

Net Zero 2030 Strategy & Climate Action Plan

Setting a pathway for decarbonisation across the Council and the wider district



NORTH
NORFOLK
DISTRICT
COUNCIL

Net Zero East

North Norfolk District Council's Net Zero Strategy and Action Plan has been developed in consultation with Net Zero East.

Net Zero East aim to collaborate with local stakeholders across the East of England to find innovative solutions that will facilitate and accelerate the transition to Net Zero by 2050.

For more information on Net Zero East please visit www.netzeroeast.uk

Foreword

North Norfolk was the first district council in Norfolk to declare a climate emergency in early 2019. It also adopted a Net Zero Target for 2030 – 20 years in advance of the national target set by the Government.

The recent Conference of the Parties (COP26) meeting in Glasgow in November 2021 has brought home graphically the need for wide-ranging global action to address dangerous and accelerating climate change. It provided a timely reminder of the imperative for all players across the economy to substantially raise our game. Local government – as well as national – is a key element of the response, and district councils such as North Norfolk District Council (NNDC) have a crucial role to play both in reducing our own organisational emissions and wider emissions in the district we serve.

NNDC welcomed the publication of the Government’s Net Zero Strategy in October 2021. It provides a direction of travel. However, a large part of the response needs to be addressed through the lens of local communities and businesses and will be place-specific. The Council needs to “step up”, and we also recognise the importance of engagement with our stakeholders in the district and achieving as high a level of buy-in as possible from our residents to our carbon reduction plans and actions. By adopting a leadership role within the district, we can show what a mainly rural council can achieve, and we are committed to acting as a catalyst and partner for wider action within Norfolk and East Anglia.

The Council believes it is possible to achieve a Net Zero Target by 2030, but we need to take action and accelerate decarbonisation across our operations. This includes improving the energy efficiency of our buildings, decarbonising our vehicle fleet and services, generating renewable energy and supporting staff to work in more energy efficient ways, including travelling less. The emissions produced by the businesses we buy goods and services from must also be reduced, and we will be exploring as a priority how contracts with our suppliers can be varied if necessary and how we can shift to more sustainable procurement.

NNDC has already taken many actions and they include:

- Adoption of our first Environmental Charter in April 2021
- Commencement of an ambitious tree planting programme, which is well underway
- Installing 150kW of solar PV capacity at our Cromer HQ, which has helped us avoid producing up to 23.2 tonnes of CO2 annually
- Obtaining funding for deployment of over 30 electric vehicle (EV) charging points at council sites and taking other measures to decarbonise our vehicle fleet, including already replacing eight vehicles that support refuse collection with EVs
- Agreeing with local electricity distributor UKPN priority reinforcement of The Reef in Sheringham so we can deploy new solar generation and further EV charging facilities

- As part of the Norfolk Warm Homes Consortium, recently succeeding with a bid for £3.85mn of public support to provide energy efficiency improvement works to homes occupied by low-income households
- Supporting third party work to look at future decarbonisation potential at the Bacton Gas Terminal
- Building staff awareness of the climate challenge through training and briefings
- Promoting flexible working for staff, with a reduction of staff attending the office and off-site meetings/visits to reduce carbon emissions
- Delivering our Greenbuild event, the most recent of which coincided with COP26, and
- Active engagement with other regional councils and stakeholders through the Norfolk Climate Change Partnership and Net Zero East.

A key priority since the Council declared the climate emergency has been measuring and understanding our own carbon footprint and then developing credible and targeted actions to reduce it. Examining assessments of our emissions since 2018/19 suggests we have already made progress from in-house actions, and this is in addition to the wider decarbonisation of the electricity system, although the COVID-19 pandemic has also had an impact. But we can do a lot more.

This document, our first Net Zero 2030 Strategy, identifies a wide range of ambitious and specific measures that we now propose to take over the two financial years 2022/23 and 2023/24. Not only will they have a targeted impact on our emissions, but many elements of the Climate Action Plan targets are based on an “invest to save” philosophy. In the years ahead we will then update the Strategy annually, always looking two full years ahead, so we maintain the trajectory we need to follow to meet the 2030 target across our operations.

The Strategy is very challenging. It is inevitable that there will be areas, many of them outside our control, where residual emissions will arise. Where this is the case, we will take steps to offset these through nature-based solutions within the district, so that our local environment, council taxpayers and residents also see additional benefits.

This is the start of the journey, one which we must complete with you.

The Council is embedding a process whereby we monitor progress on reducing our emissions and routinely report on progress. We are also committing to engage with our communities and businesses to ensure their needs and preferences are met as we evolve the Strategy and Action Plan, and that the approach we adopt works for the district and allows us to play a full part in the green recovery regionally.

Thank you for taking the time to read this document, and we welcome your feedback.



Steve Blatch
Chief Executive



Cllr. Nigel Lloyd
Portfolio Holder for Environmental Services,
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1. Introduction

Nearly 200 governments from across the world signed the Paris Agreement in 2015, which set a legally binding target to “limit global warming to well below 2, preferably 1.5 degrees Celsius, compared to pre-industrial levels”.

In response to this, the UK Government became the first major economy in the world in June 2019 to pass legislation to end its contribution to global warming by 2050, by aiming to reduce all greenhouse gas emissions to Net Zero by that year. It was also a prime mover behind, and signatory of, the Glasgow Climate Action Pact executed after COP26.

What is “Net Zero”?

The UK has committed to Net Zero greenhouse gas emissions by 2050. The term Net Zero refers to the balance of emitted and sequestered/captured emissions coming into and out of the atmosphere.

Net Zero is different from Gross Zero, which would mean stopping all emissions, something that would be virtually impossible to achieve across all sectors and aspects of daily life. Therefore, Net Zero still allows for a defined number of unavoidable emissions, balancing this output into the atmosphere with technologies and actions that take emissions from the atmosphere or from afforestation and other nature-based solutions.

The Government also considered and endorsed in December 2020 the recommendations of the Climate Change Committee (CCC) for its Sixth Carbon Budget. This has resulted in a tightening of the targets for emissions reduction to a 78% cut by 2035. In the supporting papers to its report, the CCC identified a key role of Local Authorities in support of delivery of the targets.

What are carbon budgets?

These are set by the Government on the recommendation of the Independent Climate Change Committee.

A carbon budget is a permitted and cumulative amount of carbon dioxide emissions that are emitted over a specified period of time – in the UK’s case, five years – in order to keep within a certain temperature threshold.

Every carbon budget provides a cap on the total greenhouse gas emissions, which should not be exceeded, to meet emissions reduction commitments.

As a result of the Government's Net Zero 2050 Target, many Local Authorities across the country have declared climate emergencies and are making their own ambitious Net Zero delivery targets and programmes.

In 2019, North Norfolk District Council (NNDC) became the first Local Authority in Norfolk to make such a declaration, and we set an ambitious target of reaching Net Zero across all council operations by 2030, 20 years in advance of the Government's own target.

We did this for two reasons. First, it is the right thing to do; and second, our local communities are already having to adapt to climate impacts and challenges.

However, the wider framework of government policies and enabling actions to meet the Sixth Carbon Budget and Net Zero Target is only just emerging. The Net Zero Strategy published by the Government in October 2021ⁱ ahead of COP26 recognises the need for local climate action, but it is light on resourcing and specific measures to better equip councils. It recognises the need to rationalise support and better equip Local Authorities but does not say how.

Various initiatives were set out at a high level, and the next two to three years will be about learning, identifying local priorities and setting in place governance arrangements and reporting frameworks. We need to recognise that predominantly rural local councils such as North Norfolk District Council are starting from a relatively low base and have high costs of delivery owing to the dispersed nature of our communities and the older nature of many of our buildings and local infrastructure. The same of course applies not only to the Council but to the North Norfolk district.

To support us on this journey, we have already issued our Environmental Charter.ⁱⁱ



NNDC's Environmental Charter

An Environmental Charter has already been adopted by the Council in May 2021. It is comprised of three main sections that address:

- How the Council will deliver change across the Council's own internal estates and operations
- How the Council will act as a community leader and influencer to meet challenges presented by the climate change crisis, and
- How residents can address the climate emergency and promote environmental excellence.

It defines a clear level of ambition to meet a Net Zero 2030 Target, and in terms of the NNDC's current emissions, sets out a commitment to "measure, manage and mobilise". As such, it has cleared the way for this Strategy and Action Plan.

In this document we set out our first Net Zero Strategy and Action Plan. Our Strategy and Vision is summarised at Box 4 over the page.

After this introduction, **Section 2** explains the existing emissions profile of the Council and the actions we are already taking both with regard to our own organisational emissions and how we are supporting local stakeholders.

Section 3 looks at important changes being implemented to our governance and processes, including how we engage with you and other stakeholders to ensure understanding of our Net Zero Strategy and Action Plan.

Section 4 examines in more detail the Council's organisational carbon footprint and our priority focus areas. In turn it considers in more detail the eight key areas used to group and report our organisational emissions. They are electricity purchasing, gas use, our vehicles, business travel, emissions associated with the buildings we lease to third parties, water, waste, and Council contracts. For each of these categories, we explain the emissions baseline and how this has trended over the past three years. We then explain what we are proposing to do to reduce the baseline over the next two financial years, being 2022/23 and 2023/24. Finally, we set out the commitments we are making to you going forward to deliver emissions reduction in each of these eight areas.

Section 5 summarises some of the specific steps we intend to take that comprise our Net Zero Strategy and Action Plan for the period 2022-24 set out in it.

Section 6 then looks at how we are seeking to promote wider district decarbonisation, including our advocacy of Nature-based Solutions (NbS) and the measures we are developing to address climate adaptation and to support biodiversity net gain in North Norfolk.

Section 7 identifies high-level actions that we are already taking and some thoughts on what our residents, businesses and visitors can do to support wider efforts to address climate action in North Norfolk.

Appendix A sets out information on recent trends on territorial emissions within the wider North Norfolk district.

Finally, a glossary of key terms is at **Appendix B**.

The Net Zero Strategy and Action Plan was adopted by the Council in February 2022. From here on we will be measuring progress on a half-yearly basis, and each year we will consult and engage with residents and stakeholders on changes to it for the following financial year.

Our Strategy and Vision

North Norfolk District Council intends to play a pivotal role in increasing both its and the wider district's ability to decarbonise. By setting an extremely challenging 2030 Net Zero target for our own operations, the Council will demonstrate leadership and ambition in the areas where it has most control. We will also support meeting the government's 2050 target, sooner if possible, within the district more generally.

