Doncaster’s Commission on the Climate and Biodiversity Emergency

Responding to the climate emergency: Creating a fairer, more prosperous Doncaster

An Interim Position Statement
July 2020

‘Doncaster, all of its public institutions, businesses and communities, should keep within its carbon budget, deliver an 85% reduction in net greenhouse gas emissions by 2030 and net-zero emissions by 2040.’

This Interim Report aims to represent the broad consensus reached through Commission discussion. However, this should not be taken as implying complete unanimity of view; individual attendees reserve the right to vary in their opinion.

This Report will be followed by the Commission’s Final Report with climate strategy recommendations, to be published later in 2020. If you wish to make any comments about this report, or provide feedback for consideration for the development of the Commission’s Final Report, you may contact the Climate Commission at partnerships@doncaster.gov.uk
Everyone who cares about the future of our borough will care about the impact of climate change. As elected Mayor of Doncaster, I felt that it was my duty to bring a climate emergency motion to Full Council in September 2019, challenging ourselves to ask what more we can do to work towards becoming Carbon Neutral.

Responding to the challenge of climate change is more than just about reducing emissions, it is about our ambitions for the type of borough we want to see in the future, how we hold and protect and enhance the natural environment for future generations, the type of economy that is innovative and inclusive built on clean growth and decent wages, the type of health and care system that is sustainable and responsive to future demands that will be placed upon it. Indeed as I said a Doncaster Business Conference in May 2019; “Going forwards, we know we have more to do; the potential expansion in clean and green growth is one particular example of acting globally whilst protecting our borough for future generations, I am extremely ambitious about the plans for Doncaster, but I require all your help.”

Findings from Doncaster’s Commission will inform a radical Borough Strategy, signalling a commitment to grasp the opportunities that the crisis brings to accelerate progress toward a net-zero carbon and more regenerative place, and a commitment to work with partners at all levels to achieve this.

‘I would like to express my thanks to all who contributed to the production of this report, especially the leadership exercised by Ed Miliband MP as chair of the Commission.’

I have had the privilege of being Doncaster North’s Member of Parliament since May 2005. As Secretary of State for Energy and Climate Change from 2008 to 2010, I was able to oversee the introduction of the Climate Change Act 2008. This Act made it the Government’s duty to ensure that greenhouse gas emissions (GHGs) reduced by at least 80% by 2050 in order to avoid dangerous climate change. Subsequently, I was glad to see that the Government heeded the further advice from its advisors the Committee on Climate Change, raising the ambition to net-zero carbon emissions by 2050. I was also recently appointed as the Shadow Business and Energy Secretary for the Labour Party.

I was therefore delighted to accept the invitation from Mayor Ros Jones to Chair Doncaster’s own Climate and Biodiversity Emergency Commission. I am determined that Doncaster’s Climate Change Commission will help to develop ideas and policies to bring about a rapid green transition that is fair and just.

Climate change matters because of the legacy we will leave to our children and grandchildren, but it also matters because we can create a much better economic future for people across our region by tackling it. Let’s talk about the dream, not just the nightmare. Imagine the cities and towns of the future: clean, green, with decent air quality, hospitable to walking and cycling, powered by renewables, with green space, not concrete jungles, and rewarding jobs in green industries – we already know that these things can happen, and are already beginning to happen around the world.
The global climate crisis – why we need to respond

The Intergovernmental Panel on Climate Change reports\(^1\) a scientific consensus that a range of human-produced gases (‘greenhouse gases’) are building up in the atmosphere to such an extent that some energy that may otherwise leave the atmosphere is being retained. The consequence is that the average temperature of the earth is increasing.

**Human activities are estimated to have caused approximately 1.0°C of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C. Global warming is likely to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate. (high confidence)**

The United Nations-led international treaty known as the ‘Paris Agreement’ on Climate Change (2016) agreed that all signatory nations would commit to measures intending to keep global warming ‘well below’ 2°C, and to ‘make efforts’ to keep it below 1.5°C.\(^3\)

The threat to us all is clear:

> ‘Failure to act will see a marked increase in sea levels and flooding, extreme and abrupt changes to weather patterns, crop failures, extinctions of plant, insect and animal species, and global economic disruption and crisis.’\(^4\)

The biodiversity crisis – why we need to respond

**What is biodiversity?** This is the variety of plant and animal life in the world or in a particular habitat, a high level of which is essential to provide the human world with water, clean air, food production, stable weather conditions, etc.

Human survival depends on healthy ecosystems providing us with services such as:

- production of food, clean water, medical and other resources;
- Nutrient cycling, oxygen production, soil formation, habitat provision, pollination of food crops, and carbon capture and sequestration.
- Climate regulation, waste decomposition, control of animal populations, pest and diseases.
- Cultural, recreational and mental health benefits.

The natural processes of carbon sequestration by plants and trees, along with other ecosystem services, means that the climate crisis and biodiversity crisis are inextricably linked. It is vital therefore, that measures to mitigate against the threat of global heating also promotes the recovery of nature. 1 million species already face extinction unless action is taken to reduce the intensity of the drivers of biodiversity loss. Agricultural management, deforestation, climate change, hydrological change, pollution, urbanisation, woodland management and invasive non-native species are amongst the most significant of pressures.
There is significant scientific evidence suggesting that the COVID-19 virus originated in wild animals and, probably as a result of the destruction of the natural environment, has surmounted barriers to become a human disease. The coronavirus epidemic has been a tragedy for many families and had a profoundly dislocating effect on us all. The worldwide pandemic emergency measures to contain the spread of the virus and limit deaths has led to the most extensive restrictions on populations since the Second World War, changing society fundamentally in a very short time in ways unforeseeable at the start of the year. There have been huge economic losses, but also some noticeable environmental and social effects:

- Reduced road and air transport has significantly lowered emissions of carbon dioxide and other air pollutants that affect public health such as Nitrogen Dioxide (NO₂). Improvements in urban air quality may be saving many lives.
- There has been a massive expansion of home working with improvements in the supporting technological infrastructure and reductions in commuting journeys.
- Reduced countryside tourism with improved air quality and a drop in visitor numbers has led to less disturbance for nesting birds and breading mammals, and improved river water quality. The crisis has shown the resilience of the British people and that mass system change and behaviour change is possible and can attract widespread support.

