

**ENVIRONMENT AND  
SUSTAINABILITY STRATEGY  
2020-2030**

# CONTENTS

FOREWORD FROM THE MAYOR OF DONCASTER.....	3
EXECUTIVE SUMMARY.....	4
OUR VISION FOR DONCASTER .....	4
OUR AMBITION .....	4
PRIORITIES .....	4
SHARED RESPONSIBILITIES .....	5
DEVELOPING THE STRATEGY .....	6
STRATEGIC CONTEXT .....	7
INTERNATIONAL AND NATIONAL DRIVERS FOR CHANGE .....	7
LOCAL STRATEGIC CONTEXT .....	7
OUR VISION FOR DONCASTER.....	9
OUR AMBITION .....	9
THE ENVIRONMENTAL EMERGENCY AND BIODIVERSITY CRISIS.....	10
CLIMATE CHANGE.....	10
BIODIVERSITY CRISIS .....	10
THE SCALE OF THE CHALLENGE .....	10
THE CURRENT SITUATION IN DONCASTER .....	11
STRATEGIC CHALLENGES .....	14
OPPORTUNITIES AND CROSS-CUTTING BENEFITS.....	15
BENEFITS TO HEALTH AND WELLBEING.....	15
BENEFITS TO THE ECONOMY .....	15
BENEFITS TO HOUSEHOLDS, NEIGHBOURHOODS AND COMMUNITIES.....	15
NATURAL ENVIRONMENT .....	16
1. WOODLAND, TREES & GREEN SPACES.....	16
2. BIODIVERSITY .....	17
3. WATER QUALITY, FLOOD MANAGEMENT & DRAINAGE.....	18
4. PEATLAND AND SOIL.....	19
5. CONTAMINATED LAND .....	20
BUILT ENVIRONMENT.....	21
6. ENERGY EFFICIENCY OF BUILDINGS & SUSTAINABLE ENERGY .....	21
7. STATUTORY NUISANCES INCLUDING NOISE, ODOUR AND LIGHT POLLUTION.....	22
8. TRANSPORT.....	23
ECONOMY & GREEN TECHNOLOGY .....	24
9. NATURE TOURISM .....	24
10. GREEN AND INNOVATIVE ECONOMY .....	25
11. EXISTING BUSINESS OPERATIONS AND GROWTH .....	26
12. FARMING .....	27
SUSTAINABLE CONSUMPTION, EDUCATION & BEHAVIOURAL CHANGE .....	28
13. FOOD.....	28
14. FLY TIPPING AND LITTER .....	28
15. WASTE & RECYCLING .....	29
RESEARCH AND EMERGING EVIDENCE .....	30
MONITORING RESEARCH AND DEBATE .....	30
FUNDING.....	30
MORE LOCAL EVIDENCE NEEDED .....	30
SHARED RESPONSIBILITIES .....	31
MONITORING PROGRESS AND GOVERNANCE .....	32

## FOREWORD FROM THE MAYOR OF DONCASTER

Welcome to Doncaster's Environment and Sustainability strategy.

Global, national, regional and local leaders all agree on the need to protect the environment and limit global temperature change to 1.5°C above pre-industrial levels. Failure to do so may cause irreversible damage to the planet causing detrimental impact to all life on earth.

This threat does not exist merely in the future; Doncaster is experiencing major environmental issues now. The recent devastation caused by flooding and moor fires are just two examples that show the need for us all to act now to protect communities from the impact of climate change both now and in the future, and to ensure there is still a habitable planet for future generations.

This environment emergency is broad and interrelated to many other policy areas. Our economic, housing, health, transport, education and environment strategies must all be consistent with and complimentary to each other and with our new borough strategy, ensuring that the challenges and opportunities identified in each are considered and tackled together to support the achievement of our strategic wellbeing goals.

This strategy draws upon the opinion, insight, feedback and recommendations collected from residents, elected representatives and partners – much of which came from the Climate and Biodiversity Commission and Doncaster Talks public engagement exercises.

As we continue to rebuild and grow our economy post Covid-19, we must take advantage of the growth in both existing and new green technology sectors, as well as benefiting financially from energy efficiency improvements and the re-use, removal or reduction of waste. We can tailor today's homes to the standards of tomorrow, removing the need for costly retrofitting in the future, and potentially saving residents considerable money via reduced energy bills. As transport changes to introduce new technologies, we must position ourselves to take advantage of new, cleaner options, both individually and commercially; and continue our transition to cleaner sources of electricity, bringing clean and renewable energy into our homes and industry.

The scale of the challenge should not be underestimated. We must overcome the environmental impact of decades of industrialisation and change what could be a lifetime of habits and behaviours. We all need to make our own contributions – individuals, families, businesses, community groups and public sector organisations, which collectively will make a difference to the future of our borough and help with the collective effort to combat climate change.

Some changes and interventions are easier than others, and for some, the impact will be greater and seen quicker than others. Some however, will be significant, could take longer to achieve and see the benefit from, and could be quite costly. However, the cost of not acting will be greater – both to individual and organisational finances, our health, safety and our overall way of life.

We are the generation that will need to take the difficult decisions, to take the 'short-term pain', in order to achieve the longer-term gain that results from our actions today.

Although we face a significant challenge, this agenda also brings massive opportunities for Doncaster – be it in the form of economic gain for existing and new businesses, increased jobs and better paid jobs for our local workforce; cleaner, safer and more pleasant neighbourhoods for locals and visitors to enjoy, and improved public health and well-being for our residents.

I call on all Doncaster residents, businesses and organisations to put the environment at the forefront of their thinking in the way they live their lives and manage their organisations. If we all work together, then we can continue to enjoy the improvements we have seen over recent years, and we can continue to enjoy a borough that is a pleasant place to live, work and visit for everyone.

If Doncaster is going to make its contribution to this national and international effort, then we need to act now.

***Ros Jones, Elected Mayor of Doncaster***



## EXECUTIVE SUMMARY

This strategy set outs how we will play our part in the national effort to reduce carbon emissions and help limit global average temperature increases. It also identifies how we will respond to Doncaster-specific issues like litter, fly tipping, and flooding. The strategy is derived from the input and expertise of numerous stakeholders such as businesses and organisations (including the Climate and Biodiversity Commission) as well as from residents and elected members (via Doncaster Talks public engagement exercises and member seminars).

### OUR VISION FOR DONCASTER

Doncaster businesses, organisations and residents will deliver their contribution to the regional, national and international effort to tackle the climate change emergency; and in doing so will improve and maintain a pleasant and sustainable natural and built environment for everyone to enjoy.

We will have clean air and water, thriving plants and animals, and a sustainable economy that protects and enhances our natural and built environment.

Our homes and other buildings will be energy efficient; our transport network will have minimal impact on nature, and people will have access to attractive green spaces both for leisure and to live and work in.

**Future generations will look back and realise we made the right choices in prioritising the environment in order to sustain and enhance quality of life in Doncaster.**

### OUR AMBITION

Become carbon neutral by 2040, recognising that this equates to a uniform 13-14% year-on-year reduction of emissions and an 85% reduction by 2030 (compared to a baseline of 2005 levels), and increase the proportion of land given over to woodland, wood pasture, wildflower grassland and thus support greater biodiversity.

### PRIORITIES

Over a dozen priority areas/sub-topics have been identified within the strategy, each of which have a series of key aims and delivery actions (details in later sections of the strategy).

#### NATURAL ENVIRONMENT

- Protect and enhance **WOODLAND** and **GREEN SPACES**, plant more **TREES**.
- Protect and enhance **BIODIVERSITY** to support resilient ecosystems.
- Improve **WATER QUALITY** in rivers and lakes, maintain & enhance **DRAINAGE**, and protect from **FLOODING**.
- Protect, enhance, and promote the conservation of our internationally important **PEATLAND**.
- Manage **CONTAMINATED LAND** appropriately.

#### BUILT ENVIRONMENT

- Improve the **ENERGY EFFICIENCY** of homes and other buildings.
- Increase the **ENERGY** production from **SUSTAINABLE** sources.
- Proactively and reactively tackle **NOISE**, **LIGHT**, and **ODOUR NUISANCES**.
- Improve **air quality** by reducing **TRANSPORT** emissions.

#### ECONOMY

- Exploit opportunities in **GREEN TECHNOLOGY** industry sectors.
- Encourage and support **EXISTING BUSINESSES** to improve energy efficiency and waste/recycling practices.
- Exploit blue and green **NATURE TOURISM** opportunities, whilst ensuring their protection and supporting their enhancement.
- Support the local **FARMING** sector to supply locally and operate efficiently using environmentally friendly operations.

#### SUSTAINABLE CONSUMPTION & BEHAVIOUR CHANGE

- Reduce avoidable **FOOD** waste. Encourage and support food sourcing from local, sustainable providers.
- Focus on the reduction, re-use, repair, recycling and recovery of household and commercial **WASTE**.
- Reduce **FLY TIPPING** and **LITTERING**; and optimise the response to incidences when they do occur.
- Raise awareness, share best practice, support and **EDUCATE** partners, businesses and residents on how their own **BEHAVIOUR CHANGES** can contribute to environmental improvements, whilst also achieving economic, health and social benefits.

## **SHARED RESPONSIBILITIES**

No single organisation or group can tackle this challenge alone. All businesses, public sector organisations, community groups and individual households must play their part. An indication of the contributions different groups can make are listed below:

### **Businesses and Public Sector Organisations**

- Identify and share advice, guidance and good practice.
- Work collaboratively on investment, procurement and operational activity.
- Identify and share awareness of opportunities associated with private finance options.
- Invest in electrification of fleet vehicles.
- Include environmental factors in procurement policies.
- Decarbonisation of energy supplies through demand reduction and low carbon energy generating technology.
- Identify opportunities for local partnerships – supply chains and customer base.
- Take advantage of funding opportunities for environmental improvements.
- Consider, and where possible, prioritise longer-term benefits and savings against short-term costs.
- Ensure appropriate policies are in place to encourage, enable, and support residents and employees to deliver on their role.
- Invest in higher energy efficiency features for new and existing buildings.

### **Residents**

- Reduce waste; maximise re-use and recycling.
- Dispose of unavoidable waste considerately - don't drop litter and choose legitimate waste disposal companies/facilities.
- Invest in home energy efficiency improvements.
- Consider the environment when making transport choices: cycling, walking, using public transport, car sharing, and investing in Ultra Low Emission Vehicles where possible.
- Consider the environmental impact of the products you buy, how sustainable the materials used are, where it will be shipped from, and whether natural resources such as peat are being exploited.
- Shop locally wherever you can and consider the impact of buying from further afield.
- Make space for nature in your garden and support naturalisation in community areas.
- Support community initiatives e.g. litter picking.

### **Elected members (Ward Councillors, Members of Parliament, Parish Councils)**

- Lobby Government (local, regional and national) for funding opportunities to support the implementation of the interventions required, to the scale required.
- Lobby Government (local, regional and national) for legislative changes that make environmental priorities mandatory.
- Give the environment due consideration in any local lobbying activity on behalf of residents and businesses.

## DEVELOPING THE STRATEGY

This strategy was developed in partnership with numerous Team Doncaster partners. The views of residents, elected members, public and private sector organisations, and Government agencies have been considered and collated to form a compromise and consensus on the ambition, the type and scale of interventions, and individual or collective contributions needed in order to address these critical issues.

Doncaster's Commission on the climate and biodiversity crisis has spent the last year discussing specific issues and potential solutions, informed by the latest data and expert insight from a range of partners across different environmental disciplines. They have made numerous recommendations which can be found in the published report.

Residents have voiced their concerns and opinions via numerous 'Doncaster Talks' engagement exercises in summer 2019, autumn 2019, spring 2020, and summer 2020. Elected members and Team Doncaster partners have contributed to the strategy development process across the year via member workshops and working groups, with Government agencies providing insight and support throughout.