The Council will ensure that our efforts to reduce emissions do not undermine the essential services that we provide. To make sure that limited resources are focused where they can have the most significant impact, the action plan is focused on the major transformations that need to happen. The transformations we need to make and that provide the key pillars of this action plan are:



A shift within the Council to low carbon buildings and energy, by improving energy efficiency, replacing gas heating with low-carbon alternatives (for instance, heat pumps) and increasing local renewable electricity generation.



A transition in our transport fleet and the replacement of the remaining vehicle stock to zero- and low-carbon alternatives where powered vehicles are needed. We will also encourage our work force away from transport based on fossil-fuels, in favour of, where practical, walking, cycling and public transport.



A change towards the green economy: facilitating the supply and purchasing of more sustainable products and services with less waste.

Our ambition is to have a thriving green and circular economy within North Norfolk, with businesses providing accessible low carbon services and offering sustainable commercial and locally sourced products. The Council, residents and stakeholders will consider the environmental impact of what they buy and sell due to increased climate awareness. Our residents will reuse, repair and share products, avoiding unnecessary packaging and single-use plastics, so very little waste will be generated. Any remaining waste streams will be reused or recycled where possible.

2. How NNDC is supporting climate action

In this section, we set out the context for the Strategy to deliver the Council's Net Zero 2030 Target and how we can support wider emissions reduction within the North Norfolk district.

2.1 Council operations

2.1.1 Measuring our carbon footprint

The first essential step has been to understand our own emissions and how they arise. NNDC's own emissions have shown a decrease over the past two financial years. External consultants have calculated the following figures, which already show a downward trajectory:

6,633t CO₂e
in 2018/19

5,031t CO₂e
in 2019/20

4,866 CO₂e
in 2020/21

The first, 2018/19 estimate for NNDC was produced by the Carbon Trust. It benchmarked several key sites and services using generic assumptions. The 2019/20 and 2020/21 assessments were produced by local consultancy Net Zero East, who adopted a more granular, bottom-up assessment. The decrease in emissions in 2020/21, which we term the baseline year, is complicated by the COVID-19 pandemic.

This position corresponds to only 1.06% and 0.83% of government-assessed territorial emissions in North Norfolk for 2018/19 and 2019/20 respectively (with no data available yet on 2020/21). See Appendix A. It suggests a reduction of 25% over the three-year period.

Under the Greenhouse Gas Protocol, an organisation's emissions are categorised under three scopes (see Box 5).

Box 5: What are the three Scopes?

Scope 1 emissions include direct emissions from an organisation, and Scope 2 and 3 emissions both cover indirect emissions that the organisation has a reduced ability to control.

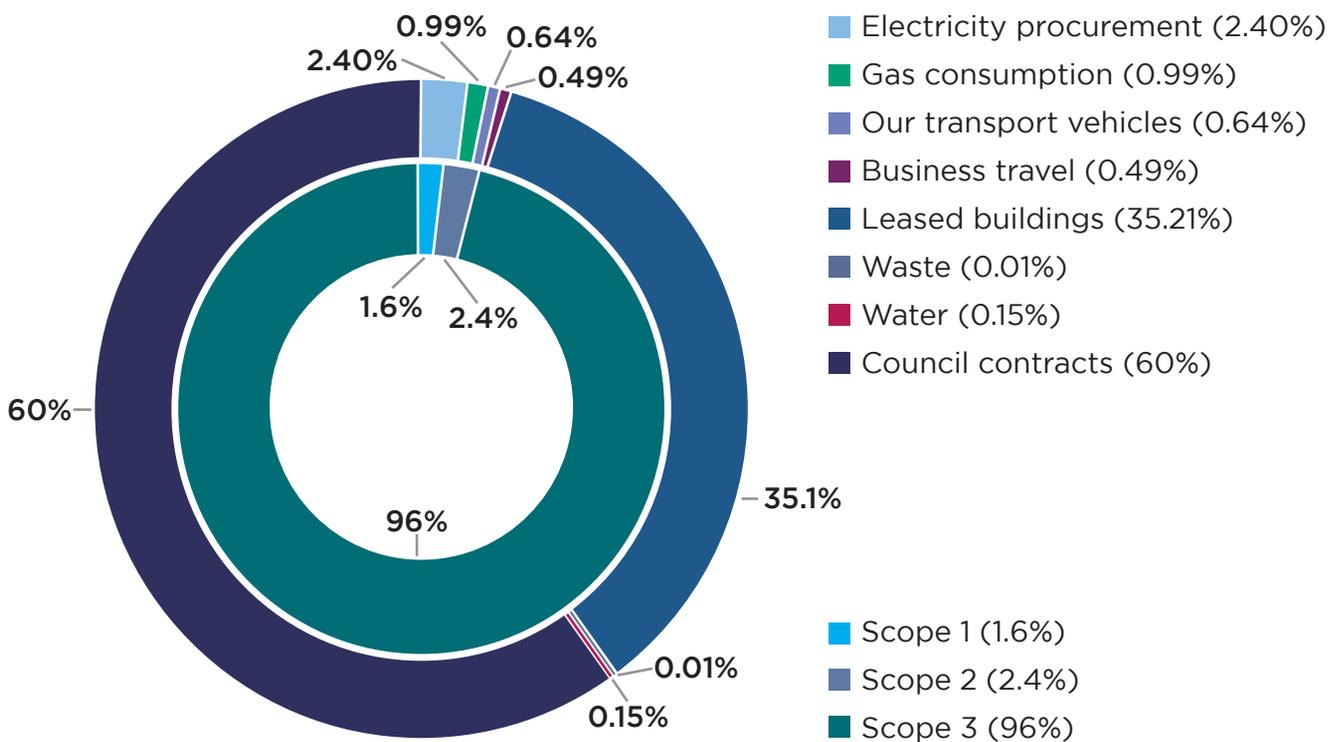
Scope 1 emissions are emitted from the combustion of fossil fuels from sources and operations that are owned or controlled by the organisation. They include emissions from on-site energy use in buildings (from oil or gas boilers) and from company vehicles that are owned or leased.

Scope 2 emissions are from the generation of electricity from an energy supplier, as well as from steam, heating or cooling. These arise at the point of production. One method of reducing Scope 2 emissions includes purchasing energy from renewable sources instead of fossil fuels.

Scope 3 emissions are indirect emissions that are not included in Scope 2 but occur because of the use of goods or services provided to the organisation. These indirect emissions arise from travel, employee commuting, leased assets, waste arising from operations and investments. The organisation has little control over these emissions, unlike Scope 1 and 2, save as part of the procurement process. Scope 3 can often be the largest contributor to an organisation’s carbon footprint. In the absence of actual data, benchmarking can be carried out to give estimated figures to facilitate inclusion in the organisation’s carbon “foot-printing”.

As Figure 1 illustrates, in 2020/21 96% of the Council’s emissions are Scope 3 emissions. Consequently, our key focus must be on partnerships with our suppliers and contractors.

Figure 1: NNDC’s emissions by sector and scope, 2020/21



Source: Net Zero East based on NNDC data

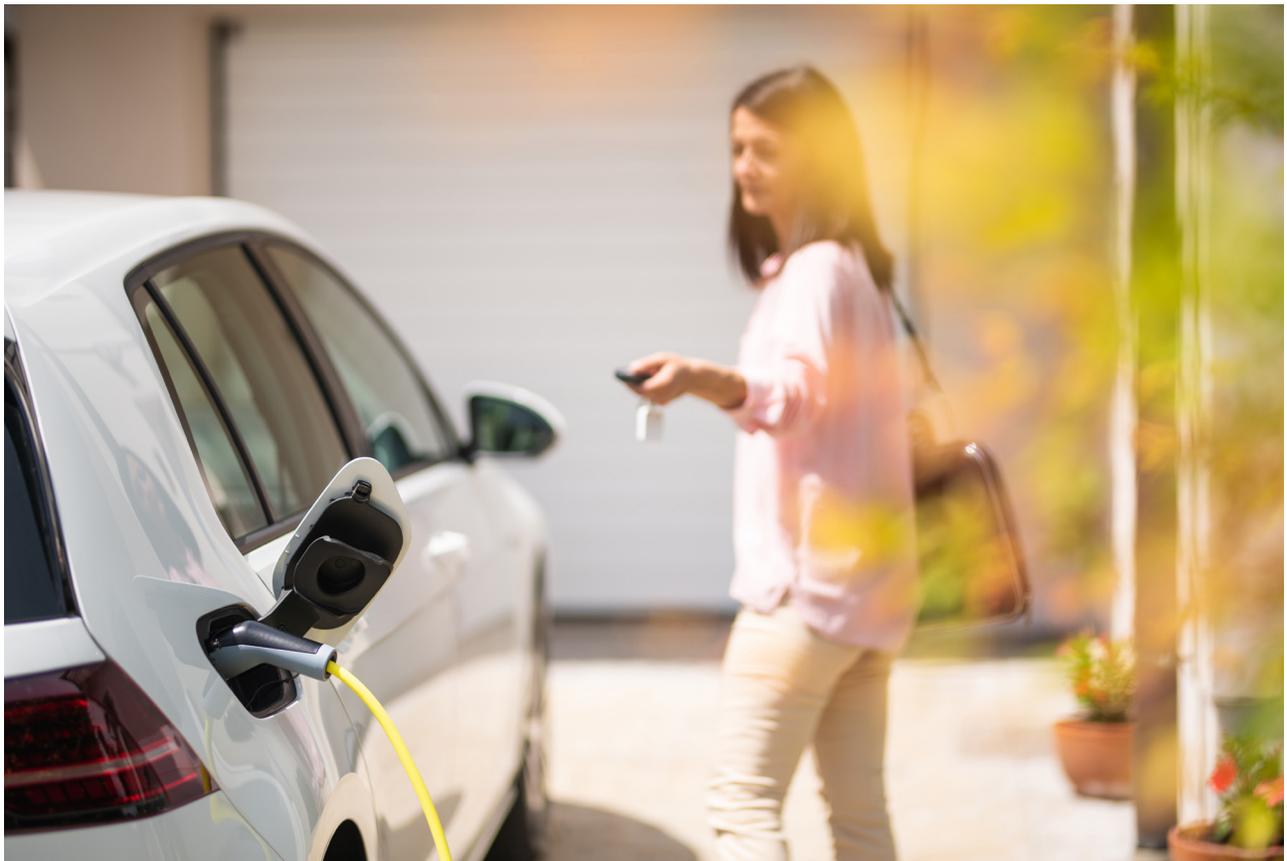
The Council recognises it needs to establish appropriate structures to further improve information gathering and reporting on its operational emissions. The approach for years 2019/20 and 2020/21 has included benchmarking, and reporting mechanisms are now being implemented to make sure we can routinely repeat the exercise for future years with implementation of a formal reporting process commencing from April 2022 with the aim of having the new system in place by September.

