

Agenda Item 11



Author/Lead Officer of Report:

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Report of: Laraine Manley
Executive Director of Place

Report to: Cabinet

Date of Decision: 15 March 2017

Subject: Growing sustainably:
a bold plan for a sustainable Sheffield

Is this a Key Decision? If Yes, reason Key Decision:-	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
- Expenditure and/or savings over £500,000		<input type="checkbox"/>		
- Affects 2 or more Wards		<input type="checkbox"/>		

Which Cabinet Member Portfolio does this relate to? *Infrastructure and Transport*

Which Scrutiny and Policy Development Committee does this relate to? *Economic and Environmental Wellbeing*

Has an Equality Impact Assessment (EIA) been undertaken?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
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If YES, what EIA reference number has it been given? EIA 1238

Does the report contain confidential or exempt information?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
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If YES, give details as to whether the exemption applies to the full report / part of the report and/or appendices and complete below:-

"The (report/appendix) is not for publication because it contains exempt information under Paragraph (insert relevant paragraph number) of Schedule 12A of the Local Government Act 1972 (as amended)."

Purpose of Report:

To present the report 'Sheffield's Green Commitment', the final report of the Sheffield Green Commission. This sets out a vision for how, working together as a city, Sheffield could become a smarter, more sustainable and more competitive future city.

To acknowledge the dedication and commitment of the Sheffield Green Commission, alongside that of the other partners, participants and members of the public who engaged and supported the process.

To present for approval a new Sustainability strategy for Sheffield, setting out how the Council intends progress its approach to creating a more Sustainable Sheffield.

Recommendations:That Cabinet:

1. Recognises and welcomes the dedication and commitment that has been provided by the Sheffield Green Commission in developing and delivering their report 'Sheffield's Green Commitment'.
2. Notes the recommendations of the report *Sheffield's Green Commitment*, which have informed Recommendation 3.
3. Approves the document *Growing Sustainably: a bold plan for a sustainable Sheffield*, and the five priority themes it contains, as a statement of the Council's strategic approach to Sustainability.
4. Delegates authority to the Executive Director of Place in consultation with Cabinet Member for Infrastructure and Transport to develop a gap analysis for each of the proposed five priority themes to identify Sheffield's strengths and opportunities for the city which will then form a detailed action plan.
5. Delegates authority to the Executive Director in consultation with Cabinet Member for Infrastructure and Transport of Place to develop an Action Plan consistent with the principles set out in *Growing Sustainably*.
6. Notes that the implementation of any of the proposed actions may be subject to further decision making in accordance with the Leader's Scheme of Delegation.

Background Papers:

Appendix 1: Growing Sustainably: a bold plan for a sustainable Sheffield

Appendix 2: Sheffield's Green Commitment

Lead Officer to complete:-		
1	I have consulted the relevant departments in respect of any relevant implications indicated on the Statutory and Council Policy Checklist, and comments have been incorporated / additional forms completed / EIA completed, where required.	Finance: <i>Paul Schofield</i>
		Legal: <i>Andrea Simpson</i>
		Equalities: <i>Annemarie Johnson</i>
<i>Legal, financial/commercial and equalities implications must be included within the report and the name of the officer consulted must be included above.</i>		
2	EMT member who approved submission:	<i>Laraine Manley</i>
3	Cabinet Member consulted:	<i>Cllr Mazher Iqbal</i>
4	I confirm that all necessary approval has been obtained in respect of the implications indicated on the Statutory and Council Policy Checklist and that the report has been approved for submission to the Decision Maker by the EMT member indicated at 2. In addition, any additional forms have been completed and signed off as required at 1.	
	Lead Officer Name: <i>Mark Whitworth</i>	Job Title: <i>Head of Strategic Housing and Regeneration</i>
	Date: <i>3 March 2017</i>	

PROPOSAL

1. In May 2014, Cabinet Member for Environment, Recycling and Streetscene agreed the establishment a Sheffield Green Commission.¹
2. A multi-agency Green Commission was to be tasked with undertaking a review of the environmental strengths, opportunities and challenges set against the context of climate change and sustainable development in the City and craft a refined vision for the city.

