

Gedling Borough Council's

Carbon Management Strategy

2021-2030

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Foreword

“Climate change has been identified as one of humanity’s greatest threats. If we continue on our current pathway, we will witness irreversible changes to the earth’s climate system that will pose a severe threat to humanity and life on earth. Following the adoption of the Paris Agreement in 2015, a legally binding international treaty which seeks to limit global temperature rise to 1.5°C above pre-industrial levels, in 2019, the UK government, under guidance from the Committee on Climate Change (CCC) committed to net zero emissions by 2050 compared to 1990 levels. This requires significant abatement of greenhouse gas emissions across all sectors of the economy. Therefore, as the responsible body for areas that include local transport, buildings and waste disposal, local governments will play a critical role in the UK’s transition to net-zero emissions.



Top left photo: Councillor Clarke leader and Councillor Payne Deputy Leader

Bottom left photo: Chief Executive Mike Hill

In November 2019, Gedling Borough Council (GBC) declared a climate emergency, alongside which a pledge to achieve net-zero carbon emissions by 2030 was made. Since then, as both a step towards the UK’s net-zero commitment and a roadmap for a green economic recovery from the Coronavirus pandemic, a 10 Point Plan for a green industrial revolution has been announced by the UK government, which has been followed by a pledge to reduce the UK’s emissions by at least 68% by 2030. Therefore, to keep pace with national progress and legislation and to support the Nottinghamshire Environmental Strategy, this local strategy outlines GBC’s ambition to show leadership in mitigating carbon emissions and improving the borough’s resilience to a changing climate. We hope that in turn, this will not only encourage other local authorities within Nottinghamshire to progress in this transition but also inspire our residents to lead greener, more sustainable lives. The transition to net-zero requires collective action from those who live, work, visit and invest in our borough and therefore, we hope that you can join us in making our mission a reality.”

Leader of Gedling Borough Council, Councillor John Clarke
Deputy Leader of Gedling Borough Council, Councillor Michael Payne
Chief Executive of Gedling Borough Council, Mike Hill

1.0 Introduction

Councillor Clarke leader and Councillor Payne deputy leader, alongside a Nottingham City Transport representative



1.1 Setting the context for action

Since the pre-industrial era, anthropogenic greenhouse gas emissions have increased. This has largely been driven by the combustion of fossil fuels and has resulted in concentrations of atmospheric carbon dioxide, methane and nitrous oxide that are unprecedented in at least the last 800,000 years. Their effects, together with those of other anthropogenic drivers, have been detected throughout the climate system and according to the Intergovernmental Panel on Climate Change (IPCC)¹, are extremely likely to have been the dominant cause of the observed warming since the mid-20th century. If our global greenhouse gas emissions continue unabated, it is expected that we will experience further warming and long-lasting changes in all components of the climate system that in turn will increase the likelihood of severe, pervasive, and irreversible impacts for people and ecosystems¹.

Climate change is already having visible effects, from the melting of Polar ice and glaciers to the unprecedented wildfires of 2020. In the UK, the Met Office projects that we will see warmer and wetter winters, hotter and drier summers and an increasing frequency of intense weather extremes. Here in the East Midlands, we can expect the most visible impacts of climate change to be an increase in unstable weather conditions, including an increase in flooding and intense storms due to the ability of warmer air to hold more water vapour, making rainfall more intense. In addition, as global temperatures rise, so does the probability of more extreme heatwaves. In fact, it has been reported that the hottest day of the year for the period 2008-2017 increased 0.8°C above the 1961-1990 average². These impacts will impose significant economic costs, damaging property and crops, disrupting infrastructure and overwhelming existing drainage systems. Not only this, but climate change will also have a negative impact on health and



Photo of Councillor Clarke, Leader and Councillor Payne, Deputy Leader at a Community tree planting event

¹ IPCC AR5 Synthesis Report: Climate Change 2014

² Met Office UK extreme events - Heatwaves

other local services, disproportionately affecting the most vulnerable residents in society. For example, elderly people may be more likely to experience detrimental physical impacts such as the worsening of symptoms of existing health problems such as respiratory illness and heart disease during heatwaves, whilst those living in deprived areas who have less access to green space are more likely to experience the urban heat island effect. Therefore, it is imperative that as a local authority, we ensure that there are no unintended outcomes to our climate action plans and that marginalised communities are not disadvantaged in this transition.

There is growing concern nationally about climate change. In a poll conducted in 2019, 85% of Britons stated that they were concerned about climate change, a rise of 25% compared to 2013³. The need for local, place-based action is further supported by the fact that 66% of Britons believe that climate change is as serious as Covid-19, with a majority of individuals wanting to see climate action prioritised in the economic recovery emerging from the pandemic⁴. By reducing our emissions rapidly, we can dampen the worst impacts caused by climate change and avoid catastrophic warming. In light of the scientific evidence and legislative context, it is crucial that as a local authority we play a leading role in driving emissions reductions borough wide in order to limit the risks associated with a changing climate and protect the security and welfare of those citizens who depend upon us. It is imperative that our carbon reduction plans account for population growth, which is expected to rise by approximately 8% over the next 10 years. This will impact consumption, waste production and environmental degradation in the borough and therefore, it is likely that to reach net-zero, emissions per capita will need to reduce further to account for population growth.

As well as contributing to legal targets to combat climate change, reducing carbon emissions presents an exciting opportunity to simultaneously deliver on a number of the Council's strategic priorities, such as the reduction in inequality, the delivery of improved public health, the construction of sustainable new homes and the creation of a cleaner, greener borough which contains more green spaces and places for our children to play. To guarantee an optimum approach that works for everyone, we will engage widely with all stakeholders to gain a greater level of understanding as to how we can cooperate to achieve the ambitions set out in this strategy, ensuring that no individual is left behind in this transition.

³ Ipsos MORI, 2019 - Concern about climate change reaches record levels with half now 'very concerned'

⁴ Climate Assembly UK, 2020, The Path to Net Zero

1.2 Defining net zero

Net-zero refers to achieving a balance between carbon emitted into the atmosphere and the carbon removed from it. Net-zero will be achieved when the amount of carbon released into the atmosphere is no more than the amount removed. To reach net-zero, we must reduce the carbon emissions that are released into the atmosphere. However, making such significant cuts requires large scale investment and innovation in alternative technologies that are technologically viable and economically competitive compared to their fossil fuel counterparts. In some areas, this will not be feasible in the timescales required, resulting in residual emissions that will need to be offset by sequestering carbon dioxide from the atmosphere, the simplest method to achieve this is through tree planting.

Despite maximal efforts as a Council, as we are not directly responsible for all the emissions that are produced in the borough, achieving our vision and becoming net-zero will require collective action. Each and every one of us must take action and join us in our ambition, this includes our residents, businesses, public bodies and the third sector.

As the principal agency for Gedling, we have significant scope to influence emissions and guide the net-zero transition across the borough. We intend to lead by example in the decarbonisation of our operations and critically, we want to enable and encourage other sectors to follow suit by leading a movement for change amongst both our residents and businesses. Providing support and guidance throughout this transition will ensure that we achieve our ambition, whilst deriving a host of positive side effects that include improved air quality. Critically, however, it will eliminate the potential for unintended consequences, particularly concerning mobility and fuel poverty, to ensure that the costs of the transition are minimised where possible.

1.3 Carbon emissions from Gedling Borough

The data on Gedling Borough Council's carbon emissions has been produced by the Department of Business, Energy and Industrial Strategy (BEIS) as part of a nationwide dataset of carbon emissions by local authority area for the period 2005-2018. The BEIS data reports what are known as Scope 1 and 2 carbon dioxide emissions at local authority level.

Scope 1 Emissions:

- Council only: Council's direct emissions, e.g., emissions from Council buildings, fleet vehicles and equipment, and land use.
- Whole Borough: Emissions within the borough boundary e.g., transportation, privately owned buildings, stationary energy (generation of electricity and fuels consumed in the manufacturing, construction and commercial sectors and domestic heating); agriculture and land use; in-boundary waste etc.

Scope 2 Emissions:

- Greenhouse Gas emissions occurring due to the use of grid-supplied electricity, heat, and/or cooling for Council and private buildings and services within the borough boundary.

Figure 1 below shows that out of the seven local authorities within Nottinghamshire, the per capita emission estimates for 2018 were lowest within Gedling Borough Council and Nottingham City Council at 3.5 tonnes per person, compared to the Nottinghamshire average of 5 tonnes per person.

