Public Document Pack

Wednesday, 16 October 2019

To: Members of the SCR - Infrastructure Board and Appropriate Officers

You are invited to a meeting of the Sheffield City Regional Mayoral Combined Authority to be held at **11 Broad Street West, Sheffield S1 2BQ**, on: **Thursday, 24 October 2019** at **10.00 am** for the purpose of transacting the business set out in the agenda.

Dr Dave Smith
Chief Executive

Member Distribution

Mayor Ros Jones (Chair)	Doncaster MBC
Owen Michaelson (Co-Chair)	Private Sector LEP Board Member
Councillor Tim Cheetham	Barnsley MBC
Councillor Bob Johnson	Sheffield City Council
Councillor Denise Lelliott	Rotherham MBC
Richard Stubbs	Private Sector LEP Board Member
Mark Lynam	SCR Executive Team
John Mothersole	Sheffield City Council

SCR - Infrastructure Board

Thursday, 24 October 2019 at 10.00 am

Venue: 11 Broad Street West, Sheffield S1 2BQ

Agenda

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11.	SCR Transport Board Draft Agenda 25th October 2019	Mr Colin Blackburn	113 - 114
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Date of next meeting: Thursday, 9 January 2020 at 10.00 am **At:**11 Broad Street West, Sheffield, S1 2BQ			

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SCR - INFRASTRUCTURE BOARD

MINUTES OF THE MEETING HELD ON:

THURSDAY, 29 AUGUST 2019 AT 10.00 AM

11 BROAD STREET WEST, SHEFFIELD S1 2BQ

Present:

Mayor Ros Jones (Chair)	Doncaster MBC
Councillor Bob Johnson	Sheffield City Council
Councillor Denise Lelliott	Rotherham MBC
Richard Stubbs	Private Sector LEP Board Member
Mark Lynam	SCR Executive Team
John Mothersole	Sheffield City Council

Officers in Attendance:

Colin Blackburn	Assistant Director - Housing, Infrastructure and Planning	SCR Executive Team
Jonathan Guest		Sheffield City Region
Paul Johnson	Senior Policy Manager	SCR Executive Team
Karl Sample		Sheffield City Region

Guests in Attendance

Craig Tyler (Minute Taker)

Apologies:

Councillor Tim Cheetham	Barnsley MBC

11 **Welcome and Apologies**

Members' apologies were noted as above.

12 **Declarations of Interest by individual Members in relation to any item of business on the agenda**

None.

13 **Urgent items / Announcements**

None.

14 **Public Questions of Key Decisions**

None received.

15 **Minutes of the Previous Meeting**

The minutes of the previous meeting held on 9th July were agreed to be an accurate record of the meeting.

16 **Strategic Economic Plan and Local Industrial Strategy Review**

A paper and accompanying presentation were received to provide an overview of the current economic landscape in Sheffield City Region and the emerging evidence to structure future priorities/activities in the SCR in relation to infrastructure, to be encapsulated within the Strategic Economic Plan (SEP) and Local Industrial Strategy (LIS)

Information was received to explain the process and timescales for development. It was noted the SEP and LIS are scheduled for publication in December 2019 but acknowledged there are a number of factors that may affect this intention.

Regarding sign-off it was noted the SCR effectively owns the SEP and can sign this off when considered appropriate. However, the LIS is co-owned with government and subject to other procedures and expectations (to be agreed with government).

Comparisons were drawn between the SCR and other city regions (nationally and internationally), noting the SCR lags behind almost every other region in terms of GVA and productivity.

It was acknowledged the drivers of productivity are numerous and suggested the SCR might be affected by having a significant number of jobs in low productivity sectors, lower skills levels and relatively less investment in research and development.

Further information was presented with specific relevance to the infrastructure related matters under the tutelage of the Infrastructure Board including housing, digital networks and energy production.

It was noted where the SCR might be particularly sensitive to wider economic drivers.

The Board considered the importance of growth being ‘inclusive’ to ensure this genuinely translates into improving the lives of the SCR’s residents and breaks the cycle of the SCR being stuck in a low wage economy.