2.1.2 Management and mitigation

Establishing the emissions baseline (or “carbon footprint”) and having a process in place to routinely update it are only the first steps. We now need to manage our emissions and mitigate them as we set a trajectory for Net Zero 2030.

Important steps we have already taken, include:

- Adoption of our first Environmental Charter in May 2021
- Installing 150kW of solar PV capacity at our Cromer HQ, which has helped us avoid up to 23.2 tonnes of CO2 annually associated with displaced emissions from the public electricity system as well as supporting installation of electric vehicles (EV) charge points
- Obtaining funding for deployment of over 30 Council-owned EV charge points at council sites and taking other measures to decarbonise our vehicle fleet, including already replacing eight vehicles that support refuse collection with EVs
- Agreeing with local electricity distributor UKPN priority reinforcement of the Reef in Sheringham so we can deploy further solar generation and EV charging facilities
- Building staff awareness of the climate challenge through training and briefings, and
- Promoting flexible working for staff, with a reduction of staff attending the office and off-site meetings/visits to reduce carbon emissions.



This Net Zero Strategy and Action Plan seeks to document the Council's emissions in detail and demonstrate how we intend to continue to reduce them. It sets out proposed measures on how the Council can further reduce emissions arising from our operations both directly and indirectly. It focusses on specific actions over the next two financial years (that is, 2022/23 and 2023/24).

To start with we are targeting an annual emissions reduction of 500 tonnes a year over the initial two Strategy and Action Plan years for 2022/23 and 2023/24. We are reasonably confident that the measures set out in this document should enable us to meet these targets.

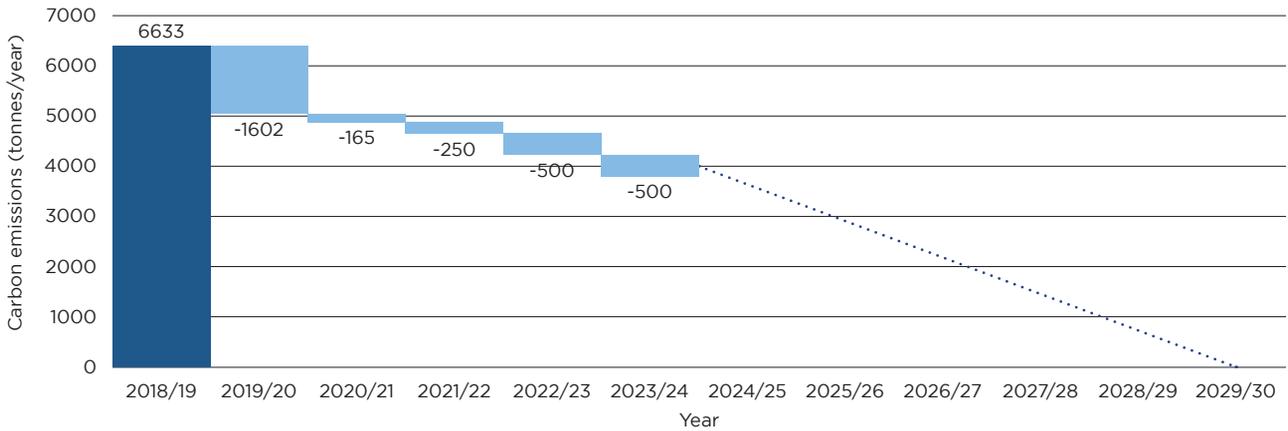
We recognise that this is the first time the Council has embarked on an ambitious emissions reduction strategy. Our approach is therefore to provide two updates on progress annually within three months of closure of each calendar half year to identify an updated Climate Action Plan for the two immediate years ahead. This approach will allow us to assess at reasonably frequent intervals how we are progressing, and it should keep in front of us our commitment to reach Net Zero by 2030 for emissions from our own operations.

In the event we fall short of annual emission reduction targets, we will identify back-up measures and accelerate other actions where possible. We will also identify lessons learned and new opportunities as we move through time and incorporate these in our proposals for future years. The approach to setting this emissions pathway to Net Zero 2030 is shown at Figure 2.



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Figure 2: NNDC emissions reduction pathway



Source: Net Zero East based on its emissions assessments and the Net Zero 2030 Target

The 2030 Target is an extremely challenging one, especially for a district with dispersed communities and few economies of scale. The figure for the 250 tonne reduction in 2021/22 is estimated; the reductions shown for 2022/23 and 2023/24 are also estimates and flow out of the actions described in this plan.

Over the remaining nine years leading up to 2030 – which includes the year we are already well into – NNDC must find on average over 540 tonnes every year of carbon reductions.

If it turns out that Net Zero cannot be fully achieved by 2030 by direct emissions reduction, we will invest in local nature-based solutions such as carbon offset schemes that deliver co-benefitsⁱⁱⁱ. However, a condition of this approach is that any such investment wherever possible must be in schemes within the district and which provide benefits to residents in North Norfolk.

Box 5: What is a “carbon offset?”

A carbon offset is a reduction in emissions made to compensate for emissions arising from the Council estate. There are a range of offsetting carbon options, including zero carbon electricity generation that exceeds the Council’s electricity consumption or tree planting.

The Woodland Trust estimates that it costs £25 to offset one tonne of CO₂. We are already committed to a tree planting programme, which so far has seen over 70,000 trees planted.

We address this and other “nature-based solutions” in more detail in section 6.

Our commitments about reducing the Council’s own emissions and meeting the Net Zero 2030 target are shown at Box 6.



Box 6: Our promises about Council emissions

The Council is committing to target Net Zero emissions in its own operations by 2030, twenty years ahead of the national target.

Where we are faced with residual emissions from our activities we will invest in carbon offsetting schemes and other nature-based solutions - wherever possible within the district - that benefit our residents and businesses.

2.2 Supporting Net Zero across North Norfolk

Local Authorities are enablers of change in delivering Net Zero and have the potential to play a transformative role outside of their own operations in their districts.

While the Council's emissions typically account for around 1% of emissions in the North Norfolk district, government analysis suggests we can influence upwards of a third of territorial emissions through place-shaping and through building on local relationships. The impact extends to piloting new initiatives and sharing best practice, to bringing organisations together and creating a platform for ideas for local solutions.

We also intend to work to improve understanding of the need to decarbonise across the district. To do this, we will work on three fronts separately focussing on residents, businesses, and other regional stakeholders.

2.2.1 Involving residents and communities

Taking residents with us on the Net Zero journey is essential to ensuring success, and we are already taking steps in this direction. Highlights include:

In May 2021 the Cabinet approved the Environmental Charter^{iv}. This has provided the foundations for the work now set out in this Net Zero Strategy and Action Plan. We have also published an animation sharing key points from our Environmental Charter, which has already been viewed over 20,000 times^v.

NNDC, as part of the Norfolk Warm Homes Consortium, has been successful in a bid for £3.85mn of public funding to provide energy efficiency improvement works to homes occupied by low-income households. The government grant has a dual purpose, to reduce fuel poverty and greenhouse gas emissions.

Norfolk Warm Homes will use the grant to provide thermal insulation and low carbon heating to replace oil and gas heating systems. Households are eligible if they live in a home with an EPC of D or below and have a gross household income of less than £30,000. The scheme is open to owner-occupiers and landlords of privately rented housing. In most cases, eligible owner-occupiers will not need to pay anything towards the costs, although landlords will pay a minimum of a third of the cost of works^{vi}.

The Council is already investing in sustainable communities. As part of a programme introduced in 2019, we are providing grants of up to £15,000 for green initiatives, including community transport schemes, to parish councils and community groups^{vii}.

We have also run 'big tree giveaway' events during the planting seasons when any resident of North Norfolk can collect a free tree to plant.

Following a successful bid to the Office for Zero Emission Vehicles, the Council was awarded funding to develop EV charge-points across Council-owned car parks. There are now 30 Council-owned charge points across the district, and these can be found at North Walsham, Wells-next-the-Sea, Holt, Sheringham, Fakenham, and Cromer.

NNDC also coordinates an annual Greenbuild festival, which last year coincided with COP26. The programme provided a range of opportunities for residents to engage with climate and sustainability issues in a local context. The festival featured online workshops, seminars, debates open to comments and questions from anyone interested in working together to build a greener future for North Norfolk.

The Council will continue to promote Greenbuild and develop a suite of engagement activities focussed on highlighting options for residents and businesses to take action to reduce their own carbon emissions.

We are also encouraging residents and visitors to support local businesses that are proactively making changes to improve the local environment and reduce their own carbon footprint.

2.2.2 Involving businesses

Businesses also have a key role to play, both through their own actions and through supporting their employees.

We will continue to work in partnership with our businesses and contractors. For instance, Everyone Active will continue to reduce emissions across sports and fitness centres. We also work with our waste contractor Serco to reduce fleet emissions.

Our ambitions go far beyond our contractors and service providers. As a district council we can participate in district infrastructure development and transport projects, and we will actively look to engage with local businesses – including the Holkham, Walsingham and other estates - in formulating and delivering our plans.

Emissions from travelling to and from work can be reduced through using public transport, walking, cycling or by car share, and we will look to promote such opportunities. Since the COVID-19 pandemic, working from home has become ‘the norm’ for a large majority of the population, and this also acts as another effective way to reduce emissions caused by travelling for work.

When at work, other emissions reduction measures can be taken, such as keeping windows closed to preserve heat inside of buildings, turning off equipment when it is not in use, as well as videoconferencing which would reduce business travel.

We will also look to attract new low-carbon businesses and services into the area especially at our enterprise zones, to support regional growth and new jobs in the green economy.

2.2.3 Involving other stakeholders

The Council already has relationships with private and third-party organisations active in the district such as the Coastal Partnership, the Rivers Trust and the Woodland Trust, which we want to develop.

We will also look to reach out to other third sector organisations to ensure more coordinated action on carbon abatement within the district and beyond.

The partnership with other councils in the region can also help create a snowball effect. Improved communication across Norfolk councils and other relevant councils is essential to efficient problem-solving, identifying best practice and solutions sharing and development of shared objectives.

We also intend to be more actively involved in the Norfolk Climate Change Partnership to expedite emissions reduction and adopt a leadership role within the county.

Box 7: Our promises about supporting emissions reduction in North Norfolk

We will actively engage and take steps to influence emissions reduction action across the district and support achievement of Net Zero by 2050 at the latest.

We will support council residents and stakeholders by place-shaping and forming partnerships to move businesses and householders in the same direction as the Council.

We will provide information and examples of good practice for residents and local businesses to fully play their part.

We will lead by example, and we will be an exemplar among rural councils.

3. Governance and process

To help us deliver against our Net Zero 2030 target, NNDC is changing the way it thinks about carbon emissions across the organisation and how we measure our progress. This section identifies some of the key changes we will need to make to better understand and monitor our emissions.