Partners involved in the development of this strategy, many via the Climate Commission, include but are not limited to the list below. Delivery of the strategy and achievement of the vision for Doncaster will require an equally collective and collaborative effort from these partners and others.

- Residents
- Elected ward members
- Parish Councils
- Members of Parliament
- Doncaster Youth Parliament
- Doncaster Green Party
- Doncaster Mayor and Cabinet
- South Yorkshire Police
- Doncaster Council
- St Leger Homes of Doncaster
- Doncaster Bassetlaw Teaching Hospital
- Doncaster Chamber of Commerce
- Yorkshire Wildlife Trust
- Engie UK
- Go Green Ltd
- Doncopolitan Magazine
- Bentley Urban Farm
- Peel Land and Property Group
- University of Leeds
- Environment Agency
- National Farmers' Union

## STRATEGIC CONTEXT

### INTERNATIONAL AND NATIONAL DRIVERS FOR CHANGE

- The International Paris Agreement on Climate Change is an agreement within the United Nations Framework Convention on Climate Change (UNFCCC) dealing with greenhouse-gas-emissions mitigation, adaptation, and finance, signed in 2016. Around 200 countries, including the UK, have signed the agreement signifying their intention to help limit global temperature increases.
- The UK Climate Change Act has been enacted in 2019 and the UK Government set out its 10-point plan in 2020 for achieving carbon neutrality:
  - Increase offshore wind energy capacity sufficient to power every home by 2030.
  - Invest £500m in hydrogen-based energy production.
  - Invest in large- and small-scale nuclear power with advanced modular reactors.
  - Invest more than £2.8bn in electric vehicles and charging infrastructure; ending the sale of new petrol and diesel cars and vans in 2030 (Some hybrids will be allowed until 2035).
  - Cleaner public transport, thousands of green buses and hundreds of miles of cycle lanes.
  - Aim to achieve the first non-stop transatlantic journey with a zero emissions plane and ship.
  - Invest £1bn in 2021 to make homes, schools and hospitals greener, and energy bills lower.
  - Establish a new world-leading industry in carbon capture and storage, backed by £1bn of government investment for clusters across the North, Wales and Scotland.
  - Absorb carbon by planting 30,000 hectares of trees a year by 2025 and rewilding 30,000 football pitches' worth of countryside.
  - Help commercialise new low-carbon technologies via a £1bn energy innovation fund.

### LOCAL STRATEGIC CONTEXT

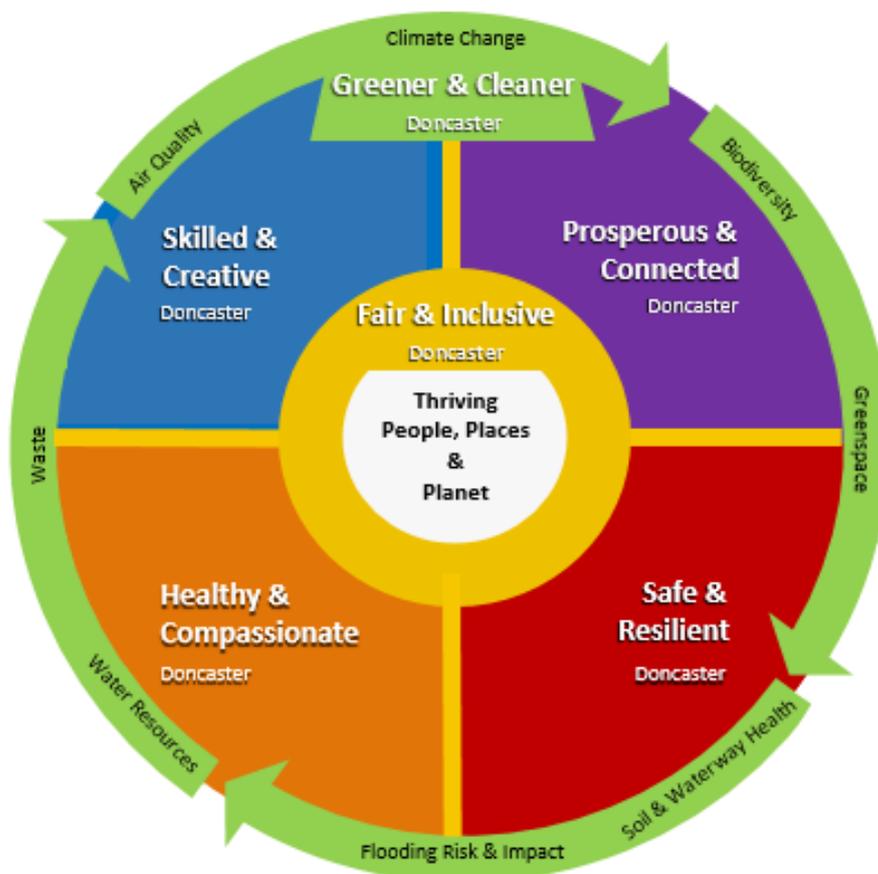
#### Borough Strategy and Wellbeing Goals

A revised Doncaster Borough Strategy will be launched in 2021. It will build upon the successes of the Doncaster Growing Together Plan to deliver a transformation in the well-being of Doncaster people and places over the next 10 years.

The Strategy will focus on the local quality of life issues residents have identified through 'Doncaster Talks' and global shared challenges like the climate change and biodiversity crisis.

Six emerging well-being goals include creating a greener and cleaner borough, improving the safety and resilience of places to challenges like flooding and developing a more compassionate Doncaster. Alongside these will be creating quality jobs, improving education and skills, tackling inequalities and supporting culture and creativity.

Delivering the Borough Strategy will require closer working with communities, shared responsibilities and a more regenerative approach to development.



The Environment and Sustainability strategy will have a significant impact on the following emerging Borough Strategy well-being goals:



#### KEY STRATEGIES

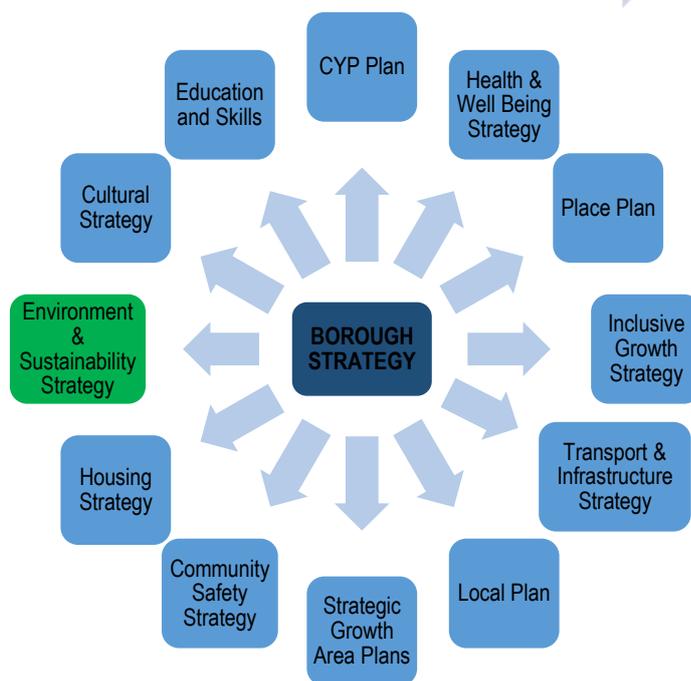
The Environment and Sustainability Strategy is just one of a number of key strategies that will support the delivery of the Borough Strategy and achievement of our wellbeing goals.

Each tier 2 strategy is consistent and complementary to the borough strategy and to each other.

#### SUPPORTING DOCUMENTS

This Strategy is part of a package of documents. The reader can access the data, research and insight upon which it has been derived via the *Evidence Base* and the *Climate and Biodiversity Commission* report.

Further details on individual partners' commitments and plans to address the environment and sustainability can be found in their own individual strategies and plans, which are summarised and referenced in the *Evidence Base* document.



The Environment and Sustainability strategy has several sub-strategies and plans that address specific topics; some of which are listed below. More detail and web links can be found in the Evidence Base document.

- Green Infrastructure Strategy, Tree Risk Management Plan.
- Biodiversity Net Gain Guidance, Local Nature Recovery Strategy, Moors Site management plans.
- Local Flood Risk Management Strategy, Water Level Management Plans
- Contaminated Land Inspection Strategy, UK Peatland Strategy
- Housing Delivery Plan, Doncaster Energy Masterplan, SCR Energy Strategy
- Air Quality Action Plan, Doncaster Walking Strategy, Doncaster Cycling Strategy, Get Doncaster Moving Strategy
- Doncaster Visitor Economy Strategy, SCR Strategic Economic Plan.
- NFU Net zero Strategy, National Food Strategy.
- Resource and Waste Strategy, South Yorkshire Municipal Waste Strategy.

## OUR VISION FOR DONCASTER

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## OUR AMBITION

The UK Government and Sheffield City Region Combined Authority have adopted targets to become carbon neutral by 2050 and 2040, respectively. Locally, Full Council took the decision to declare a climate emergency and biodiversity crisis; in doing so, challenging Doncaster to become carbon neutral, protect and enhance our natural environment, and move towards an innovative, inclusive economy, built on clean growth, decent wages, and a sustainable health and care system. Different organisations are aiming to become carbon neutral in different timeframes, but overall, this Strategy adopts the ambition recommended by the Climate and Biodiversity Commission:

**Become carbon neutral by 2040, recognising that this equates to a uniform 13-14% year-on-year reduction of emissions and an 85% reduction by 2030 (compared to a baseline of 2005 levels), and increase the proportion of land given over to woodland, wood pasture, wildflower grassland and thus support greater biodiversity.**

# THE ENVIRONMENTAL EMERGENCY AND BIODIVERSITY CRISIS

## **CLIMATE CHANGE**

When certain gases produced from human activity build up in the atmosphere, they prevent energy that would ordinarily escape into space from doing so. This creates a 'greenhouse' or warming effect on the planet, which in turn increases average temperatures across the globe. Humans have already caused global warming of around 1°C above pre-industrial levels and if this trend continues then this will reach 1.5°C between 2030 and 2052. This is the point after which the sorts of climate change impacts we are already seeing worldwide will become more severe and more regular; and natural systems may undergo lasting changes that subsequently effect our way of life.

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. Keeping within the global carbon budget for greenhouse gases would give us a 66% of achieving this.

The threat to use 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'.

## **BIODIVERSITY CRISIS**

Biodiversity is the variety of plant and animal life within a particular area, habitat or ecosystem (a community or group of living organisms that live in and interact with each. Human survival depends on healthy ecosystems providing us with benefits, environmental goods and 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, pests and diseases.
- Cultural, recreational and mental health benefits.

Our reliance on the natural processes of carbon sequestration by plants and trees, along with other ecosystem services, means that the climate crisis and biodiversity are inextricably linked. It is vital therefore, that measures to mitigate against the threat of global warming also promote the recovery of nature and its role in supporting resilient ecosystems. Agricultural land management, deforestation, climate change, hydrological change, pollution urbanisation, woodland management and invasive non-native species are amongst the most significant of pressures. One million species already face extinction unless action is taken to reduce the intensity of the drivers of biodiversity loss.

## **THE SCALE OF THE CHALLENGE**

The global carbon budget can be divided using population sizes to give national, regional and local carbon budgets. Doing so gives Doncaster a total carbon budget of around 12 million tonnes of CO<sub>2</sub>e. Once this has been spent, we need to be 'carbon neutral'. This means reducing our emissions such that any remaining emissions can be cancelled out by carbon capture or offsetting. Forecasts suggest that, at current rates, Doncaster will use up its carbon budget in by 2027.

Doncaster clearly needs to reduce its rate of emissions such that our limited carbon budget lasts longer during which we can make the necessary investments and behavioural changes to transition to a lower carbon economy and way of living.