¹ Sheffield City Council (2014) *The Sheffield Green Commission*, Individual Cabinet Member Decision, <http://democracy.sheffield.gov.uk/documents/s13620/Green%20Commission.pdf>

3. The Sheffield Green Commission was initiated and launched in May 2014 by Councillor Jack Scott and was subsequently carried forward and chaired by Councillor Jayne Dunn, in both cases as the relevant Cabinet Member.
4. The Commission was made up of key stakeholders from across the city, including business, industry, both Universities, the public sector and the independent and community sector and amassed a significant evidence base from written submissions and oral evidence from expert witnesses. All the evidence and video footage of the hearings can be accessed on the Sheffield City Council website here: <https://www.sheffield.gov.uk/your-city-council/policy--performance/green-commission.html>
5. The final report of the Sheffield Green Commission —**Sheffield's Green Commitment**— was published in February 2016 and set out a vision for how, working together as a city, Sheffield could become a smarter, more sustainable, more competitive, future city. The report set out a series of recommendations shaped around four core visions for a more sustainable city:
 - **Connected city** - a city with transportation systems that are efficient and affordable, reliable and clean, simple and intuitive, networked and integrated, and low-emission. A city digitally connected to reduce avoidable travel. A city where there is a modal-shift towards active travel, where people move more on foot or by cycle, particularly for short-distances of under 5k/3 miles.
 - **Transformative energy** - an energy secure city with transformative affordable, clean, efficient, low-emission, networked, renewable, resilient, simple and locally owned energy solutions.
 - **European green city** - Sheffield is a green city both in its urban core and its surrounding landscape and this is part of its attractiveness and distinctiveness. A city with an accessible, ambitious, bold, bio-diverse, equitable and high-quality, well-designed formal and informal landscape that is sustainable to maintain and delivers a myriad of benefits. An Outdoor City that provides legacy in terms of its place-making. Green space which when linked together into a permeable network is game-changing for people, and for wildlife. An Outdoor City ecosystem.
 - **Learning city** - A Core City and Euro-city which, building on its unique resources and capabilities, collaborates with partners in order to innovate and learn from its residents and from others in moving towards a more sustainable future. Sheffield is committed to continuously learning about how to make Sheffield a smart, sustainable future city.
6. "*Sheffield's Green Commitment*" is attached to this report as Appendix 2. It contains a number of recommendations which have informed the development of the proposed strategic approach.
7. The Commission's aim was to '*contribute to the debate*' and to '*influence and help create a sustainable and smart city vision that takes account of economic, social and environmental drivers*'.
8. It is recommended that Sheffield City Council welcomes the work and commitment of the 19 members of the Green Commission and everyone who contributed evidence, expertise and valuable time to develop a vital report for the city.
9. This report sets out a commitment to build on the comprehensive evidence base and recommendations delivered by the Commission to set out an ambitious vision to make Sheffield a growing, productive and sustainable city. The formal response is in "*Growing Sustainably: A bold plan for a sustainable Sheffield*", attached to this report as [Appendix 1](#). It is proposed that this document is approved as a new Sustainability strategy for Sheffield, setting out how the Council intends progress its approach to creating a more Sustainable Sheffield.

10. Cities drive economic growth; in the UK 61% of growth comes from our main city regions. Aligned to this, more and more people are living in cities. The growth of cities like Sheffield brings major social, economic and cultural opportunities for people and for businesses, whilst at the same time there are consequences to the economic and cultural opportunity that cities represent: for example, significant energy consumption and carbon dioxide emissions, along with associated pressure on infrastructure including waste and transport.
11. Sheffield is known for its innovation and its ability to create and shape the future of industries. Sustainable growth and the changes we need to make to create a more sustainable city and global economy is an opportunity for Sheffield and one which plays to the city's strengths.
12. Building on the vital work of the Green Commission, "Growing Sustainably" sets out **five priority areas** which will enable Sheffield to be a leading centre of sustainable growth.

The five priority themes are:

- **Sustainable and affordable energy, for homes and businesses**

Energy is a key component for sustainable city growth, from a generation, distribution and usage/ consumption perspective. Security of supply and low cost is essential for both residents and businesses alike. As a city which already generates significant levels of low-carbon energy, there are opportunities to expand this capability. In addition to our homes and businesses benefiting from lower cost, resilient and low carbon sources of heat and power, we will explore opportunities to use our energy more effectively and efficiently.

- **Transport and mobility**

A growing and thriving City needs a transport network that is fully integrated, which connects different modes of travel to encourage people to use public transport, cycle and walk, and that meets the future demands of Sheffield. A Transport system which supports economic growth, and considers environmental sustainability. A city which benefits from low emission vehicles and technology.

- **Air quality**

We want to be a city where our air quality is good, and where air pollution is reduced to a point well below the European Health Limit maximum values.

- **A Green and innovative economy**

A growing and thriving city creates significant opportunities for our businesses, educational institutions and communities but growth at scale will bring additional pressure on our existing infrastructure. We will explore the opportunities to work with city partners to develop innovative solutions that could for example reduce carbon, help us adapt to climate change and to improve air quality.