The process is based on four enabling activities that will sit within our overall governance framework. This is shown at Figure 3.

Figure 3: Reworking our processes



Source: NNDC

3.1 Governance

We will measure our carbon emissions routinely based on an auditable process and publish twice yearly snapshots of changes in the form of a scorecard with supporting commentary. The reports will be validated by Corporate Leadership Team and submitted to Cabinet for discussion and feedback.

Our Corporate Leadership Team will be charged with overseeing new processes and ensuring we deliver on our climate commitments. A portfolio owner on the Cabinet will take on specific responsibility for delivery of the Net Zero Strategy and development of the Climate Action Plan.

All senior management and Council decisions will be assessed and tested for consistency against the Net Zero Strategy and Action Plan.

3.2 Data management

We have adopted manual processes to date to calculate our emissions and carbon footprint, combining disparate information flows from our internal accounting processes. We intend to Implement a data management process to accurately track and monitor emissions going forward, and our aim is to have that new system in place for September 2022.

In the short term, we will need to retain additional resource to support data collection, information gathering and reporting. However, this should quickly permit us to target emissions reductions and make savings in how we deliver our services and to better understand the options and choices that we make.

We understand what an appropriate data management system might look like, and we are taking early steps to design and implement it.

3.3 Reporting

We intend to produce half yearly reports on our progress and the emissions reduction we can achieve. It is expected these reports will be made available at the first half of the financial year and mid-year.

In addition to this we will also update the Net Zero 2030 Strategy and Climate Action Plan twice yearly.

Reporting and Update Timetable: 2022 - 2023

Half yearly report on emissions reduction	Update the Net Zero Strategy and Action Plan
September 2022	December 2022
March 2023	June 2023

We also intend to develop a scorecard so that our performance can be seen at a glance, and these will be prominently displayed on the NNDC website.

3.4 Engagement

NNDC already organises events such as the Greenbuild festival, which provides a range of opportunities for engagement through online workshops, seminars, debates and Q&A sessions. We will build on that experience and continue to explore new ways of participation and channels of communication.

We will provide the opportunity to influence our plans and we will consult on changes to the Net Zero Strategy and proposed new measures adopted in our Climate Action Plan annually including alternatives and any additional steps that are needed.

We will also engage with other Norfolk councils, other rural councils and stakeholders to share knowledge and experience and discuss best practice.

3.5 Accountability

We expect to be held to account for our performance and delivery, including publication twice yearly of the scorecard. Each six-monthly reporting cycle will be supported by a report, and we will hold different forms of engagement to explain our actions and plans, and will hold other information sharing events.

Box 8: Our promises about governance and reporting

All senior management and Council decisions will be assessed and tested for consistency against the Net Zero Strategy and Action Plan.

We will establish a new data management and reporting system by September 2022.

We will develop a scorecard so that residents and stakeholders can readily assess how we are performing and our progress.

We will build engagement with you every year around our proposals and changes to the Strategy and Action Plan.

We will update the Strategy and Action Plan annually always making sure it covers the period running two years ahead.

4. NNDC's emissions and priority focus areas

In this section, we set out the priority actions for NNDC based on the information currently available to us.

The baseline and focus for action in 2022/23 and 2023/24 are shown by the Council's primary activities, with an indication of how the activity contributes to the three "Scopes".

We have segmented our emissions into eight main categories conventionally used in government guidance for reporting emissions. It covers in order:

- Electricity purchasing
- Gas use
- Our vehicles
- Business travel
- Emissions from the buildings we lease to third parties
- Water
- Council contracts
- Council's own waste

In each case we set our assessment of emissions over the past three years. We then set out the early-stage actions we are already moving ahead with or are proposing to take. We also set out the initiatives we are committing to start in this area so that we can report and be assessed and held to account by our residents and stakeholders.

The main actions and projects are summarised at Figure 4. The focus is the actions required over the two years covered by the Strategy and Plan. It considers:

- The priority actions to take
- Measures to enable the actions
- Priority capital projects, and
- Plans to develop over the plan period so that more specific and granular actions can be identified when the Strategy and Plan is renewed.



Figure 4: NNDC’s Priority actions and projects in the Net Zero 2030 Strategy

Actions to take	Measures to enable the actions	Priority capital projects	Plans to develop
Lighting systems and replacement with LEDs	Full audit of buildings with heating to establish remedial energy	Energy efficiency improvements programme	Building retrofit plan for six years beyond this plan
Buildings audit	Create centralised hub of information, including profiles for all Council-owned buildings Identify funding sources	Tender for design of zero-carbon leisure centre. Secure innovation or grant funding for conversion	Building retrofit plan for six years beyond this plan
Design, order and schedule installation of heat pump systems at priority properties	Heat assessment of design, order and schedule installation of heat pump systems at properties	Tender for design of heating systems at selected sites	Heating decarbonisation plan for six years beyond this plan
Identify priority sites for additional renewables	Council land use assessment, identifying priority sites	2,5MW solar development per annum	Renewables development plan for six years beyond this plan
Identify priority sites for wave 2 EV chargers	Engage with UKPN over Local Area Energy planning framework	Invest in further EV chargers	Transport decarbonisation plan for Council vehicle fleet for six years beyond this plan
Update carbon footprint for 2021/22 and 2022/23	Embed annual process for data capture and updating Net Zero Strategy	Not applicable	Implement green procurement policy
Review all leases and third-party contracts	Adopt carbon offsetting policy and review biodiversity net gain measures	To be determined	Identify priority options and plan for water saving measures

4.1 Electricity procurement

4.1.1 Current emissions

Electricity consumption is defined under Scope 2 emissions. It is spread across the Council's buildings and assets. Highest use is associated with the main council offices in Cromer and Fakenham Connect, which make up around 30% of all the Council's electricity consumption. The electricity consumption figure includes amenity lighting.

The emissions from electricity consumptions in the last three years were:

184tCO₂e
in 2018/19

253.6tCO₂e
in 2019/20

194tCO₂e
in 2020/21



4.1.2 Actions we are taking

Decarbonisation of the electricity system has led to significant reductions in emissions associated with electricity procurement over recent years. While coal burn has been almost eliminated from the generation mix and largely replaced by low or zero carbon renewable technologies, gas is still an important source of emissions during periods of low wind and/or high demand.

We will enter a new electricity contract in April 2022 with EDF, which will supply the Council with zero carbon electricity from wind, solar and nuclear sources of generation. The contract will run from April 2022 to March 2025.

Upon expiry, the Council will ensure the new electricity contract adopted is again zero carbon.

Even though our electricity consumption will be carbon neutral over the Plan period, we will still look to use less energy across our estate, as this should free up resources for other services and programmes. To enable us to better understand the scope for reduction, we will carry out a lighting audit of our buildings in 2022/23 with a view to an early switch over to LED systems from 2023/24.

We will also actively look for opportunities to install solar PV across the Council estate, using the power to supply our own buildings. The council already have 150kW of solar PV on the Cromer Office rooftop, which generated 100.6MWh in 2019/20 and 79.4MWh in 2020/21^{viii}. The solar PVs contributed to the reduction in electricity consumption from the electricity grid by around 30%, resulting in emissions savings of 46.4tCO₂e since April 2019.

Additionally, works have already been approved to establish a 300kW solar carport at the new Reef leisure centre in Sheringham, which could produce around 293MWh/year and be consumed at the site and power EV chargers.

We will be targeting further renewable generation over the initial two-year Climate Action Plan period. We will also look to locate some of these facilities with other EV charging points at strategic locations.

In a related move, we will be working with consultants to see what measures can be taken locally to boost the take up of renewable energy sources in our area to reduce wider territorial emissions associated with energy supply in the NNDC area. There is already 120MW of renewable generation capacity located in North Norfolk, and we will aim to increase this to 200MW by 2025 subject to obtaining the necessary planning approvals.

4.1.3 Our commitments

We will over the Plan period:

1. Contract 100% zero carbon tariff from April 2022, and reduce emissions from Scope 2 to zero.
2. Seek to reduce total electricity consumption by end 2023-24 by 10% over the 2021/22 baseline.
3. Carry out lighting audit of sites to determine and quantify benefits of switching to LED lighting.
4. Establish 5MW of additional solar PV on or close to council estate by 2025.
5. Consider enabling measures to support deployment within the district of additional renewables generation subject to developers obtaining appropriate planning consents.
6. Look to work with offshore renewable operators off the Norfolk Coast to ensure the benefits of these developments is captured by the district and that they support wider net zero efforts within the area.

4.2 Gas

4.2.1 Current emissions

Direct gas consumption by the Council is classed as Scope 1. It accounts for less than 2% of our carbon footprint. Current emissions from this source have remained consistent with the levels seen in 2018/19, with a significant drop of around a third in 2019/20 due to lower gas consumption in the Cromer Office over the summer months.

There are two key buildings contributing to the Council's gas consumption; NNDC Cromer Office and Fakenham Connect. NNDC Cromer Office accounts for around 80% of total gas emissions due to significantly higher gas demand.

The emissions from gas consumption over the past three years were:

67tCO₂e
in 2018/19

48tCO₂e
in 2019/20

69tCO₂e
in 2020/21



4.2.2 What we are doing

We have already undertaken an assessment of the gas heating system at our NNDC Cromer Office to inform decision-making on a future low-carbon heating system and ensure readiness for future funding calls.

We have also supported regional work on the role for clean hydrogen across heat, power and transport through the Bacton Energy Hub study carried out by Hydrogen East and supported wider discussions around distributed hydrogen development across the district. Over the lifetime of the first Plan period, we will also explore development of a district heat strategy to prioritise areas and developments that could benefit from applications of new, lower-carbon heating systems.

4.2.3 Our commitments

We will:

1. As a priority, track and seek support from national heat decarbonisation funding competitions across 2022/24.
2. Review NNDC's fossil fuel-based heating systems in 2022/23, with a view to establishing additional actions in the next annual update of this Action Plan.
3. Focus on increasing energy efficiency across our estate and increased use of smart controls for buildings where it is not viable or economic to switch over the heating system.
4. Seek to reduce total gas consumption across our estate by 25% by end 2023/24. This can be achieved partially by implementing smart heating systems that allow for specific areas/rooms of offices to be heated in the winter rather than heating the whole building.
5. Making upgrades to energy efficiency across both the NNDC Cromer Office, Fakenham Connect and the Cedars by 2024.
6. Assess alternative options for meeting heat demand at Council properties (e.g., heat pumps, community heating), and decide on the replacement gas systems at NNDC Cromer Office and Fakenham by 2026 at the latest (when the Government has issued clarity on the role of hydrogen for heat).
7. Continue support for work on the role of hydrogen for heat (but also transport and power) in the district.
8. Commence development of a district heat strategy and produce a check list of priority areas for action.