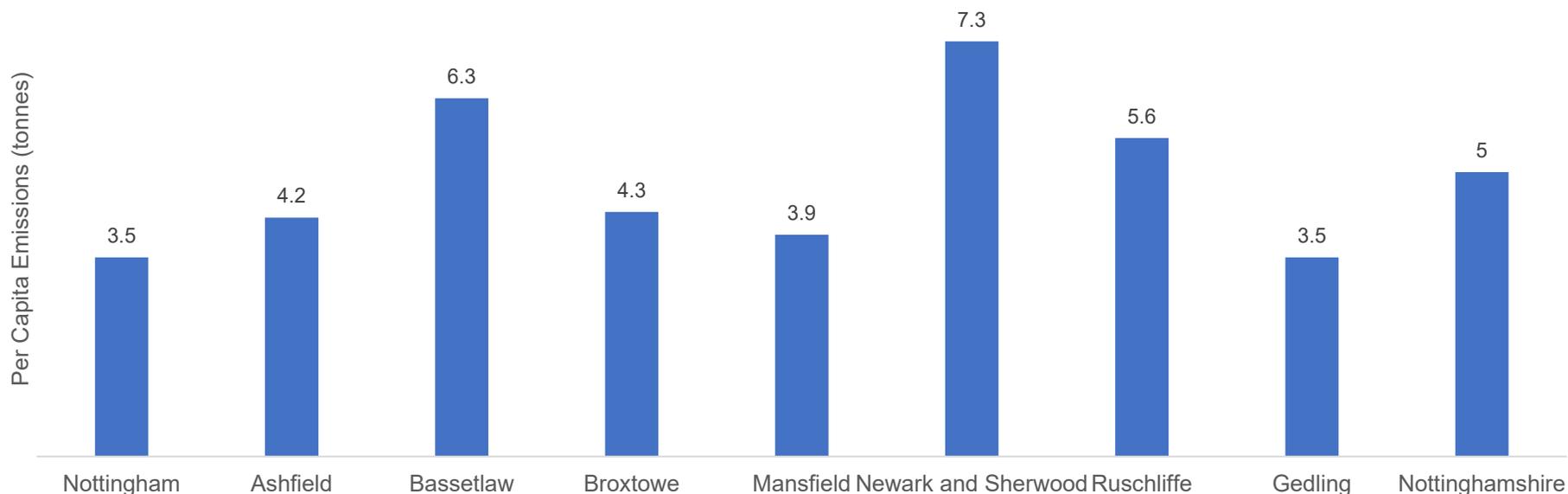


Figure 1: Department for Business, Energy & Industrial Strategy (BEIS) Per Capita CO₂ emission estimates for the seven local authorities in Nottinghamshire in 2018³

Scope 3 Emissions figures are not included within this strategy; Scope 3 Emissions are indirect emissions that include all the Greenhouse Gas emissions that occur outside the borough boundary as a result of activities taking place within the borough. Some examples of Scope 3 activities are the extraction and production of purchased materials; transportation of purchased fuels; and use of products and services. Although this strategy focusses predominantly on monitoring progress primarily against the scope 1 and 2 emissions in the BEIS figures, we will also strive to reduce Scope 3 Emissions, working collaboratively with local partners to reduce emissions from sources we do not have direct control over.

Figure 2 displays the 2018 BEIS emissions estimates broken down by source. These have been categorised under emissions from the Commercial and Industrial, Residential, and Transportation sectors. Within the borough, residential emissions account for nearly half (46%) of the borough's total carbon emissions, followed by 30% from industrial and commercial sources and 24% from transportation.

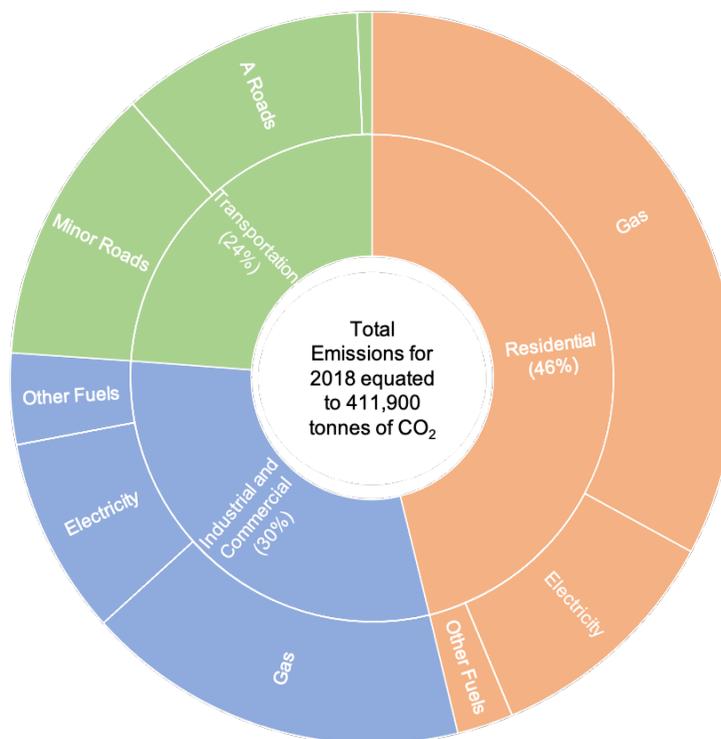


Figure 2: Department for Business, Energy & Industrial Strategy (BEIS) 2018 CO₂ emission estimates for Gedling Borough⁵

⁵ UK local authority and regional carbon dioxide emissions national statistics: 2005 to 2018

1.3.1 Carbon emissions from the Council's own operations

As part of our bid to address our carbon emissions, GBC commissioned APSE to establish our carbon baseline. We anticipate that this report will set a benchmark from which we can measure our improvements moving forward. From the Council's own operations, vehicles accounted for the greatest proportion of carbon emissions, comprising 49% of the total, followed by natural gas and electricity (see Figure 3). This not only provides us with valuable information as to where we should be focussing our efforts moving forward but will also serve as a benchmark enabling us to measure our carbon reduction targets year on year.

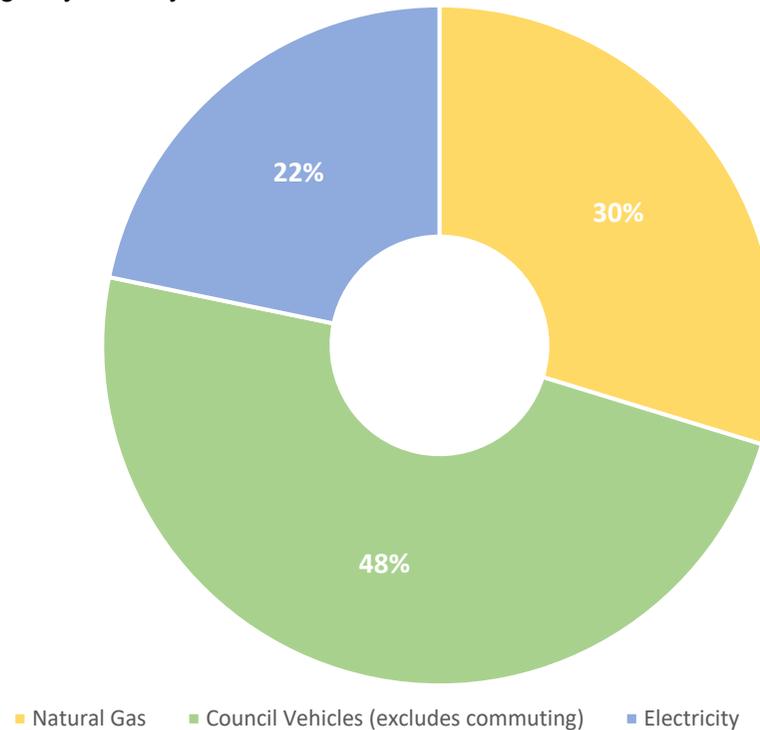


Figure 3: APSE, 2021 - CO₂ emission estimates from Gedling Borough Council's operations using 2019 figures⁶

⁶ APSE 2021: Gedling Borough Council Consultancy support – Establishing the Council's Carbon Footprint

1.3.2 Carbon emissions from staff commuting

The COVID-19 pandemic and the associated lockdown resulted in many council staff working from home. A GBC commissioned report by APSE Energy⁷ found that weekly emissions resulting from a shift to remote working reduced by 53.74% (from 3.74 tonnes CO₂e). A transition to remote working therefore presents a major opportunity to reduce GBC's operational emissions emerging out of lockdown.

2.3.3 Our performance so far

Gedling Borough Council has been working collaboratively with other Nottinghamshire Local Authorities and the D2N2 Local Enterprise Partnership (the LEP) on the Climate Emergency Agenda through the Environmental Strategy Working Group, recognising that the energy, climate and sustainability agenda does not respect Local Authority boundaries. This Group meets on a regular basis utilising a workshop approach that is addressing the challenges laid out in the D2N2 LEP Energy Strategy.