- **Climate change mitigation and adaptation**

It is widely accepted that climate change is already occurring and that if we take action now we can avoid the worse impacts of a changing climate. Cities are the major drivers of global growth and

must take an equally major role in leading and implementing solutions to climate change. Cities across the world are already leading the global response to climate change (including several in the UK) and they have individually and in collaboration with other cities (eg. Compact of Mayors) have established programmes to mitigate their impacts and develop adaptation programmes.

Sheffield is already investing and delivering adaptation programmes; Sheffield is the first city in the UK to develop a Business Improvement District (BID) for flood defence investment. Sheffield has been selected as the UK's pilot core city to lead the way in urban flood protection. The centrepiece of this pilot is the strategic catchment-wide approach that the partnership between the Council and the Environment Agency is taking. That approach aims to protect the city from flooding over the coming century as the effects of changing weather patterns brought about by climate change are experienced.

The partnership is developing an £83 million capital investment programme in the city's strategic flood and sustainable drainage infrastructure scheduled to be delivered over the next few years. This investment programme provide further economic advantage to our City's businesses by developing resilience to climate events, as well as helping to protect homes and other important assets in our city.

As a city we need to explore the opportunities to mitigate our impact on the climate, and establish a carbon reduction programme with partners in the city. This could include participating in a national, European or global climate change programme, such as the Compact of Mayors, Resilient Cities Programme or Climate Local.

13. These five priority themes are set out in more detail in "Growing Sustainably". It is proposed that further work is carried out to develop a gap analysis for each of the proposed five priority themes to identify Sheffield's strengths and opportunities for the city which will then form a detailed action plan.

HOW DOES THIS DECISION CONTRIBUTE?

14. The report 'Growing Sustainably' contributes to the Sheffield City Council Corporate Plan ambition in a number of ways;
15. *A strong economy*
 - a. In creating the conditions for local businesses to grow, by ensuring that issues which may in future act as hurdle for business growth, including developing plans for energy resilience, air quality and climate change are progressed.
 - b. In the city being well connected, by developing a comprehensive transport strategy.
 - c. By promoting green innovation, by working with our partners in the city to explore innovate solutions to environmental sustainability challenges.
 - d. Support the investment in Sheffield's flood and drainage infrastructure to make the city more resilient to climate change.
 - e. Access to local, low carbon energy by reducing the dependency of Sheffield's businesses on imported fuel with decarbonised, locally generated energy sources will give Sheffield a competitive advantage over other locations and support future economic growth.

16. *Thriving neighbourhoods and communities,*

- a. by helping to support the creation of places and spaces where people enjoy being, including access to green and open spaces, as well as city's unique status as the 'Outdoor City'
- b. Better connected transport and increased travel choices, by supporting the development of a transport strategy which aims to provide a transport network which is integrated, connecting different modes of travel to encourage people to use public transport, cycle and walking.

17. *Better health and wellbeing;*

- a. Better housing conditions to improve health, through supporting the development of residential energy investment programmes and a local energy supply company, aiming to provide lower cost energy to households across the city. This will help to address the impact of fuel poverty in the city and support those individuals and families who this affects.

HAS THERE BEEN ANY CONSULTATION?

18. There has been considerable consultation and engagement with stakeholders and members of the public throughout the Sheffield Green Commission programme.
19. 19 individuals who had both expertise and influence were invited to become Green Commissioners. They were selected to represent voices of different stakeholders across the city, including business, industry, universities, the public sector and the independent sector.
20. All hearings (6) were held in public, where the Commissioners received and reviewed evidence. This including verbal evidence from expert witnesses as well as written and verbal evidence from local experts and grassroots campaigners. Expert witnesses were chosen to bring a wide range of evidence and insight into the issues that need to be tackled to make cities more sustainable and to give practical examples of successful initiatives and innovation.
21. The process commenced with a public consultation event in May 2014, which informed the initial areas of enquiry for the Commissioners. A 'fringe' event was also held, and at all events the public was encouraged to submit written evidence. This is detailed in Appendix 3 of the Green Commitment.
22. As part of the Green Commission, an open and wide-ranging call for evidence took place over a 15 month period, inviting contributions from residents of Sheffield and beyond.
23. This included verbal evidence from expert witnesses at six hearings held in public and written evidence, including from local experts and grassroots campaigners. Expert witnesses were invited to present a wide range of evidence and insight into the issues that the Commissioners agreed needed to be addressed in order to make cities more sustainable and to give practical examples of successful initiatives and innovation.

RISK ANALYSIS AND IMPLICATIONS OF THE DECISION

Equality of Opportunity Implications

24. Overall the 'Growing Sustainably Strategy' is expected to have a positive impact on the economic and health outcomes of everyone in the city. However it should have a particularly positive impact on financial inclusion, people with disabilities and their carers', young and old people and pregnant women.
25. The level and nature of impact will be reviewed and updated, when the plan for the delivery of the strategy is developed.