4.3 Our transport vehicles

4.3.1 Current emissions

Emissions from NNDC's own transport vehicles also fall under Scope 1. We have 20 transport vehicles used by several teams within the Council such as Environmental Protection Team, Environmental Services Team, Leisure and Localities, Countryside and Parks and Property Services.

The nature of the work of these teams means it is difficult to use any other form of transport than cars and vans. Currently all the operating vehicles are diesel cars, vans and SUVs. Total emissions from that sector amount to about 0.6% of all emissions.

The emissions from our transport vehicles over the past three years were:

65tCO₂e
in 2018/19

56tCO₂e
in 2019/20

51.8tCO₂e
in 2020/21



4.3.2 What we are doing

We are actively investigating options for vehicle upgrade, analysing leases and expiry dates. In the absence of specific incentives (such as scrappage schemes), it is essential to acquire new vehicles only at the end of life of the previous vehicle, as the carbon footprint of car production is an emission-intensive process. We will adopt EV and other low-emissions vehicles in place of every vehicle at the end of life.

Where replacement is not immediately contemplated, we will seek to use lower carbon fuels such as HVO, and we will also look to reduce fuel consumption across the fleet.

4.3.3 Our commitments

We will:

1. Produce a timeline for switchover of certain larger vehicles to HVO as soon as possible.
2. Produce a timeline for switching the current smaller fleet to electric-based vehicles on refreshed leases. The vehicles will be replaced normally at the end of life by EVs throughout the 2020s.
3. Tender for and work with suppliers to establish low-carbon vehicle contracts.
4. Consider options for switching our Refuse Collection Vehicles to clean, green hydrogen through the Solar to Hydrogen Infrastructure for Transport (SHIfT) project as part of the Net Zero Norfolk programme of works being funded under the Community Renewal Fund (CRF).
5. Aim to reduce emissions from our vehicles by at least 5tCO₂e a year.
6. Improve infrastructure for an increased number of EVs such as electric vehicle charging points in the car parks owned by the Council. As NNDC transitions to EVs, electrical grid upgrades may be needed at building depots to enable large-scale charging.

4.4 Business travel

4.4.1 Current emissions

Business travel refers to all employee travel for work-related reasons using their own vehicles. Most of the vehicles used for business travel are small to medium petrol and diesel cars. They fall under Scope 3.

Overall, business travel makes up 0.5% of NNDC's total emissions. Even though this percentage is small, it remains a challenge to reduce emissions in this sector. Business travel falls under Scope 3 emissions, which are emissions that the Council does not directly control, and we need to work with our workforce to push through change in this sector.

The emissions from business travel over the past three years were:

112tCO₂e
in 2018/19

75tCO₂e
in 2019/20

40tCO₂e
in 2020/21



The drop in car usage and resulting fall in emissions was most likely caused by the COVID-19 pandemic and decreased business travel needs.

4.4.2 What we are doing

The Council's ability to provide employees with the option of working from home has greatly improved throughout the COVID-19 pandemic, and we will be promoting measures to enable flexible working practices with a blend of home and office working. We will provide information on low-carbon travel alternatives and will ensure that the Council offices support on-site EV charging provision. We are also building awareness and support for active travel options, such as cycling and walking.

4.4.3 Our commitments

We will:

1. Reduce transport needs as far as possible through home working, fewer face-to-face meetings, transition to 'active' transport (cycling and walking) and avoiding car use for work-related activities.
2. Provide information to our workforce on lower-carbon transport options.
3. Look into strategies for incentivising public transport use where possible through initiatives such as providing loans for season tickets and also active travel.
4. Support continued home working where our workforce wishes to take advantage of this.
5. Make the case for early action to convert the Bittern rail line away from diesel.
6. Engage with bus operators in North Norfolk around decarbonising fleets and identify areas where the Council can provide support.

4.5 Leased buildings

4.5.1 Current emissions

Leased buildings emissions fall under Scope 3. They are the second most emitting sector in North Norfolk District Council after council contracts. Based on the benchmarking applied, the emissions have remained broadly constant.

The emissions from leased buildings over the past three years were:

3,906tCO₂e
in 2018/19

2,874tCO₂e
in 2019/20

2,850tCO₂e
in 2020/21



4.5.2 What we are doing

We have undertaken a detailed assessment of the gas heating system across three Council-owned assets contributing to emissions across the Council's estate, including two assets currently leased; Rocket House and The Cedars.

We will commence a review of building leases in 2022 to ensure there is as much alignment as possible between Council actions and the measures adopted by the tenants of our leased buildings.

4.5.3 Our commitments

We will:

1. Create a timeline of lease expiry dates and implement a sustainable/green approach to new tenancy agreements
2. Review all current leases for NNDC-owned buildings with a view to better understanding carbon impacts
3. Work with our tenants to produce action plans for reducing gas use and its carbon intensity at premises under existing leases and start negotiations with occupiers on reducing energy usage, improving energy efficiency and switching to green electricity supply

4. Take necessary action at the point of lease termination and develop a strategy for reducing building emissions before the issue of a new lease
5. On heating systems – judge options based on criteria of property type and existing infrastructure, and
6. Produce a priority listing to replace gas boilers with heat pump and other alternative systems based on building characteristics and usage
 - Replace old gas boilers with new equivalents as an interim measure
 - Explore the potential to initiate community heating schemes and heat zones
 - Review again in 2025 when the picture on hydrogen for heat is clearer.

4.6 Water

4.6.1 Current emissions

The emissions from use of water across the Council’s estate fall under Scope 3. Total emissions from this source were around 12tCO₂e in 2020/21. This is significantly lower than previous years (41tCO₂e in 2019/20), primarily due to the COVID-19 pandemic, which saw a reduction in water use across most public conveniences in the district. It was also caused by lower water consumption at the Council’s Cromer Office.

The emissions from water supply to our premises over the past three years were:

33tCO₂e
in 2018/19

41.1tCO₂e
in 2019/20

11.8tCO₂e
in 2020/21



4.6.2 What we are doing

We will identify priority actions for reducing water consumption, including deployment of water saving devices.

As most of the inefficiency in water systems comes from leaks from pipes, plumbing fixtures and fittings, the Council is already looking into installing water meters into public conveniences and office buildings to monitor and detect leaks quicker.

We will also be considering the local water environment and how this is dealt with in the Council's planning and enforcement activities.

4.6.3 Our commitments

We will:

1. Reduce water consumption across our estate by implementing water efficiency measures and introduce a staff awareness campaign. We will aim to reduce emissions to less than half of 2019/20 levels by the end of 2023/24 with a target of 20tCO₂e.
2. Designate a member of staff to monitor and drive improvements in water environmental issues from 2022.
3. Work with Anglian Water to devise water usage strategies and decarbonisation of processing activities.
4. Identify sites where rainwater harvesting and use could be deployed by the end of 2022/23.
5. Offset any remaining emissions from water consumption prior to 2030.
6. Integrate sustainable drainage requirements into all the Council's new developments from 2022.

4.7 Council contracts

4.7.1 Current emissions

Emissions under Council contracts also fall under Scope 3. A large portion of these is a result of the Serco waste and street cleaning contract fleet, which accounts for 15% of overall NNDC emissions.

Council contracts are variable year-on-year and so this value is expected to fluctuate most depending on the need for building repairs and contracted support. There is also limited visibility currently on emissions from organisations falling under contracted work, and so the Council will put in place a mechanism to better understand emissions in this area.

Another key service provider is Everyone Active, who manage our leisure centres.

The emissions from council contracts over the past three years were:

2,023 tCO₂e
in 2018/19

1,701 tCO₂e
in 2019/20

1,656 tCO₂e
in 2020/21



4.7.2 What we are doing

We will be working with our contractors to reduce fleet emissions and have already started the process of seeking emissions reductions through switching over part of the fleet associated with refuse collection to EVs. We also will be joining forces with Serco and our other key suppliers on the Council's Net Zero 2030 target and we will ensure we engage with them proactively on our carbon reduction programmes.

All new suppliers will need to meet our sustainable procurement policy once this has been adopted. We will also consider further measures to limit demand for services and goods procurement.

4.7.3 Our commitments

We will:

1. Review all current service contracts with a view to better understanding carbon impacts and reduction options.
2. In particular, look into exploring the feasibility of improving emissions reduction from waste collection vehicles in partnership with our contractors Serco.
3. Adopt by mid-2023 a sustainable procurement policy.
4. Target reductions in the emissions arising under the Council's contracts of not less than 15% a year, with an overarching objective of reducing emissions to 1.200tCO₂ by end 2023/34.
5. Deliver the Solar to Hydrogen Infrastructure for Transport (SHiFT) project as part of the Net Zero Norfolk programme of works funded under the Community Renewal Fund (CRF).

4.8 The Council's own waste

4.8.1 Current emissions

Waste from the Council's own operations are also Scope 3. This category does not include emissions associated with our transport fleet, including our waste vehicles, which are included under Council Contracts (section 4.7).

The emissions from waste generated from the Council's own operations were close to 1tCO₂e across both 2019/20 and 2020/21, which is less than 0.02% of all emissions. Although the percentage is low in comparison with other sectors, this number is still significant given the number of sites it covers (mainly the waste from two office buildings, country park and information centre). Much can be done to reduce waste from these assets.

The emissions from our in-house waste management activities over the past three years were:

1tCO₂e
in 2018/19

1tCO₂e
in 2019/20

1.1tCO₂e
in 2020/21



4.8.2 What we are doing

In 2022 we will embark on a review of Council in-house waste activities and mitigations.

4.8.3 Our commitments

We will:

1. Reduce our own waste wherever possible. Even though the waste reduction relies in big part on behaviour change by our workforce, there are still facilities that can make it easier for people to change their habits.
2. Manage our waste by becoming a single-use plastic free council by 2023, as stated in our Environmental Charter.
3. Enforce key principles for waste reduction in our office operations, which include buying in bulk, avoiding single use items and food waste, and making sure waste is properly segregated.
4. We will start an office furniture re-homing and re-use scheme.
5. We will also work on improving North Norfolk's capacity for processing materials, which would include better sorting facilities and higher number of drop off points for sorted waste, such as clothes and electronic waste.