This partnership work enables a clear oversight to the work going on across the County, and allows Local Authorities to identify areas of collaboration and joint working, investment and a sharing of resources with workshop themes including:

- Decarbonisation of leisure centres and other energy intensive buildings;
- Improving the sustainability of existing housing stock;
- Planning for sustainable new build;
- Decarbonisation of fleet vehicles;
- Installation of Electric Vehicle infrastructure;
- Green procurement and joint investment;
- Offsetting and investment in green energy.

The Council has already delivered a number of projects and initiatives that will reduce the borough's carbon emissions and contribute to our net zero agenda; these have been outlined below:

⁷ APSE Energy 2021 - Establishing the Council's staff commuting to work carbon usage.

The Built Environment

- At our Civic Centre, we have installed energy efficient LED lighting and shower facilities to encourage active travel, in particular, cycling to work
- To reduce energy consumption, we have installed pool covers and new energy efficient pumps at our leisure centres
- An energy efficient window replacement programme is soon to be commenced at the Civic Centre at a cost of £300,000
- In March 2021, Gedling Borough Council published 'planning guidance on low carbon energy and sustainable design for Gedling Borough' which provides practical advice on the forms of sustainable design and construction for major developments and includes a checklist guide for developers to assist in the submission of major planning applications. For all major development proposals (defined as 10 or more dwellings) we expect consideration to be given to the following:



Photo of a residential street

- Sustainable layout and design for e.g. improved connectivity within and off the site to encourage more sustainable travel;
- Maximising site potential for e.g. solar orientation of buildings to encourage solar heating;
- Minimising energy use such as through thermal mass and insulation within buildings;
- Integrating new development with existing green networks and incorporation of sustainable drainage systems to help to adapt to and mitigate the impact of climate change such as flood risk.
- Minimising water consumption;
- Minimising the use of primary minerals, re-use of existing materials and sustainably sourced local materials.



Photo of Leader Councillor Clarke by an electric car charging point

Transport

- We require developers to install EV charging points as standard on new build residential and commercial developments across the borough.
- We aim to expand the EV charging network in the borough and have currently installed 15 EV charging points, these are located at High Street, Arnold (2 units), Fredericks Avenue, Carlton (6 units), Haywood Road South, Mapperley (1 unit), Morrison Street, Netherfield (6 Units)

Energy

- We have installed solar panels at three of our council run sites, these are located at the Civic Centre, the Richard Herrod Centre and Jubilee Depot
- We have facilitated a solar panel farm at Gedling Country Park managed by Anesco that feeds into the national grid and provides energy to 1,500 properties in the neighbouring areas of Carlton and Arnold Gedling Solar Farm
- We have installed new LED streetlights across various locations including the borough's car parks, leisure centres and recreation grounds, replacing the older 75W and 150W sodium fittings to 18W LED bulbs or 21W headlights.

Parks and Open Spaces

- We have a large programme of planting new trees, setting ourselves a target of planting a minimum of 500 trees annually.
- To encourage biodiversity, we are developing new pollination zones through the creation of more areas of meadow and grassland and reducing the application of herbicides and banning the use of Glyphosate on Council-managed parks and open spaces.
- We have created an ambitious Green Space Strategy that aims to protect and improve the borough's green spaces, setting ambitious standards for their improvement over the next five years



Photo of solar panel at Gedling County Park

Behavioural Change

- In partnership with Nottinghamshire local authorities, we have joined a 'Green Rewards' scheme - a sustainability platform, which will reward residents for reducing their carbon emissions via a points-based system with rewards supplied by local businesses using a voucher scheme.
- Within the recently published Planning Guidance on low carbon energy and sustainable design for Gedling Borough, there is an expectation that consideration is given to the sustainable layout and design of developments to promote improved connectivity, encouraging sustainable travel

Waste Reduction and Recycling

- We have delivered on our Plastic Clever Council commitment and have removed single use plastics from our operations as far as possible
- We are working in collaboration with our county-wide partners to reduce contamination levels for recycling in order to increase the borough's recycling rates



Photo of black refuse bins

2.0 Scope

This strategy is predominantly focused on efforts to reduce energy consumption and carbon emissions derived from our own operations. However, meeting our carbon emissions reductions targets will require action from all stakeholders including the borough's residents and businesses and therefore, it is imperative that we use our influence to promote carbon reduction and sustainable behaviour across the whole borough, striving to incite behavioural change wherever possible. We appreciate that addressing the climate crisis will impact resident's lives and will require lifestyle change and therefore, as a local authority, we must involve local residents, businesses, community organisations and service providers in the development of the Action Plan. Their skills, ideas and perspectives will not only result in better outcomes and more creative solutions; however, this will also allow for potential issues to be raised and addressed at an early stage, ensuring that initiatives are delivered with maximum effect and helping to create a resilient, socially inclusive and healthy borough

2.1 Our Vision

‘To take robust action to tackle the threat of climate change, both internally and externally, working in partnership with local organisations and residents to facilitate behavioural change contributing to sustainable communities.’

To deliver our vision we are focusing on the following priority areas:



Accompanying this strategy is an action plan outlined in section 4 that covers our 6 priority areas. To ensure that we are capturing changes in government policy and funding as well as innovation, this action plan will be reviewed on an annual basis. This will mean that we will not only be able to incorporate the latest research, technologies and regulations into the action plan, but it will also enable us to learn from previous actions. Adopting a flexible approach will allow us to formulate partnerships with neighbouring and cross-tier local authorities and businesses in sectors such as transportation, energy, housing and infrastructure that spreads beyond borough boundaries. Such an approach will enable the sharing of best practice allowing for the continual improvement of the strategy and its actions.

2.2 Our Priorities

Priority 1: The Built Environment

The built environment is the largest emitter of carbon in Gedling borough, with residential, industrial and commercial premises generating a combined 313,900 tonnes (76%) of emissions according to the 2018 BEIS dataset. Emissions from residential buildings contribute 189,600 tonnes or 46% of this share. This consists of 134,800 tonnes from gas (71%), 44,500 tonnes from electricity (23.5%) and 1,200 tonnes from other fuels (5%). Commercial and Industrial emissions account for 124,300 tonnes of carbon dioxide or 30% of the total generated in the borough. This encompasses 70,200 (56%) from gas, 35,900 (29%) from electricity, 16,500 (13%) from other fuels and a remaining 1,700 tonnes (1%) from agriculture. Therefore, significant opportunities exist to reduce the borough's carbon emissions through the incorporation and implementation of energy-efficient measures in both existing and new buildings.



Photo of new house build

The achievement of energy efficiency in residential homes can also help alleviate fuel poverty, as this lowers the amount of fuel that is required to heat a home and thus enables the most vulnerable households to boost their income. As a council, we have been awarded £784,000 via the Greens Homes Grant to retrofit 95 properties with solid wall insulation and solar panels, targeting properties with an EPC rating of band D or lower. However, beyond this, we intend to support our residents to become more resource-efficient in terms of energy and water usage through the support and promotion of retrofitting schemes and fostering energy savings via education and awareness.

EPC Rating	Number of Properties in Gedling
A	52
B	4,068
C	11,267
D	17,119
E	8,992
F	2,160
G	343
Total	44,001

Data period Jan 2008 – Dec 2021

Concerning new developments, the council will encourage developers to achieve sustainable construction and design via non-statutory planning guidance⁸ which will serve as a material consideration in determining major planning applications. This will not only contribute to the mitigation of climate change but will also enable adaptation to any future climatic changes, through the incorporation of green infrastructure, which in turn, will enhance the resilience of communities to extreme events.

Priority 2: Transport

Aside from contributing to almost a quarter of the borough's carbon emissions, transport is the main cause of air pollution in urban areas. This is associated with a number of adverse health impacts, being a contributing factor in the onset of heart disease and cancer. In 2017 alone, the costs of air pollution to the NHS and social care in England were estimated to be £157 million⁹.

⁸ Gedling Borough Council, 2021 - Low carbon Planning Guidance for Gedling Borough

⁹ Imperial College London 2018 - Air pollution in England could cost as much as £5.3 billion by 2035

According to the BEIS data, in 2018, transport accounted for 102,400 tonnes of carbon emissions annually or 24% of the borough's total, a 15.2% reduction in transport emissions in 2008. Of the 102,400 tonnes of carbon emitted from transport in 2018, 50,900 tonnes (50%) were derived from vehicles on minor roads, 44,400 tonnes (43%) from A roads and 2,800 tonnes (3%) from other modes, that includes LPG vehicles. Of the carbon emissions derived from the Council's own operations, its fleet, that comprises of 64 vehicles (as shown in Table 1) accounted for 48% of the total⁴. However, it is clear from Table 1 below that feasible low carbon options are available for 100% of the council's fleet, presenting a major opportunity to tackle a large proportion of the council's operational emissions.

