as well as senior officer engagement across NELC teams to feed in to the development of the plan.

There are current bids, such as the Freeport and Levelling up fund bids, that include elements of work that support and enable cycling, walking, EV and public transport. Examples include the Europarc bus bridge and extension to 'Cycle superhighway' project on Pyewipe Estate that are being included in the Freeport bid.

Other transport initiatives to reduce carbon

Plans are currently being rolled out, as funding allows, to replace halogen traffic signals with LED. The current 'Traffic signals fund' bid from NELC to the DfT includes several sites across NEL where this upgrade will reduce energy use and lower carbon emissions. Technology that links sets of traffic signals to better manage queues and congestion also helps the through-put of vehicles which in turn reduces queuing traffic and lowers vehicle emissions. These schemes are currently underway and are delivered in line with other network improvements as funding allows. Additional funding would allow this programme to be rolled out more quickly.

In addition to other transport options, trials are currently being carried out at sites across NEL to determine the effectiveness of using 'warm mix asphalt' as a long-term option. Using the warm mix technique (rather than hot-mix) as part of the highway maintenance programme reduces energy use and the carbon footprint resulting from the works. Trials are required as these lower carbon techniques are still relatively new and untested so there is some caution as to the long-term lifespans of such treatments.

Suppliers are encouraged to manage highway works in ways that reduce the number of vehicle trips etc needed to complete works. Actions should also be taken around reuse and recycling of materials in carriageway construction. The Council should continue to look at the use of new materials and new suppliers, with the aim of reducing lifetime carbon emissions. However, some ways of working may be more expensive (but lower carbon) and these will need Member support.

Priority 4.1: Green Cycle Highways and Active Travel



What actions might be possible to fund transport projects?

It may be possible to use capital funding under the LTP as local match funding towards external funding bids such as the cycle superhighway project. The project includes three off-road cycle route improvements along the corridor between Grimsby & Immingham ports and is currently supported by £2.3m of investment from Greater Lincolnshire LEP.

Department for Transport revenue-funded projects such as 'Access Fund' and 'Local Authority Capability Fund' could be utilised to carry out initiatives and projects that support and enable cycling, walking, car share and public transport use.

NELC looks to encourage local organisations to take part in national sustainable travel events such as 'Bus Week', 'Cycle-to-work Week' and 'Walk-to-School Week'. Through this communication it may be possible to start discussions with organisations on the potential for partnerships to deliver schemes.

Action to date

The Council is already taking action to increase the cycling network through investment in green cycle highways and road improvements (such as the A180).

The Council and its partner ENGIE have been awarded £319,000 from the Department for Transport's Active Travel Fund. This funding is to carry out cycling improvements along the A46 Cycling Corridor. The Cycling and Walking Improvement Plan is for an area stretching from Clee Road at Isaac's Hill roundabout, along Weelsby Road, up to the Fryston Corner junction and along Laceby Road to the Bradley Crossroads roundabout.



Priority 4.2: Green Public Transport



What actions are required?

The Council has an enabling role to play in green public transport, such as through working with stakeholders like Stagecoach.

As an example, electric minibuses used to operate as part of a NELC Phone 'n Ride service. Operators could be encouraged at bid stage to include this provision in their service. However, investment is likely to be required for vehicle purchase or the additional costs would likely lead to increased tender costs to cover the capital outlay. Increases could be limited by seeking a more long term partnership agreement with upfront capital costs spread over a longer period.

Delivery of Government requirements through the National Bus Strategy should be considered. A key aim of the National Bus Strategy is to halt the decline of bus passenger numbers and to deliver significant modal shift. This could be delivered via enhanced partnerships and a Bus Service Improvement Plan, but this will require approval from Cabinet. There is also a possible zero-emission buses scheme (ZEBRA), with the bid by the end of June 2021.

What has been achieved so far?