The Government's most recent biodiversity assessment indicates that the UK will not meet the Global 2020 targets it has committed to. Rapid changes in species abundance continues, with more species decreasing than increasing and with the rate of decline not letting-up and in some cases accelerating. Species distribution is falling, and 15% (1,188) of conservation-status species, are currently assessed as being threatened with extinction.

There are difficult investment and prioritisation decisions to be made: longer-term cost savings and benefits to the environment and the cost of not acting now versus the short and immediate term costs of changing behaviours, technology, and working practices. This is a difficult balancing act under normal circumstances but becomes more complicated during the current economic recovery period following major incidents such as the recent flooding and Covid-19 pandemic.

# THE CURRENT SITUATION IN DONCASTER

## Doncaster Talks

- 90% of respondents said that tackling climate change is extremely or somewhat important to them, with 87% agreeing or strongly agreeing with the need for big changes to address climate change.
- When asked about the way they do things (e.g. use of utilities in the home, how they travel, waste and recycling) majority of respondents said that they are already doing a lot or some changes to the way they do things in order to address climate change.
- Similarly, a large proportion of respondents (61%) said that they have already made changes to improve the insulation of their homes. Similar proportions of respondents said they have already made changes to their homes heating system (35%) and that they are willing but not able to (39%). Majority of respondents said that they are willing but not able to spend money on solar panels, an electric vehicle or other measures in response to climate change.
- 88% of respondents agree or strongly agree with the new naturalisation approach being trialled in different areas across the Borough.
- Respondents were asked to rank policy areas in order of importance to them. This resulted in Health and Wellbeing, Education and Skills and Economy being ranked as the top three, Arts and culture was ranked last, and Environment and climate change ranked in the middle (5 out of 8 policy areas).
- 63% of people choosing the options which focused on improving energy efficiency of existing homes and building new homes to high environmental standards, as well as saying no to building developments that are not at the highest environmental standards, even if this results in those developments not going ahead. Only 9% of respondents said that the council should focus on building many new homes, complying only with minimum legal building standards.
- When asked to place a marker on a continuum indicating where Doncaster should focus resources (from targeting resources on a few specific areas to spreading resources evenly across all areas), respondents put the marker near the middle, but slightly more towards spreading resources evenly across all areas.

## NATURAL ENVIRONMENT

### Woodlands, Trees and Green Space

- Approximate 6% of Doncaster is woodland, a smaller proportion than South Yorkshire (7%) and UK (8%).
- Tree canopy cover is 13% (ranging from 7% (Stainforth/Barnby Dun) to 24% (Edlington/Warmsworth)); a smaller proportion than the South Yorkshire (16%) and UK (16%) averages.
- Standard of Doncaster parks varies; some are high standard (Fields in Trust status), others are poor/declining standard.

### Biodiversity

- We lack Doncaster-specific data evidence on local biodiversity gains and losses upon which to base targeted initiatives.

### Water Quality, Flood Management and Drainage

- Large proportions of the east of the borough have low-lying agricultural land that is intensively pump-drained and subject to Water Level Management Plans.
- Doncaster has large areas that are at risk from river and/or surface water flooding. Much of the northern half of the borough is designated as flood zone 3.

### Peatland and Soil

- Doncaster has one of the largest areas of lowland raised bog (peatland) in the UK's (Thorne and Hatfield Moors covers 3,318 hectares, supporting 5000+species of plants and animals).

### Contaminated Land

- Currently 43 sites in Doncaster on the public Contaminated Land Register.
- Existing policies in place to ensure developments take account of any contaminated land.

## **BUILT ENVIRONMENT**

### **Energy Efficiency of Buildings & Sustainable Energy**

- Most of Doncaster's 135,000 homes are energy rating D (43%) and C (24%). 23% are E/F/G, 10% are A/B. National average is D. Around 62% of Council stock is energy rating C, and 35% energy rating D. A small proportion are rating B.
- No data available on energy efficiency of commercial or community buildings.
- Doncaster has the 9th highest number of renewable energy installations in the UK, with 7,053 homes and 191 businesses generating their own electricity (as of March 2019).

### **Statutory Nuisances**

- 2000+ noise complaints received per year, mostly from residential sources (music, pets, neighbours). Only 80 odour complaints (mainly agricultural, in rural areas) and 25 light complaints respectively.

### **Transport**

- Air quality is largely okay, but 8 Air Quality Management areas have been declared – all near busy roads, due to nitrogen dioxide levels.
- Doncaster has consistently had the highest vehicle use in South Yorkshire 1993-2019. Motor vehicle traffic has increased 67% over this period.
- Bus use in Sheffield City Region has fallen by 18% in 10 years.
- Overall downward trend across 2015-2018 of cycling for travel from 12% down to 9% (similar to England and S. Yorks).
- Overall upward trend across 2015-2019 of walking for travel from 24% up to 27% (similar to England and S. Yorks).
- 9 rail stations across Doncaster. Doncaster and Conisbrough have seen increases in travellers across 2016-2018 (2% and 29% respectively), but all others (Adwick, Bentley, Hatfield/Stainforth, Kirk Sandall, Mexborough and Thorne North and Thorne South) have seen reductions (ranging from 6% to 14%).

## **ECONOMY & GREEN TECHNOLOGY**

### **Nature Tourism**

- Between 2017-2019 there was an average 7.1 million day visitors, 760,000 overnight stays, and total visitor spend of around £253m per year. Several parks and nature reserves have achieved Green Flag awards and/or are protected heritage sites and form key aspects of Doncaster's visitor economy.

### **Green and Innovative Economy**

- Across all the low-carbon and renewable energy economy, 3,649 jobs will be required by 2030, and 5,565 will be required by 2050. These will include sectors such as alternative fuels, low-carbon heat, energy efficiency and low emission vehicles and infrastructure.

### **Existing Business Operations and Growth**

- GVA increased 37% to £5.9bn between 2012-2018. Business base grew 44% to around 9,400 across 2010-2020 (90% are micro businesses employing up to 9 people). Private sector jobs increased 17% to 95,000 (2009-2019). This included professional, scientific and technical jobs (+2,500), transport and storage (+2,000), construction (+2,000), manufacturing (+1,000), business administration and support services (+1,000). Reductions were seen in retail (-1,000) and mining, quarrying and utilities (-700). Public sector jobs also reduced by approximately 5,000.
- House building rates were on a par with the national average and we've seen over 1,000 net new homes per year for the last 4 years.
- Covid 19 has had an unprecedented impact on our economy in terms of job losses and business closures. As at May 2020, the number of claimants searching for work reached 14,560 (8% of working age population) – double the amount the same time in the previous year. The proportion of 16-24 year olds searching for work was 11% - the second highest in the country.
- Doncaster has long-standing post-industrial challenges relating to: relatively low skills levels (e.g. ranked 62 out of 63 in Great Britain for NVQ4+ skills); an above average proportion of residents with no formal qualifications (ranked 43 out of 63); relatively low productivity levels (ranked 55 out of 63); relatively low levels and exports per job (ranked 59 out of 63); and relatively high unemployment levels (7.2% compared to a rate of 3.9% for England).
- Doncaster has distinctive industry strengths it can exploit to create quality jobs and tackle climate change at the same time. Doncaster is linking its competitive advantages and wider low-carbon growth opportunities to investment in education, skills and training. This includes developing new Centres of Excellence as part of Doncaster's University City ambitions – including Green Tech.

## **Farming**

- Farming is a significant source of greenhouse gas emissions but can also play a significant role in climate adaptation and mitigation. Agricultural emissions are mainly methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O); not CO<sub>2</sub> like for electricity generation, transport and manufacturing. Cutting CH<sub>4</sub> and N<sub>2</sub>O emissions is difficult because they result from complex natural soil and animal microbial processes.
- Doncaster's commercial agricultural sector has around 36,000 hectares; almost ¾ of which are cereals and other arable crops including biofuels – likely therefore to include significant contract farming as well as locally owned farms. Roughly 6000 hectares is used for grassland for livestock and almost 300 hectares is used for fruit and vegetables.
- Direct employment in Doncaster's agriculture is modest – around 865 individuals.
- Turbulent weather has a huge impact on farm businesses. 2020's harvest is expected to be the lowest in 40 years.
- Farms are often dissimilar to each other with unique characteristics and circumstances in place – any opportunities/solutions/support mechanisms will need to be flexible enough to be accessible to a range of different businesses.

## **SUSTAINABLE CONSUMPTION**

### **Food**

- Love Food Hate Waste (LFHW) is a national campaign to tackle the 8 million tonnes of food waste thrown away each year in the UK at a cost of £12 billion to households. Since its launch, millions of people have responded saving around £1.5 billion worth of food.
- Better education around health and skills development is required around fresh food preparation due to the large amount of avoidable waste, transport and energy use, generated from convenience foods, that could be tackled if families could be encouraged to cook from scratch.
- The Barnsley, Doncaster and Rotherham (BDR) Waste Partnership, Love Food Hate Waste Campaign centres around 5 themes: Perfect Portions, Love Your leftovers, Savvy Storage, Know your dates, Planning Perfection
- In BDR, 34% of household residual waste consists of food waste. Doncaster households are estimated to be wasting an average 2.4kg of food waste per week; of which 60% is classed as avoidable waste that could have been consumed at some point prior to disposal.

### **Fly tipping and litter**

- Monthly fly tipping incidents range from 441 (Oct 2017) to 122 (May 2019). This is aligned with other similar authorities and slightly below the national average. Monthly fly-tipping incidents have further reduced with 109 reported in July 2020.
- This data significantly under-states the true number of incidents because they do not include fly-tipping in hotspot areas which are dealt with separately on a scheduled basis. Hotspots include many areas of the Borough where residential streets have back alleys.

### **Waste & Recycling**

- Detailed information about the exact amount of total waste generated in Doncaster is not available as there are several sources of waste and a standard system for waste reporting does not exist for commercial operators.
- 63% of waste is Construction, Demolition and Excavation; 18% is Commercial and industrial; and 12% is household waste.
- The amount of waste collected by the Council that is recycled increased from 41% to 46% (2014-2018) and the percentage going to landfill has reduced from 55% to less than 5%.
- Fortnightly black, green and blue bin and green box collections occur, and household waste is processed at a BDR facility for recycling and solid recovered fuel production.

## STRATEGIC CHALLENGES

As important as the environment is, we cannot tackle issues in isolation without due consideration for other strategic priorities. Acknowledgement of the synergies and conflicts that exist between the Environment and Sustainability Strategy and other key strategic priorities is critical; as is working together amongst partners to find appropriate connections and compromises to ensure everyone remains supportive of the interventions we seek to deliver.

Interventions that bring benefits to the environment may be directly or indirectly beneficial or detrimental to certain partners' priorities/operations. Where required, a supported transition will be necessary to ensure the right changes happen in the timescales needed.

Some business sectors that are currently thriving in Doncaster rely heavily on fossil fuels and are high in emissions and so by their very nature are detrimental to the environment e.g. logistics, manufacturing, aviation. It will be important to identify opportunities for these sectors to 'green' their processes in order to reduce and mitigate their impact on the environment.

Making changes to operations and investment requirements to become 'greener' may be unaffordable for some businesses within the current economic climate. Being voluntary 'early-movers' to greener ways of operating will likely be good for businesses' reputations, but may make some businesses less competitive with competitors that continue with current ways of working, particularly if 'greening' has led to higher costs for goods and services. Potential opportunities for collaboration and support to those businesses need to be exploited.

Embracing new green technology sectors will likely bring more and higher paid job opportunities to the borough, but may also be out of reach for the significant number of low-skilled workers in Doncaster. These new technologies may also be detrimental to existing industries as the new, greener technologies become more popular. Our education and skills strategy must be shaped by businesses, focusing on the new knowledge and skills required for future job opportunities.

High levels of deprivation remain across significant proportions of our borough, rendering many households unable to make significant investments in environment-improving interventions and unable to realise the associated benefits. Opportunities for support, financial and informative, need to be identified and promoted to ensure nobody is left behind.