Clearly, there are useful lessons to be learnt for Climate Change Strategy. United Nations Secretary-General António Guterres has stated to world leaders the imperative to address the climate emergency within the COVID-19 recovery programme:

‘As we spend huge amounts of money to recover from Coronavirus, we must deliver new jobs and businesses through a clean, green transition...Fossil fuel subsidies must end, and polluters must start paying for their pollution.’

National and Local Commitments

As a result of global climate talks, the UK Government introduced the Climate Change Act 2008 to ensure that the net UK carbon account for all six Kyoto greenhouse gases for the year 2050 is at least 80% lower than the 1990 baseline. In June 2019, the Government followed the Committee on Climate Change’s recommendations and committed to “net-zero” greenhouse gases by 2050. This was re-confirmed by the new Government through the Queen’s Speech to Parliament in December 2019.

There is also increasing public concern about climate change and support for measures to combat it. A YouGov poll published in September 2019 found that 89% of UK respondents thought that the climate is changing and human activity is mainly or partly responsible. 66% of UK respondents also felt that we are still able to avoid the worst effects of climate change but it would need drastic change.

In the UK Youth Parliament’s 2019 Make your Mark consultation, protecting the environment was the top issue voted for in a ballot of over 800,000 young people. Locally, as a result of Make Your Mark, the theme Improve The Environment was chosen as the theme for the a Primary Network Conference for primary school children held on 6th March 2020.
Doncaster’s commitment

On 19th September 2019, Doncaster Council unanimously passed a motion to declare a Climate and Biodiversity Emergency and to establish a Local Commission (‘The Commission’) on behalf of the Team Doncaster local strategic partnership to be able to advise on targets and actions for the borough as a whole, rather than just the council. Findings from the Commission will inform Team Doncaster’s new Borough Strategy in 2020, which will grasp the opportunities that the crisis brings to accelerate progress toward a net-zero carbon and more regenerative place, and a commitment to work with partners at all levels to achieve this.

What is ‘net-zero’? Also referred to as ‘carbon neutral,’ it is the situation where greenhouse gases are reduced as far as possible and any remaining emissions are ‘offset’ by other measures to remove carbon dioxide from the atmosphere, for example through nature-based capture of carbon or carbon capture and storage technology.

Team Doncaster partners have also signed up to the Sound the Alarm for Climate Change pledge:

Doncaster wants to play its part in combatting climate change. We represent organisations and agencies in Doncaster. We pledge to support the Borough by doing more for the environment, working together to achieve net-zero carbon emissions.

On Friday, 21st September 2019, thousands of Doncaster schoolchildren – with support of their schools, together with local trade unions, businesses, political parties, and the Council - took part in the Global Climate Strike in Doncaster town centre.

Mayor of Doncaster, Ros Jones announced on 5th March 2020 that further environmental pledges would be made at future Council Meeting in May (subsequently postponed due to COVID-19). These pledges for Doncaster Council will include

- Ceasing the use of peat products in Council parks and gardening services.
- Ceasing to use glyphosate-based herbicide products in Council parks and gardening services.
- Ceasing to use single use-plastics.
- Planting more trees across Doncaster on Council land or with partners.

Doncaster - all of its public institutions, businesses and communities – are encouraged to consider pledges they can deliver to make a positive contribution to climate mitigation, climate adaptation, and the recovery of biodiversity.
Our local response recognises a role for Doncaster to play in global challenges, and at the same time to move beyond a narrow response to climate change. The widely recognised concept of ‘Doughnut Economics’ provides us with a very workable model for sustainable and regenerative development. An economy is considered prosperous when all twelve social foundations are met without overshooting any of the nine global ecological ceilings or planetary boundaries, see diagram below:

This provides a good model of how we can weave our concerns about climate, biodiversity and the environment together with basic requirements for our social lives such as food, health, education, housing, work and equality.

- The **social foundations** that we must provide for human wellbeing are described in the centre of the circle.
- The **ecological ceiling**, nine planetary boundaries we must live within for sustainability are described on the outside of the circle.
- The space between the social foundations and the ecological ceiling is the **safe and just space for humanity** in which can thrive through a regenerative and distributive economy.

This model also encompasses the United Nations Sustainable Development Goals (SDGs) which includes SDG 13 'Take urgent action to combat climate change and its impacts.'

The Doncaster Talks public consultation asked *What could Doncaster do to help reduce the impact of Climate Change in the future?* has identified a wide range of concerns and also ideas for practical activity locally. The results of this consultation are currently being analysed (see also the Public Engagement section below).
University of Leeds School of Environment has provided a ‘Carbon Roadmap’ towards net-zero carbon:

- Doncaster’s baseline emissions (emitted in Doncaster and emissions producing electricity used by Doncaster) have fallen by 29% from 2750.1 Kilotonnes (Kt) in 2005 to 2059.5 Kt in 2017. This is due to a combination of increasingly decarbonised electricity supply, structural change in the economy, and the gradual adoption of more efficient buildings, vehicles and businesses.

- In 2017, the average carbon dioxide emissions per each person was estimated at 6.7 tonnes per year of CO2, a reduction from an estimated 9.4 tonnes CO2 per person per year in 2005.