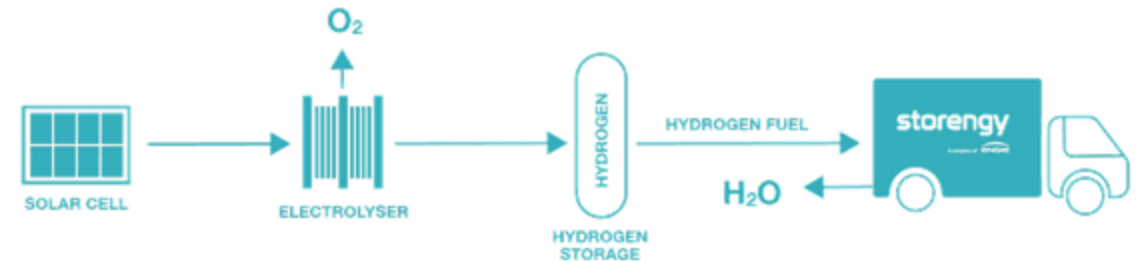
NELC relies on local capital funding and external funding bids to deliver active travel projects. The region recognises that to improve active travel networks, funding capital infrastructure and revenue support is essential.

In the past few years, NELC and its regeneration partner, ENGIE, have successfully implemented active travel initiatives, including community and workplace-based bike events, bike recycling with bikes being returned to people in more deprived communities, cycle hubs and 'bikeability' training. The area already boasts higher than average levels of cycling, especially in the less affluent parts of the borough.

Possible future actions

Potential for installation of solar carports at park and ride and commercial arrangement for this could be explored. This could include electric charging for cars and buses. This would require work with partners to develop a phased delivery and the installation of micro grid infrastructure to allow this phased development. Considerations should be given to numbers of fast chargers, as well as any requirements on vehicle to grid capability. It would be suggested that battery storage is considered. It is estimated that each car parking space could create ~1.7MWh solar generation and ~0.47tCO₂ savings per annum (assuming 2kWp of solar PV per carport), as well as supporting EV rollout in NEL. Such a scheme would provide visible commitment to green energy and EVs. However, initial infrastructure is likely to require funding. The Council should review availability of grants for innovative mobility projects. It should be noted that the economics of solar car ports and EV charging are developing and it may be possible to develop this without funding support.

The Council could consider a pilot project looking at hydrogen refuelling for specialist vehicles. For example, a hydrogen refuelling compound with a small number of vehicles such as bin wagons could be trialled, with solar PV utilised to support the generation of hydrogen. Grant funding options could be explored to support such a project. This would have benefits in terms of carbon emission savings, as well as benefits to local air quality.



Priority 4.3: Electric vehicle (EV) Charging Network



What actions are required?

EV charging points are required across the region. Development of EV strategy for NEL is currently in the pipeline. This would include the roll out of additional EV charge points across the Borough. NEL are currently involved with Lincolnshire County Council and North Lincs Council to develop a Greater Lincolnshire EV plan, with the final draft due for completion in June 2021. NELC will now need to adopt some basic principles about what it is prepared to do to support the take up of EVs. The current thinking is that the Council would take an enabling role in an initial phase of installation, focusing on NELC owned/maintained car parks to provide EV charge point provision for local residents as well as commuters and visitors to the area. This approach would require Member sign off.

Rolling out an EV charging network

The Council is considering developing a large-scale EV charging point network, including an electric forecourt along the A180 route, and are taking steps to tackle the issue of on-street residential EV charging points to ensure that access to EVs is equitable across NEL. This activity requires partnership working with private sector to deliver and run, particularly following installation. Until EVs become more mainstream in NEL, NELC will need to lead the agenda but in time the commercial market will take over once there is a critical mass of EV owners to enable them to turn a profit from EV charging provision in NEL.



Priority 5: Local Sustainability



Ambition

The Council's aspiration is for actions around carbon reduction to also support local sustainability. It wishes to seek out, invest in and deliver high quality projects that will help to compensate residual carbon emissions within the region, as well as support a green economy and improve the sustainability of NEL. The aspiration is to engage with local stakeholder and identify projects that have additional benefits, such as promoting mental wellbeing and physical health, providing flood alleviation, improving local amenity and recreational opportunities and tackling problems like biodiversity loss.