Financial and Commercial Implications

26. There are no immediate direct financial or commercial implications arising out of this policy report as it does not propose to incur cost in respect of specific actions to realise the objectives of the Green Commission.
27. In order to realise some of the city's ambitions, specific actions will be required and the expenditure associated with these will be brought forward for approval under the Council's existing Revenue and Capital Budget procedures. This may require the reprioritisation of expenditure as there is currently no budgetary provision for these activities.

Legal Implications

28. The Council does not have a duty to develop a strategic approach to sustainability but the "general power of competence" under the Localism Act 2011 enables the production of the Strategy and for it to inform the Council's exercise of its functions.
29. The Council is required to have regard to the National Planning Policy Framework (NPPF) as a material consideration in the exercise of its planning functions. The NPPF sets out the government's expectations for sustainable development, or growth, and so a Sustainability Strategy will assist the Council in complying with this duty.
30. The implementation of any of the actions set out in this report may be subject to further decision making in accordance with the Leader's Scheme of Delegation, and the legal implications will be considered fully at that time.

ALTERNATIVE OPTIONS CONSIDERED

The 'As-is' option: no new Sustainability Strategy or approach put in place in the city

31. Much of the valuable work which already takes place in the city supporting sustainability outcomes would continue. However, the new opportunities for co-ordinated approach, working together to deliver greater benefits would be lost, as would the potential to embed sustainability more strongly within our city and our activities.

REASONS FOR RECOMMENDATIONS

32. The introduction of a Sustainability strategy will provide the city with an opportunity to build on the excellent work that is already being done, and take forward the significant progress made by the Sheffield Green Commission.
33. It enables the Council to make a bold statement of its intentions, and to seek the support of its partners and stakeholders across the city.
34. It sets the direction and focus for our efforts and will allow us to develop an action plan.
35. To be clear to Government and our other partners in the Sheffield City Region of our intentions and strategy, which will support any request for investment or funding.
36. City sustainability is not something which one organisation can achieve in isolation, and will require the support and contribution of all organisations, businesses and residents across the city. Creating a clear vision and strategy will help to crystallise and re-affirm our ambitions and enable other partners to also contribute.
37. We understand that we have a unique role in facilitating and enabling, working alongside business and our communities to create collective approaches to the opportunities and challenges we face as a city.

Growing sustainably: a bold plan for a sustainable Sheffield

Cities are driving economic growth – 80% of world’s GDP growth is generated by cities and in the UK, 61% of growth comes from our main city regions. More and more people are living in cities – the world is urbanising and by 2050, 70% of the global population will live in cities. Sheffield is no different: today, we are a city of 569,000 people but are expected to grow to 650,000 by 2039.

The growth of cities like Sheffield brings major social, economic and cultural opportunities for people and for businesses. Cities are dynamic, restless places that are always at the forefront of progress: leading, innovating and challenging to shape futures. But, there are consequences to the economic and cultural opportunity that cities represent: 70% of global CO₂ emissions come from cities and cities consume two-thirds of the world’s energy. In the UK, cities actually emit less CO₂ than the rest of the country as a whole and in 2014, cities accounted for 54% of the UK population but only 46% of the UK’s total CO₂ emissions. Sheffield’s CO₂ emissions per capita were 5.45 in 2014, which is lower than the UK average of 6.3 per capita². This means that cities have a critical role in not only reducing climate impact but in creating and shaping a sustainable global economy that connects people to the opportunities and proceeds of growth while harnessing the inherent innovation and creativity that cities have to protect and enable environmentally sustainable growth.

Sustainable growth and the changes we need to make to create a more sustainable city and global economy provide an opportunity for Sheffield and one which plays to the city’s strengths.

Sheffield is known for its innovation and its ability to create and shape the future of industries. It is a City of Makers and the Outdoor City, uniquely combining major city economic and cultural opportunities with spectacular National Park. The city has long been recognised for its commitments and track record on sustainability:

- Sheffield was one of the first major UK cities to develop an energy recovery facility and to create an energy network that provides heat and hot water to businesses and residents in the city.
- Private-sector led renewable power plants in the Lower Don Valley (E.ON) and Holbrook (UYE).
- The Lower Don Valley Flood Defence Business Improvement District (BID) – the first BID in the UK where private sector investment has been secured to deliver and maintain flood defence and resilience measures in Sheffield’s Lower Don Valley.
- Sheffield will be the first UK city to have low energy LED street lighting across all its neighbourhoods.
- The City already has a number of innovative companies whose product and services contribute towards greater environmental sustainability. The Advanced Manufacturing Research Centre is a collaborative partnership between the University of Sheffield, Boeing and Rolls Royce which applies world-leading research and development, environmental sustainable solutions and manufacturing Sheffield’s advanced manufacturing expertise to create and shape industries.