Vehicle	Quantity	Alternative Fuel Type Feasibility
Dennis Elite Freighters	20	Hydrogen
Johnston Sweeper V652	2	Hydrogen
Schmidt Compact Sweeper	3	Electric
Hiab Crane Vehicle	1	Hydrogen
Ford Transit 3.5 Tonne	14	Electric
Ford Transit 4.7 Tonne	7	Electric
Ford Panel Van	16	Electric
Ford Panel Van with Versalift	1	Electric

Table 1: GBC's fleet numbers with the alternative fuel low carbon type that would be feasible for each vehicle type

Borough-wide, we want to reduce transport emissions whilst creating the conditions for an improved and more comprehensive transport system that encourages active travel. From our own operations, we want to reduce the number of journeys taken by our employees, encourage the increased use of public and active transport modes and procure zero emission alternatives for our fleet. However, we will not stop here, we will use our local influence to encourage and incentivise businesses and individuals within the borough to follow suit.

In the UK, commuting is estimated to account for 25% of all transport emissions¹⁰. Within the council, a shift to remote working during the pandemic resulted in a 53.74% reduction in the weekly emissions derived from staff commuting¹¹. Therefore, retaining a 'working from home' arrangement and encouraging this borough wide would not only have a significant influence on the borough's carbon emissions, but could also bring a variety of additional benefits that include reduced stress associated with commuting and an improved work life balance.

Furthermore, the Council aim to encourage residents to utilise green bio-gas public transport and as part of this, we will work with developers of new residential developments in the borough to explore the provision of taster passes for travel on buses

¹⁰ Moblityways, 2021

¹¹APSE Energy 2021 - Establishing the Council's staff commuting to work carbon usage.

In order to achieve both our net zero carbon target and create a cleaner borough with improved health outcomes, we will continue to work to eliminate transport emissions, via a combination of measures that include:

- Reducing the total number of vehicles on the road by encouraging a shift away from vehicle use and promoting active travel and where vehicle use is unavoidable, increase car sharing
- Supporting the deployment of electric vehicles by removing obstacles to their uptake such as the lack of charging infrastructure
- As a council, retaining and encouraging 'flexible' working arrangements that reduce the number of commutes made by council employees. Alongside this, there is a need to also harness and strengthen digital tools to facilitate working from home, ensuring staff can collaborate regardless of locality

Priority 3: Energy Generation



Aerial photo of Gedling Country Park

Energy is central to everything we do, it is fundamental to our quality of life, our environment and our economy. Despite identifying the need to achieve energy efficiency within the borough's building stock, it is imperative that we also ensure that as much of the borough's energy requirements are provided by renewable sources. As a council, we have installed solar panels at three of our council run sites, located at the Civic Centre, the Richard Herrod Centre and Jubilee Depot. Any additional energy that we require beyond our generation potential, we will look to purchase from renewable sources. On buildings that are outside of the council's ownership, we will use our influence to promote best practice such as that outlined within our non-statutory planning guidance document.

Priority 4: Consumption and Behavioural Change



Photo of shop frontage with an 'open' sign

Almost everything humans do involves materials that have been extracted, processed and transported across vast distances. Our economy is built around these raw materials or natural resources that include trees, gas, oil, metal ores, water and fertile land. Over the years, our demand for raw materials has grown, for example, from 1970 to 2010 our natural resource consumption more than tripled. However, this level of consumption worsens the climate breakdown and results in a host of detrimental impacts including an increase in air pollution, environmental degradation and habitat loss. It exhausts the planet's life support systems that provide us with fresh water and leaves us short of materials critical to our health and quality of life.

Humanity's demand for ecological resources and services is outpacing supply. In 2021, it was calculated that July 29th is the date at which human consumption has eroded all the resources the planet can produce in 12 months. However, by reducing waste and non-essential consumption, reusing, repairing and sharing existing goods, sourcing local and using more ethical and sustainable alternatives, we can significantly reduce the detrimental impacts that result from our consumption.

As a local authority, we endeavour to use our influence to promote environmentally sustainable behaviour borough wide, we want to see the borough's residents and its children, the next generation, gain a shared sense of responsibility. Although some behaviours will be harder to change than others, we appreciate that what often impedes behavioural change, is not only the fact that the scale and complexity of the climate challenge is difficult for many people to grasp, but it's also a low priority for a lot of people, particularly those in vulnerable financial circumstances. Therefore, as a council, we will work with our local community to support the most vulnerable, sharing resources and best practice. To enable us to do this we will utilise a new Place-Based Carbon Calculator (PBCC), developed by the centre for Research into Energy demand Solutions, (CREDS), that allows access to data sets on a street-by-street basis where a detailed breakdown of the carbon footprint and uptake of low carbon technologies can be obtained. This will enable us to focus our resources on those areas most in need of carbon mitigation.

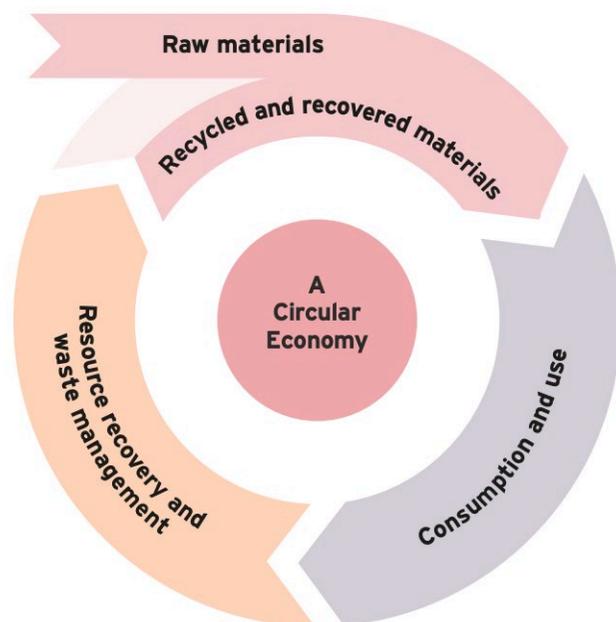
Priority 5: Waste Reduction and Recycling



Photo of waste refuse vehicle and operators

Gedling Borough Council's (GBC) Waste Department collects waste from over 53,000 domestic properties within the borough, emptying an average of 5 million bins annually. The borough's waste service, which operates in partnership with Nottinghamshire County Council, recycles, recovers and disposes of an average of 42,000 tonnes of waste per year, of which 33% was recycled and composted in 2019/20. Recent data reflects a worsening picture and subsequent need for further action in terms of education and enforcement around recycling and bin contamination that will minimise the volume of waste that is disposed of via incineration and landfill. Waste collection and rubbish disposal play an extremely important role in contributing to the cleanliness of the borough and our drive for sustainability. Our resident's health and the conservation of resources is a key responsibility of all local authorities. As the creation of waste is an inevitable by-product of human life, Gedling Borough Council must manage it in the most resource-efficient way possible, adopting the circular economy approach, where waste is reduced reused and recycled wherever possible. This is particularly important in light of population growth. By doing this, the council will also ensure that the impacts of its resident's consumption on climate change are minimised, in turn, contributing to the achievement of the borough's 2030 net-zero carbon reduction ambition.

Figure 4: The Circular Economy¹²



¹² Reproduced from Our Waste, Our Resources – A Strategy for England, 2018

Although priority goes to preventing the creation of waste in the first place, where waste cannot be reused or recycled, we intend to divert as much waste as possible from landfill and incineration to measures which promote the recovery of resources including anaerobic digestion, incineration with energy recovery, gasification and pyrolysis. Work is currently also being undertaken by Nottinghamshire County Council as the lead Waste Disposal Authority, which may in future impact on Gedling Borough as Waste Collection Authority. Planning permission has recently been granted for an energy from waste incinerator called the East Midlands Energy Re-Generation (EMERGE) Centre – which is designed to burn almost 500,000 tonnes of waste a year, reduce landfill and generate enough energy to power 90,000 homes. Furthermore, plans to develop a new residual waste incinerator on the site of the soon to be decommissioned Ratcliffe on Soar Power Station have been unveiled which will simultaneously reduce the volume of waste destined for landfill by diverting this waste for the purpose of energy generation.

Simultaneously, at the same site, the UK's first nuclear fusion reactor could be built, which will produce a source of clean energy. However, this is currently only in the bidding phase.

Priority 6: Green Infrastructure - Carbon offsetting

We acknowledge that achieving carbon neutrality in the borough will be a huge challenge and that despite maximal efforts, it will not be possible to completely eliminate carbon emissions. Therefore, there is a huge requirement to offset the borough's carbon emissions, namely by sequestering carbon dioxide from the atmosphere, through primarily, tree planting. The Committee on Climate Change have stated that the UK needs to plant 1.5 billion additional trees to achieve carbon neutrality, therefore this strengthens the need for us to develop planting plans and collaborate with landowners, businesses and residents to support both our national and local commitments.