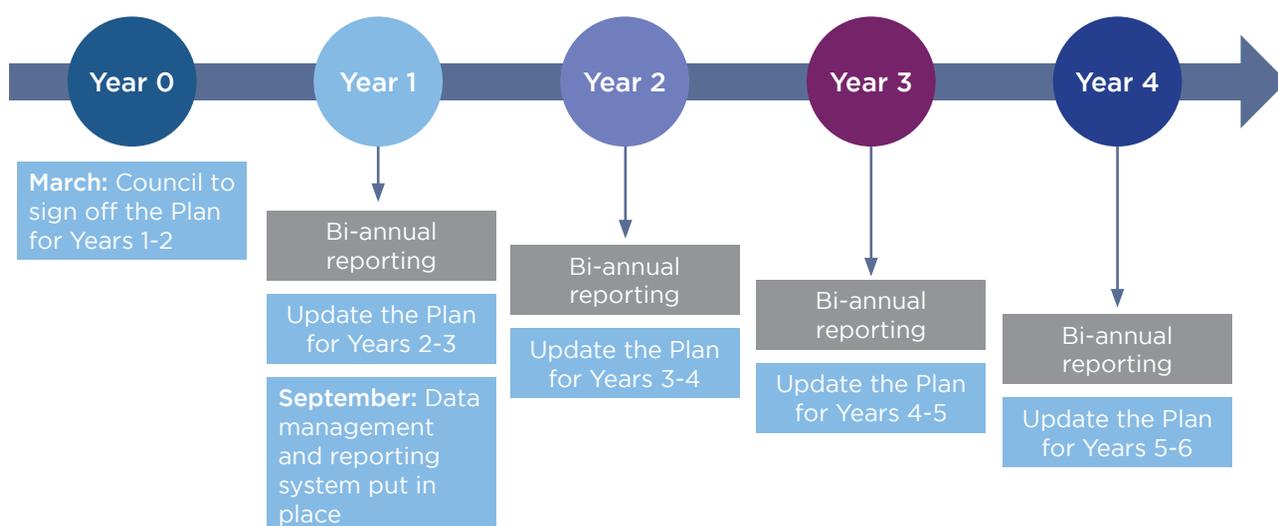
5. The Climate Action Plan 2022-24

NNDC has already been quick to take significant actions that are already beginning to drive down emissions across its building and activities. Some of these have been set out in section 2. However, we need to go further and faster if we are to push meaningfully towards a Net Zero 2030 target.

In this section we summarise the key actions contemplated in our Net Zero 2030 Strategy in the next two financial years. We call this the 'NNDC Climate Action Plan 2022-24'. We also set out the changes to how we manage and govern the Council's carbon footprint, and how we will report progress.

The new Net Zero and Climate Action governance framework is shown at Figure 5.

Figure 5: NNDC's governance reporting



In all, we are proposing additional CO2 savings of around 500 tonnes in each of Years 1 (2022/23) and 2 (2023/24) respectively, reducing our carbon footprint by roughly 10% per annum.



5.1.1 NNDC Climate Action Plan 2022-2024

5.1.1 Interventions

We split the actions we will take between the following twelve areas.



5.1.1 Governance

Ref	Year	Action
G01	22/23	Implement new carbon reporting process
G02	22/23	Complete 2021/22 footprint
G03	22/23	Appoint Carbon Data analyst
G04	22/23	Establish new governance rules on compliance of the Council's actions Net Zero 2030 Target
G05	22/23	Revise and publish Climate Action Plan for Year 2
G06	23/24	Complete 2022/23 footprint
G07	23/24	Adopt emissions reduction targets for Year 24/25 and 25/26
G08	23/24	Develop a biodiversity policy
G09	22/23	Review sustainable procurement policy
G10	23/24	Revise and publish plan for Year 3



5.1.2.1 Buildings and energy

BE01	22/23	Move urgently to the purchase of 100% renewable energy from April 2022
BE02	22/23	Undertake energy audits of all our buildings and prepare a priority carbon reduction and energy efficiency plan
BE03	22/23	Prioritise efforts to switch away from oil and carbon-intensive fuels by 2030
BE04	22/23	Carry out review of change-over to LED systems and smart controls in council-owned buildings
BE05	22/23	Implement new LED and control system in the Cromer office
BE06	23/24	Implement new LED and control system in the Fakenham office
BE07	22/23	Make sure any new council-controlled buildings or refurbishments are designed to achieve Net Zero emissions by 2030
BE08	22/23	Granular assessment of heating requirements and heat loss by property to create priority conversion list for heating system replacement
BE09	23/24	Develop "invest to save" plan energy efficiency projects across our estate

5.1.2.2 Renewable generation



RE01	22/23	Assess renewable energy generation opportunities across the Council Estate
RE02	23/24	Develop plan for supporting renewable energy for the district
RE03	23/24	Develop plan for supporting community energy for the district
RE04	23/24	Develop plan for collaboration with offshore developers for maximising benefits to North Norfolk from regional funds

5.1.2.3 Gas



G01	22/23	Develop heating decarbonisation plan for Council estate using gas
G02	23/24	Identify energy reduction plan for legacy sites using gas supply
G03	23/24	Assess options for green gas

5.1.2.4 Transport



T01	22/23	Develop a plan for increasing EV charge points at council-owned buildings and carparks
T02	22/23	Adopt a target for EV charge-points at Council owned carparks and buildings
T03	22/23	Implement shift over to hydrotreated vegetable oils for all Council refuse collection vehicles
T04	23/24	Assess options for decarbonisation of all other Council-owned vehicles
T05	23/24	Agree a replacement programme for all Council-owned vehicles to ensure they are all low-carbon by 2030
T06	23/24	Establish Active Transport plans
T07	23/24	Develop a strategy to work alongside local rail operators to decarbonise diesel and coal-fired railway lines

5.1.2.5 Business travel



Bt01	22/23	Review New Ways of Working policy
Bt02	23/24	Adopt a staff active travel policy

5.1.2.6 Leased buildings



Lb01	22/23	Carry out lease review and establish handover schedule
Lb02	22/23	Carry out energy efficiency review of leased buildings

5.1.2.7 Council contracts



Cc01	23/24	Develop contracts carbon remediation plan
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5.1.2.8 Water



O ₂ 01	22/23	Appoint a cabinet member to be responsible for coordinated cross-party work for water management
O ₂ 02	22/23	Identify priority actions for saving water at Council-owned and occupied properties
O ₂ 03	22/23	Identify priority actions for improving water management across the district



5.1.2.9 Waste

- | | | |
|-----|-------|--|
| W01 | 22/23 | Identify opportunities to reduce waste across the Council's own operations |
| W02 | 22/23 | Reduce plastic pollution from Council operations |
| W03 | 23/24 | Identify circular economy options |

5.1.2.10 Procurement

- | | | |
|-----|-------|--|
| P01 | 22/23 | Review procurement policies and develop green procurement strategy |
| P02 | 23/24 | Commence pensions review |

5.1.2.11 Supporting staff and councillors

- | | | |
|-------|-------|---|
| Ssc01 | 22/23 | Briefing to staff and councillors on the newly adopted Net Zero Strategy and Action plan in April |
|-------|-------|---|

5.1.2.12 Offsetting

- | | | |
|------|-------|--|
| Of01 | 22/23 | Adopt Council offsetting policy |
| Of02 | 22/23 | Explore carbon offsetting opportunities, especially those that can create co-benefits for the region |
| Of03 | 23/24 | Carry out geo-spatial mapping assessment of natural capital and biodiversity across North Norfolk, identifying the existing state of play and opportunities for further action |

6. The wider regional challenge

In this section we set out some initial thoughts on how we will aim to mobilise carbon reduction and climate mitigation actions within the North Norfolk district.

6.1 Addressing climate adaptation

Reducing emissions to as close to Net Zero as possible (climate-change mitigation) by 2030 across our operations and within the North Norfolk area wherever possible remains the key priority. In this context, we are already committed to increasing biodiversity within the district by planting 110,000 trees by 2023^{ix}. Many impacts of climate change are however inevitable, and we will need to be both resilient and adaptable in response.

As a maritime district, with widespread low-lying floodable landscapes and soft erodible cliffs, we are perhaps more exposed to the impacts of global heating, particularly sea level rise, than many. As a Council we have been at the forefront of developing and implementing adaptable solutions to the challenges faced by our coastal communities and coastal habitats. We have also developed new methods of safeguarding our coastline through dynamic natural processes, such as 'landscaping'. We will continue to develop the resilience of our coastal areas and to ensure coastal adaptation is featured strongly in shoreline management solutions.

The target of Net Zero by 2030 might be hard to achieve due to the infrastructural, technological, and funding constraints in some sectors. Therefore, many councils are planning to use carbon offsetting and other Nature-based Solutions (NbS)¹ to tackle residual emissions.

Such solutions entail an integrated approach that can address climate change and biodiversity loss, while supporting sustainable development. Although well-designed NbS can deliver multiple benefits for people and nature, much of the recent limelight has been on tree planting for carbon sequestration. It is often referred in shorthand as carbon offsetting.

Box 9: What is carbon offsetting?

A carbon offset is a reduction or removal of emissions of carbon dioxide or other greenhouse gases made to compensate for emissions made elsewhere. Offsets are measured in tonnes of CO₂e.

Trees for Life calculates six trees offset 1 tonne of CO₂, so one tree = 0.16 tonnes CO₂.

There are currently a range of carbon offset providers in the UK that have a focus on delivering carbon offset schemes in the UK.

NbS is an umbrella term covering a range of types of projects:

- Restoring and protecting forests and wetlands in catchments.
- Increasing the number of green spaces in cities and towns.
- Coastal habitat restoration.
- Carbon sequestration through tree planting and peat bog restoration.
- Rewilding.
- Aquaculture.
- Regenerative agriculture.

Due to their cross-cutting nature, the projects can provide a blend of ecosystem services. The gains include carbon sequestration, as well as nutrient balancing and numerous mental health benefits. We will actively support such activities but will only do this for the purposes of offsetting as a last resort. Should this be necessary we will target schemes in our own area. This should enable maximisation of economic, social, environmental and other co-benefits for local taxpayers at the same time as reducing emissions.

Given that the district of North Norfolk is relatively rural, agriculture, forestry and other land use potentially offer great benefits in terms of NbS. However, NNDC does not own a substantial amount of land, and the land already owned is used for different purposes. This means that nature-based initiatives will require partnerships with local landowners. The Council has therefore already started identifying and engaging with landowners interested in developing projects in line with our Biodiversity policy^x, which we will develop and review during 2022/23 to ensure consistency with this Net Zero 2030 Strategy.

6.1.1 Leveraging North Norfolk's natural assets

NNDC is home to a wide variety of natural environments. We have segmented our activities under six headings, being:

- Land.
- Soil and sub-surface.
- Habitats and species.
- Freshwater.
- Coast and marine.
- Atmosphere.

6.1.1.1 Land

Land provides ecosystem services across food production, regulating carbon cycle, recreational use and habitats for many species contributing to biodiversity. North Norfolk is a rural district with above the country's average farming land area, and it is nationally important for cereal and horticultural crops production. There are good examples of land-use and agricultural practices in the North Norfolk and wider Norfolk region. It is important that NNDC builds on its record of facilitating sustainable local practices and works to identify opportunities in the shorter-term.