² Centre for Cities (2017) *Cities Outlook 2017*, <http://www.centreforcities.org/wp-content/uploads/2017/01/Cities-Outlook-2017-Web.pdf> based on Department of Energy and Climate Change (DECC) 2016, CO₂ emissions per capita, 2014 data. ONS 2015, Population Estimates, 2013 and 2014 data.

Sheffield City Council has a unique role in facilitating and enabling, working alongside business and our communities to create collective approaches to the opportunities and challenges we face as a city. This desire to bring key stakeholders together led to the establishment of the Sheffield Green Commission which has produced an ambitious and far-reaching report and set a vision for a more sustainable city.

We welcome the report from the Sheffield Green Commission and the dedication, commitment and expertise that were brought together to deliver such clear and aspirational recommendations. We recognise that there is much to do but as a city, we are making significant strides:

<p>Connected city</p>	<ul style="list-style-type: none"> • Devolution to Sheffield City Region creates new opportunities and investment for the strategic transport networks that connect up places in the city region and connect the city region to other major cities and markets. • UK’s first tram-train scheme connecting Sheffield and Rotherham, building on the existing Supertram system • Sheffield-based companies supporting the development of the wind/ hydrogen refuelling station at the Advanced Manufacturing Park • University of Sheffield has established ‘Sheffield Bycycle’ bicycle rental scheme.
<p>Transformative energy</p>	<ul style="list-style-type: none"> • Sheffield was one of the UK first cities to develop a district heat network. Municipal waste is converted into electricity and heat, which supplies heat to homes and commercial properties on the network. • Private sector investment has seen further investment into heat networks in the city, notably E.ON’s 30MW biomass energy plant in the Lower Don Valley and UYE’s 6.5MW biomass energy plant at Holbrook. • Sheffield Renewables have installed several crowd-funded community share PV installations in Sheffield and the wider City-Region. • The University of Sheffield is operating a state-of-the-art photovoltaic (PV) installation, designed to test use of PV technologies in northern latitudes and field-test new technologies.
<p>European green city</p>	<ul style="list-style-type: none"> • In partnership with the Environment Agency, Sheffield City Council is delivering an ambitious capital investment programme in flood protection and sustainable drainage to make the city more resilient to flooding, protecting thousands of homes and businesses and supporting new housing development and economic growth. • With 83 public parks and green spaces, 70 green roofs and more than a third of the city within the Peak District National Park, Sheffield is recognised as being a ‘green city’. It is also creating new green space within the city, such as the award-winning Grey to Green scheme which not only created new vibrant public space but also provides innovative sustainable drainage as part of the city’s flood defences.³ • Sheffield is capitalising on its strong economic advantage as the ‘Outdoor City’.

³ www.greytogreen.org.uk

Learning city

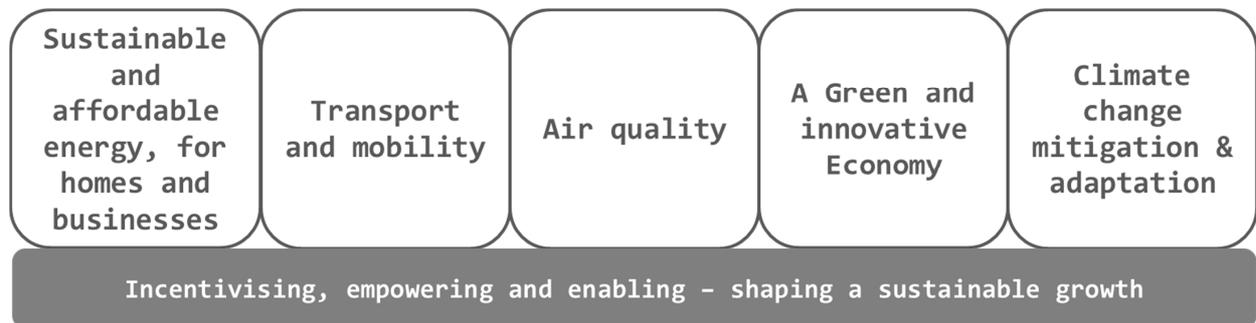
- Sheffield, through its Green Commission has started a city-wide dialogue with a range of partners about how we transform Sheffield into a smart, sustainable city of the future.
- The City already has growing expertise in a wide range of sustainability-related matters, from resource efficiency and environmentally progressive manufacturing to innovative alternative fuel development and renewable technologies.
- Sheffield has a number of community-based and grass-roots organisations which are already progressing sustainability solutions, and which can provide a network for wider engagement, participation and delivery.