Whilst tree planting increases the capture of CO₂ in a process called sequestration and allows for carbon offsetting, it must be acknowledged that this is a long-term solution. Young whips and saplings do not store as much as older trees that are 20 years and greater, they only store carbon relative to their size, making them more effective at combating climate change as they get older. However, trees do more than just capture carbon, they also fight the effects of a changing climate by helping to prevent flooding, reduce urban temperatures and pollution, provide shade and improve biodiversity by helping to keep soil nutrient rich. Thus, they play a notable role in mitigating against the worst effects of climate change and consequently help to improve the resilience of the Borough to climate related threats.

To help facilitate carbon sequestration the Council has initiated a 'Green Lung Project' that will be delivered over the next 2-3 years. This will see the development of a Memorial Woodland in Gedling County Park and a green link corridor leading from Digby Park Arboretum alongside Mapperley Golf Course to the Country Park. Along its route, we will install heritage interpretation panels which will serve as educational tools and illustrate the 'Natural Flora and Fauna' in the area. Furthermore, new developments in the borough will be expected to incorporate suitable tree planting and retain existing trees where possible.

3.0 Delivering and monitoring the strategy

This strategy provides the overarching direction for Gedling Borough's transition to net zero by 2030, outlining the steps we need to take now and over the next 8 years to work towards our vision. Monitoring and reporting are essential to ensure that actions taken are effective, to enable informed decisions to be made and outcomes achieved.

3.1 Community engagement and consultation

Gedling Borough Council is committed to engaging and involving residents, commercial organisations, businesses, borough partner organisations including the voluntary sector; health and higher education partners, schools and National Government Departments and agencies. To ensure we achieve a holistic strategy, one of the initial actions we intend to make is to create a communication and engagement plan that supports and promotes the priorities in the strategy by engaging with residents, local businesses and third sector organisations and landlords about the reasons for declaring a climate emergency, what emissions they are responsible for, and how they can play their part, securing collaborative partnerships and commitments from these different members. Not only this, but by involving local stakeholders throughout the process, we will ensure maximum success and eliminate the potential for unforeseen and unintended consequences. As part of this, we will hold events including climate commissions and resident assemblies and intend to create a Climate Emergency section on our website that is signposted from the homepage. This will contain the Carbon Management Strategy, any pertinent supporting documents and will clearly demonstrate the actions the council are taking, with regular updates on progress.

3.2 Project Groups

It is vital that quick and effective action is taken to address the climate emergency and the environmental pressures which the Council recognises across all disciplines. Currently, all Senior officers are required as policy to consider carbon reduction implications in all decision making through report templates established to reflect this. With this in mind 'Action Plan Project Groups' will be formed and overseen by Council officers who will be responsible for delivery of the objectives of this strategy. They will be accountable for the delivery of their project workstream, ensuring it remains aligned with the council's business priorities and the strategy. Furthermore, each workstream will have defined targets for carbon reduction against which the deliverables will be measured.

3.3 Performance Measurement

An annual programme plan will be established on our monitoring software to ensure the project workstreams are kept updated and that key performance indicators are met. The programme will be overseen by members of GBC's Senior Leadership Team (SLT), who will report progress to Cabinet and the Environment Committee on a quarterly basis (in terms of oversight of performance indicators).

To help facilitate and monitor our progress, GBC has appointed a Climate Change Officer, who, aside from working towards meeting the objectives outlined with our action plan, will be responsible for publishing an annual report analysing our progress. The appointed candidate will also play a pivotal role in ensuring strong collaboration within and across every department, helping to bring more creative and effective actions.

3.4 Officer and Member Governance

To take this forward the Chief Executive Mike Hill is the lead officer and Leader of the Council John Clarke and Deputy Leader Michael Payne are the lead councillors. Governance of the strategy will ensure that its delivery can be achieved and that the appropriate resources are available when required. It is intended that an update report will be provided to the Corporate Leadership Team (formed of the Chief Executive, and Directors) every quarter. In addition, the Council's Corporate Management Team (comprised primarily of Heads of Service) will be regularly updated and asked to identify key priorities, resources and capabilities for an effective response. Any risks will need to be understood and the pathways for delivery and progress regularly reviewed. An 'Officer/Member Environmental Sustainability Group', that was initially established to deliver the 'Plastic Clever Council initiative' will going forward, assist with the development of the strategy that we intend to continually update moving forward.

The primary function of the Officer/Member Environmental Sustainability Group will be to:

- Ensure that as strategy and action plan are progressed any required consultation is comprehensive and thorough
- Assist with the subsequent development of the strategy
- Regularly review progress against the action plan, once developed and agreed
- Assist the Climate Change Officer with prioritisation of actions (subject to the Council's standard governance and decision-making procedures)
- Seek out good practice and establish best practice amongst other Local Authorities, organisations and sectors as appropriate
- Report to the Environment Committee on progress on a quarterly basis (or as required)

3.5 Review

Recognising that national policy and legislation is likely to change, we intend to review this strategy after a five-year period.

3.6 Funding

In terms of funding, we have established an initial GBC allocated Carbon fund of £200,000 to deliver on certain projects, we have already allocated £127,000 of this funding to the projects outlined below:

- GCP Charging Points - £68,000.00
- Civic Charging Points & Lighting - £28,000.00
- Market Solar Panels - £16,000.00
- Bee Bee/Pollinator Plan - £15,000.00
- Green Lung Tree Planting Project - £50,000

GBC will need to develop business cases for investment to reduce carbon emissions. We will not only assess how services are currently configured to ensure that we maximise annual budgets to reduce our carbon impact, but we also need to seek to maximise grant and project funding to support the delivery of the strategy. Currently, we have successfully made bids into the Green Homes Grant, Salix Low Carbon Skills Funding and the Homes Upgrade Grant (HUG). However, we also need to explore alternative funding opportunities, such as community municipal bonds, green bonds and crowdfunding as well as searching for opportunities for private sector investment in projects and exploring the possibility of negotiating Section 106 agreements or the monies from the Community Infrastructure Levy to deliver projects.

3.7 Engagement

Previously within this document we have recognised that although we have a leading role in delivering our net zero ambitions, we cannot deliver upon this on our own. We will need to work in collaboration with residents, businesses, and community groups to enable and encourage them to help our borough achieve net zero. It is therefore essential that we engage and consult with all stakeholders throughout this transition so that we are able to co-design our approach to net zero. A key part of this will be to clearly outline the reasons for declaring a climate emergency, what emissions residents, businesses, and community groups are responsible for, how they can play their part in the transition and what benefits doing so will bring to them.

A large part of our engagement strategy will be to establish ways in which young people, many of whom are passionate about seeing environmental change can help us achieve our ambitions borough wide and drive change across the other generations. We are exploring options to establish a Climate Emergency Youth Forum to ensure representation of the younger generations. We also intend on training members of staff within the council who will be able to share knowledge and insights, visiting the borough's schools and businesses.

4.0 Action Plan

It is intended to establish a 'Climate Change Reserve Fund' to action quick wins, small works and carbon efficiencies; this reserve could be drawn down from as specific initiatives are identified during the course of the Climate Change Team's work moving forward.

4.1 The Built Environment

Objectives	Actions	Timescales	Lead & Key Partners
Promote the uptake of energy efficiency technologies in commercial and domestic properties	Consider the inclusion of local energy efficiency standards through the preparation of the Greater Nottingham Strategic Plan.	2023/24 onwards	Lead: Head of Development & Place Key Partners: Planning Policy Manager Food Health & Housing Manager Climate Change Officer
	Maximise available funding and promote schemes to help retrofit housing within the borough, prioritising low EPC rated owner occupied and rented homes (both social & private), privately owned properties (D and below) and social landlord housing where possible.	Throughout the strategy	Lead: Head of Environment Key Partners: Food, Health and Housing Manager Climate Change Officer
	Create or promote a scheme that helps simplify the retrofit market and reduce costs for property owners by creating a one-stop-shop for energy efficiency measures with pre-procured contractors.	Throughout the strategy	Lead: Head of Environment Key Partners: Food, Health and Housing Manager Property Manager Climate Change Officer Communications Manager