Deep-rooted habits and behaviours exist both at individual and organisational levels that can be difficult to change voluntarily. Clear information and policy direction will need to be provided to encourage and support individuals and organisations to change their behaviour where needed to contribute towards achievement of the Borough's targets and ambitions. Similarly, our elected members have a role to play in lobbying Government to introduce legislation to support environmental protection and improvement, giving local progress and the environment due consideration in any local lobbying activity on behalf of residents and businesses.

The way we recover from the economic impact of the CV19 pandemic will have a significant impact on our climate-related ambitions. Supporting people that have become unemployed to get back into work may involve continuing short-term encouragement and support for enterprises in industry sectors that we will ultimately transition away from in favour of greener job sectors. We must recognise the need for a transition from certain industry sectors to cleaner, greener alternatives; but recognise that this transition needs to be managed and supported carefully.

Infrastructure developments and certain industry sector expansions, e.g. major road developments, potential airport expansion; will have negative environmental impacts. Such economically important developments need to take the environment into consideration and evidence mitigation measures to reduce environmental impact, particularly in line with the Government's Environment Bill, which introduced a mandatory requirement for Biodiversity Net Gain (BNG) in the planning system. Development on brownfield sites should be prioritised over greenfield sites.

The financial resources available from private households, businesses, and local and national government is insufficient to implement the interventions needed. We must look for and exploit alternative funding sources to help our residents and businesses to make the required investments to reduce their own carbon footprint; e.g. exploiting the carbon offsetting activity of private companies from outside Doncaster.

Some biodiversity-focused interventions could provide environmental benefits alongside savings to tax-payer funded services, but could be in conflict with the generally accepted standard and 'look and feel' of the borough e.g. regularly cut grass verges vs a 'naturalisation' approach of letting the grass grow and encouraging wildflowers/plants.

## OPPORTUNITIES AND CROSS-CUTTING BENEFITS

Although this strategy focuses on the environment, there are broader benefits to tackling climate change. These factors, along with the cost and challenges faced if we do not act, must be at the forefront of policy and investment decisions.

### **BENEFITS TO HEALTH AND WELLBEING**

A healthy environment is vital for human health and wellbeing. Poorly planned and managed communities with unsustainable transport systems and a lack of access to public and green areas increase air pollution, noise and heat islands, reduce opportunities for physical activity and have a negative impact on community life and people's physical and mental health (WHO, 2020).

Improving access to a healthier environment (e.g. better air quality) will help improve health and wellbeing outcomes for Doncaster residents such as reduced risk of chronic conditions and better mental health.

Addressing climate change will decrease the frequency and intensity of heatwaves, droughts and extreme rainfall and reduce the transmission of food-borne, water-borne and zoonotic infectious diseases. Those who are vulnerable or in vulnerable situations are at higher risk and strategic actions are required to support those disproportionately affected.

Team Doncaster and local communities should work collectively to mitigate the negative effects of increasing demands for energy, transport and technological innovation in order to protect and promote health. Health needs to be central to decisions affecting these trends, identifying opportunities for health protection and promotion.

### **BENEFITS TO THE ECONOMY**

Ensuring that businesses become more environment-conscious regarding their infrastructure and processes will help to reduce emissions but will also provide a financial benefit. For example, using less energy to heat buildings means lower running costs; and natural environment solutions can be lower cost compared to engineered solutions.

A crucial activity for this strategy is to connect businesses with funding opportunities to help make the changes required to reduce their environmental impact – both in terms of awareness and support. It must also help to connect businesses with investment opportunities – for example, those identified by the Natural Capital Assessment.

Resource efficiency is another opportunity for savings. The 'circular economy' approach ensures that waste from one business or sector is re-used as a raw material/resource for another. This can generate savings for businesses both in purchasing and disposal costs. We must maximise awareness of the businesses operating in our area and support the development of supply/demand partnerships between our local businesses.

New markets will open up, stimulated by the increased demand for existing and new technologies and services. These will include opportunities for higher skilled and higher paid jobs for local residents. There will also be opportunities for existing and new businesses operating in the supply chains of these new enterprises. Doncaster businesses need to position themselves with the right knowledge and skills to take advantage of these opportunities.

### **BENEFITS TO HOUSEHOLDS, NEIGHBOURHOODS AND COMMUNITIES**

Changing the way we do things could help households save considerable sums e.g. lower utility bills through better insulation, lower energy costs and carbon footprints through local energy production, lower transport costs through using active travel options for shorter journeys. Money saved from environment-conscious decisions gives us more money to spend in our community and leads to further investment and jobs growth in our local economy.

Protecting and enhancing our natural environment creates more pleasant places to live, work, and spend leisure time, which is as good for rest, relaxation and mental health as it is for activity and physical health. Neighbourhood pride will increase, encouraging residents and visitors to take responsibility and maintain those high standards.

More specifically, appropriate protection against extreme climate-related events gives residents and business owners the confidence to invest in their homes, businesses and neighbourhoods, leading to broader place-based and economic improvements.

# NATURAL ENVIRONMENT

## 1. WOODLAND, TREES & GREEN SPACES

Green infrastructure contributes significantly to local climate regulation. Trees absorb carbon dioxide, converting it to oxygen through natural processes. Tree canopies create shade and shelter, and they help prevent or reduce the risk of flooding by absorbing water, intercepting it and slowing down the rate that it flows into rivers. Trees also help protect soil erosion and surface run off and provide a pleasant, natural landscape and cover for/contrast within the built environment. Our parks, green spaces, and woodland enhance our settlements, providing places for us to relax and exercise, while at the same time providing areas where nature can flourish. Through diversification of grassland management, we can support ecosystems and reduce our carbon footprint.

Aims	Outcome
<ul style="list-style-type: none"> <li>Protect and enhance existing woodland and green spaces.</li> <li>Increase overall tree cover and woodland cover.</li> <li>Maximise prevalence of appropriate green space in new developments.</li> <li>Achievement &amp; maintenance of 'Quality Parks' benchmark standards for open space provision.</li> <li>Enhance the biodiversity value of all public open spaces, as key connecting components of ecological networks and sites supporting access to nature.</li> </ul>	Improved green space provision and increased tree coverage.

### Delivery Actions

	Private Sector	Public sector	Residents
Through active engagement, interpretation and education, ensure that the value of woodland, wood pasture, trees, and parks is understood and considered by policy makers, residents and businesses.	X	X	X
Manage public open spaces for biodiversity through appropriate management practices, informed by expert advice and local knowledge, e.g. naturalisation of appropriate greenspace.	X	X	X
Use the Future Parks Programme to develop, implement and share best practice; and integrate new technologies into parks provision through the Smart Parks project.		X	
Maintain and improve current and future green infrastructure assets.	X	X	X
Support the continued development of the Doncaster Green Space Network – enhancing social & community capacity, developing local knowledge share/best practice.	X	X	X
Ensure that open space, woodland, trees and hedgerows are adequately considered in new developments, with a presumption against developments that result in loss or deterioration of woodland/trees.	X	X	
Develop and implement a tree-planting programme, to include various sized sites from individual trees in gardens to strategic woodland creation where feasible.	X	X	X
Procurement of companies with appropriate growing procedures and controls to ensure that all nursery stock planted is free from pest and disease.	X	X	X

### Key Strategies and Plans

- Local Nature Recovery Strategy (2021) (in development)
- South Yorkshire Natural Capital Assessment (including woodland creation opportunity map) (2021) (in development)
- Future Parks management plans (2019)
- [Doncaster Green Infrastructure strategy \(2014\)](#)
- [Tree Policy and Tree Risk Management plan \(2019\)](#)
- Doncaster Council Environment Services Improvement plan (2021) (in development)

## 2. BIODIVERSITY

Mirroring global trends, the UK's biodiversity is undergoing significant declines due to agricultural practices, detrimental land management, climate change, urban expansion, pollution, and invasive non-native species. The impact on nature includes loss of habitat and degradation of its quality, character, distinctiveness and connectivity; in-turn resulting in a loss of species diversity – our biological communities are becoming more similar to each other and in turn less resilient.

We must adopt a step-change in how we value and use the natural environment in order to protect and enhance biodiversity and ensure that ecosystems are resilient, continue to function and thrive and provide us with goods and services like food, clean water and oxygen production. We must work to a principle of 'bigger, better and more joined-up' areas of nature. This means thinking about ecosystem functions at a landscape-scale.

Doncaster has a varied landscape with many green and blue infrastructure assets, such as its parks, woodlands, allotments, playing fields, cemeteries, rivers and canals. It has conservation sites of international importance (Thorne & Hatfield Moors), two Nature Improvement Areas (The Dearne Valley and Humberhead Levels), and 15 Sites of Special Scientific Interest. We have a long history of natural history recording and conservation successes in partnership working, but much more needs to be done. Many people also recognise the intrinsic value of biodiversity and are calling for and taking action for the environment for nature's sake.

### Aims

- Embed South Yorkshire Natural Capital Assessment outcomes & principles in decision-making.
- Continued partnership work to deliver strategic, landscape-scale biodiversity projects.
- Develop a Local Nature Recovery Strategy to identify and communicate where and how the most strategic and beneficial interventions should be targeted.
- Facilitate informed local, community action to complement strategic biodiversity projects.
- Connect more people with the natural environment and improve access to nature.
- Adopt a Biodiversity Net Gain approach for Doncaster.
- Protect Doncaster's environment from invasive non-native species.

### Outcome

Bigger areas for nature, and better quality habitats, that are more joined up at all scales.

### Delivery Actions

	Private Sector	Public sector	Residents
Work with and support strategic partners to share and apply the Natural Capital Assessment evidence and insights and highlight the continued need for high-quality environmental data.	X	X	
Develop and implement a Local Nature Recovery Strategy.	X	X	X
Maintain and improve the condition of the borough's statutory nature conservation sites (Sites of Special Scientific Interest, Special Areas for Conservation and Special Protection Areas).	X	X	
Increase the proportion of non-statutory Local Wildlife Sites in positive management.	X	X	X
Support the designation/extension of a Dearne Valley Site of Special Scientific Interest.		X	
Support a review of the Humberhead Levels Site of Special Scientific Interest re-notification.		X	
Research, develop and implement a Biodiversity Net Gain approach for Doncaster.	X	X	
Review existing DMBC land management regimes and the potential for public open spaces and connecting areas of green and blue infrastructure to deliver biodiversity enhancements, e.g. 'naturalisation' of appropriate greenspace e.g. grass verges, areas within parks.	X	X	X
'Greening' of the public realm and 'art and ecology' collaborations.	X	X	X
Engage with communities to ensure that changes to land management are well informed and communicated, and promote opportunities for local stewardship and adoption of good practice.	X	X	X
Work in partnership to engage with landowners and managers, particularly (but not exclusively) in the farming sector, to understand the challenges and opportunities for biodiversity, and explore where better outcomes can be supported for farming and wildlife.	X	X	
Support environmental research and innovative approaches to sustainable land and water management, including through changes in agricultural land-use and practice, to help inform policy change, environmental subsidy and a diversified green economy.	X	X	X
Promote and support biodiversity recording and monitoring to ensure that decisions are well informed by sound environmental information.	X	X	

### Key Strategies and Plans

- South Yorkshire Natural Capital Assessment (including woodland creation opportunity map) (2021) (in development)
- Biodiversity Net Gain guidance (2020) (in development)
- [Doncaster Green Infrastructure strategy \(2014\)](#)
- Doncaster Council Environment Services Improvement Plan (2021)
- Local Nature Recovery Strategy (in development)

### 3. WATER QUALITY, FLOOD MANAGEMENT & DRAINAGE

Safe, well-managed and good quality water resources are essential to the health, wellbeing and sustainability of the population. Our lakes and rivers form part of our biodiversity ecosystem as well as providing economic and health benefits in the form of blue tourism and pleasant places at which physical activity is encouraged.