Local sustainability actions required

The Council can lead with action on community assets and manage these in a way that inspires others. An example might be a scheme to improve biodiversity and plant wildflowers in local parks. The Council can also look to utilise its land assets to maximise renewable energy generation locally.

Larger scale actions can also be taken to help reduce or offset carbon emissions, such as tree planting schemes, peatland restoration and encouraging low-carbon farming methods.

The Council also has an enabling role to take in supporting community stakeholders and groups in taking action.

Challenges and barriers

Proposals to install renewable energy technologies, develop energy parks or develop local offsetting schemes will take time and resources to deliver. They also typically require significant investment, although this will vary greatly from scheme to scheme. However, partnership arrangements and the investment landscape is developing rapidly, with new options being looked at that allow more innovative delivery of carbon and sustainability schemes.

Opportunities

Projects around local sustainability has significant potential for incorporation of local employment and skills development. This can help local people to find roles in green-related work. It will also help to upskill NEL's workforce for the drive to net zero carbon and a more sustainable future. Schemes can also be utilised to help educate and inspire young people – embedding thinking around sustainability into future generations.



Priority 4.1: Sustainability Action on Council Assets



What types of asset are held by the Council?

Local authorities own around 4% of England's land in county farms, parks, nature reserves, highways, moorland, foreshore, downland, golf courses, allotments and green belt land, as well as council buildings, schools and council housing. Many of these assets, such as green spaces, parks, nature reserves and allotments, are used by local communities and can be considered community assets. However, there is scope for sustainability actions on other Council assets, such as schools and highway land.

What actions are required?

The Council should work with partners to identify sites with opportunities for renewable energy technology development and potential financing / commercial options for delivery of such schemes.

Projects could be the generation of renewable electricity (e.g. via solar power or wind turbines) or production of green gases. Green gas is a fairly new market and there currently isn't sufficient green gas being injected into the gas grid to allow the Council or other stakeholders to purchase 100% green gas. The production of local green gases (e.g. biomethane via anaerobic digestion) would support other local activities on decarbonisation of heating within the region.



Priority 4.2: Local Carbon Offsetting



What actions are required?

NELC will look to manage residual emissions from its portfolio and assets with robust carbon offsetting. This can be achieved through a certified carbon offset scheme and through actions to set up local carbon offsetting schemes.

Local actions should focus on maximising use of the Council's land assets (linked to priority 5.1), increasing tree cover across the region and through working with community stakeholders to encourage local action across NEL.

Schemes could also be linked in with green travel actions through the creation of green travel corridors.

What have we achieved so far?

The Council already purchase renewable electricity (REGO backed) for its own use. ENGIE is also currently working with the Council to develop an tree canopy cover assessment to support action around increasing tree cover across the region. Initial assessment has shown that NEL currently has lower than average tree cover (estimated at 12.5% compared to the UK average of 15.8%), although percentage of tree cover does vary significantly by ward.

It is estimated that the current tree cover in NEL sequesters 6,570 tCO₂ annually, as well as 2.16 tonnes of carbon monoxide and 11.76 tonnes of nitrogen dioxide.

Next steps

NELC should agree incremental tree planting targets to increase tree cover year-on-year, with a high-level tree planting plan for the next 5 years.

Additional tree planting opportunities could also be explored through engagement with private landowners in the region. This could be achieved through engaging with businesses on aligning contributions via their corporate social responsibility activities. Schools and community groups are also key stakeholders that can be engaged around potential schemes. It is also possible to engage with all these groups around volunteering.

Challenges

Carbon is only effectively offset when a tree reaches maturity. In the early years and decades, carbon sequestration rates are very low. The rates increase as time progresses, up until the tree reaches maturity. A mature tree is estimated to absorb around 21kg carbon per year and over their lifetime absorb and estimated 1 tonne of CO₂. Carbon offsetting accountancy must therefore be robust and scientifically accurate.

As with other actions around emissions reductions, resource within the Council is a key challenge. It is important to ensure appropriate resourcing of actions identified.