- If trends continue, Doncaster’s emissions are expected to fall by a further 23% by 2050, some years after we want to be at net-zero – see chart below:

![Doncaster's 2017 greenhouse gas emissions](chart1.png)

- Doncaster’s 2017 greenhouse gas emissions

![Kt CO2e](chart2.png)

- Business-as-usual local baseline
- Pathway to net-zero
- The Inter-governmental Panel on Climate Change has argued\textsuperscript{15} that from 2020, keeping within a global carbon budget of 344 Gigatonnes of greenhouse gas (GHG) emissions would give us a 66% chance of limiting average global warming to 1.5 degrees.

- If we divide this global carbon budget figure up on an equal basis by population, this gives Doncaster a total carbon budget of 13.8 Megatonnes, a limit we should endeavour to live within by arriving at a point where our greenhouse gas emissions are ‘net-zero.’

- At current rates, Doncaster would use up this budget in just over 6 years – instead we need to chart a pathway to net-zero emissions.

- In line with Sheffield City Region and neighbouring authorities, the Commission proposes that:

\begin{quote}
‘Doncaster, all of its public institutions, businesses and communities, should keep within its carbon budget, deliver an 85% reduction in net greenhouse gas emissions by 2030 and net-zero emissions by 2040.’
\end{quote}

- There are no ‘silver bullets’ that lead to dramatic step changes in the carbon footprint of an area, but instead multiple options have to be adopted across all sectors, in particular (but not exclusively):
  - Households and other public/commercial buildings (better insulation, improved heating, more efficient appliances, some small-scale renewables).
  - Transport (more walking and cycling, enhanced public transport, electric and more fuel-efficient vehicles).
  - Energy efficiency and renewable production.
  - Industry (better lighting, improved process efficiencies and a wide range of other energy efficiency measures).
  - Nature-based solutions (woodland, grassland and peatland absorbing atmospheric carbon).
  - Reducing waste.

- Some of these options are already cost-effective in reducing emissions, the direct costs of adopting them will be paid back through the energy savings they secure. Other options are technically effective in reducing greenhouse gases, and though not cost-effective at present, they may become so in the future. There are also innovative and emerging technologies in development. While these are not yet available, they may also provide significant carbon reductions and cost savings at some point in the future.
1. It’s up to all of us to tackle climate change. All Doncaster’s public organisations, businesses, and communities must take a lead and make it financially possible for people, including those on lower incomes, to play their part.

2. We believe that we can create better lives for people and tackle climate change. We owe it to our future generations to put Doncaster at the forefront of tackling the climate emergency. It will be good for our economy, in creating jobs, and good for our quality of life by cutting air pollution, improving public transport and offering better access to nature.

3. We have an opportunity not to be missed to create a 21st century economy – with appropriate education, skills, training and employment suitable for low-carbon business.

4. We need to ensure that no one is left behind – that there is a ‘just transition’. That means when jobs change we have to help those who affected, because we know what happens when industries change and there is little help for people. We cannot let that happen.

5. We face a global climate and a nature crisis. This emergency is about carbon emissions, but it is also about biodiversity and our eco-system. We need to respect and protect nature.

6. We need to build our resilience to the changes in climate. We know that events, such as flooding, will challenge our communities, infrastructures, and our security. We must adapt to keep people safe.

7. We must follow the science in our planning, and use evidence to assess our progress.

8. We must promote the full participation and engagement of all part of the community in open, honest, and inclusive conversation about the challenges we face and the future we want.

The Commission is considering action across the following themes; each are indicated by our Carbon Roadmap as being an area for significant contribution to climate mitigation and adaptation:

- Energy production and consumption - renewable energy generation and energy saving
- Land use and biodiversity – trees, grassland, peatland, green spaces, agriculture
- Food – production and food security
- Waste – recycling, land fill
- Transport – low emissions vehicles, active transport, public transport, freight, aviation
- Business, economy and green technology
- Buildings – domestic, public, commercial, and industrial
- Climate adaptation, including one-catchment and natural solutions to flood management
- COVID 19 pandemic and other emergencies – risk, resilience, recovery and renewal
- Behaviour change and social influence

What is climate mitigation? All of the measures we need to take to reduce the acceleration of global heating, in particular the reduction of greenhouse gases.

What is climate adaptation? Global heating is already bringing more frequent and extreme weather patterns and these will increase. Communities and nations need to adapt to be resilient to rising sea levels, heat waves, flooding, storm damage to housing and infrastructure, etc.
Energy - production and consumption

- National policies decarbonising electricity supply are contributing to a decline in Doncaster’s greenhouse gas emissions, with full decarbonisation of UK electricity expected by 2045. (Carbon Roadmap)

- Doncaster’s Carbon Roadmap indicates that measures to improve the efficiency of domestic and commercial energy consumption – insulation, heat pumps, etc. – will provide highly carbon- and cost-effective measures on the journey to net-zero emissions.

- Doncaster is placed 8th amongst UK Local Authorities for the level of installed capacity of solar photo voltaic (PV) panels on housing with 24 megawatts (MW) of generating capacity on 7,049 homes

- Doncaster has over 43 MW of solar capacity across 7,233 homes, land and commercial buildings.

- Of this Doncaster Council owns 2,124 kW of installed capacity across 700 homes and buildings.

- Solar produces 42 gigawatt Hours (GWh) of electricity each year. Wind produces 140 GWhs of electricity each year.

- Annual electricity consumption in Doncaster (2018) was 439 GWh (439 million kilowatts) across domestic users and at total of 1,273 GWh across all settings (commercial and domestic).

- Of this Doncaster Council consumed 20 GWh of electricity over the same period (2.4% of the total non-domestic electricity use in Doncaster), reducing to 19 GWh in 2019.

- In summary, 14% of Doncaster’s electricity consumption is being generated by renewable energy infrastructure (wind and solar only) in Doncaster.

- Doncaster Council’s Local Plan for Spatial Development until 2035 includes two significant policies promoting Low Carbon and Renewable Energy (Policy 59) and Wind Energy Developments (Policy 60)

- Doncaster already has a significant private sector of renewable energy production from wind, ground and roof photovoltaic solar energy, and biofuels.