GROWING SUSTAINABLY: WHAT WE'RE GOING TO DO

We recognise that as major UK city economy, Sheffield has a vital contribution to make in creating a sustainable future. Growth remains vital for our city and our economic strengths, our growing population and its inherent talent provides us with the opportunity and capacity to explore and develop innovative solutions to the challenges we face.

In harnessing our city's innovation and creativity, Sheffield has the opportunity to create a more sustainable city.

Building on the vital work of the Green Commission, we will set out five priority themes which will enable Sheffield to be a leading centre of sustainable growth. The **five key priority themes** are:



These five priority themes have been chosen as they are considered to be areas where the Council and its partners can make progress and represent issues which are critical for the city going forward. A description of each priority theme is set out below.

The priorities build on the recommendations of the Sheffield Green Commission report. It is envisaged that other areas and recommendations contained within the report *Sheffield's Green Commitment* will be progressed by organisations and individuals across the city, recognising that Sheffield's civil society (including organisations, businesses and individuals from many different sectors) are already working together and contributing towards a more sustainable city.

We will undertake and develop a gap analysis for each of the proposed five priority themes to identify Sheffield's strengths and opportunities for the City which will then form a clear and detailed action plan.

Sustainable and affordable energy, for homes and businesses

Energy is a key component for any city, from both from generation, distribution and usage perspectives. The Mini-Stern Review for the Sheffield City Region (SCR) *'The Economics of Low Carbon Cities'* forecast SCR energy bill to be £4.59 billion by 2022 – a £1.18 billion annual increase from the 2011 SCR energy bill⁴. It concluded that the SCR could insulate itself against projected energy price increases to a 'very large extent' through investments in energy efficiency and low carbon options.

Sheffield generates significant levels of energy already, via its heat networks and power generation, and with those of its partners (including E.ON, UYE and Sheffield Renewables). There are further opportunities to develop energy generation in the city, particularly with the support and investment of the private sector.

The Council and community organisations have invested and co-ordinated local initiatives to increase levels of energy efficiency and reduce fuel poverty across homes in the city, but low take-up of the Government's Green Deal programmes have meant that there are still households that cannot sufficiently heat their homes.

KEY AREAS OF FOCUS

- Supporting Sheffield's businesses to harness low carbon, locally generated energy sources, potentially unlocking competitive advantage and reliable, sustainable energy to support their growth.
- We will continue to work with partners to expand our energy networks, with the ambition of increasing access to businesses and residents.
- We will continue to explore the opportunities to establish an Energy Supply Company.
- As well as economic benefits, residents will have access to stable, long-term energy pricing and supplies which will also help those suffering with fuel poverty and can provide wider health-related benefits.

Transport and mobility

A growing and thriving city needs a transport network that is fully integrated, which connects different modes of travel to encourage people to use public transport, cycle and walk.

In order to provide an integrated transport network that meets the future demands of Sheffield we are developing a new Transport Strategy for the city. This is principally focused on ensuring the transport system supports economic growth, and the trips associated with additional planned employment and housing, but will also consider matters of environmental sustainability including issues highlighted in the Green Commission. It is also thought highly likely that both our economic growth and sustainability ambitions will suggest significant intervention to support public transport, cycling and walking, as these more sustainable modes are also the more space efficient modes. Given the physical constraints of the city increasing road capacity to carry motor vehicles in many areas is limited, sustainable and efficient modes create the opportunity to provide for growth in travel demand without resulting in unacceptable levels of traffic congestion.

It is planned that consultation on the vision for the Transport Strategy will commence in early summer 2017 and finalised in early 2018.

⁴ Centre for Low Carbon Futures (2012) *The Economics of Low Carbon Cities - A Mini-Stern Review for the Sheffield City Region*
<http://www.lowcarbonfutures.org/sites/default/files/SCR%20Mini%20Stern%20Final%20Report.pdf>

KEY AREAS OF FOCUS

- Develop an ambitious, multi-modal transport strategy for Sheffield
- Deliver the UK's first tram-train providing fast, lower emission connectivity between Rotherham and Sheffield city centre
- Explore the potential to develop alternative and low emission fuels and technologies in the city.

Air quality

We want a city where our air quality is good, and where air pollution is reduced to a point well below the European Health Limit values.

Despite our efforts to date, Sheffield is still in breach of EU Air Quality Limit Values relating to Nitrogen Dioxide (NO₂) gas which should have been met by 1st January 2010. A key contributor is road traffic, in particular diesel vehicles, where engine technology is not performing as expected in urban areas like Sheffield.