A well-maintained drainage network leads to multiple benefits including reduced risk of flooding which affects local homes and the ability of local people to travel to work. Doncaster has suffered from severe flooding on multiple occasions recently so we must do all we can to reactively and proactively protect homes and businesses from the devastating effect it has on our communities.

Appropriate road drainage also reduces potholes and helps reduce delays to transport – reducing emissions and improving the reliability of public, private and commercial transport.

#### Aims

- Develop robust asset intelligence, identify key flood risk areas and map drainage assets.
- Develop and implement Water Level Management Plans that include the long-term sustainability of drainage networks and consider how current practices can support biodiversity and catchment flood management more effectively.
- Develop and implement a borough-wide pump management policy.
- Design, promote, manage and monitor Sustainable Urban Drainage Systems (SUDS).
- Develop and implement an appropriate de-culverting programme.
- Support the work of Catchment Partnerships in identifying issues and solutions, sharing information, expertise and advice and seeking funding for the delivery of targeted priorities.
- Explore opportunities to reconnect rivers with their floodplain and associated habitat types.
- Increase resident/business engagement in river stewardship organisations, through opportunities, education, awareness and empowerment.
- Reduce diffuse pollution inputs to the borough’s waterbodies.
- Ensure appropriate monitoring, management and regulation of controlled waters (aquifers).

#### Outcome

Better water quality and better protection from flooding.

#### Delivery Actions

	Private Sector	Public sector	Residents
Closer, joined up working between Doncaster Drainage Boards and review of Water Level Management Plans.	X	X	
Support the work of Catchment Partnerships in identifying issues and solutions, sharing information, expertise and advice and seeking funding for delivery of targeted priorities.	X	X	
Implement Catchment Plans for the River Don and the River Torne.	X	X	
Implement Local Plan policies requiring due consideration and measures to deal with drainage and flood risk.	X	X	
Raise awareness of the impact of (& reduce the use of) using chemicals such as pesticides (in particular when there is a possibility of run-off to watercourses).	X	X	X
Planned works completed on a cyclical basis that includes cleansing all road gullies, linear drainage, soakaways, trash screens, pumping stations, ponds and flow controls.	X	X	
Adequate maintenance of drainage assets that support flood risk mitigation.	X	X	

#### Key Strategies and Plans

- [Our Plan for the River Don \(2020\)](#)
- [Don](#), [Dearne](#), [Torne](#) and Rother Catchment Plan (various, under review)
- South Yorkshire Natural Capital Assessment (including woodland creation opportunity map) (2021) (in development)
- Local Nature Recovery Strategy (2021) (in development)
- [Local Flood Risk Management Strategy \(2014\)](#)
- Water level management plans (IDB) for Thorne, Crowle and Goole Moors ([Part 1 \(2008\)](#) and [Part 2 \(2018\)](#)) and [Hatfield Chase \(1995\)](#)
- Sustainable Urban Drainage System (SUDS) Adoption Policy (2020) (in development)
- [Humber River Basin District Management Plan \(2015\)](#)

## 4. PEATLAND AND SOIL

Peatlands are highly significant to global efforts to combat climate change and the achievement of wider sustainable development goals because when they are in a healthy condition they act as large land-based carbon sinks and water stores. They form part of a diverse natural environment that contributes to biodiversity but also provide a natural landscape that promotes health and wellbeing. In their healthy, natural, wet state peatlands are an internationally important habitat for a diverse range of plant and animal species but they also provide vital ecosystem services. These include storing and capturing carbon from our atmosphere, helping to minimise the risk of flooding by storing and regulating water flows and they sequester carbon.

Lowland peat is one of the most carbon rich habitats in the UK and Doncaster has the largest extent of lowland raised bog in England – Hatfield, Thorne, Goole and Crowle Moors covers over 3,300 hectares. The mixture of habitats, including peatland, marsh, woodland and gravel pits, means the area is incredibly rich in wildlife – the reserve supports over 5,000 species of plants and animals, of which more than 4,000 are insects. Large parts of Potteric Carr are on peat soils and it has pockets of conservation managed fens as well as tall reedbed communities; there are significant areas of agricultural peatland and some ex-floodplain fens located along the River Torne too.

Unfortunately, a significant proportion of Doncaster’s lowland peat was damaged by commercial peat extraction in the second half of the 20th Century. These areas have been drained and degraded which has lowered the natural water table and has reduced the land’s ability to provide many of the ecosystem services mentioned above, converting them from carbon sinks to significant sources of carbon release. Conservation-managed lowland fens under high water table management are among the most effective carbon sinks per unit area in England and Wales, whereas agriculturally drained lowland peats are amongst the UK’s largest land-use derived source of carbon dioxide emissions. There is a clear correlation between CO2 balance and mean water table depth and so restoring or raising water level in agriculturally drained lowland peatlands could deliver nationally significant climate mitigation benefits

Restoration of floodplain fens must therefore be a priority particularly where they are not in intensive management and can be relatively easily restored, and we need to give careful consideration to intensively managed agricultural land. Work is underway to remediate the numerous sites, but it will be years before the bog is fully functional again, which is key to maximising its potential as a carbon store.

Soil loss and its environmental impact is not limited to the peatlands. Watercourses in agricultural land throughout the Doncaster area are impacted by sediments from soil loss – reducing biodiversity, contributing to flood risk, and increasing release of carbon and soil fertility.

### Aims

- Restoration and conservation of peatland sites to retain suitable conditions for the development of raised bog and its vegetation.
- Appropriate management of agricultural peatlands.
- Improve understanding of the location of existing peat soils, in particular degraded peatland to inform a restoration programme.
- Encourage, support and promote composting schemes, both home and commercial, as an alternative to peat-based compost purchases.

### Outcome

Peatland is recognised, protected, enhanced and extended for biodiversity, water storage, carbon sequestration, and essential climate mitigation.

### Delivery Actions

	Private Sector	Public sector	Residents
Enforce Local Plan policies protecting from significant loss of the best and most versatile agricultural land; and require development proposals to demonstrate that all practicable steps have been taken for soil resources to be conserved and managed in a sustainable way.	X	X	
Work in partnership with Natural England, Humberhead Peatlands National Nature Reserve, Environment Agency, River Torne Catchment partnership and YWT.	X	X	
Insist on low/no peat content in soils/compost in horticultural works.	X	X	X

### Key Strategies and Plans

- [UK Peatland Strategy \(2018\)](#)
- [Site Management Plans for the individual Moors](#) (under review)
- Wildfire plans relating to response and recovery (in development)
- South Yorkshire Natural Capital Assessment (including woodland creation opportunity map) (2021) (in development)
- Local Nature Recovery Strategy (2021) (in development)

## **5. CONTAMINATED LAND**

Doncaster has a rich industrial past and thus has a legacy of historic land contamination involving a very wide range of substances. Although there is little conclusive evidence of serious acute health effects from the types and levels of land contamination found in England, given the known toxicology of contaminants at certain sites and their potential health risks associated with long-term exposure, it is prudent to ensure areas potentially affected from contamination are managed appropriately.

### **Aims**

- Identify, risk assess and appropriately manage contaminated land.
- Consider and mitigate the potential impact of flooding on contaminated land sites.
- Review and update the Contaminated Land strategy and register.
- Maintain a GIS database which links planning developments and land quality databases, enabling the more efficient processing of planning applications.

### **Outcome**

Potential risk from contaminated land sites is appropriately mitigated.

### **Delivery Actions**

	<b>Private Sector</b>	<b>Public sector</b>	<b>Residents</b>
Continue to map, review & ratify potential contaminated land sites; with appropriate sharing of intelligence amongst partners/stakeholders.	X	X	
Local plan policies to ensure development sites mitigate contamination or unstable land.		X	
Partnership working amongst The Yorkshire and Lincolnshire Pollution Advisory Group to promote best practice, training and guidance documents for partners/stakeholders.	X	X	
Prioritise potential sites for inspection – as per the Inspection Strategy 2017, ensuring potential high-risk sites are identified, risk assessed, recorded and remediated in accordance with the Contaminated Land Regulations.		X	

### **Key Strategies and Plans**

- [Contaminated Land Inspection strategy \(2017\)](#)

## BUILT ENVIRONMENT

### 6. ENERGY EFFICIENCY OF BUILDINGS & SUSTAINABLE ENERGY

Buildings, be they housing, commercial or community units, are amongst the biggest sources of CO2 emissions, due in part to their requirement for heat and power, but also their low levels of energy efficiency. A key requisite for health is that people can afford energy and can heat and run their homes efficiently.

Embedding sustainability into current and future housing and other developments is essential for a cleaner and greener borough. Supporting interventions and developments that improve the energy efficiency of buildings can also contribute to an inclusive economy that benefits the health and wellbeing of everyone in Doncaster.

Despite Doncaster's significant housing growth over the last half a decade, most of our housing stock is relatively old – developed during times when build standards were significantly lower than today's requirements. We need to not only build to high standards, but also retrofit new, higher standards to existing buildings. Consideration will be given to re-purposing existing buildings as it can be more sustainable than demolishing and replacing with new builds. Consideration of the heritage and listed status of historical buildings will need to be given.

Renewable sources of energy offer several potential advantages. They do not irreversibly deplete finite resources, and most have a lower climate footprint than fossil fuels. If managed well, they can pose minimal health risks and can yield social and economic co-benefits. Such energy sources can serve individual buildings or could be at a community scale.

Aims	Outcome
<ul style="list-style-type: none"> <li>Maximise the energy efficiency of new and existing homes and buildings.</li> <li>Maximise the large-scale and small-scale renewable energy generation.</li> <li>Maximise the use of energy produced from renewable resources.</li> </ul>	Reduced carbon footprint from homes & buildings and reduced running costs for residents and businesses.

#### Delivery Actions

	Private Sector	Public sector	Residents
Ensure new build developments are built to the highest level of energy efficiency that is practicably and financially viable, utilising new energy technology and design.	X	X	
Lobby Government for better build standards and earlier introduction of these changes.	X	X	X
Undertake a retrofitting of insulation, space heating, and hot water facilities in domestic homes.	X	X	X
Increase the proportion of domestic and commercial heating supplied from fuel cell µCHP.	X	X	X
Reduce demand for domestic hot water and commercial heating, hot water and cooling.	X	X	X
Provide advice and guidance on energy saving measures to residents, landlords, schools, businesses, community groups.	X	X	
Ensure tenant awareness of and landlord adherence to building standards legal requirements.	X	X	
Promote and support access to energy saving grants/loans for households and businesses.	X	X	
Promote micro-renewable energy technologies and decentralised heat/power systems.	X	X	
Maximise opportunities to purchase and consume renewable electricity and heat generated within the borough. Encourage the use of energy providers that use renewable energy sources.	X	X	
Commission a private sector housing stock condition study and commercial buildings energy efficiency standards study; identify options for improvement.	X	X	
Development of appropriate renewable energy infrastructure throughout the borough.	X	X	X
Referrals to Council enforcement service from health care providers for anyone presenting with cold-related health issues (housing conditions assessment).	X	X	X
Promote the roll out of residential smart metering.	X	X	

#### Key Strategies and Plans

- Housing Strategy (2020) (in development)
- Housing Delivery Plan (2020)
- DMBC Enforcement Policies (various)
- Energy Masterplan (2020) (in development)
- [SCR Energy Strategy \(2020\)](#)
- [Heritage Strategy \(2015\)](#), under review)

## **7. STATUTORY NUISANCES INCLUDING NOISE, ODOUR AND LIGHT POLLUTION**

Noise stands second to poor air quality in terms of the burden of ill health caused by a single pollutant and is increasingly high on the international agenda.

Odour nuisance is subjective and difficult to define and measure. They can also arise from a wide variety of sources. Although most odours are not harmful to health, they can be a common cause of distress and complaint for individuals.

Appropriate lighting contributes to a sense of identity and place, and makes for a safer and friendlier environment, however, inappropriate lighting can cause light pollution. There are health implications related to using inappropriate lighting in public spaces, including risks relating to glare, light pollution, harm to local ecologies and inappropriate light spectrums. Although artificial light can provide many benefits to society, it is important that the right lighting is in the right place, at the right time.