**Current activity includes:**

- 56kw of solar PV panels installed at Herten Triangle Leisure Park – energy generated sold to a local restaurant.

- 75kw of solar PV panels installed on Savoy Cinema – with 50kw supplying the cinema and 25kw supplying a restaurant in Unit 1.

- 112kw of solar PV panels installed on Danum Library. Solar PV panels providing 91kw are proposed for a Civic Office carport


- Development of a dedicated EV-only fleet car park at the Council’s Civic Office and the redevelopment of Scarborough House car park with 39 EV charge points (subject to planning).

- Contract with energy company ENGIE for an Energy Masterplan to make a comprehensive inventory of current and future energy consumption, and identify energy projects to put Doncaster on a path towards carbon neutrality.

- Planning permission has been granted for large solar panel installations at Amazon, Doncaster Airport, and Austerfield.

**The Commission recommends:** (see also Housing section below)

- Reseaching the receptivity of investors, the borough, and landowners to the financing and installation of renewable energy systems.

- A review of renewable energy opportunity locations so that Doncaster is ready to be a home for renewable industries when funding becomes available (this review is currently being undertaken as a partnership between Doncaster Council and ENGIE).

- Major projects and developments in Doncaster should be linked to renewable energy production as a condition of approval.

- Specific requirements for investment need to be identified to support the massive expansion of the electricity infrastructure.

- Doncaster seeks to be at the forefront of innovation such as carbon capture technology and hydrogen as a source of power.

**The Commission requires further discussion:**

- The impact of local Planning Regulations on opportunities for renewable energy infrastructure.

- The ‘democratisation’ of energy – greater shared ownership and public participation in approaches to renewable energy, for example installation of domestic solar panels and micro-energy generation systems on public and business buildings.
Land use and Biodiversity

- The Doncaster borough covers 56,852 hectares, of which 64% is agricultural holdings, 5.6% woodland, and 3% wetlands.
- Private and commercial landowners and farmers and therefore have a key role, for example with renewable energy production, on-farm carbon storage, maximising hedgerows and soil health, and for productivity gains while decreasing footprints. The National Farmers Union has a climate policy with a net-zero target for 2040.
- Doncaster Council owns 1,500 hectares of land including leases, parks, public and other open space, car parks, recreation grounds, playgrounds, allotments, cemeteries and woodland (356 hectares in total).
- The Commission believes that we need to promote habitat recovery, re-wilding of public open spaces and road verges, and land use methods that protect and promote the natural processes of carbon sequestration into trees, plants, grassland and the soil, and in particular our local peatlands.
- The borough’s tree canopy coverage estimated at 12.6% stores 1,945 Kt of CO₂ and absorbs 77 Kt of CO₂ annually.¹⁵
- Hatfield Moor fires (May 2020, and previously September 2010), probably caused by human action, have destroyed many hectares of peatland and its particular biodiversity, releasing large amounts of carbon into the atmosphere and compromising the rate at which it can sequester carbon in the future. It is also a major loss of habitat for particular lowland peat species such as Adders and Nightjars.

Current activity includes:

- Doncaster Nature Alliance established to promote the biodiversity agenda - regular meeting as a network of around 12 different groups and services, with discussions underway regarding feasibility of more formalised structure as an independent organisation. Public event ‘Your Wilder Doncaster’ was held on 3rd March 2020 at Doncaster College.
- Publication of a free magazine Doncaster Wild Times to highlight local natural assets and attractions, widely distributed throughout the borough.
- Partnership arrangements for the commissioning of a Natural Capital Assessment for Doncaster.
- Surveys of Doncaster Council land assets for tree planting opportunities and other re-wilding opportunities for example wildflowers on road verges and public green space corners.

The Commission recommends:

- Establishment of an independent Doncaster Nature Alliance to lead on/co-ordinate climate related biodiversity issues, nature recovery, and re-wilding.
- Wilder areas of public open space, for example through a targeted approach to mowing of grass verges and parks, should be promoted for the biodiversity of wild flowers, grasses, insects, pollinators, soil health and for public enjoyment.
- Developing a range of tree planting initiatives with public and private landowners and communities with the aim of increasing tree canopy cover in the borough from 12.6% to 17% (possibly 20% depending on land use pressures). This should be based on an assessment of the borough’s Natural Capital Assets, best practice in tree planting, and ensure that tree planting projects compliment other biodiversity and requirements.
- Maximising the benefits to be achieved through Biodiversity Net Gain in the Planning system and Local Nature Recovery Network (both in the Government’s Environment Bill), re-wilding open spaces and grass verges where appropriate, supporting the acquisition of land assets for these purposes, and connecting with natural habitats beyond the Borough borders.
- Engagement with the agricultural sector and landowners to understand their perspective on land use change initiatives for climate change mitigation and nature recovery.
- Protecting and restoring Doncaster’s precious peatland, educating the public of its value for biodiversity and contribution to climate change mitigation, and future wildfire prevention and response.
- Build on community enthusiasm for private gardens e.g. trees, ponds, flowers for pollinators, etc.

The Commission requires further discussion:

- An evidence-based target for peatland restoration (including of fire damage recovery) to protect and restore for carbon sequestration and storage, water management, and biodiversity. This may include approaches for sustainable agriculture on peatland.
- Sheffield City Region/South Yorkshire Local Nature Partnership collaboration opportunities for Natural Capital Assessment, woodland creation, and Nature Recovery Network connectivity.
Food

- UK greenhouse gas emissions include approximately 10% from agricultural sources (globally food systems are estimated to contribute to 20-30% of emissions, mostly from agricultural production).