In terms of the standards set by the EU for fine Particulate Matter (PM₁₀) dust pollution, all our monitoring stations are indicating that we are in compliance, although there is no safe limit for this pollutant.

Our current approach is to encourage the take-up of low emission fuels and technologies which cause less pollution whilst making public transport, cycling and walking as attractive and easy as possible. Overall however, it is quite clear that air quality in Sheffield has not improved and this is a significant issue for the Council, one which impacts upon our citizens' health and well-being and the City's overall prosperity.

As a result of a High Court Ruling on 21 November 2016, Government must produce a new National Air Quality Plan in draft by 24 April 2017 with a final version by 31 July 2017. Sheffield was not one of the areas originally identified by the Government as requiring a Clean Air Zone (CAZ) by 2020, but we are aware that a number of additional cities will be mandated to have a CAZ in the upcoming plan.

Better air quality is vital for the long term sustainability, health and wellbeing of the city. We are ambitious to improve air quality in Sheffield and are keen to explore a range of measures to improve air quality across the city.

KEY AREAS OF FOCUS

- Work to progress the recommendations from the DEFRA funded 2013 Sheffield Low Emission Zone Feasibility Study which indicated that in the short term, diesel vehicles (particularly Buses, Taxis and Goods Vehicles) need to be retrofitted or be a minimum Euro VI / 6 standard and in the longer term, we need a shift away from diesel fuel to alternative low emission fuels (electric, gas / biogas, hybrid, hydrogen).
- Raising awareness is another important aspect of reducing air pollution. The Council launched its DEFRA funded '*AirAware in Sheffield*' media campaign in October 2014, which continues to encourage everyone to do their bit to help reduce pollution and protect themselves from the health risks <https://www.sheffield.gov.uk/environment/air-quality/air-aware-sheffield.html>.
- We will also continue to lobby the Government for national policy interventions, such as a diesel scrappage scheme, embedding emissions standards in Taxi Licensing policy, and a UK Air Quality Campaign to raise awareness, all of which would result in more rapid emissions reductions across the whole country.

- Explore the opportunities to expand our city's heat networks, which can contribute to reductions on NO_x emissions produced by existing conventional gas boiler systems.

A Green and Innovative Economy

Sheffield is world renowned for its advanced manufacturing, built on a long and proud history. Sheffield is known for its innovation and its ability to create and shape the future of industries. This is not just the preserve of metals and advanced manufacturing, but can be seen across the spectrum of business and commerce that is based in Sheffield.

As set out in Sheffield's Economic Strategy, we want to future proof the city's economy and its infrastructure by supporting the development of a sustainable low carbon city⁵. This includes investing in the city's energy supply, water, waste, telecommunications and flood management systems to ensure they are resilient to the impacts of climate change and provide low carbon solutions and local energy generation. Improving and strengthening the city's supporting infrastructure in this way will deliver a stronger, more sustainable and balanced local economy.

At the same time, climate change can bring opportunities and if Sheffield is on the forefront of managing the risks associated with climate change, this will prove attractive to inward investment. The Council will work with Sheffield's businesses and organisations to help businesses identify and respond to the risks and opportunities presented by climate change and extreme weather, particularly flooding, over-heating and drought, as demonstrated through the Lower Don Flood Defence Business Improvement District (BID).

Low Carbon Industries across Sheffield City Region, this sector comprises over 300 companies, employing approximately 10,000 people, and contributing £570 million in GVA. Our potential in this area is enhanced by our expertise in advanced manufacturing where there are specific opportunities to develop new products that form part of the supply chains for sub-sectors like nuclear, wind and tidal power and geothermal.

The city launched a 'Smart-Lab' initiative in 2015, in partnership with Amey and Ferrovial Services which invited innovators from around the world to submit proposals for tackling challenges which included urban revitalisation. National organisations such as the Future Cities Catapult can offer support to advance innovation, help UK companies grow and help make our cities better places to live⁶.

Developing 'smart' technologies, such as alternative and low emission vehicle solutions or mobile applications which promote active travel such as walking, cycling or running can provide new commercial opportunities for business, whilst at the same time contributing towards the sustainable growth of Sheffield.

Applying approaches such as those outlined above, we can explore how we can facilitate the development of ideas and innovation, attract private sector investment and resources to address some of the challenges we face as a city.

We will look to harnessing the inherent innovation and creativity in Sheffield that will help to enable environmentally sustainable growth. To be a successful, sustainable city Sheffield will use the latest technology and new ways of working to champion smart, innovative solutions.