Priority 4.2: Local Carbon Offsetting

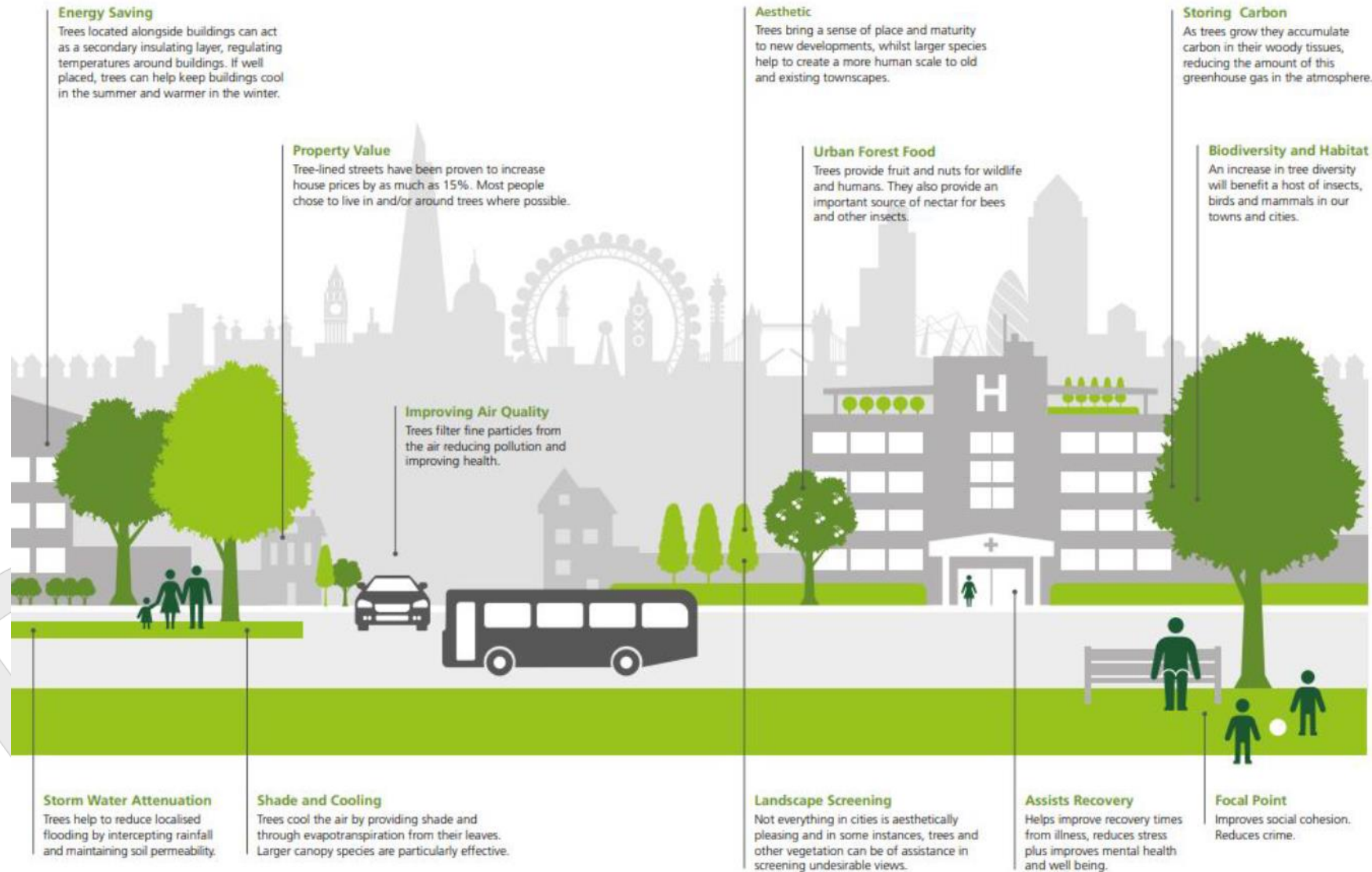


Benefits of trees and green spaces

Increasing tree cover can have a wide range of benefits for a local community. There are a wide range of benefits including carbon and greenhouse gas storage, air quality improvements, flood protection, increased property value, better social cohesion, health and wellbeing benefits and support for local biodiversity and habitat.