- The Intergovernmental Panel on Climate Change (IPCC) report Climate Change and Land Use states that ‘balanced diets, featuring plant-based foods, such as those based on coarse grains, legumes, fruits and vegetables, nuts and seeds, and animal-sourced food produced in resilient, sustainable and low-GHG emission systems, present major opportunities for adaptation and mitigation while generating significant co-benefits in terms of human health.’

- The same IPCC report also comments the stability of food supply is projected to decrease as the magnitude and frequency of extreme weather events that disrupt food chains increases. Increased atmospheric CO₂ levels can also lower the nutritional quality of crops.

- The government advisers, the Committee on Climate Change, advocates eating a diet with a lower proportion of red meat and dairy products (in a balanced diet) as a means to changing land use and reducing GHG emissions. A ‘low GHG’ diet may also have co-benefits for health, local business and food security.

- The agricultural business sector, food production and distribution systems are highly relevant to climate change strategy. At the same time, the agricultural sector is also subject to significant commercial pressures and increasingly frequent extreme weather challenges.

Current activities include:

- Doncaster has achieved Sustainable Food City status as part of the Sustainable Food Cities Network, ‘working across all aspects of the food system to solve some of today’s most pressing social, environmental and economic issues.’

- Local food issues and awareness website Good Food Doncaster website goodfooddoncaster.org/

- Doncaster Schools Catering Service has policies around responsible and local provisioning and food education

The Commission recommends:

- An evidence gathering exercise to develop a clear picture of the food production and consumption trends at present, to give a solid base for future policy development.

- Greater understanding and engagement with Doncaster’s own agricultural sector and farmers.

- Climate-friendly food production and agriculture should be supported in local education, training, skills and investment policy.

- Food choice issues and food waste should be included within climate awareness programmes and footprint calculators or use designed programmes.

The Commission requires further discussion:

- Opportunities to influence the food choices and habits of Doncaster communities towards lower GHG and more plant-based diets, responsible sourcing, good quality and local produced food while ensuring that people do not lose out financially.
Waste

- In 2015, 10 million tonnes of food and drink was being wasted per year, of which 4.1 million tonnes (valued at more than £20 billion) was being sent to landfill.20

- However, Doncaster municipal waste processing by BDR Waste Partnership is currently diverting around 95% of waste from landfill21, making a significant carbon dioxide saving - it is the first in the UK to combine a Mechanical Biological Treatment plant and a dry anaerobic plant.

- Municipal (household) waste is a small proportion of the total waste produced in Doncaster.

- Doncaster has two energy-producing anaerobic digester plants in the private sector, inputs including local food waste and locally grown maize.

Current activities include-

- Waste awareness campaigns through the BDR Waste Partnership including Love Food Hate Waste21, Recycle Week22, and Love Your Clothes23.

- Local community groups active in the Great British Spring Clean campaign24.

- There is an active local market for collection and processing of commercial and industrial waste, skip hire, recycling, etc. many part of regional or national companies.

The Commission recommends:-

- Promotion of waste reduction policies and behaviour change earlier in the cycle of product use - promoting reuse, repurposing and recycling initiatives and businesses so that ‘waste’ becomes a ‘resource’ in a more circular economy.

- Public sector procurement should include requirements regarding the reduction of waste.

- Influence consumer choices and behaviours through waste education such as Love Food, Hate Waste campaign, as part of Climate Change communications strategies

- Municipal waste disposal services may be able to further improve their ‘carbon footprint.’

- Public and private waste management partnerships should be explored for the promotion of the local ‘circular economy’ where waste from one business process becomes a resource for another.

The Commission requires further discussion:-

- Practical methods of stimulating circular economic activity in the private sector.
Transport - active travel, low emission vehicles, aviation

- In March 2020, the Department of Transport published Decarbonising Transport: Setting the Challenge and will launch The Transport Decarbonisation Plan in autumn 2020. This will set a pathway for government, business and society to achieving carbon budgets and net zero emissions across every single mode of transport by 2050.

- Department of Transport’s Aviation & Climate Change Consultation was due out in early 2020, but was delayed due to COVID-19. A final Aviation Strategy is due to follow. (Domestic aviation emissions are included in the UK’s carbon budgets, whereas under the Kyoto Protocol, international aviation emissions reduction is the responsibility of the UN International Civil Aviation Organisation.)

- The Commission recognises the importance of Sheffield City Region’s Transport Strategy in particular Goal 2: A cleaner and greener Sheffield City Region and Policy 5 Lead the way towards a low carbon transport network, including a zero-carbon public transport network.

- On-road transportation accounts for 41% of Doncaster’s emissions, and has the greatest scope of cost-effective and carbon-reduction measures (Carbon Roadmap).

Current activity includes:

- The Department for Transport’s Transforming Cities Fund will deliver a range of public transport and active travel schemes by 2022-23 and includes £166 million for Sheffield City Region (South Yorkshire). Phase 1 of the Transforming Cities Fund has enabled the early delivery of five active travel schemes in Doncaster:
  - Doncaster South East Active Travel Package
  - Y Routes: Orbital Routes
  - Thorne to Moorends Cycling Connectivity
  - Ten Pound Walk to Doncaster Train Station Pedestrian Improvements
  - A18 Corridor Improvements

- Active travel infrastructure has been incorporated into the recent Quality Streets projects on Hall Gate and Silver Street, and is central to the current redevelopment of Doncaster Station and its forecourt, which includes a new station Cycle Hub.

The Commission recommends:

- Optimising opportunities for mode shift to cycling and walking – the Borough’s flat geography is ideal, but the current public transport offer and lack of options for modes other than cars for longer journeys makes mode shift less attractive.

- Rapid transition towards low emission vehicles (ahead of Government target to ban petrol and diesel car sales by 2035) as a carbon effective measure (depending on the ‘cleanness’ of electricity supplies). This requires initial investment in electrical infrastructure and the electric vehicle supply chain and servicing business though would be cost and carbon-effective in the long run.