<b>Aims</b>	<b>Outcome</b>
<ul style="list-style-type: none"><li>Reduce the creation of and optimise the response to nuisances such as noise, light, odour, dust and smoke issues.</li></ul>	Reduced noise, light and odour nuisances.

### **Delivery Actions**

	<b>Private Sector</b>	<b>Public sector</b>	<b>Residents</b>
Make appropriate planning decisions based on best practice to mitigate adverse impacts of new developments.	X	X	
Develop and strengthen reporting and monitoring protocols amongst partners.	X	X	
Robust and fair enforcement in accordance with Enforcement Policies where necessary and appropriate.		X	
Enable easy and effective ways for residents and businesses to report nuisances affecting them.		X	

### **Key Strategies and Plans**

- Doncaster Council Enforcement Policies (various)

## 8. TRANSPORT

Air quality has a demonstrable effect on health, with children and older people being more susceptible to the effects of air pollution. It is heavily affected by emissions from transport and industry, with traffic emissions being the major factor. These pollutants do not just affect the areas with greater traffic, given certain conditions, pollutants could be transported, great distances to affect areas far from the pollution source. Secondary pollutants such as ozone, created by reactions between sunlight and traffic emissions are also a problem across both urban and rural areas.

The use of cars, buses, lorries, and trains are an established part of our everyday lives, both for leisure and industry use; and a significant proportion of our economy is reliant on our fantastic transport links within Doncaster, regionally, national and internationally. We must minimise the environmental impact vehicular transport has and offset against any unavoidable damage it causes.

Aims	Outcome
<ul style="list-style-type: none"> <li>Remove the 'Air Quality Management Area' status of the eight Doncaster areas with high nitrogen dioxide levels.</li> <li>Reduce vehicular emissions, by reducing the emissions from the vehicles using our roads and reducing the number of vehicles on the road.</li> </ul>	Improved air quality across the borough.

### Delivery Actions

	Private Sector	Public sector	Residents
Increase prevalence of Ultra Low Emission Vehicles – both for personal and fleet; improving infrastructure, awareness and understanding of options, and increased prioritisation in investment decisions.	X	X	X
Increase average vehicle occupancies.	X	X	X
Improve provision of affordable, high quality, low emission public transport, and increased integration between bus and rail services.	X		
Decrease the average total distance travelled per individual per year.	X	X	X
Promote greater use of rail and waterborne freight options, with reduced use of and increased efficiency in road freight.	X		
Include sustainable, clean transport options in the design of all new developments – including active travel and public transport options; and ensure comprehensive health impact assessments are completed for all proposed major infrastructure developments to identify the impact on residents' health and identify mitigation where the development is deemed necessary.	X	X	
Provide safe, attractive environments to walk and cycle; focusing on reducing the 55% of journeys that are less than 1km made by car.		X	
Naturalisation of appropriate areas through appropriate measures such as changes in grass cutting frequency, planting more greenery or reducing public access.		X	
Implementation of the interventions identified in the Air Quality Action Plan		X	

### Key Strategies and Plans

- [Air Quality Action Plan \(2018\)](#)
- [Walking Strategy \(2018\)](#)
- [Cycling Strategy \(2019\)](#)
- [Get Doncaster Moving Strategy \(2016\)](#)
- [Doncaster Green Infrastructure Strategy \(2014\)](#)
- [Local Plan \(2015\)](#) (approval underway, publication expected late 2020)

## ECONOMY & GREEN TECHNOLOGY

### 9. NATURE TOURISM

Nature tourism (sometimes referred to as green and blue tourism), can be categorised into three groups: incidental natural settings/experiences; activities dependent on nature and where nature provides a focus; and activities enhanced by nature. The success of nature tourism is predicated on a few key factors: the presence of charismatic (or 'iconic') species, a supporting infrastructure of well managed sites capable of handling individuals and groups of visitors, and a network of supportive businesses including accommodation providers, catering services, and where relevant, locally based services such as boat trip operators and/or wildlife guides.

Between 2013 and 2015 Doncaster had 6.8million visitors (6.5m day visitors, 0.3m overnight visitors), and an overall visitor spend of £173m. There are 14,000 jobs in our visitor economy sector.

Aims	Outcome
<ul style="list-style-type: none"> <li>Continue promotion of the borough's green/blue infrastructure including nature reserves and historic parks and gardens of national significance e.g. Potteric Carr, Thorne and Hatfield Moors, and Cusworth Hall &amp; Brodsworth Hall and their parklands.</li> <li>Improve local transport links between tourism locations and key transport nodes such as Doncaster Transport Interchange and Robin Hood Airport.</li> <li>Protect, maintain and enhance our natural areas, and access to and within them.</li> <li>Encourage Green Tourism through investment and development.</li> </ul>	Nature tourism sites are protected, improved and well-used by residents and visitors.

#### Delivery Actions

	Private Sector	Public sector	Residents
Support appropriate non-residential development in the countryside that can support rural economies.	X	X	X
Local Plan policies to support the preservation/enhancement of key sites such as Thorne & Hatfield Moors.		X	
Achievement and maintenance of Green Flag status for the borough's parks.		X	
Promote nature tourism opportunities via Visit Doncaster, through both investment and development.	X	X	X
Continue to promote the markets to encourage local purchasing and reduce food miles.	X	X	

#### Key Strategies and Plans

- [Visitor Economy Strategy \(2019\)](#)
- [Heritage Strategy and Policies \(2015\)](#), under review)

## 10. GREEN AND INNOVATIVE ECONOMY

A recent LGA report ('Local green jobs – accelerating sustainable economic recovery' (2020)) estimates that across the low-carbon and renewable energy economy, around 3,600 jobs will be required by 2030 and 5,600 by 2050. These will mostly be within the alternative fuels, low-carbon heat and energy efficiency sectors; but will also include low emission vehicles & infrastructure, low-carbon services and low-carbon electricity.

To fully exploit the benefits of a low carbon economy, it is necessary to develop an overall circular economy – to keep finite resources in a loop of use and reuse for as long as possible using renewable energy sources. A circular economy aims to redefine growth, focusing on positive society-wide benefits. It entails gradually decoupling economic activity from the consumption of finite resources, and designing waste out of the system. This needs to be underpinned by a transition to renewable energy sources. The circular model builds economic, natural, and social capital and is based on three principles:

- Design out waste and pollution
- Keep products and materials in use
- Regenerate natural systems

### Aims

- Prioritise investment in a low carbon economy – to improve the well-being of residents through cleaner air, environmental security, improved health, improved public transport, and a resilient economy with more quality jobs.
- Developing a framework for delivering green growth that will balance the improvement of local well-being with the respect for planetary environmental boundaries.
- Support the development of skills needed for low carbon jobs.
- Support the development of a Green Technology Centre of Excellence as part of the University City work.

### Outcome

Opportunities in the green economy are accessible and exploited.

### Delivery Actions

	Private Sector	Public sector	Residents
Prioritise low-carbon investments that will deliver jobs at scale and deliver productive and sustainable assets for the future.	X	X	
Take advantage of public, industry and Government pressure for a more sustainable borough including development of new buildings, machinery and retro-fitting/upgrading of existing technology to newer, cleaner standards.	X	X	
Invest in 'green' buildings – improving energy efficiency in residential and commercial buildings.	X	X	X
Invest in low-carbon energy infrastructure and usage.	X	X	X
Invest in Doncaster's natural capital and green infrastructure – for ecosystem resilience, job creation and regeneration.	X	X	
Support the low-carbon transition – to ensure the benefits of acting on climate change are shared widely and the costs of a sustainable transition do not fall on those least able to pay, or whose livelihoods are most at risk as the economy changes.	X	X	X
Re-skilling communities to support and take advantage of green and innovative economic growth.	X	X	X
Encourage and support businesses to upgrade their business premises.	X	X	X
Increase the take-up of energy suppliers using 100% renewable sources amongst Doncaster businesses.	X	X	X
Harness local, regional and national funding to support the transition.	X	X	X
Adherence to Local Plan policies requiring developments to contribute to Green Infrastructure, meet high BREEAM standards and have at least 10% of regulated energy from renewables.	X	X	

### Key Strategies and Plans

- Borough Strategy (2020) (in development)
- [Inclusive Growth Strategy \(2018\)](#)
- Housing Strategy (2020) (in development)
- [SCR Strategic Economic Plan \(2020\)](#)
- [SCR Energy Strategy \(2020\)](#)
- Education and Skills Strategy (2020) (in development)

## **11. EXISTING BUSINESS OPERATIONS AND GROWTH**

Doncaster has over 9,000 businesses of which 90% are micro businesses employing 0-9 people. The top five employing sectors are Health, Retail, Manufacturing, Transport & Storage, and Education; and our economy is in a transition from an economy dominated by heavy industry to a more diverse, knowledge-driven economy. The Covid-19 pandemic has had a major impact locally – both in term of job losses and business closures.

Doncaster already has distinctive industry strengths it can exploit to create quality jobs and tackle climate change at the same time. We must continue to invest and support our competitive advantage in areas such as Future Mobility and industry specialisms such as rail engineering and logistics.

Doncaster and the Sheffield City Region economic recovery plans are focused on the imperatives of getting people back into work, through employment and skills support, supporting as many businesses as possible to bounce back and exploiting new markets and opportunities – such as the need for environmental improvements and the development of new technologies. At the same time, the objective of ‘building-back better’ for the longer-term underpins the work – to improve the well-being of residents within a zero-carbon future.

### **Aims**

- Minimise the carbon footprint of Doncaster businesses.
- Develop Doncaster’s Future Mobility competitive advantages.
- Develop environmentally friendly supply chains.
- Support local innovative businesses in the circular economy to grow.
- Create a development zone for net carbon neutral manufacturing and innovation.
- Develop a Sustainability Centre on the Waterfront site.

### **Outcome**

Local businesses are supported to be more environmentally sustainable and to access opportunities associated with the green economy.

### **Delivery Actions**

	<b>Private Sector</b>	<b>Public sector</b>	<b>Residents</b>
Undertake a local business audit to understand the scale and scope of ‘green ‘activity completed or underway.	X		
Development of appropriate support for small and medium enterprises to be more sustainable.	X	X	
Promoting ‘low carbon’ business practices through supply chains, promoting accredited sustainability standards through purchasing, employee travel plans.	X		

### **Key Strategies and Plans**

- Borough Strategy (2020) (in development)
- [Inclusive Growth Strategy \(2018\)](#)
- Housing Strategy (2020) (in development)
- [SCR Strategic Economic Plan \(2020\)](#)
- [SCR Energy Strategy \(2020\)](#)
- Education and Skills Strategy (2020) (in development)

## 12. FARMING

Agriculture is uniquely placed to tackle climate change as it is both an emissions source and a sink. Farmers have the ability to protect carbon reserves stored in soils and vegetation through sustainable farming practice that focuses on soil health. Healthy soil is fundamental to safe and affordable food production. It also locks in greenhouse gases and can help reduce the risk of flooding. The principal GHG emitted by most industries is CO<sub>2</sub> from fossil fuel combustion, whereas for agricultural systems its methane and nitrous oxide (N<sub>2</sub>O). Reducing these emissions is more difficult than cutting CO<sub>2</sub>, because they result from complex and imperfectly understood natural soil and animal microbial processes. A supply of nitrogen from organic or inorganic sources is necessary for the growth of crops and pasture (food), and it is an unavoidable consequence of soil processes that a small amount of nitrogen in an agricultural system will be emitted as nitrous oxide.