	Investigate financial incentives for installing energy efficiency measures/low carbon technology in residential, commercial and industrial premises in Gedling	2022/23 onwards	Lead: Head of Regeneration & Welfare, Head of Environment Key Partners: Property Manager Planning Policy Manager Food, Health and Housing Manager Climate Change Officer
	Ensure at least minimum energy efficiency standards are achieved in new build social housing sector (Investigate non gas grid solutions)	2022/23 onwards	Lead: Head of Development & Place Key Partners: Planning Policy Manager Building Control Team Leader Development & Regeneration Manager Food, Health and Housing Manager Climate Change Officer
	To regulate and enforce the minimum energy efficiency standard in rented accommodation.	2022/23 onwards	Lead: Head of Environment Key Partners: Food, Health and Housing Manager Senior Environmental Health Officer Climate Change Officer Communications Manager
Provide support and guidance to the borough's residents and businesses to reduce their energy demand	Inform residents and businesses across the borough on energy saving measures through developing materials and engagement i.e. local pop up-stalls/roadshows, with the aim of helping them to reduce fuel poverty.	Throughout the strategy	Lead: Head of Environment Key Partners: Development & Regeneration Manager Climate Change Officer Communications Manager

	Work with partners to support residents and businesses to promote the future of low carbon technologies	2022/23 onwards	Lead: Head of Environment Key Partners: Food, Health and Housing Manager Economic Growth Officer Climate Change Officer Communication Manager
Minimise emissions in the construction of new buildings and ensure that these buildings are built with the highest energy efficiency standards	Promote best practice by working with developers across the borough to encourage sustainable design and construction in new developments including thermal insulation, passive ventilation and cooling, heat source pumps in accordance with the Low Carbon Planning Guidance for Gedling Borough.	2022/23 onwards	Lead: Head of Development & Place Key Partners: Building Control Manager
	Provide low carbon guidance to developers such as Homes England 'Building for a Healthy Life' and Passivehaus Institut, 'Passivehaus Certified Standard'	2022/23 onwards	Lead: Head of Development & Place Key Partners: Building Control Manager
	Ensure regional procurement frameworks encourage developers to source locally	2022/23 onwards	Lead: Head of Finance & ICT Key Partners: Economic Growth Manager Legal Services Manager
	Undertake research with partners to facilitate a local circular economy for material reuse in construction to reduce emissions, costs and improve sustainability	2022/23 onwards	Lead: Head of Development & Place Key Partners: Economic Growth Manager Climate Change Officer Communications Manager

	Investigate requiring new developments to provide a 'EPC certificate showing the carbon footprint of each property and its likely running cost	2022/23 onwards	Lead: Head of Development & Place Key Partners: Building Control Team Leader Food, Health and Housing Manager Climate Change Officer
Continually improve the energy efficiency of the council's existing building stock and its services	Introduce detailed energy use monitoring of the property portfolio, including the provision of Energy Performance Certificates and actively review our assets to identify where energy efficiency improvements can be made.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key Partners: Property Manager Leisure Services, Parks & Street Care Climate Change Officer
	Call on the Government to provide the necessary powers and resources for us to deliver local action on climate change and provide strategic and financial leadership to drive ongoing carbon reductions	Throughout the strategy	Lead: Chief Executive Key Partners: Leader of the Council Deputy Leader and Portfolio Holders
	Identify existing sites that could be suitable for green technologies and infrastructure.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key Partners: Property Services Planning Policy Climate Change Officer
	Consider energy efficiency as part of any reactive repair or refurbishment work by replacing old equipment with new energy efficient alternatives.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key Partners: Property Manager Leisure Manager Business Development & Support Manager

	Carry out a review of opportunities to reduce the Information Technology carbon footprint by updating Information and Communications Technology (ICT) infrastructure with lower carbon equipment (including server equipment, printers, workstations etc) and enforcing power saving policies	2022/23 onwards	Lead: Head of Finance & ICT Key Partners: IT Manager Managers of Services
	Review the carbon footprint of e-services and cloud-based services and consider how council service can best be delivered (including e- services, documents transfer and electronic postage and online public services).	2022/23 onwards	Lead: Head of Finance & ICT Key Partners: IT Manager Managers of Services
	Continue the roll out of energy efficient plant equipment and lighting across the property portfolio including community buildings and facilities, and car park lighting e.g. LED lighting, power controls, heating systems	2022/23 onwards	Lead: Head of Regeneration & Welfare Key Partners: Property Manager
	Review purchasing/procurement policy to prioritise sustainability.	2022/23 onwards	Lead: Head of Finance & ICT Key Partners: Procurement Officer Legal Services Manager Climate Change Officer

4.2 Transport

Reduce the need to travel by diesel or petrol cars within the borough's boundaries	Review the Air Quality Strategy to include carbon reduction targets	2022/23 onwards	Lead: Head of Environment Key Partners: Scientific Officer Community Protection Manager
	Encourage employers to implement smarter working or home working initiatives to reduce employees' travel time and distance travelled, considering the use of fiscal policy as an incentive	2022/23 onwards	Lead: Chief Executive Key Partners: All Council staff Elected members
	Promote active travel and the use of green spaces through social prescribing (including green gym, health walks, forest school etc)	2022/23 onwards	Lead: Head of Communities & Leisure Key Partners: Economic Growth & Regeneration Parks and Street Care Manager Climate Change Officer Communications Manager
	Continue to ensure that new developments promote active travel and are within easy reach of high-quality public transport and cycle network routes	2022/23 onwards	Lead: Head of Development & Place Key Partners: Development & Regeneration Manager Planning Policy Manager Health Development Officer Business Development & Support Manager
	Work with partners across D2N2 to offer greater connectivity over the region.	2022/23 onwards	Lead: Head of Development & Place Key Partners: Planning Policy Manager Scientific Officer

			Climate Change Officer Relevant stakeholders
	Develop a staff travel promotion/incentive scheme for alternative travel (ULEV car lease scheme, car passenger allowance, cycle allowance, cycle purchase scheme, staff business travel card, staff travel schemes etc.).	2022/23 onwards	Lead: Head of Human Resources, Performance & Service Planning Key Partners: Senior Assistant Accountant Climate Change Officer Communications Manager
	Widen access to the Staff Cycle purchase scheme & influence businesses and private landowners	2022/23 onwards	Lead: Head of Human Resources, Performance & Service Planning Key Partners: Senior Assistant Accountant Climate Change Officer Communications Manager
	Develop a strategy for further EV charging points across Gedling owned car parks.	2022/23 onwards	Lead: Head of Environment Key Partners: Scientific Officer Property Manager Finance Business Partner Car Parks Officer
	Work with employers within the borough to promote car sharing schemes.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key Partners: Local Businesses Climate Change Officer Communications Manager
	Encourage freight organisations to make the switch to electric vehicles and promote the use of	2022/23 onwards	Lead: Head of Regeneration & Welfare Key Partners:

	cargo-bikes for final stage deliveries for SME's.		Local Businesses Climate Change Officer Communications Manager
Promote the uptake of active travel	Prioritise the development of a high-quality cycling network and secure cycle parking across the borough.	2022/23 onwards	Lead: Head of Communities & Leisure Key Partners: Planning Policy Manager Business Development & Support Manager Community Partnership Manager Nottinghamshire County Council
	Seek to secure ongoing funding to support education, co-design and engagement to help commuters and visitors feel safe to make the switch to walking and cycling.	2022/23 onwards	Lead: Head of Communities & Leisure Key Partners: Planning Policy Manager Business Development & Support Manager Community Partnership Manager Climate Change Officer
	Collaborate with schools and employers to encourage pupils, parents, and employees to travel by walking and cycling where possible. Hold events such as car free days, clean air days to promote the benefits of walking and cycling, in conjunction with communities and voluntary organisations.	2022/23 onwards	Lead: Head of Environment Key Partners: Climate Change Officer Partners/stakeholders Community Partnership Officer Communications Manager
	Consider introducing a workplace travel grant for employers to encourage their employees to commute to work by cycling.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key Partners: Scientific Officer Economic Growth Manager

			Local Businesses Climate Change Officer
Support the deployment of electric vehicles	Extend the provision of EV charging points across the borough's car parks.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key Partners: Economic Growth Manager Property Manager Car Park Officer Financial Business Partner
Reduce emissions from council fleet and private vehicle hire	Investigate with partners a programme to replace / upgrade refuse trucks with ULEV/Biogas/Hydrogen/ Hydrogenated Vegetable Oil Diesel fuelled vehicles fuelled vehicles.	2022/23 onwards	Lead: Head of Environment Key Partners: Depot Services Manager External Stakeholders/Partners
	Investigate and replace/upgrade, all vans with electric powered vehicles (including establishing charging infrastructure).	2022/23 onwards	Lead: Head of Environment Key Partners: Depot Services Manager External Stakeholders/Partners
	Integrate driver training with annual certification and investigate 'in cab' monitoring and route optimisation.	2022/23 onwards	Lead: Head of Environment Key Partners: Depot Services Manager Business Development & Support Manager
	Introduce Taxi licensing minimum vehicle emission requirement (e.g. maximum age of vehicle, EURO class, emissions monitoring etc).	2022/23 onwards	Lead: Head of Environment Key Partners: Depot Services Manager Community Protection Manager Partners