Members were presented with the proposed ‘people-focussed’ vision for the SCR’s SEP and LIS and its proposed supporting policies and outcomes (metrics to be confirmed).

Members agreed it was entirely appropriate to base strategies around people.

It was suggested we need to recognise there are a number of initiatives in the SCR that are working well, such as apprenticeship rates and examples of inward investment that are based on the quality of the local workforce, and considered what more can be done to scale up what is working well.

It was noted the SCR has a unique and very disperse landscape which doesn't lend itself to some initiatives that might work in other city regions. Caution was therefore urged to ensure we don't just try to copy what might be working elsewhere.

It was proposed that some of the comparative economic figures might be misleading and suggested comparisons should be drawn against national averages rather than London.

Members asserted the importance of having an effective action plan in place to focus our efforts and initiatives and help the SCR mange its 'step-change' journey towards achieving its economic ambition, turning rhetoric into actual deliverables.

Consideration was given to additional specific local factors that need to be addressed to achieve our productivity ambition including the need to recognise the significant deprivation and lack of social mobility that exists in some locations.

It was suggested many of the ambitions of the SEP and LIS are cross-cutting and will only be achieved if silo-working is avoided.

The Board considered whether the SCR is as effectively 'noisy' as other city regions in respect of marketing its riches and potential.

RESOLVED - that the Board notes the summarised evidence base and the emerging areas for prioritisation.

17 **Draft SCR Energy Strategy**

A report was received to present the emerging Draft SCR Energy Strategy.

It was noted the Strategy is still a work in progress and views are being sought on the emerging goals and policies prior to the document being considered complete.

It was noted the approach taken to develop the Energy Strategy has included strengthening of the evidence base, ensuring we have a clear approach to what is required, undertaking significant levels of stakeholder engagement and aligning the draft to the emerging SEP and LIS.

Regarding next steps, it was noted the output from Phase 1 of the Carbon Target & Future Scenarios commission would be received later this month, ahead of further stakeholder workshops and reports back to relevant SCR Boards. Further outputs will be received from the Carbon Target & Future

Scenarios commissions later in the year informing further stakeholder input and leading to the endorsement of the final strategy by March 2020.

Members expressed support for the proposal to market the SCR Energy Strategy by means of a 'Green Heart of Great Britain' concept.

Members challenged the extent to which the notion of an energy strategy based around the increased usage of renewable and clean energy resources is realistic.

The Board debated the potential new sources of energy and new approaches to saving energy that might be developed through the implementation of the Energy Strategy, noting intentions to closely investigate hydrogen from electrolysis, minewater energy and nuclear research.

Consideration was given to where local authority policy levers (i.e. planning regulations) might help achieve the ambitions of the Strategy.

It was also suggested there may be other initiatives that might help market the SCR to innovators and investors and proposed the SCR could become known for being proficient in working with those innovators to help turn their ideas into reality. It was agreed to convene a workshop to explore this concept in more detail.

Action: Karl to liaise with Owen to progress an 'energy ideas into reality' event.

RESOLVED – that the Board agrees the next steps as set out in the report are notes the intention to bring a report back to the next meeting to provide commentary on the consultation feedback and consequent responses.

18 **Digital Infrastructure**

A report was received to provide an update on the Superfast South Yorkshire programme and to introduce a discussion on the need to produce a digital infrastructure plan for the City Region.

It was noted the commercial rollout of fibre broadband across South Yorkshire, funded by BT and Virgin Media, is currently expected to reach around 80% of premises across South Yorkshire. The remaining coverage will be covered by the Superfast South Yorkshire (SFSY) project, which a partnership between the South Yorkshire authorities of Barnsley, Doncaster, Rotherham and Sheffield and BT Openreach, to specifically address intervention areas across South Yorkshire that are not commercially viable for providers to service without subsidy.

The report therefore provided an update on the SFSY programme, its performance, future delivery and take-up rates. The report also set the scene for the potential production of a digital infrastructure plan for the City Region, which will aim to build on SFSY and ensure the region is well positioned to take advantage of the next wave of digital technology, such as 5G.