There are no ‘silver bullet’ answers to tackling climate change, but improving farming’s productive efficiency will enable farmers to produce the same quantity of food, or more, with less inputs, in smarter ways. This, in turn, will enable the sector to further reduce its greenhouse gas emissions. A variety of measures can include loosening compacted soils and preventing soil compaction in cropland and pasture, reducing the need for cultivation and minimising N<sub>2</sub>O emissions. Enhancing carbon storage in soils and vegetation will require collaborative working with multiple parties. There also needs to be recognition by all parties of the multiple environmental benefits that could be layered together with carbon storage in response to a realistic carbon reward price.

Doncaster’s commercial agricultural sector has around 36,000 hectares, almost three quarters of which are cereals and other arable crops including biofuels. Doncaster’s farms include significant contract farming as well as locally owned farms. Approximately 6000 hectares is grassland for livestock and around 300 hectares are used for fruit and vegetables. Following the UK’s exit from the EU, farms face the challenge of changing subsidies and changing commercial challenges from new trade deals. We need to understand and support our farmers to be both viable and successful businesses that can contribute to our local economy; but also support them to farm in a way that supports biodiversity and contributes to reducing climate change and supporting local health and wellbeing.

Aims	Outcome
<ul style="list-style-type: none"> <li>Gain a better understanding of the farming industry within Doncaster.</li> <li>Support local food producers to adapt to climate change and challenging weather events.</li> <li>Enable local farming businesses to play a role in sustainable local food security.</li> <li>Engage local farmers and landowners in the development of nature recovery networks and biodiversity protection and enhancement.</li> <li>Support regenerative farming and local food production approaches, including improving access to land for smallholdings, agroecological land trusts or county farms.</li> </ul>	Local farms are resilient and adaptable to changing conditions, and actively support the reduction of impacts of climate change.

### Delivery Actions

	Private Sector	Public sector	Residents
Improve intelligence on local farms – for example, which farms are signed up to carbon cutting schemes, ELMS or other biodiversity initiatives, tree planting and commercial off-setting, selling produce locally, renewable energy generation, etc.	X	X	
Support local farms to make the best use of opportunities such as ELM funding, woodland creation funding, commercial carbon offsetting option, and renewable energy production.	X	X	
Identify and promote funding and investment opportunities to promote the financial viability of Doncaster’s agricultural sector, particularly where finance relates to sustainability, renewable energy, decarbonisation, carbon sequestration and offsetting, and biodiversity enhancement.	X	X	
Training & support for new entrants, social enterprises, cooperatives and community ownership.	X		
Promote relevant partnership working between Doncaster’s agricultural sector, land agents, business sector, and other Team Doncaster partners.	X	X	
Develop a clearly defined food strategy for Doncaster. Raise the profile of Good Food Doncaster/Sustainable Food Cities to local food producers – to improve access to affordable healthy food, reduce food insecurity, and promote a successful, locally-led food economy.	X	X	X
Integrate support for agro-ecological farms and local supply chains into local development plans and new development site plans.	X	X	
Engage with farmers about land drainage and their contribution to flood risk mitigation.	X	X	
Optimise farming practices to support the protection of peatlands.	X		

### Key Strategies and Plans

- [Achieving Net Zero: Farming's 2040 Goal – National Farmers Union \(2019\)](#)
- South Yorkshire Natural Capital Assessment (including woodland creation opportunity map) (2021)
- Local Nature Recovery Strategy (2021) (in development)

## SUSTAINABLE CONSUMPTION, EDUCATION & BEHAVIOURAL CHANGE

### 13. FOOD

Changing weather patterns and more frequent extreme weather are already having an impact on both national and local food production and therefore commercial viability. Local flooding in 2019 affected 18 farm-holdings and general wet weather impeded harvesting and planting. Each year, Doncaster generates 10,000 tonnes of avoidable food waste. This is wasted money for households and businesses; and also represents waste that has a high disposal cost.

#### Aims

- Increase the proportion of locally sourced food.
- Reduce and remove avoidable food waste.
- Promoting food security for the residents of Doncaster

#### Outcome

The impact of local food consumption and waste disposal is minimised.

#### Delivery Actions

	Private Sector	Public sector	Residents
Support communities to buy locally produced food or to grow their own food.	X	X	X
Continue to endorse the BDR Waste Partnership Love Food Hate Waste Campaign (Perfect Portions, Love Your leftovers, Savvy Storage, Know your dates, Planning Perfection).	X	X	X
Alignment with National Food Strategy principles; Review organisational or household food purchasing policies/approaches, ensuring healthy and sustainable choices are made.	X	X	X
Develop a 'veg cities' approach through the Doncaster Food Network.	X	X	
Encourage and support partnership between local suppliers and users/sellers of food produce.	X	X	X
Support local food producers to adapt to a changing climate and challenging weather events,	X	X	X

#### Key Strategies and Plans

- National Food strategy (Parts One and Two) ([2020](#) and 2021)

### 14. FLY TIPPING AND LITTER

Fly tipping is a major problem in some parts of the borough, particularly within the urban centre alleyways where thousands of tonnes of waste are cleared each year with an annual cost to the local taxpayer of almost half a million pounds. Aside from a drain on financial resources, it also presents a significant health risk and blights our neighbourhoods and countryside, and can negatively affect how an area looks and how people feel about their area. Where the composition of fly-tipped waste includes hazardous waste, it can threaten our ecosystem and wildlife and may even depict a risk to human life. Fly tipping also negatively impacts on the local landscape and enjoyment of green space for residents and visitors. Littering is also a problem across many parts of the borough with around 2000 reported cases last year, 3000+ fines issued and 500+ cases submitted for prosecution.

#### Aims

- Increased proportion of land and highways meeting required cleanliness standards.
- Reduce fly tipping and litter.

#### Outcome

Reduced incidences and impact of fly tipping & litter.

#### Delivery Actions

	Private Sector	Public sector	Residents
Robust and fair enforcement activity in response to fly tipping and littering.		X	
Lobby local magistrate courts for fly tipping punishments that reflect the social, economic and environmental costs.	X	X	X
Improve awareness of legal waste disposal contractors and the consequences of using unauthorised contractors.	X	X	X
Review, and improve and/or increase household and commercial waste provision.	X	X	
Use proactive architectural protections to reduce the risk of fly tipping, especially in areas that can affect drainage and cause flooding.	X	X	X
Develop innovative ways of working with local businesses to reduce the amount of take-away litter and encourage businesses to take ownership of localised issues caused by their packaging.	X	X	
Effective and accessible communication and engagement to discourage fly tipping and littering.	X	X	X
Maximise involvement in local initiatives e.g. Big British Spring Clean and Love Where You Live.	X	X	X

#### Key Strategies and Plans

- Doncaster Council Enforcement policies (various)
- Doncaster Council Environment Services Improvement plan (2021)

## 15. WASTE & RECYCLING

Waste is a problem at a global and local level. The world's oceans contain 97% of the world's water; they regulate our climate; absorb CO2, and they are the number one source for protein for over a billion people. However, they are facing a major problem in the form of plastic pollution. Plastic waste can take hundreds of years to degrade and not all plastics are recyclable – single-use plastics make up almost half of the plastic made each year. In some cases, certain types of plastic are technically recyclable but not cost effective to do so. There are trillions of pieces of plastic waste already polluting the world's oceans, totalling millions of tonnes.

We all need to reduce our waste and ensure any unavoidable waste is disposed of appropriately. Our mind-set when dealing with waste must be to focus on the upper parts of the waste hierarchy: Reduce, Re-use, Repair, Recycle, Recover; with Disposal being the last option rather than the default one.

Doncaster is well served by waste processors who deliver waste transfer, processing, and total waste management services to residents and businesses. Waste services, included transfer stations, are delivered by numerous local and national independent companies. In addition, the Council operate several household waste recycling centres and are responsible for kerbside collection of general and garden household waste from residential properties, as well as the collection of waste from litter bins, street cleansing and ground maintenance activities.

Doncaster Council waste collection data shows that households have increased their recycling level to approximately 46% over the period 2014/15-2018/19; with the amount of residential and local authority collected waste reducing slightly over the same period. The percentage of waste going to landfill has reduced significantly from around 55% to 5%.

### Aims

- Focus efforts on the waste hierarchy of 'Reduce, Re-use, Repair, Recycle, Recover, Dispose'; with particular focus on the first 5 stages.
- Achieve national targets associated with household waste recycling.
- Maintain the high level of waste diverted from landfill at 95%+.
- Maintain waste collection completion at 99%+ of all scheduled collections.
- Minimise consumption of single-use plastics.

### Outcome

The impact of the borough's waste on the environment is minimised.

### Delivery Actions

	Private Sector	Public sector	Residents
Provide advice and guidance on residential and commercial waste disposal/recycling options and consumer choices and behaviours.	X	X	
Ensure adequate, value for money provision of household, municipal and commercial waste facilities.	X	X	
Recovery of all waste at the Barnsley, Doncaster and Rotherham waste partnership facility, for recycling and solid recovered fuel production.		X	
Explore public and/or private waste management partnerships that promote the concept of the local 'circular economy' where one businesses waste become another business's resource.	X	X	
Review and if necessary, update the South Yorkshire Municipal Waste Plan.		X	
Procurement policies to include requirements associated with reduction and careful processing of waste.	X	X	

### Key Strategies and Plans

- [BDR Joint Waste Plan \(2012\)](#)
- South Yorkshire Joint Waste Plan (in development)
- [South Yorkshire Municipal Waste Strategy \(2017-2021\)](#)

## RESEARCH AND EMERGING EVIDENCE

### MONITORING RESEARCH AND DEBATE

Although there is clear and robust evidence surrounding many aspects of climate change research and policy, we must acknowledge that there are areas where uncertainties and disagreements remain. Detail and clarity continue to develop as research progresses into the impact of certain factors as well as the validity and value of potential solutions that emerge. Two examples where there remains a significant range of views and disagreement are aviation and meat consumption/plant-based diets.

Aviation is widely acknowledged to be a heavy polluter, but our international airport is also a major economic benefit for Doncaster, South Yorkshire and the Sheffield City Region. We need to do all we can to ensure our airport and associated business park minimise its impact on the environment whilst at the same time supporting it to realise its jobs growth and local economic gain potential. Regional airports are part of the solution to reduce the overall impact of passengers travelling further afield to a small number of specific airports e.g. in London or Manchester; but they also **need to invest in carbon reduction measures in their own fleet vehicles and ground operations, and their offsetting and investment in local natural capital**

**Individually, we need to consider the environment when making decisions about the number of flights we take each year, particularly long-haul flights.** The aviation industry has committed to cutting net emissions to zero by 2050 and is **progressing research into the development of cleaner fuels and electric planes**. Locally, any new developments in Doncaster are subject to a Biodiversity Net Gain requirement through the planning system.

Debate continues internationally about the environmental impact of livestock/red meat diets (methane production from animals, stronger impact than CO<sub>2</sub>, impact on land from animal food requirements) versus a plant-based diet (intensive farming/threat to soil fertility, rainforest clearance, CO<sub>2</sub> production from transportation around the world). As there is currently no scientific agreement on this matter, Doncaster should monitor this discussion closely and adapt our own approach accordingly as and when a consensus is found. In the meantime, **we can all consider the source of our food, taking individual and commercial decisions to buy as locally as possible, and from manufacturers that use sustainable farming and production practices.**

These examples demonstrate the need for an environment and sustainability strategy to be flexible enough to be able to take on changes as they occur over time and adapt to changing information or circumstances. It is essential that we remain aware of international agreements and protocols for action on certain matters so that we can factor these into our own activity and investment plans as and when a scientific consensus is in place. This monitoring role also applies to forthcoming UK legislative changes e.g. the Environment Bill and Agriculture Bill and their potential impact on our strategic ambition and plans. **This will require all partners, particularly major organisations, to put in place resources to obtain such information and insight as well as developing arrangements for the effective sharing of information between appropriate stakeholders.**

### FUNDING

It is also clear that financial resourcing is a major challenge. Local, regional and national government finances will be an essential part of our response to the environmental emergency, as will access to private finance opportunities from organisations wishing to offset their unavoidable emissions through investment elsewhere. **Doncaster will need to put in place the infrastructure and networks whereby such finance opportunities are identified at the earliest opportunity and exploited to the maximum as and when they become available.** In addition, businesses and residents will need to take a long-term approach to investment decisions wherever possible by spending money now to reduce emissions but also to save money in the long-term. We also need businesses, public sector organisations and residents to invest time and money in general sustainability improvements such as parks, and greenspaces.