‘Green and blue infrastructure’ (trees, parks, other green spaces, river and coastal areas) can increase life expectancy and reduce health inequalities. Residents in a deprived inner-city area are likely to have access to five times fewer public parks and good-quality general green space than people in more affluent areas.

Green infrastructure design should be incorporated into transport infrastructure projects with a view to greening key routes in the region. These consideration can also help to strengthen funding applications and maximise funding into the region.



Priority 4.3: Work with Community Stakeholders



What actions are required?

One of the priorities for NELC will be to communicate, engage and consult with local communities on net zero carbon ambitions. This will help to develop and sustain a mandate for action within local areas, as well as encourage individuals and communities to take their own action on reducing emissions.

Councils are well placed broker behaviour change within the region, as well as to take action on local sustainability. This can be achieved through working with local networks, community groups and partnerships, developing an understanding of local needs and opportunities and providing information to support action.

Enabling actions can include the provisions of equipment (e.g. for litter picks), provision of information (such as how to do actions safely or provision of risks assessments) and support with sourcing materials or funding – such as where to source trees for local planting schemes or where funding is available to local community groups.

Engagement and partnership approaches

There are many ways that a council can communicate with and engage the local community. Across the country Councils are increasingly moving away from traditional statutory consultations and working more directly with stakeholders to understand their perceptions and ideas on climate action. Co-design, where the Council works with local people and interest groups to design programmes and projects, is also being used by some local authorities. Community empowerment is also an option, where the power is handed over to others to design and deliver solutions.



Other Actions Required



Wider strategic actions required

Lobbying: The Council already takes an active role in working with partners to highlight the need for local investment as part of the Government 'Levelling Up' agenda. The Council will use its connectivity in these discussions to further highlight the need for Government to provide the investment and powers to allow local authorities to maximise their chances of achieving carbon neutrality, both internally and with partners within their regions..

Collaboration outside of NEL: Work with other public sector organisations and government to determine and implement best practice methods. Learn and build upon what has worked well within other local government settings

Partnership working: Continue to embrace partnership working across the Region to deliver our collective net zero ambitions in unison, by making best use of all relevant networks, groups, resources, strategies, plans, and funding sources. In particular The Council will develop its relationships with:

- The Yorkshire and Humber Climate Commission
- The partners that have developed the Humber Industrial Cluster Plan
- The Zero Carbon Humber Consortium of leading energy and industrial companies and academic institutions
- Carbon reduction partnerships across Greater Lincolnshire

There is also a programme of work to be delivered to engage our local community in carbon reduction, to listen to views and to provide the support needed to enable individuals and groups to take action themselves.

Carbon offsetting

Where local or regional offsetting is not possible, national or international carbon offsets will need to be considered. Due to limitations on the amount of land the Council owns, there may still be a requirement to consider the purchase of credits from national or international offset projects. This would be required once avenues to offset locally or regionally have been exhausted. The Council should investigate the merits and legitimacy of established high quality international schemes, such as the credits offered by Verified Carbon Standard (VCS) and Gold Standard. Consultation should then be carried out with independent experts to choose the most genuine and reliable offset projects.

Linkages between carbon reduction plans and other plans

The drive to reduce carbon emissions sits alongside other actions needed to ensure the economic, social and environmental sustainability of our place. The Council will need to plan its carbon reduction activity carefully, to ensure, for example, that opportunities are taken for influencing improvements in health inequalities, and for increasing biodiversity.