4.3 Energy Generation

Expand local low carbon energy generation in the borough	In conjunction with research and other public sector partners, create a map of potential areas for low carbon generation across the borough's sites and building stock.	2022/23 onwards	Lead: Head of Development & Place Key Partners: D2N2 Midland Net Zero Hub Planning Policy Manager
	Work collectively to support the delivery of the D2N2 Energy Strategy and develop and deliver tangible energy action plans to support the area wide reduction of carbon emissions.	Throughout the strategy	Lead: Head of Environment Key Partners: Food, Health and Housing Manager Climate Change Officer
	To facilitate greater uptake of renewable energy generation, develop a suite of information and guidance materials following engagement with residents and lead partners.	2022/23 onwards	Lead: Head of Environment Key Partners: Climate Change Officer Community Partnership Manager Communications Manager
	Explore options to invest in alternative energy generation (e.g. PV farms, wind turbines)	Throughout the strategy	Lead: Head of Regeneration & Welfare Key Partners: Planning Policy Manager Property Manager Food, Health and Housing Manager Climate Change Officer
	Undertake a feasibility study of opportunities to fit PV/alternative energy generation and storage to our property portfolio.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key Partners: Property Manager Food, Health and Housing Manager Climate Change Officer

	Audit council leisure centres with a view to preparing a business case for installing PV systems on all roofs, pool covers and other energy saving initiatives.	2022/23 onwards	Lead: Head Communities & Leisure Property Manager Leisure Manager Climate Change Officer
	In the council, for any additional energy that we require beyond our generation potential, we will look to purchase from renewable suppliers supplying 100% renewable energy tariffs.	2022/23 onwards	Lead: Head of Finance & ICT Key Partners: Property Manager Procurement Officer Food, Health and Housing Manager Climate Change Officer
	Explore the possibility of establishing a community energy scheme with partners to deliver energy efficiency options such as Solar PV and heat source pumps.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key Partners: Community Partnership Manager Food, Health and Housing Manager Climate Change Officer
Improve the borough's capacity to store locally generated renewable energy	Undertake a feasibility study of opportunities with partners to incorporate energy storage alongside renewable generation on council buildings to allow maximum use of locally generated energy.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key Partners: Property Manager
	Increase electricity storage locally, through communicating benefits, understanding financial and business cases.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key Partners: Property Manager

			Registered social landlords/property suppliers.
Ensure that low carbon energy is affordable and accessible to all	Enable access to appropriate nationally available grant funding, incentives, and access to finance, to support affordable energy generation for all.	Throughout the strategy	Lead: Head of Regeneration & Welfare Key Partners: Property Manager Community Partnership Manager Food Health and Housing Manager Climate Change Officer
	Work with partners to explore an energy hub where residents, parish council's, local businesses and third sector organisations. can access information, advice and services provided by the council related to energy and going carbon neutral.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key Partners: Local Businesses Community Partnership Manager Residents Climate Change Officer Communications Manager
	Promote incentives for low carbon heating and investigate additional finances/funding opportunities for low carbon heating.	2022/23 onwards	Lead: Head of Environment Key Partners: Community Partnership Manager Food, Health and Housing Manager Climate Change Officer

4.4 Consumption and Behavioural Change

Increase local and low carbon production	Identify and work with key influencers within Gedling on Carbon Management best practice.	Throughout the strategy	Lead: Head of Environment Key Partners: Climate Change Officer Economic Growth Manager
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			Local Businesses Community Partnership Manager Residents Communications Manager
	Hold a borough wide lower carbon emissions with local partners with local businesses.	2022/23 onwards	Lead: Head of Environment Key Partners: Climate Change Officer Economic Growth Manager Local Businesses Residents Communications Manager Other Authorities Officers/ Climate Change Officers
	Consider growing local produce such as edible fruits, flowers and vegetables in Council owned allotments and green spaces.	2022/23 onwards	Lead: Head of Communities & Leisure Key Partners: Climate Change Officer Community Partnership Manager Localities Co-ordinators Property Manager
	Support the development of cooperative, community owned and other collaborative ventures to foster more effective use and sharing of resources such as swap shops to encourage recycling.	Throughout the strategy	Lead: Head of Communities & Leisure Key Partners: Climate Change Officer Community Partnership Manager Localities Co-ordinators Economic Growth Manager
	Promote local/sustainable food/food growing (Allotments, community growing plots, schools growing projects,	Throughout the strategy	Lead: Head of Communities & Leisure Key Partners: Community Partnership Manager

	Abundance Projects as recommended by the Permaculture Association, and other initiatives for example 'Incredible Edible', and develop links to local fruit and veg businesses)		Localities Co-ordinators Residents and community groups Climate Change Officer
Reduce consumption of high carbon produce	Influence partners running education and outreach programmes to reduce meat consumption, whilst in turn, encouraging residents to take up plant-based diets, and promote events such as meat free Mondays within schools the wider community.	Throughout the strategy	Lead: Head of Communities & Leisure Key Partners: Community Partnerships Manager Local Businesses Residents Climate Change Officer Other Partners Communications Manager
	Work in partnership with catering facilities to consider their carbon footprint in order to identify the biggest emissions areas so that they can be reduced and consumers can make informed choices.	Throughout the strategy	Lead: Head of Environment Key partners: Economic Growth Manager Food, Health and Housing Manager Environmental Health Officers Residents Local Businesses Climate Change Officer Communications Manager
	Promote and encourage seasonal and local eating. E.g., Seasonal food markets	2022/23 onwards	Lead: Head of Regeneration & Welfare Key Partners: Economic Growth Officer Town Centre Manager Climate Change Officer Local Businesses Residents

Buy and procure sustainably and maximise existing resources	Work with partners across the borough to explore the idea of ethical sustainable purchasing and swapping of goods through re-use schemes, shops and initiatives. Creating sharing platforms to reduce the need for individual ownership of goods i.e. libraries, community swap shops/lease schemes.	2022/23 onwards	Lead: Head of Communities & Leisure Key partners: Climate Change Officer Community Partnerships Manager Economic Growth Manager Local Businesses Residents Other Partners Communications Manager
	Work with partners and networks in the borough to support SMEs across all sectors to become more sustainable and low carbon in their operations.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key partners: Economic Growth Manager Local Businesses Food, Health and Housing Manager Residents Climate Change Officer Communications Manager
Encourage environmental awareness	Promote green business issues including energy efficiency, transport/travel planning, low carbon technology, 'green' accreditation and signposting to grants and support services etc.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key partners: Climate Change Officer Economic Growth Manager Food, Health and Housing Manager Community Protection Manager
	Draw up and implement an Environmental Policy and raise cultural awareness by implementing carbon literacy based training	2022/23 onwards	Lead: Head of Environment Key Partners: Senior Leadership Team Heads of Service Councillors Climate Change Officer
	Run a series of climate promotion events both internal		Lead: Head of Environment Key Partners:

	for example 'Energy Saving Week' and external for parish councils, businesses and the public.	2022/23 onwards	Climate Change Officer Communications Manager Parish Council's Economic Growth Officer Local Businesses Community Partnerships Manager Localities Co-ordinators Residents Other Partners
	Promote various environmental awareness events, partnering with charities and organisation's to run activities in support of our net zero ambition and to celebrate progress.	Throughout the strategy	Lead: Head of Environment Key Partners: Climate Change Officer Communications Manager Parish Council's Community Partnerships Manager Localities Co-ordinators Residents Local Charities Communications Manager
	Review any Council Service Level Agreements to include sustainability criteria and raise awareness amongst our partners on the importance of this priority and support them to look at their own operations.	2022/23 onwards	Lead: Head of Governance & Customer Services & Monitoring Officer Key Partners: Heads of Department Legal Services Manager Procurement Officer Climate Change Officer
	Set up a web portal for residents to make their own climate emergency declarations.	2022/23 onwards	Lead: Head of Environment Key partners: Food, Health and Housing Manager Scientific Officer Climate Change Officer IT Services Communications Manager
	Host a net zero residents assembly to ensure that our	2022/23 onwards	Lead: Head of Communities & Leisure

	residents' and local businesses' interests are firmly represented and update this carbon management plan accordingly.		Key Partners: Climate Change Officer Economic Growth Manager Businesses representatives Community Partnerships Manager Communications Manager
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4.5 Waste Reduction and Recycling