It was questioned whether the refreshed SEP has appropriately captured the

importance of digital to achieving the SCR's wider economic ambition, and noted the LEP will be charged with ensuring such matters are given appropriate recognition as the SEP evolves. It was requested the Infrastructure Board's LEP members continue to champion the importance of this matter.

Members considered the need for all Boards to work collectively to deliver the digital ambition.

It was noted the report is due to be received at the forthcoming SCR Chief Executives meeting, at which the Chief Executives will be asked to:

1. Note the progress and success of the Superfast South Yorkshire broadband programme.
2. Note the standard condition that is applied to all BMBC planning decisions and agree that the adoption of these across the City Region should be considered by the Heads of Planning.
3. Agree the need to work to prepare a SCR Digital Infrastructure Plan.

The Board expressed support for these recommendations.

19 **Infrastructure Board Work Programme Dashboard**

Provided for information.

Members were asked to continue to contribute requests for additional items

20 **Forward Plan 2019/20**

Provided for information.

Members were asked to continue to contribute requests for additional items.

It was requested the Board continue to be kept informed of what financial headroom is available for investment and what future sources of funding might be available going forward.

21 **SCR Transport Board Draft Agenda 30th Sept.2019**

Provided for information.

22 **Any Other Business**

No further matters requested.

In accordance with Combined Authority's Constitution/Terms of Reference for the Board, Board decisions need to be ratified by the Head of Paid Services (or their nominee) in consultation with the Chair of the Board. Accordingly, the undersigned has consulted with the Chair and hereby ratifies the decisions set out in the above minutes.

Signed .....

Name .....

Position .....

Date .....

Sheffield City Region MAYORAL COMBINED AUTHORITY

INFRASTRUCTURE BOARD

OCTOBER 24th 2019

STRATEGIC ECONOMIC PLAN

Purpose of Report

This paper provides Board members with an update following the discussion at the last LEP Board which provided a steer on the vision and objectives for the emerging Strategic Economic Plan.

Members will be provided with an update on the vision, objectives and draft outcomes and emerging broad policy areas. The appendix provides an early view of the draft and informs a discussion of priorities for the economic plan.

Thematic Priority

This paper links to all thematic priorities and the eventual outputs will shape the thematic priorities in the future.

Freedom of Information

This paper will be made available under the MCA transparency scheme

Recommendations

The Board is asked to:

- Note the revised vision and objectives agreed by the LEP (9th September 2019)
- Discuss the draft outcomes and emerging broad policies, and provide their input for the development of these in the draft SEP.

1. Introduction

1.1 The City Region is developing a new Economic Strategy for the region. The Strategic Economic Plan (SEP) will be a single overarching strategy which will set out the wider socio-economic aspirations and inclusive priorities for SCR over the medium to long term. This paper provides an update on the process and discussion of the vision, objectives and action areas proposed.

2. Proposal and justification

2.1 Following a presentation of the economic evidence base, the strategy development process has revised vision, objectives and broad policy areas following feedback from the LEP and thematic boards. The work to date will be presented to get further feedback and stimulate discussion on the future policy direction and priority areas for SCR and where the LEP/MCA can add most value and impact.

2.2 Board Members are invited to note the revised vision, objectives, discuss the draft outcomes and emerging broad policies, and provide their input for the development of these in the draft SEP.

2.3 An early draft economic strategy is attached to this paper and to facilitate discussion. Members will receive a presentation at the Board to explain the elements.

2.4 The emerging vision is focused on our "People" (all who live, work or visit SCR) and as such has been agreed as:

A growing, inclusive, & sustainable economy playing an ever-increasing role in future UK prosperity.

2.5 Innovation and creativity underpin the strategy and will drive how SCR designs policy and what is delivered. Innovation is a process that that delivers added value and change. However, the field of innovation is very broad. The ability to develop, commercialise and adopt new ideas is a priority for all high-performing organizations and places. Intense global competition and technological development have made innovation a source of competitive advantage. It is a primary reason economic growth may occur in one area and not another.