- Transportation using petrol and diesel, especially private car use, needs to reduce at the same time as the transition to low emission vehicles and better public transport.

- Public consultation to understand changing patterns of use of public transport, and how choice and behaviours could be promoted towards more active and sustainable transport modes.

- Using Doncaster’s infrastructure assets to promote greater use of rail freight over road freight.

- Increasing integration between bus and rail services to increase passenger use of public transport.

- Support for the Hydrogen South Yorkshire Network to develop hydrogen as an innovative fuel technology.

The Commission requires further discussion:-

- Neighbourhood and urban design opportunities in Doncaster borough to reduce convenience of short-distance private car journeys, promote and active and public transport, and improving community shared space.

- Lessons and opportunities around improving air quality and active transport as a result of the COVID-19 pandemic.

- The local implications of the national Transport Decarbonisation Plan’s Aviation Strategy, the UK Sustainable Aviation’s commitment to achieving net-zero CO₂ emissions by 2050, and international policy.
Exploiting the cost-effective options for green technology in households, public and commercial buildings, transport and waste could be economically beneficial (Carbon Roadmap).

Although significant investments would be required to develop a green technology and economy, there would also be significant energy savings and job creation in this new market replacing ‘high carbon’ employment and income.

Sheffield City Region’s Energy Strategy and Strategic Economic Plan (in development) may provide significant opportunities for Doncaster’s green business sector.

Current activity includes:

- Success of the Green Growth and Productivity Conference (16th January 2020) demonstrates that Doncaster already has a vibrant sustainability business sector on which to build. This provides significant opportunity to marry our competitive advantages with low carbon opportunities, diversify our economy and create better jobs.

The Commission recommends:

- A local business audit to understand the scale and scope of ‘green’ activity across the business community, supporting the development of appropriate support for small and medium enterprises to be more sustainable.
- Promoting ‘low carbon’ business practices through supply chains, promoting accredited sustainability standards through purchasing.

The Commission requires further discussion:

- Taking forward lessons from the COVID-19 lockdown, for example, changes in commuting and office use as a result of increased use of communications technology.
- Increasing access for local businesses to green finance and investment, at borough and/or Sheffield City Region level, particularly as part of the post-COVID-19 recovery and renewal.
- Low carbon methods of construction, and how growth can be supported in this part of the economy
- Analysis of losses and gains in the job market require for a transition to a net-zero carbon economy.

Green finance

- Though this has yet to be discussed at the Commission, it is recognised that many aspects of a climate policy have very significant financial implications and high levels of investment may be needed from a variety of public, commercial and private sources.
- The mechanisms of ‘green finance’ are complex and evolving – carbon pricing and trading, Natural Capital Accounting and Investment, circular economics, green bonds, carbon offsetting payments, blockchain, etc. many of which are less familiar to traditional economics.

What is ‘offsetting’? Where carbon emissions cannot be completely eliminated, the remaining emissions may be compensated for (‘offset’) by removing an equivalent amount of carbon dioxide by natural or technical means. Usually this means that a payment is made to a provider of the offsetting service, referred to as purchasing carbon credit. Carbon credits can be traded on in ‘carbon markets’ following rules established by the Kyoto Protocol

- Further work will need to be undertaken to assess the need for development of green finance infrastructures at local, regional, or national levels.
- This will also include commissioning and investment policies that support the move to a green economy, and may include consideration of dis-investment in fossil-fuel related industries.
- HM Treasury’s review into funding the transition to a net zero greenhouse gas economy will publish a report in autumn 2020.
- HM Treasury has also commissioned The Dasgupta Review into the Economics of Biodiversity which will identify a range of actions that can simultaneously enhance biodiversity and deliver economic prosperity.
Buildings – housing standards, retrofitting, environmentally friendly builds

- ‘We will need to reduce the energy demand from our buildings and industry, and put in place systems that allow us to meet this reduced energy demand with renewable energy and carbon neutral fuels.’ (Zero Carbon Britain)
- Leeds University Carbon Roadmap suggests that tackling poor energy performance of housing will be highly cost and carbon-effective opportunities to reduce Doncaster’s carbon emissions.
- Many houses in Doncaster are sub-standard in their A-G energy rating.
- Wards with greatest proportion of low energy rated properties are Town, Hexthorpe and Balby North, Sprotbrough, Bentley, Mexborough, Wheatley Hills and Intake. These areas also score low on a range of other housing characteristics such as roof and wall insulation.
- 25000+ houses in Doncaster are without cavity walls, 10000+ have cavity walls but no insulation, 12000+ have no roof insulation, 2200+ have only single glazing.
- 3000+ houses are without a boiler and radiator heating system, and 2500+ are still on solid fuel, oil or bottled gas. The percentage of lighting that is ‘low energy’ is only 44-50% in all wards.

Current activity includes:

- The Doncaster Local Plan (planning regulations for building and development) includes policy 58 – flood risk management, policy 59 - low carbon and renewable energy, and policy 60 - wind energy developments.
- Planning Policy 31 - Valuing Biodiversity and geodiversity, introduces the Biodiversity Net-Gain principle. Proposals that may harm designated wildlife or geological Sites, Priority Habitats, Priority Species, protected species or non-designated sites or features of biodiversity interest, will need to provide or fund a minimum 10% net gain for biodiversity.
- The use of micro-renewable energy technologies and decentralised heat and power systems are promoted within new developments how many have been delivered?
- See also Energy section above.