⁵ Sheffield City Council (2012) *Bigger Economy, Better Business, Faster Growth: Sheffield Economic Strategy*, http://www.welcometosheffield.co.uk/content/images/fromassets/100_2002_280313101103.pdf

⁶ Sheffield Smart Lab: <http://www.sheffieldsmartlab.co.uk/>

KEY AREAS OF FOCUS

- Explore further opportunities for working with public and private sector partners in the city to pool resources and to attract external funding to allow us to develop and test innovative solutions to reduce carbon, mitigate/adapt to climate change and to improve air quality.
- Harnessing Sheffield City Council's investment and procurement capacity to increase the city's environmental sustainability and create new opportunities for innovative local businesses that are developing the future of local carbon technology (eg. energy; low emissions)
- Supporting the growth and development of low carbon industries as a key GVA driving sector for the Sheffield economy. This could include:
 - *Business support* – opportunities align business support with the innovative low carbon sector, providing intensive technical support to help business development
 - *Investment* – exploring how targeted, GVA-focused investment to drive growth in the low carbon sector
- Build on the successful Smart Lab Sheffield approach to enable and support the start-up and incubation of innovative new businesses.

Climate change mitigation and adaptation

It is now widely accepted that climate change is already occurring and that if we take action now we can avoid the worst impacts of a changing climate.

In 2015, 195 countries attended the 21st Conference of the Parties (COP21) in Paris. A historic agreement was reached to limit global temperature rise this century to less than 2 degrees Celsius and to pursue further actions to reduce this to 1.5 degrees Celsius above pre-industrial levels.

Cities have a clear role in delivering these reductions.

Sheffield is already investing and delivering adaptation programmes. As outlined above, Sheffield is the first city in the UK to develop a Business Improvement District (BID) for flood defence investment, working in partnership with local businesses and the Environment Agency.

The partnership is already delivering significant investment into Sheffield's flood and drainage infrastructure to make the city more resilient to climate change. As part of the national flood investment programme, £83m of capital investment schemes is scheduled to be delivered by 2021 in the Don and Sheaf valleys and citywide drainage infrastructure, protecting up to 6,000 homes and 2,000 businesses as well as key transport routes and critical infrastructure such as Sheffield's main railway station. e.

The Council is helping to create successful places and spaces in the Don Valley by investing up to £25m from the Sheffield City Region Investment Fund, to enhance transport infrastructure, flood defences and enhanced public realm.

These investments provide further economic advantage to our City's businesses by developing resilience to climate events.

KEY AREAS OF FOCUS

- We will explore further opportunities to mitigate our impact on the climate, and establish a carbon reduction programme with partners in the city.
- Explore the opportunity for the City to participate in a national, European or global climate change programmes to work collaboratively with the best cities in supporting sustainable city economies.

Incentivising, empowering and enabling – shaping a sustainable growth

The Council wants to work with its partners and wider stakeholders to deliver sustainable growth.

Leadership

Sheffield City Council has a vital role in providing, inspiring and supporting leadership from Sheffield and across sectors to create a growing, sustainable city. This is a major opportunity for Sheffield to become a leading sustainable city with communities and businesses that are: resilient to the effects of climate change; part of a growing economy that can fully exploit its innovative capacity to deliver new solutions to sustainability challenges; part of a city where our decisions and behaviours, both collectively and as individuals, are more sustainable.

Investment and partnership

The Council recognises that creating a more sustainable future for the City isn't something we can do alone, and requires strong partnerships. The Council has the clear role of incentivising, empowering and enabling, with a good example of this being the Lower Don Valley Flood BID programme. The Council enabled and facilitated the process, leveraging the private sector investment and supported the wide approach.

We will therefore investigate the opportunities to develop partnerships with the private sector and universities that can contribute towards delivery or investment in the city.

Strategy and plans

The Council will ensure that our wider strategies and plans consider their implications and impact on Sheffield's sustainability, and develop appropriate actions to ensure they contribute positively towards the five priority themes contained within this document.

Engagement and facilitation

We will build on the work of the Green Commission, the partners and the networks to engage with our communities and facilitate change.

MOVING FORWARD: NEXT STEPS

As outlined above, the city has already made some significant advances in key areas. Recognising the progress that has already been made by organisations, individuals and businesses across the city we intend to take this forward. We understand the vital contribution the Council can make in creating a sustainable future, and by identifying our five priority themes are providing a bold message of our commitment to take this forward.

We need to have an accurate and comprehensive understanding of our strengths and weaknesses, as well as the opportunities and challenges we face and therefore we are committing to undertake a comprehensive gap analysis over the next three months.

This work will help to inform the development of an Action Plan that is consistent with the principles set out in this document.

We aim to complete and publish this Action Plan by December 2017.