2.6 The strategic objectives in the SEP are framed around "Inclusion", "Growth" and "Sustainability":

- **Inclusion** reflects the realisation that economic growth is not beneficial unless all people have a fair opportunity to contribute and benefit from it.
- **Growth** reflects the need to drive up prosperity by lifting productivity to improve the wellbeing of our people and businesses.
- **Sustainability** (or rather environmental sustainability) reflects the urgent need to address concerning climatic and environmental challenges and create sustainable and attractive places for our people and businesses to thrive.

The draft business objectives link the above to our thematic areas, reflecting the current structure of the LEP boards. The work to date has highlighted a systemic approach and as such, the objectives link across to the vision and thus the strategic objectives.

2.7 A set of policies are proposed as ways in which the LEP and partners can make interventions to drive economic prosperity. The policy areas reflect a need for focused intervention but also to take account of the broadening agenda for LEPs.

3. Consideration of alternative approaches

3.1 There are no viable alternative propositions as the LEP/MCA has empowered the Thematic Boards to:

- Contribute to future policy development and priorities
- Develop new programmes;

4. Implications

4.1 Financial

There are no financial implications to this paper.

4.2 Legal

There are no legal implications to this paper.

4.3 Risk Management

Through the development of programmes, appropriate risk measures will be put in place in line with the SCR Risk Management Programme.

4.4 Equality, Diversity and Social Inclusion

Inclusive growth is central to the agenda and the strategy considers all aspects of society to understand where opportunities are not available or where particular barriers are preventing residents from accessing opportunities. Further consideration of inclusion will occur through review from Sheffield Hallam's Centre for Regional Economic and Social Research.

5. Communications

5.1 All propositions developed by Thematic Boards to support the SEP / LIS will be communicated to and subject to agreement by the LEP / MCA to adopt the new policy. A communications plan underpins the work to develop the SEP and the LIS and specific work resulting from this. The SCR Corporate Communications plan will reflect agreed LEP, Mayoral and MCA priorities.

6. Appendices/Annexes

6.1 Appendix 1 – SEP Draft

REPORT AUTHOR	**Jonathan Guest**
POST	**Senior Economic Policy Manager**
Officer responsible	**Felix Kumi-Ampofo**
Organisation	**Sheffield City Region**
Email	**Felix.Kumi-Ampofo@Sheffieldcityregion.org.uk**
Telephone	**T: 0114 220 3416**

Background papers used in the preparation of this report are available for inspection at: 11 Broad Street West, Sheffield S1 2BQ

Other sources and references:

- Strategic Economic Plan Evidence Base – 2019 (Summary Evidence Pack) and other relevant documents available on the website: https://sheffieldcityregion.org.uk/explore/resources/

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STRATEGIC ECONOMIC PLAN

Sheffield City Region

CONTENTS

VISION

1. VISION

A growing, inclusive, and sustainable economy playing an ever-increasing role in future UK prosperity

- Focus on inclusion and people
  - Whilst productivity has increased through the delivery of the first SEP, not everyone has benefited with pockets of deprivation, high unemployment and low skills/pay. This SEP needs to bring everyone along together and avoid leaving any individuals or communities behind
- Growth
  - SCR is on track to meet many of the ambitions in the first SEP, but is performing less well then most other LEPs and the UK in economic performance. This SEP aims to achieve a step change in growth punching above its weight both nationally and globally through an innovation furnace that builds on its legacy and capitalises upon current and future opportunities
- Sustainability
  - Climate change is happening and requires a major change in how we live, work and play. This SEP will help SCR transform to a low carbon economy, build its resilience to climate change and create sustainable places that improve the quality of place whilst maintaining local distinctiveness