### MORE LOCAL EVIDENCE NEEDED

There are some aspects of the strategy that require further or more in-depth research to determine a clearer understanding of the current situation in Doncaster – only then can we identify and implement our collective locality-specific response. There is currently a lack of data and understanding in the topics listed below; each will need to be addressed by partners either individually or in partnership, in order for the most appropriate responses to be identified and implemented.

- Local biodiversity data.
- Energy efficiency of private homes.
- Energy efficiency of commercial and community buildings.
- Status of local trading partnerships (producers, manufacturers, retailers).

## SHARED RESPONSIBILITIES

This section identifies a series of activity and/or commitments that we will need to deliver on if we are going to achieve our vision for Doncaster. In the same way that multiple stakeholders have contributed to the development of the strategy, its implementation is equally dependent on the collective effort and contribution of us all.

It is clear from the sort of interventions discussed in this strategy that different stakeholders will have different roles to play; and it is acknowledged that within any given cohort, different people and organisations will be able to make different scales of intervention according to their own particular circumstances.

### **Businesses and Public Sector Organisations**

- Consider, and where possible, prioritise longer-term benefits and savings against short-term costs.
- Embed appropriate policies to encourage, enable, and support residents and employees to deliver on their role.
- Identify and share advice, guidance and good practice.
- Work collaboratively on investment, procurement and operational activity.
- Identify and share awareness of opportunities associated with private finance options.
- Decarbonise energy supply through demand reduction and the installation of low carbon energy generating technology.
- Invest in electrification of fleet vehicles.
- Identify opportunities for local partnerships – supply chains and customer base.
- Take advantage of funding opportunities for environmental improvements.
- Include environmental factors in procurement policies.

### **Residents**

- Reduce waste; maximise re-use and recycling.
- Dispose of unavoidable waste considerably - don't drop litter and choose legitimate waste disposal companies/facilities.
- Invest in home energy efficiency improvements.
- Consider the environment when making transport choices: cycling, walking, using public transport, car sharing, and investing in Ultra Low Emission Vehicles where possible.
- Consider the environmental impact of the products you buy, how sustainable the materials used are, where it will be shipped from, and whether or not natural resources such as peat are being exploited.
- Shop locally wherever you can and consider the impact of buying from further afield.
- Make space for nature in your garden and support naturalisation in community areas.
- Support community initiatives e.g. litter picking.

### **Elected members (Ward Councillors, Members of Parliament, Parish Councils)**

- Lobby Government (local, regional and national) for funding opportunities to support the implementation of the interventions required, to the scale required; and for legislative changes that make environmental priorities mandatory.
- Give the environment due consideration in any local lobbying activity on behalf of residents and businesses.

## MONITORING PROGRESS AND GOVERNANCE

Progress needs to be measurable so we can continuously determine and communicate the success or otherwise of the activity we undertake. Different partners – be it businesses, organisations, communities or individuals will identify their own targets and measures of success; but as a borough, we must put in place a means by which we can assess quantitative progress. The Team Doncaster partnership board will adopt responsibility for performance management oversight and will put in place a framework by which board members can collate and analyse performance data.

All partners must be open to appropriate sharing of data associated with factors such as energy use, transport use, buildings efficiency etc. such that this can be accumulated to determine our collective impact/progress towards the borough's goals. Without such data sharing agreements, it will be very difficult to determine progress.

Priority Area	Outcome	Performance Indicators	Baseline
<b>Woodland, Trees and Greenspace</b>	Improved green space provision and increased tree coverage.	<ul style="list-style-type: none"> <li>Proportion of land covered by greenspace and tree canopy coverage (increase).</li> <li>Net loss of woodland, trees and greenspace due to development (minimise).</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 5.8% of Doncaster is woodland.</li> <li>Doncaster tree canopy cover is on average 13% (7% - 24%).</li> </ul>
<b>Biodiversity</b>	Bigger areas for nature and better quality habitats that are more joined up at all scales.	<ul style="list-style-type: none"> <li>Proportion of wildlife sites actively managed for their biodiversity interests (increase).</li> <li>Expenditure and engagement in biodiversity conservation (increase).</li> </ul>	<ul style="list-style-type: none"> <li>38% of the Borough's Local Wildlife Sites are actively managed for their biodiversity interests (2020).</li> <li>Public support, awareness and engagement in biodiversity conservation and social responsibility is rising; as shown by increases in expenditure by Non-Government Organisations and time committed to conservation causes by volunteers. Conversely, public sector expenditure has fallen dramatically over the last decade, and coordinated communication &amp; support to help individuals/communities contribute, isn't well-developed.</li> </ul>
<b>Water Quality, Flood Management &amp; Drainage</b>	Better water quality and better protection from flooding.	<ul style="list-style-type: none"> <li>Water quality measures (optimise).</li> <li>Scale and severity of flood damage incurred by residents and businesses (minimise).</li> </ul>	<ul style="list-style-type: none"> <li>Further research needed to determine this.</li> </ul>
<b>Peatland &amp; Soil</b>	Peatland is recognised, protected, enhanced and extended for biodiversity, water storage, carbon sequestration, and essential climate mitigation.	<ul style="list-style-type: none"> <li>Scale of loss/degradation of peatland from 2020 levels (minimise).</li> </ul>	<ul style="list-style-type: none"> <li>40% of vegetation and resident fauna affected, peat surface burned, tramways and access routes damaged, plastic water control structures melted and peat from some of the baulks which divide up the restoration cells burned.</li> </ul>
<b>Contaminated Land</b>	Potential risk from contaminated land sites is appropriately mitigated.	<ul style="list-style-type: none"> <li>Proportion of CL sites identified and assessed (maximise).</li> </ul>	<ul style="list-style-type: none"> <li>43 sites on the public Contaminated Land Register (2020).</li> </ul>
<b>Energy Efficiency of Buildings and Sustainable Energy</b>	Reduced carbon footprint from homes & buildings and reduced running costs for residents and businesses.	<ul style="list-style-type: none"> <li>Proportion of homes/buildings with energy rating A-C (increase).</li> <li>Proportion of electricity generated from renewable sources (increase).</li> </ul>	<ul style="list-style-type: none"> <li>Domestic energy efficiency ratings: A/B: 8%, C: 52%</li> <li>Private sector homes: A/B: 10%, C: 26%</li> <li>Council houses: B: 3%, C: 62%</li> <li>9th highest number of renewable energy installations in the UK: 7,053 homes and 191 businesses generating their own electricity.</li> <li>678kw solar PV installed on 16 Council owned buildings.</li> <li>2.124MW solar PV installed on 750 council houses.</li> </ul>
<b>Statutory Nuisances</b>	Reduced noise, light and odour nuisances.	<ul style="list-style-type: none"> <li>Number of noise, light and odour complaints (reduce).</li> </ul>	<ul style="list-style-type: none"> <li>Around 2,200 noise complaints per year.</li> <li>Around 24 light complaints per year.</li> <li>Around 80 odour complaints per year.</li> </ul>

Priority Area	Outcome	Performance Indicators	Baseline																
<b>Transport</b>	Improved air quality across the borough.	<ul style="list-style-type: none"> <li>Number of AQMAs (reduce).</li> <li>Air quality measures (optimise).</li> <li>Number of people cycling/walking for transport (increase)</li> </ul>	8 Air Quality Management Areas (AQMA) <table border="1"> <tr> <td>Average (2019/20)</td> <td>µg/m3</td> </tr> <tr> <td>PM10 across all sites</td> <td>16</td> </tr> <tr> <td>NO2 - worst 3 sites</td> <td>74</td> </tr> <tr> <td>NO2 - best 3 sites</td> <td>33</td> </tr> <tr> <td>NO2 - worst sites across all AQMAs</td> <td>46</td> </tr> </table> <table border="1"> <tr> <td></td> <td>Jan-20</td> </tr> <tr> <td>Cyclists</td> <td>1910</td> </tr> <tr> <td>Pedestrians</td> <td>12395</td> </tr> </table>	Average (2019/20)	µg/m3	PM10 across all sites	16	NO2 - worst 3 sites	74	NO2 - best 3 sites	33	NO2 - worst sites across all AQMAs	46		Jan-20	Cyclists	1910	Pedestrians	12395
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	Jan-20																		
Cyclists	1910																		
Pedestrians	12395																		
<b>Nature Tourism</b>	Nature tourism sites are protected, improved and well-used by residents and visitors.	<ul style="list-style-type: none"> <li>Number of visitors to nature sites/attractions (reduce).</li> </ul>	<ul style="list-style-type: none"> <li>Total of £253m visitor spend per year (2017-2019)</li> <li>An average of 305,000 trips a year generating 760,000 overnight stays per year and generating an average annual spend of £41 million (2017-2019).</li> <li>7.1 million day visitors p.a. generating an average £212 million p.a. (2017-19).</li> <li>Visitor spend on the Trans Pennine Trail increased from £144m (2011) to £885m (2017).</li> </ul>																
<b>Green &amp; Innovative Economy</b>	Opportunities in the green economy are accessible and exploited.	<ul style="list-style-type: none"> <li>Number of businesses and jobs created in green tech industries/supply chains (increase).</li> </ul>	<ul style="list-style-type: none"> <li>Further research needed to determine this.</li> </ul>																
<b>Existing Business Operations &amp; Growth</b>	Local businesses are supported to be more environmentally sustainable and to access opportunities associated with the green economy.	<ul style="list-style-type: none"> <li>Proportion of commercial buildings with energy rating A-C (increase).</li> </ul>	<ul style="list-style-type: none"> <li>Further research needed to determine this.</li> </ul>																
<b>Farming</b>	Local farms are resilient and adaptable to changing conditions, and actively support the reduction of impacts of climate change.	<ul style="list-style-type: none"> <li>Proportion of businesses trading with local farmers (increase).</li> <li>Carbon footprint of local farms (reduce).</li> <li>Number of new farmers joining the sector (increase).</li> </ul>	<ul style="list-style-type: none"> <li>Further research needed to determine this.</li> </ul>																
<b>Food</b>	The impact of local food consumption and waste disposal is minimised.	<ul style="list-style-type: none"> <li>Proportion of food sourced from local providers (increase).</li> </ul>	<ul style="list-style-type: none"> <li>Further research needed to determine this.</li> </ul>																
<b>Fly Tipping and Litter</b>	Reduced incidences and impact of fly tipping & litter.	<ul style="list-style-type: none"> <li>Scale and severity of fly tipping and litter across Doncaster (reduce).</li> </ul>	<ul style="list-style-type: none"> <li>Monthly fly tipping incidents range from 441 (Oct 2017) to 122 (May 2019).</li> <li>70 tonnes of waste collected each week from hotspots, costing around £400k per year.</li> <li>In 2019, there were 1617 reported cases of littering, 3142 littering fines and 506 cases submitted for prosecution.</li> </ul>																
<b>Waste &amp; Recycling</b>	The impact of the borough's waste on the environment is minimised.	<ul style="list-style-type: none"> <li>Proportion of household waste recycled (increase).</li> <li>Amount of household, municipal and commercial waste to landfill (reduce).</li> </ul>	<ul style="list-style-type: none"> <li>Total waste generated is composed of:               <ul style="list-style-type: none"> <li>12% Household waste (46.4% recycled, 4.6% to landfill (2018/19)).</li> <li>18% Commercial and Industrial waste</li> <li>63% Construction, Demolition and Excavation</li> </ul> </li> <li>(Recycling and landfill proportions for C&amp;I and C,D&amp;E waste are not known at present)</li> </ul>																