Net Zero Carbon Delivery Governance



Governance structure

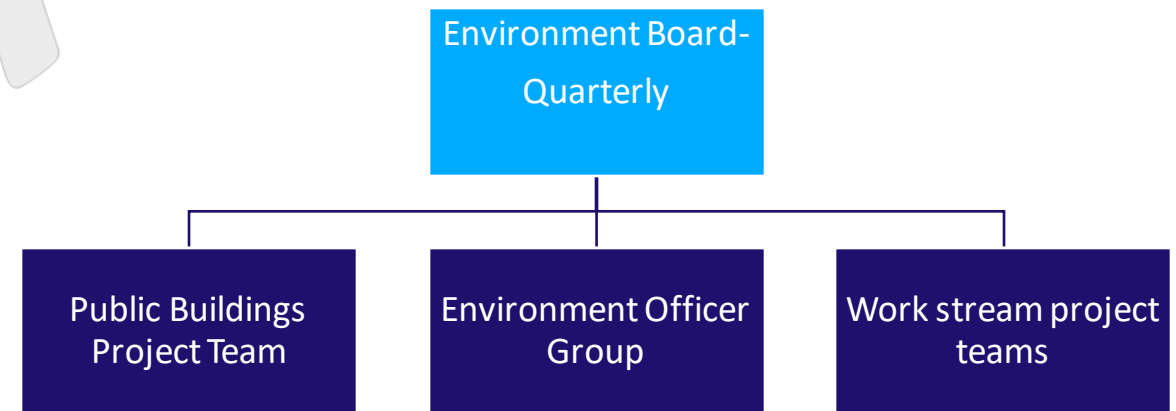
To ensure that progress towards achieving net zero carbon neutrality through Council actions is monitored, reported on and scrutinised, an Environment Board will be set up to oversee delivery of this agenda, together with other themes required to achieve the Council's ambition of a green future, such as protection of nature, wildlife and biodiversity. This board will be responsible for providing strategic direction, ensuring adequate financial support and resource is in place, and managing programme risks. It will also be responsible for monitoring progress and providing updates to key stakeholders, leadership and scrutiny.

A number of project delivery groups with clear workstream leads will be accountable for ensuring projects are developing in line with agreed objectives and timescales. This will include the already established Public Building delivery group, the overarching Environment Officer Group, as well as additional specific project groups in key delivery areas. Project Teams will also be responsible for reporting progress and communicating any risks or issues. A programme highlight report will be collated on a quarterly basis, with annual progress reports to Cabinet.

Each workstream and discrete project will have its own risks, dependencies, and interfaces captured via appropriate risk workshops and dedicated risk registers. Some common risks include:

- **Financial risks / funding availability:** there is a risk that adequate funding is not available, which would result in projects not being completed or being delayed. Where possible, actions are being aligned with actions and budgets already in place in the Council. Opportunities to maximise on receipt of Government and other grant funding are also being sought.

- **Resource:** this is needed across the Council, to achieve the aspirations set out. However, pressures on Council budgets and staff presents a risk to this. To mitigate this a dedicated resource should be established with a clear programme structure to help mitigate and resourcing or delivery risks. The Council shall work collaboratively with partners to share best practice and avoid duplication of effort.
- **New technology:** this is being developed at a rapid pace and the Council will need to ensure it consistently reviews its approach to ensure that the most appropriate solutions are implemented. This will allow the Council to update its approach and utilise the most appropriate solutions from a cost and carbon perspective.



Monitoring and Reporting



Delivery of net zero carbon within NEL will be a dynamic process that will evolve as the climate emergency and technology landscape shifts over time. Therefore, the plan will be reviewed regularly to ensure that it stays current and remains fit-for-purpose.

Each workstream will report progress on a quarterly basis to the Environment Board, and this will capture key milestones achieved and any risks or issues for the workstream in question.

The Council will continue to report greenhouse gases through existing reporting requirements and a carbon reduction tracker will be used to monitor progress made towards net zero carbon within the Council. Government statistics will be used to track progress within the wider region.

Each year an annual report will be approved by Cabinet and published to summarise the progress made during the previous calendar year, and to give a forward projection of the projects anticipated for delivery over the subsequent calendar year.

The purpose of annual monitoring and report is to allow all stakeholders to ascertain progress of the Council towards its net zero carbon target. The report will also include a section highlighting the latest data on regional emission and key actions.