PROGRESS TO DATE

2. SUCCESSES

- Exceeding performance anticipated in previous SEP
  - GVA growth has been twice as fast as planned, hitting the target of £35bn six years ahead of schedule, progress towards the job creation target is four years ahead of schedule, number of new businesses created has almost hit its 2024 target already
- Strong manufacturing industry and growing business base
  - More businesses since 2011 and a higher proportion of high growth businesses in SCR compared to other areas.
  - Manufacturing makes up a bigger proportion of the economy (12.1% of employment base) and is growing at a faster rate than the UK average
  - Global reputation for high precision engineering and high quality design - world-leading manufacturing and engineering companies: Rolls-Royce, Tata Steel, Siemens VAI, MCLaren
- Academic research and R&D strengths
  - Several areas of academic specialisation (e.g. health, metal and materials-related, engineering)
  - Industry-leading examples of technical education delivery (e.g. UTCs); and private sector engagement with universities driving innovation.
- Strengths in nationally supported sectors including digital
  - High growth sectors (e.g. professional services, scientific & technical activities) becoming more embedded with almost 1,5000 more firms in professional, scientific and technical sub-sector between 2011-2017.
  - The digital sector contains a group of high productivity, relatively high growth businesses with growth in productivity of 150% between 1997 and 2015
- Local, national and international connectivity
  - Geographically well-connected with recent local upgrades
  - Doncaster Sheffield airport integrated logistics hub
- Availability of affordable housing and valuable natural capital
  - Standard of living higher for middle-high earners than other northern cities

3. LESSONS

- Absolute GVA has increased since the first SEP was launched but UK gap remains the same. Productivity gap has widened.
- SCR needs economic not just productivity growth i.e. more jobs and more high skilled jobs
- Skills requirements of Industry 4.0 – need to respond, quickly;
  - Mismatch in workforce supply and demand exacerbated by decreasing levels of age population participating in learning and training, and lack of progress in addressing education progression
  - Levels of digital exclusion exceed the UK averages with Barnsley, Doncaster and Bolsover amongst the worst in the country
- Increasing recognition of the importance of places
  - Access to skilled workers, supply chain networks and supporting institutions crucial for investment. SCR's strength of place and its locational economic advantages can be packaged into a compelling proposition.

4. CHALLENGES AND OPPORTUNITIES

Challenges	Opportunities
• Low levels of productivity, innovation, entrepreneurship and R&D investment compared to other areas. • Several low productivity sectors are strong and dominating industries are predicted to decline. • Higher proportion than England average with no qualifications, lower proportion with higher skills and lower educational attainment • Low wage/skills industry dominates (1/3 of all employees, average wage 11% lower than England average) with the potential for employment to be replaced by automation • Hotspots of deprivation with poor health outcomes and high unemployment • Certain population groups remain disengaged from the labour market, for example ethnic minorities and female employees. • International trade and challenges with existing markets • Graduate retention issues. • Varied quality of living environment with polarised housing market • Digital and transport connectivity issues. • Poor air quality. • Climate change and potential for more frequent extreme weather events	• Move into emerging industries (e.g. digital) • Better locally embed some sectors e.g. construction, transport, professional services and health • Build on academic excellence and links between academia and industry • Opportunities for new international markets • Potential for integrated logistics hub • Potential to build a higher standard of living for middle earners • Climate change and potential opportunities from transforming to a low carbon economy

STRATEGIC AMBITIONS

5. STRATEGIC AMBITIONS - 2040

- **GROWTH**
  - GVA and productivity growth will have increased to exceed the UK average with SCR's strengths achieving global excellence and recognition providing improved prosperity for people.
- **INCLUSION**
  - All of SCR's people will have the opportunity to benefit from economic growth and access to education, training, jobs and services.
- **SUSTAINABILITY**
  - SCR will be recognised and celebrated for its high quality, low carbon environment and distinctive quality places including access to green space, connectivity, housing and resilience to current and future climate threats

6. FOCUS UPON PEOPLE

- **People** start businesses, make decisions, research, up-skill, innovate, care and create opportunities.
- An increasing number of economic strategies are focused on "**People**", showing a recognition of the most important driver of economic transformation:
  - Medellin in Colombia - Participation
  - Greater Manchester - GM's public services.
- People will **be able to access more opportunities, be more prosperous, and enjoy the places they live, work and play in and interact with**.