Key areas of focus for NNDC include:

- Investigating opportunities to increase open green spaces.
- Working with local landowners, farmers and organisations such as NFU to encourage sustainable land-use and farming practices across the district.

6.1.1.2 Soil and sub-surface

Soils are a mixture of minerals, organic matter and organisms all interacting with each other. They provide important ecosystem services ranging across holding water and preventing flooding, providing food and non-food plants with nutrients, influencing gas exchanges between the roots and the atmosphere. Soil types in North Norfolk are largely gravel, sand, silt and clay.



NNDC has one of the highest rates of soil erosion in the country, and this position is expected to be exacerbated as the climate continues to shift towards heavier rainfall and thunderstorms.

Key areas of focus for NNDC include:

- Working with local landowners, farmers and organisations such as NFU to encourage sustainable land-use and farming practices across the district.
- Supporting better understanding among council taxpayers and stakeholders around soil erosion and the need to develop coordinated policies in the district to tackle this.

6.1.1.3 Habitats and species

Habitats and species have intrinsic value as they promote biodiversity and add aesthetics to the landscape. Habitats provide spaces for species of plants and animals to thrive, helping maintain genetic diversity and gene-pool which can provide beneficial medicines and food sources in the future. They also play a role in carbon sequestration and storage.

North Norfolk is, of course, home to a significant amount of coastal habitats, in addition to areas with deciduous woodland enabling biodiversity to thrive. We will look to

protect, re-generate and expand these by working with key local organisations such as the Coastal Partnerships Network, amongst others.

Key areas of focus for NNDC include:

- Investigating options for rewilding in the NNDC region.
- Increasing engagement with environmental stakeholders^{xi}.
- Seeking to increase habitat connectivity as well as creating new habitat areas.
- Examining which coastal habitats can be protected, re-generated and expanded.

6.1.1.4 Freshwater

Rivers, lakes, ponds, groundwaters, wetlands and all organisms living within them are described as freshwater. The availability and quality of freshwater for drinking, crop irrigation and living organisms is fundamental for us. North Norfolk has got a dry climate compared to the rest of England, making the stress on water resources more prominent. Maintenance of water resources will be crucial as the climate is predicted to enhance the drying of the region.



Key areas of focus for NNDC include:

- Identifying five priority locations where sewage, fertilizer run-off or industrial discharge are affecting water quality and implement a management programme. Chalk streams should be an early focus.
- Exploring whether desalination plant supported by offshore renewable energy could deliver benefits for the district.
- Collaborating with the Broads Authority on water quality management within the Broads.

6.1.1.5 Coast and marine

Our marine environment and coastal zone provide food, add to landscape aesthetics and provide recreational opportunities. They are also home to important habitats, vital to supporting populations of marine mammals such as grey and harbour seals, as well as an array of seabirds. In the case of saltmarsh, they are also an important source of carbon sequestration.

Unfortunately, it is also a repository of human-produced pollutants. North Norfolk region is especially vulnerable to the effects of climate change, particularly sea level rise, with its sensitive habitats and already eroding coastline.

Key areas of focus for NNDC include:

- Working with and promoting the Coastal Partnership East.
- Collaborating with Anglian Water to continually improve quality of wastewater being discharged into the sea.
- Supporting robust visitor management at vulnerable coastal sites.

6.1.1.6 Atmosphere

Our atmosphere consists of gases that are essential for life on Earth and functioning of our ecosystems. The composition of these gases has a big impact on climate regulation and climate changes. Humans, animals and plants require clean air, free of chemicals and particulate matter, to live healthily. The atmosphere, however, is often a recipient of pollution from human activity.

Key areas of focus for NNDC include:

- Establishing pollution-free zones (or ultra-low emission zones).
- Building dialogue with the top five point-source emitters in the private sector to encourage and support their decarbonisation.
- Strengthening air quality monitoring, targeting priority locations at schools and medical premises.
- Exploring viability of deploying micro-scale pollutant capture and storage.



7. A role for us all

We know from our communication with residents and businesses that there is a shared concern about climate change, and the effect this might have on families, livelihoods, and communities.

NNDC therefore intends to engage with you and want you to work with us to be part of the process to help create a safe and secure environment for you and your families. We particularly want to work with communities and young people to build engagement to understand your views, concerns, ideas and priorities.

In this section, we set out some ideas on how all our council taxpayers and stakeholders can play a part focussing on measures that we are already taking outside of the specific commitments set out in this Strategy and Action Plan.

Following the adoption of our Environmental Charter in May 2021, this Strategy and Action Plan is the next essential step in that process. We want to continue the conversation, assisting in translation of the national Net Zero 2050 target to the local context.



7.1 If you live in North Norfolk

For residents of North Norfolk, there are a variety of actions that can be taken to reduce carbon emissions. They include:

- Growing some of your own food (in your garden or on an allotment), buying locally sourced produce (which will also support local businesses).
- Reducing waste where possible.
- Installing renewable energy or buying green energy through your energy provider.
- Improving the energy efficiency of your home, through improving insulation and utilising smarter controls to benefit from time-of-use pricing.
- Take steps to consciously save water, as well as installing a water meter and water butts.
- Recycling, which is an easy action that can benefit the wider environment.



7.2 If you visit North Norfolk

Visitors to North Norfolk can help the district reach Net Zero by using the existing public transport system, walking or cycling. Visitors with EVs should also use the fast-expanding local charging system.

You should seek out local food and drink providers.

You can also visit and support natural sites that look to boost biodiversity.

You can use the local recycling options.

7.3 If you go to school in North Norfolk

Walking, cycling or using public transport is an ideal way to reduce emissions from travelling to and from school, while increasing well-being.

You can also encourage your school to support the local environment through creating bio-diverse habitats on site.

You can share these experiences with your families and friends.

7.4 If you run a business in North Norfolk

Reducing emissions from running a business in North Norfolk is possible through a range of actions, including:

- Having green fleet vehicles and installing EV charge-points on site for you and your employees, to encourage the transition away from petrol and diesel cars.
- Applying for Green Grants as they become available.
- Carrying out your own carbon audit to determine the priority areas to target for decarbonisation.
- Reducing waste and managing water consumption.
- Buying green energy through your energy company to power your business.
- Exploring the use of green gases, using accredited low-carbon service providers and servicers.



Appendix A: Emissions across North Norfolk

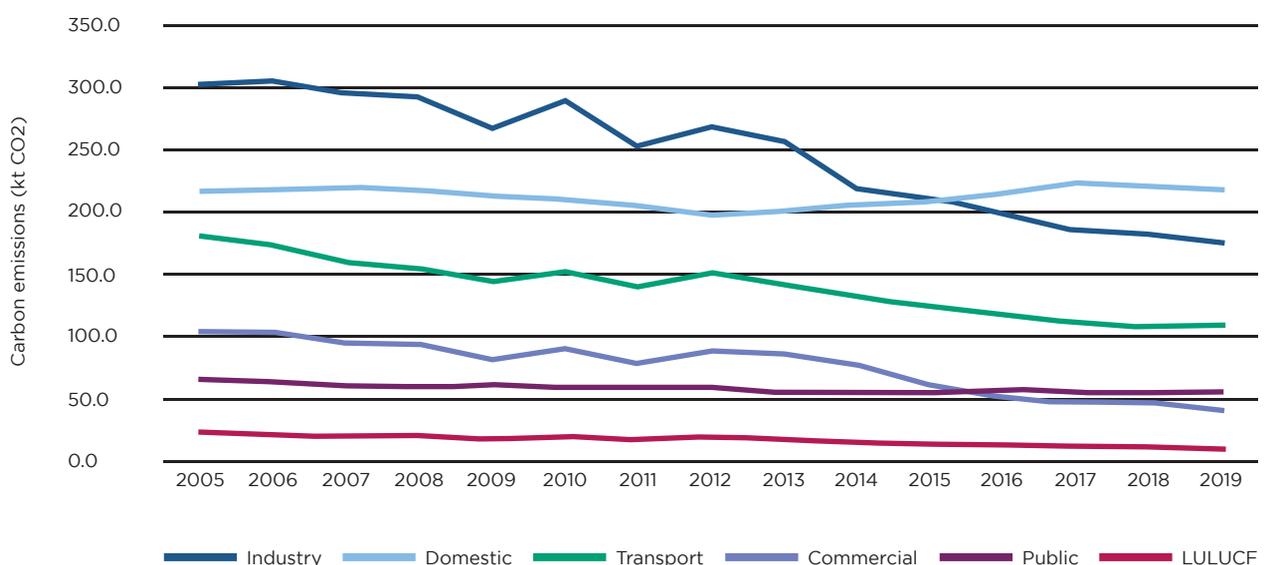
Emissions in the wider North Norfolk area are termed territorial emissions, and they too are usually expressed as tonnes of CO2 equivalent (CO2e). In 2019, the year that has the most recent complete data from the Government, were 609kt CO2 for the North Norfolk area. As noted, we estimate that about 1% arose from Council operations. Over recent years estimated territorial emissions for the district have been falling because of wider changes particularly in the electricity sector.

In 2019, NNDC served an estimated population of close to 105,000, with average per capita emissions of 5.8 tonnes, across our area. This is down by over a third from 8.9 tonnes in 2005. District carbon emissions were the third lowest of the areas covered by the seven District Councils in Norfolk. Emissions/km2 were also down 0.6kt, a 33% reduction, down from 0.9kt emissions/km2 in 2005, when comparable government data start.

The main trends in emissions by the six sectors used by BEIS are shown for the period 2005-19 at Figure A1. These cover industrial, commercial, domestic and public sector use, transport and land use.

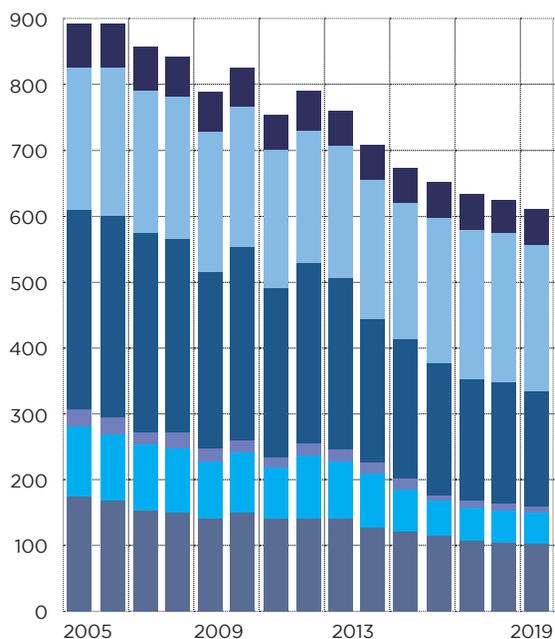
The break-down for the NNDC district for 2019 using government classifications and BEIS data derived from the National Atmospheric Emissions Inventory is then shown at Figure A2 This is shown alongside aggregated sub-totals by the main categories with a comparison looking back over a further four years.