The Commission recommends:

- Prioritise improvement of existing housing to deep retrofit standard (near net zero).
- Undertake full stock condition survey of private sector residential properties (the St Leger Homes housing stock will have much property condition data already). Undertake full stock condition survey of commercial properties, as part of wider Business Audit, focusing on building energy efficiency, investment plans/progress, areas of interest and support requirements.
- Collate Team Doncaster buildings/asset management data, identify improvements required and potential for economies of scale
- Release the capacity of households across the borough to carry out effective and forward-looking energy improvements for themselves. Help to encourage and facilitate mass-provision, bulk purchase, or discounted rate energy efficiency improvements by commercial providers for residential and commercial properties. Provide easily accessible advice and guidance to give households the confidence to move to new heating technologies, identify accredited companies list, and consider the provision of loans to fund this work for those able to pay, and grants or deferred payment options for those unable to pay.
- Lobby Government and Sheffield City Region for funding programmes for the improvement of existing private sector stock.
- Raise standards in private rented housing - Lobby government to raise the minimum standard required for private rented properties (currently Rating: E), and consider mandatory energy efficiency standards and part of licensing schemes
- Increase take-up of Great North Energy gas and electric provision, or other providers using renewable sources of electricity and gas.
- Encourage and support provision of SPV for private residential & commercial properties
- Install and utilise Smart meter technology in Team Doncaster buildings for daily, hourly uses, for each building.
- Consider investing in developing higher standard new homes (above current minimums) in order to meet future standards without the need for costly retrofits in the future. E.g. adopt Future Homes Standard (coming into effect in 2025) whereby e.g. all new homes will no longer have gas central heating systems.
- Partner organisations to share asset management data to enable collective analysis and identification of building standards improvements, and enable potential collective solutions that can take advantage of economies of scale.
Climate adaptation and resilience

What is climate adaptation? Global heating is already bringing more extreme weather patterns and these will increase in frequency and severity. There is already a level of ‘locked in climate change’ that communities and nations need to adapt to so we can be resilient to rising sea levels, heat waves, flooding, storm damage to housing and infrastructure, etc.

- Committee on Climate Change’s report Progress in preparing for climate change 2019 Report to Parliament states **The climate of the UK is changing, and further change is inevitable regardless of how strongly the world reduces greenhouse gas emissions**.

- A Met Office State of the UK Climate report shows that our climate is continuing to warm with wetter winters, drier summers and rising sea levels. Wetter weather brings increased river flows and risk of more frequent and intense flooding, and waterlogging of agricultural land. Drier summers risk droughts, restricted water supplies, lower productivity of agriculture and horticulture, and wildfires on land.

- Sea level rise will mean higher tidal influence on the river Don into Doncaster, incoming tides pushing against outflowing water which will lead to more frequent and severe flooding. By 2121, North Sea levels could have risen by over 1 metre.

- Doncaster is naturally a very wet landscape and has an artificial, engineered catchment management system (e.g. continuous pumping and drainage to prevent permanent standing water). Current risks will be exacerbated by climate change - Doncaster, like many other communities across the UK, is in the front line of these climate issues.

- Along with traditional ‘hard engineering’ flood risk defences such as embankments and walls, a wider range of solutions are needed to adapt to and reduce the severity of natural hazards such as flooding. Natural Flood Management can involve planting forests, restoring wetlands, flood plains, and peatland, especially in higher areas of a river catchment area, so that water flows are slowed and the volumes of hitting defences and settlements downstream are reduced.

Current activity includes:

- A Flood investigation Report (S19) into recent local events is identifying learning will help inform future flood risk planning options and also learning on community vulnerability and resilience.

- Local community resilience schemes and property flood resilience schemes are increasing community awareness of flood risk and action residents can take to keep themselves, their families and their communities safe during flood events.

- Work with asset owners including water companies, drainage boards, Environment Agency, landowners, and other strategic partners will review the causes of flooding and develop plans for short medium and longer-term repairs and sustainable flood mitigation and resilience.

The Commission recommends:

- A climate change risk and vulnerability assessment covering all aspects of potential impact on Doncaster of predicted scenarios for changing and extreme weather patterns.

- Developing and delivering an integrated nature-based solutions ‘source to sea’ whole catchment strategy for the river Don to adapt and build resilience to climate risk in the short to medium term.

- Involving communities in the conversation to re-thinking how we manage water and our land in the catchment - What sort of place do we want to create?

- Building on existing catchment-level partnerships and governance to scale up our efforts, bringing together initiatives such as nature recovery networks, Northern Forest, peat partnerships, biodiversity net gain.

- Using a Natural Capital approach to attract investment and building blended/green finance models to enable integrated sustainable investment across the catchment with built and nature based solutions.
Public engagement

Doncaster Climate & Biodiversity Commission recognises that public conversation, engagement and involvement in climate issues is absolutely vital. Decarbonisation of the economy and adapting to more unpredictable and extreme weather conditions will have a profound impact on all parts of the community – some of these changes may be welcomed as they also improve quality of life, others may feel very difficult.

Success of many elements of climate change policies depend on the agreement, decision-making and changes in behaviour of all of us. In a civic society, each member has the right to be active and shape climate responses. Further, involvement and action can help individual cope with issues such as climate anxiety and grief, and maintain a sense of hope for a positive future.

Public engagement activity so far has included:

- Doncaster Talks Climate Change Survey - ongoing
- Woodlands Speaks/Local Trust Climate Emergency event – with Environmental Justice Commission and IPPR 29.11.2019
- Parish and Town Councils update 17.01.2020.
- Doncaster Nature Alliance ‘Your Wilder Doncaster’ public event 03.03.2020, and Wild Times magazine.
- Primary Network Conference ‘Improve the Environment’ with Doncaster Council Participation Service 06.03.2020
- Navigating Ecological Tragedy – interfaith conference and retreat 06.03.2020

Further public engagement planned:

- At the date of writing this report, social distancing measures in response to COVID19 restrict what is possible through group meetings, consultations, workshops and focus groups. Public engagement plans including online options are being considered.
- A Citizen’s Climate Emergency Assembly planned for summer 2020 is being reconsidered.
- Further public perspectives will be gathered through Doncaster Talks.