Minimise the borough's waste and its impact on the environment	Engage the public, communities, schools and businesses through borough wide behavioural change initiatives and information campaigns to provide a greater understanding of waste issues, where local waste goes and best practices to reduce the volume of waste and recycle correctly.	Throughout the strategy	Lead: Head of Environment Key Partners: Depot Service Manager Climate Change Officer Community Partnership Manager Communications Manager Business Development & Support Manager
	Promote SMART (Save Money and Reduce Trash) shopping to encourage households to buy items with less packaging, use reusable bags and buy refill packs.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key partners: Climate Change Officer Economic Growth Manager Local Businesses Residents Depot Service Manager Communications Manager
	Promote at council events environmental initiatives and consider a carbon clever brand.	2022/23 onwards	Lead: Head of Environment Key partners: Climate Change Officer Community Partnerships Manager

			Communications Manager
Use social media to promote initiatives such as 'Recycling Week (linking into Plastic Clever Council, Kids Against Plastic) update.	2022/23 onwards		Lead: Head of Environment Key Partners: Communications Manager Climate Change Officer Depot Service Manager
Raise awareness of reducing junk mail, providing actionable ways to reduce unwanted mail such as registering with the Mail Preference Service or the use 'No Junk Mail' stickers.	2022/23 onwards		Lead: Head of Environment Key partners: Communications Manager Climate Change Officer Depot Service Manager
Encourage waste prevention as part of the Council's own activities and operations	2022/23 onwards		Lead: Head of Environment Key partners: All Heads of Service All Council staff Elected members
Explore the concept of an Arnold Market environmental policy standards documents to address sustainability, plastic packaging and bags etc.	2022/23 onwards		Lead: Head of Regeneration & Welfare Key partners: Economic Growth Manager Town Centre Manager Food, Health and Housing Manager Climate Change Officer
Explore options for the roll out of food waste recycling.	2022/23 onwards		Lead: Head of Environment Key partners: Depot Service Manager in conjunction with partners such as the County Council as Lead Waste Authority
Install public drinking fountains that reduce the need for plastic consumption.	2022/23 onwards		Lead: Head of Environment Key Partners:

			Business Development & Support Manager Parks Development Officer Climate Change Officer
	Encourage a repair and reuse economy by exploring possible subsidies, e.g. pop up shops, clothes swaps, supporting reuse schemes.	2022/23 onwards	Lead: Head of Regeneration & Welfare Key partners: Climate Change Officer Economic Growth Manager Community Partnerships Manager Charities Local Businesses
	Adopt and promote the use of electronic payments and documentation, moving away from sending cheques and look to make payments electronically. Switch over to e-billing for companies that we still receive paper invoices from (where available). Increase use of email for remittances / invoices / reminders etc.	2022/23 onwards	Lead: Head of Finance & ICT Key partners: Finance Business Partners All Departments Residents
	Explore the opportunity for commercial food waste collection and potential for anaerobic digestion.	2022/23 onwards	Lead: Head of Environment Key partners: Depot Service Manager in conjunction with partners such as the County Council as Lead Waste Authority
	Research the feasibility of moving towards a near-to closed-loop composting service in which food waste can create compost	2022/23 onwards	Lead: Head of Environment Key partners: Depot Service Manger Climate Change Officer

	to grow veg locally to put back into the community.		Community Partnerships Manager Localities Co-ordinators
Maximise the amount of domestic waste that is recycled in the borough	Seek to reduce contamination levels through publicity and promotion and target areas where contamination is particularly prevalent.	2022/23 onwards	Lead: Head of Environment Key partners: Depot Service Manager Climate Change Officer Business Development & Support Manager Communications Manager
	Ensure that households know what can be recycled and composted and monitor that the right things are in the correct bins.	2022/23 onwards	Lead: Head of Environment Key partners: Depot Service Manager Climate Change Officer Communications Manager
	Encourage residents to present more materials for recycling & composting through the use of rewards and incentives to maximise quality and quantity of recycling.	2022/23 onwards	Lead: Head of Environment Key partners: Depot Service Manager Climate Change Officer Communications Manager
	Run more promotional campaigns to local businesses and householders to encourage everyone to recycle and compost.	2022/23 onwards	Lead: Head of Environment Key partners: Depot Service Manager Climate Change Officer Communications Manager
	Deliver to the principals of the JWMC Nottinghamshire Principles for the Reduction of Contamination. Issue S46 Fixed penalty notices to repeat offenders.	2022/23 onwards	Lead: Head of Environment Key partners: Depot Service Manager Community Protection Manager Communications Manager

Promote a culture of reuse	Run more promotional campaigns to schools and householders to encourage everyone to reuse waste	2022/23 onwards	Lead: Head of Environment Key partners: Depot Service Manager Climate Change Officer Communications Manager
	Develop an A-Z re-use and recycling directory which explains how and where to re-use and recycle a range of items and materials.	2022/23 onwards	Lead: Head of Environment Key Partners: Climate Change Officer Community Partnerships Manager Economic Growth Officer Depot Service Manager Communications Manager
	Promote existing on-line reuse schemes (Freecycle, Freegle etc.)	2022/23 onwards	Lead: Head of Environment Key partners: Climate Change Officer Depot Service Manager Communications Manager
	Ensure that bulky waste is re-used wherever possible as an alternative to disposal, collaborating with local charitable groups.	2022/23 onwards	Lead: Head of Environment Key partners: Climate Change Officer Depot Service Manager Communications Manager
Reduce the carbon impact of waste management in Gedling Borough, ensuring that our services become more economic, efficient, and effective	Explore the potential installation and use of vehicle monitoring systems to optimise fleet performance and on-going eco-driver training courses to ensure optimal use of vehicles by Council staff.	2022/23 onwards	Lead: Head of Environment Key partners: Depot Service Manager
	Continue to investigate use of lower carbon fleet technologies	2022/23 onwards	Lead: Head of Environment Key partners: Depot Service Manager

	and drive down annual energy consumption in fleet vehicles.		
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4.6 Green Infrastructure – Carbon Offsetting

Offset residual emissions from hard to reduce sources	Review and evaluate the establishment of a carbon offset fund for developers to pay into when a certain high level of energy efficiency of buildings is not able to be met.	2022/23 onwards	Lead: Head Development & Place Key partners: Planning Policy Manager
	Delivery of Biodiversity Net Gain for new developments by at least 10%.	2023/24 onwards	Lead: Head of Development & Place Key partners: Planning policy manager
	Audit and assess key sites across the borough for Green Infrastructure, including Green Roofs/Walls to help improve the resilience of the borough to climate related risks such as flooding and heatwaves.	2022/23 onwards	Lead: Head of Development & Place Key partners: Planning Policy Manager Climate Change Officer Economic Growth Manager Property Manager
	Develop a tree planting plan on council open space portfolio. To explore grant funding initiatives for residents.	2022/23 onwards	Lead: Head of Environment Key partners: Tree Officer Climate Change Officer
	Create more 'bee friendly' meadow areas on green spaces, and let grasslands grow to encourage greater biodiversity.	2022/23 onwards	Lead: Head of Environment Key partners: Tree Officer Climate Change Officer

			Parks and Street Care operations Manager
	Reduce the use of herbicides and ban the use of Glyphosate to protect bees and pollinators.	2022/23 onwards	Lead: Head of Environment Key partners: Tree Officer Climate Change Officer Parks and Street Care Operations Manager
	Promote Natural Climate Solutions for Gedling in partnership with landowners/managers.	2022/23 onwards	Lead: Head of Development & Place Key partners: Planning Policy Manager Economic Growth Manager Communications Manager
	Promote sustainable management of sports clubs / grounds (best practice case studies, grants etc).	2022/23 onwards	Lead: Head of Communities & Leisure Key partners: Leisure Managers Parks and Street Care Operations Manager Climate Change Officer
	Establish the feasibility of establishing a GBC own tree nursery (so native trees can be grown from seeds (gathered by GBC staff/tree officer), sell/give these to the borough's residents or to other local authorities).	2022/23 onwards	Lead: Head of Environment Key partners: Tree Officer Parks and Street Care Operations Manager Climate Change Officer Communications Manager
	Review and update the standards and conditions	2022/23 onwards	Lead: Head of Environment Key partners:

	document for allotments – sustainability, materials, waste, energy, water supply and capture etc.		Parks and Street Care Operations Manager Climate Change Officer
	Develop planning policies to promote sustainable construction and design including e.g. for energy efficiency and low carbon developments renewable energy climate adaptation; green infrastructure [including natural carbon solutions (e.g. trees/wetlands meadows/hedgerows) plus provision of allotments; green walls and roofs, flooding avoidance measures in new developments (including SUD's and natural flood management (NFM)], travel plans and associated works (encouraging modal shift and active travel, provision of EV charging points (including e-bikes), car club parking bays, cycle routes and connectivity investment.	Throughout the strategy	Lead: Head of Development & Place Key partners: Planning Policy Manager Economic Growth Manager Property Services Manager Parks and Street Care Operations Manager Climate Change Officer