Figure A1: NNDC emissions trends 2005 to 2019^{xii}



Source: Net Zero East (data source: BEIS LA territorial CO2 emissions (2019))

Figure A2: Emissions profile for NNDC 2005 to 2019 (kt CO₂e)



Sector Name	CO ₂ (kt)
Industry Total ¹	108.5
Commercial Total ²	41.4
Public Sector Total ³	10.0
Domestic Total ⁴	175.3
Transport Total ⁵	217.6
LULUCF Net Emissions ⁶	56.3
Grand Total	609.0

Source: National Atmospheric Emissions Inventory

This data shows that total territorial emissions have decreased steadily over the past five years. Most emissions in North Norfolk are sourced from the district’s Transport and Domestic sectors, largely due to the rurality of the district, which means that there is a heavy reliance on private cars and transport within the population, and many domestic properties and businesses having oil central heating, rather than being supplied by the gas grid. These characteristics are consistent with other predominantly rural districts and is a shared national issue but is particularly prominent in NNDC.

Furthermore, Industrial emissions are also very low, with only two major point sources of emitters, being the Bacton Gas Terminal and the Ryburgh Crisp Maltings.

Advances in EVs and decarbonisation of heavier transport will be key to reducing emissions in the district. Creating awareness of the need to replace heating systems, especially in areas off the gas grid where oil and high-carbon fossil fuels are extensively used, will also be key to local decarbonisation. Active tracking of take up of incentives to participate in energy efficiency programmes, including retrofitting properties, will also be very important. The Council will support and promote such initiatives where possible.

¹Industrial sector emissions are comprised of: industrial electricity, industrial use, industrial ‘other fuels’, large industrial installations and agriculture

²Commercial sector emissions are comprised of commercial electricity, commercial gas and commercial ‘other fuels’

³Public sector emissions are comprised of public sector electricity, public sector gas and public sector ‘other fuels’

⁴Domestic sector emissions are comprised of domestic electricity, domestic gas and domestic ‘other fuels’

⁵Transport sector emissions are comprised of road transport (A roads, motorways and minor roads), diesel railways and transport other

⁶LULUCF emissions are comprised of net emissions from forest land, cropland, grassland, wetlands, settlements, and harvested wood products

Appendix B: Glossary of Terms and Endnotes

Word	Definition
1MW	One megawatt (1MW) is approximately equivalent to the amount of electricity used by 330 homes during one hour. 1MW is equivalent to 1,000 kilowatt hours (1,000 kilowatts of electricity used for one hour).
Adaptation	Action that helps cope with the effects of climate change – for example construction for barriers to protect against rising sea levels, or conversion to crops capable of surviving high temperatures and drought.
Anthropogenic climate change	Man-made climate change – climate change cause by human activity as opposed to natural processes.
Biofuel	A fuel derived from renewable, biological sources, including crops such as maize and sugar cane, and some forms of waste.
Black carbon	The soot that results from the incomplete combustion of fossil fuels, biofuels, and biomass (wood, animal waste, etc.). It is the most potent climate-warming aerosols. Unlike greenhouse gases, these particles absorb all wavelengths of sunlight and then re-emit this energy as infrared radiation.
Carbon budgets	A carbon budget is a permitted and cumulative amount of carbon dioxide emissions that are emitted over a period of time in order to keep within a certain temperature threshold. Every carbon budget provides a cap on the total greenhouse gas emissions which should not be exceeded, in order to meet emissions reduction commitments.
Carbon capture and storage	The collection and transport of concentrated carbon dioxide gas from large emission sources, such as power plants. The gases are then injected into deep underground reservoirs. Carbon capture is sometimes referred to as geological sequestration.

Carbon dioxide (CO₂)

Carbon dioxide is a gas in the Earth's atmosphere. It occurs naturally and is also a by-product of human activities such as burning fossil fuels. It is the principal greenhouse gas produced by human activity.

Carbon dioxide equivalent (CO₂e)

A carbon dioxide equivalent (CO₂e) is a unit of measurement that is used to standardise the climate effects of greenhouse gases. CO₂e is therefore the number of metric tons of CO₂ emissions with the same global warming potential as one metric ton of another greenhouse gas. Six greenhouse gases are limited by the Kyoto Protocol and each has a different global warming potential. The overall warming effect of these gases is standardised through carbon dioxide equivalent – the amount of CO₂ that would cause the same amount of warming.

Carbon footprint

The amount of carbon emitted by an individual or organisation in a given period of time, or the amount of carbon emitted during the manufacture of a product.

Carbon neutral

Carbon neutral refers to the balance between carbon dioxide released in to the atmosphere and the equivalent removal of carbon dioxide from the atmosphere.

Carbon offset

A carbon offset is a reduction in emissions made to compensate for emissions arising from Council estate. There are a range of offsetting carbon options, including zero carbon electricity generation that exceeds the Council's electricity consumption or tree planting.

Climate change

A pattern of change affecting global or regional climate, as measured by yardsticks such as average temperature and rainfall, or an alteration in frequency of extreme weather conditions. This variation may be caused by both natural processes and human activity. Global warming is one aspect of climate change.

Co-benefits

Co-benefits are defined by the Government as improved resource efficiency for businesses, lower household costs, and wider health co-benefits. There could also be beneficial impacts from improved air quality, and reduced emissions from other pollutants, as well as improvement in agricultural soil and peatland restoration, which in turn could positively impact water quality.

Conference of the Parties (CoP)	A Conference of the Parties is the supreme governing body of an international convention, in this case a series of United Nations climate change conferences and is the main decision-making body of the UNFCCC.
Deforestation	The permanent removal of standing forests that can lead to significant levels of carbon dioxide emissions.
Electric Vehicles (EVs)	An electric vehicle is a vehicle that is powered entirely or partially by electricity from a battery that requires recharging.
Energy efficiency	Energy efficiency is achieved by using less energy to carry out the same tasks in order to reduce energy waste.
Fossil fuels	Natural resources, such as coal, oil and natural gas, containing hydrocarbons. These fuels are formed in the Earth over millions of years and produce carbon dioxide when burnt.
Global warming	The steady rise in global average temperature in recent decades, which experts believe is largely caused by man-made greenhouse gas emissions. The long-term trend continues upwards, they suggest, even though the warmest year on record, according to the UK's Met Office, is 1998.
Greenhouse gases (GHGs)	Greenhouse gases refers to the collection of gases that contribute to the greenhouse effect by absorbing and trapping infrared radiation that is already in the Earth's atmosphere.
Greenhouse effect	The insulating effect of certain gases in the atmosphere, which allow solar radiation to warm the earth and then prevent some of the heat from escaping.
IPCC	The Intergovernmental Panel on Climate Change is a scientific body established by the United Nations Environment Programme and the World Meteorological Organization. It reviews and assesses the most recent scientific, technical, and socio-economic work relevant to climate change, but does not carry out its own research. The IPCC was honoured with the 2007 Nobel Peace Prize.
Kyoto Protocol	A protocol attached to the UN Framework Convention on Climate Change, which sets legally binding commitments on greenhouse gas emissions. Industrialised countries agreed to reduce their combined emissions to 5.2% below

1990 levels during the five-year period 2008-2012. It was agreed by governments at a 1997 UN conference in Kyoto, Japan, but did not legally come into force until 2005. A different set of countries agreed a second commitment period in 2013 that will run until 2020.

LULUCF	This refers to Land Use, Land-Use Change, and Forestry. Activities in LULUCF provide a method of offsetting emissions, either by increasing the removal of greenhouse gases from the atmosphere (i.e. by planting trees or managing forests), or by reducing emissions (i.e. by curbing deforestation and the associated burning of wood).
Mitigation	Action that will reduce man-made climate change. This includes action to reduce greenhouse gas emissions or absorb greenhouse gases in the atmosphere.
Nature-based solutions (NbS)	Nature-based Solutions (NbS) are defined by International Union for the Conservation of Nature as “actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenge effectively and adaptively, simultaneously providing human well-being and biodiversity benefits”.
Net Zero	The UK has committed to Net Zero greenhouse gas emissions by 2050. The term Net Zero refers to the balance of emitted and sequestered/ captured emissions coming into and out of the atmosphere.
Per capita emissions	The total amount of greenhouse gas emitted by a country per unit of population.
Renewable energy	Renewable energy is energy created from sources that can be replenished in a short period of time. The five renewable sources used most often are: biomass (such as wood and biogas), the movement of water, geothermal (heat from within the earth), wind, and solar.
UNFCCC	The United Nations Framework Convention on Climate Change is one of a series of international agreements on global environmental issues adopted at the 1992 Earth Summit in Rio de Janeiro. The UNFCCC aims to prevent “dangerous” human interference with the climate system. It entered into force on 21 March 1994 and has been ratified by 192 countries.

Endnotes

ⁱ<https://www.gov.uk/government/news/uks-path-to-net-zero-set-out-in-landmark-strategy>

ⁱⁱ<https://www.north-norfolk.gov.uk/media/6917/environmental-charter-v5.pdf>

ⁱⁱⁱCo-benefits are defined by the Government as improved resource efficiency for businesses, lower household costs, and wider health co-benefits. There could also be beneficial impacts from improved air quality, and reduced emissions from other pollutants, as well as improvement in agricultural soil and peatland restoration, which in turn could positively impact water quality.

^{iv}<https://www.north-norfolk.gov.uk/media/6917/environmental-charter-v5.pdf>

^v<https://www.north-norfolk.gov.uk/projects/climate-emergency/>

^{vi}For further information contact Norfolk Warm Homes - <https://norfolkwarmhomes.org.uk/>

^{vii}<https://www.north-norfolk.gov.uk/tasks/community-grants-and-funding/north-norfolk-sustainable-communities-fund-details/>

^{viii}Decrease in the generation was caused by maintenance works in early 2020.

^{ix}<https://www.north-norfolk.gov.uk/tasks/planning-policy/local-plan-new/>

^x<https://www.north-norfolk.gov.uk/info/planning-policy/current-local-plan/policies/policy-en9-biodiversity-and-geology/>

^{xi}<https://www.wildeast.co.uk>

^{xii}LULUCF is emissions associated with land use, land use change and forestry, which can be positive or negative. In NNDC the figure is positive, meaning a detrimental contribution to emissions.