The Commission recommends:

- Doncaster’s response to the Climate and Biodiversity Emergency must be based on extensive public support, engagement, and participation. It must highlight the benefits as well as the challenges of change, and be inclusive of all sections of the community.
- Public engagement and participation will need to be continuous requirement into the future, rather than just in the lifetime of the Commission.
The Following themes will be discussed in the coming period before the Doncaster and Biodiversity Commission’s Final Report is published:-

- Response to the COVID-19 pandemic and other emergencies.
- Behaviour change and social influence – for energy use, consumption and also protection of the natural environment.
- Green finance.

Other remaining issues detailed above in this report will be picked up outside of Commission meetings by Commission leads, expert advisors and supporting officers. The outcomes will be fed back to the whole Commission for agreement in the final report.

Given the range and complexity of issues under consideration, there are likely to be issues for which there is limited progress or remain to be resolved at the end of the Commission’s lifespan. These issues will be fed forward into further Action Plans for the structures that will follow on after the Commission.

**Next Steps**

- Findings from public engagement activities including Doncaster Talks will be incorporated into the Commission’s Final Report in the autumn 2020.
- Doncaster Council and Team Doncaster will identify climate emergency infrastructure necessary as an immediate follow-on from the Commission.
- Strong and clear ambitions regarding climate mitigation and adaptation will be integrated throughout the new Borough Strategy, linking to wider sustainability and regenerative goals for Doncaster.
- The development of climate science, national policy and legislation, and international treaties will continue to be closely monitored to ensure that Doncaster’s response is always timely.
References

1 Intergovernmental Panel on Climate Change Special Report Global Warming of 1.5 ºC
2 The Paris Agreement – United Nations Climate Change Committee
3 Intergovernmental Panel on Climate Change (October 2018) Special Report – Global Warming of 1.5°C
4 Ibid.
7 The Queen’s Speech 2019 Background briefing, p. 119.
8 YouGov https://yougov.co.uk/topics/science/articles-reports/2019/09/15/international-poll-most-expect-feel-impact-climate
9 UK Youth Parliament Make your mark
10 Doncaster Borough Council Meeting Minutes 19th December 2019
11 Raworth, Kate (2017), Doughnut economics: seven ways to think like a 21st century economist
12 Kate Raworth, sourced from Wikimedia
13 UN Sustainable Development Goal Knowledge Platform
15 iTREE Canopy survey conducted by Doncaster Council, 2019.
16 FCRN Foodsource Evidence-based resources on sustainable food systems
17 Intergovernmental Panel on Climate Change (January 2020) Climate Change and land: An IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems
18 Committee on Climate Change, January 2020 - Land use: Policies for a Net Zero UK
19 WRAP (2019), Food waste in primary production in the UK
20 BDR Waste Partnership local information
21 Love Food, Hate Waste
22 Recycle Week
23 Love Your Clothes
24 Great British Spring Clean
25 Department of Transport (March 2020) Decarbonising Transport: Setting the Challenge
26 Sheffield City Region Transport Strategy
27 UK Sustainable Aviation
28 Sheffield City Region Strategic Economic Plan
29 HM Treasury (November 2019) Review into funding the transition to a net zero greenhouse gas economy: terms of reference
30 HM Treasury The Economics of Biodiversity: The Dasgupta Review
31 Centre for Alternative Technology (2019), Zero Carbon Britain: Rising to the Climate Emergency
32 Committee on Climate Change, July 2019 - Progress in preparing for climate change 2019 Report to Parliament
Some Key further resources

- Committee on Climate Change [website](#)
- Committee on Climate Change, June 2020 - [Reducing UK emissions: 2020 Progress Report to Parliament](#)
- Christiana Figueres (2020) - The Future We Choose
- [Tyndall Centre for Climate Change Research](#)
- [UK Climate Projections (UKCP)](#)
Climate and Biodiversity Commission attendees

Rt Hon Ed Miliband MP (Chair) - Member of Parliament for Doncaster North,
Cllr Dave Shaw - Doncaster Council Elected Member for the Town Ward
Cllr Chris McGuinness - Doncaster Council Elected Member for the Armthorpe Ward, Portfolio Holder for Communities, Voluntary Sector, and the Environment
Cllr Mark Houlbrook (observer) - Doncaster Council Elected Member for the Thorne and Moorends Ward, Chair of Communities & Environment Overview and Scrutiny Panel
Cllr Jane Cox (observer) - Doncaster Council Elected Member for the Finningley Ward, Vice-Chair of Communities & Environment Overview & Scrutiny Panel
Rachel Bice - Chief Executive, Yorkshire Wildlife Trust
Dan Fell - Chief Executive Officer, Doncaster Chamber
Damian Allen - Chief Executive, Doncaster Council
Dr Rupert Suckling - Director of Public Health, Doncaster Council
Dr Alice Owen - Associate Professor in Business, Sustainability and Stakeholder Engagement, University of Leeds
Chris Saunders - Strategic Regeneration Manager, ENGIE energy and services company
Roger Wells - Operations & Compliance Director, Go Green Ltd
Alannah White - Member of Youth Parliament for Doncaster
Anna Russin - Member of Youth Parliament for Doncaster
Joanne Holden - Sustainability Director, Peel L&P Group Management Limited
Warren Draper - Co-founder, co-editor of Doncopolitan magazine, co-founder of Bentley Urban Farm
Tony Nicholson - Doncaster Green Party, Sprotborough Parish Council
Allie Hesketh - Assistant Environment and Land Use Adviser, National Farmers Union
Jenny Barlow - Flood Risk Management Advisor, Environment Agency
Gill Gillies - Assistant Director of Environment, Doncaster Council
Dr Kirsty Edmondson-Jones - Director of Estates and Facilities Doncaster & Bassetlaw Hospitals NHS Foundation Trust

This Interim Report aims to represent the broad consensus reached through Commission discussion; however, this should not be taken as complete unanimity of view, and individual attendees reserve the right to vary in their opinion.