7. DELIVERING TRANSFORMATIONAL CHANGE

Innovation

- **A shared pervading ethos:** all stakeholders working together to identify and exploit opportunities to innovate across SCR's economy, places and communities
- **Combined with disciplined approaches:** using, refining and continuously improving best practice for driving forward innovation, so innovation becomes our 'first nature'

Creativity

- **Daring to be different:** effective creative relationships generating new and novel opportunities via knowledge 'fusion' and cross-agency/sector/place collaboration, creating a broad and powerful culture
- **Active cross-overs:** increased creativity will create pervasive benefits both for innovation by business and social enterprises/non-profit activities contributing to a powerful local ecosystem

7.1 SPATIAL CONTEXT *(CURRENTLY BEING WORKED UP WITH LAs)*

Barnsley:
Barnsley's local distinctiveness stems from its historical character and culture, including its settlements and architecture. Barnsley's location means it is ideally placed to support sustainable economic growth and the sectors which will drive forward the regional economy. Barnsley future economy is evolving from the industrial past, adapting to economic change and meeting future needs.

Doncaster:
Doncaster is a metropolitan borough located in the heart of England. We have innovative businesses across a range of sectors, hard-working employees, an expanding skills sector, world class connectivity and a growing cultural scene. We have a great platform of success to build upon, and we are ready to go further and faster.

Sheffield:
Sheffield is the core city at the heart of the Sheffield City Region and is a creative, inventive and energetic city. It is one of the UK's major city economies with internationally recognised, leading edge talents in manufacturing, engineering and design. The city will be known for its distinctive and high performing sectors.

Rotherham:
Rotherham is one of the most enterprising places in Britain and we will make Rotherham the go to place to start or grow a business, where entrepreneurs will flourish. world class businesses are already located in Rotherham alongside many home grown firms with world class reputations.

STRATEGIC PRIORITIES FOR DELIVERY

8. PRIORITIES FOR DELIVERY

Priority areas through which the identified challenges and opportunities will be address to achieve the overall vision:

- Business Growth
  - Driving innovation and creativity to create the enabling conditions which will grow productivity, R&D investment, scale-ups, trade and exports to grow the economy and improve the well being of people.
- Skills and Employment
  - Transforming the skills base at all levels, increasing employment particularly skilled, well-paid employment to deliver prosperity
- Connectivity and Infrastructure
  - Digital and sustainable transport infrastructure and clean energy to transform to a low carbon economy
- Quality of place
  - Quality built and natural environments in distinctive places, local culture and sport, access to green space and services supporting positive health and wellbeing outcomes

8.1 BUSINESS GROWTH

- Objective
  - Business-driven investment in innovation, combined with academic-business R&D partnerships and open innovation consortia for key supply chains, will significantly increase R&D investment - assisting the transition to a highly productive economy by 2030
- Outcomes
  - Economic and productivity growth
  - Increased investment in R&D
  - Skilled worker retention
  - Increased exports
  - Improved business and employment density

8.2 SKILLS AND EMPLOYMENT

- Objective
  - By 2030 education and skill levels will lead to increased and higher paid employment, through focused interventions from school age through to adult education, leading to an increase in economic activity at all skill levels across SCR
- Outcomes
  - Improvement in qualification levels in population
  - Improved wage levels
  - Higher share of higher-level occupations in labour market
  - Better education progression and attainment rates
  - Reduction in benefit claimant rates

8.3 CONNECTIVITY AND INFRASTRUCTURE

- Objective
  - Transform connectivity and transition to a low carbon economy by improving sustainable transport, digital coverage and sustainable energy ensuring that everyone can access education, employment, leisure, health and other services and amenities within a clean energy environment by 2030
- Outcomes
  - Reduction in car travel
  - Increase active and public travel
  - 5G and full fibre coverage
  - Reduction in emissions

8.4 QUALITY OF PLACE

- Objective
  - By 2030 SCR's cities, towns and rural areas will be recognised for their quality built and natural environments in distinctive places, with access to local culture and sport, green space and services supporting positive health and wellbeing outcomes
- Outcomes
  - Reduced fuel poverty and homelessness rates
  - Improved housing energy efficiency
  - Improved urban centre vitality
  - Improved air quality
  - Enhanced natural capital
  - Higher cultural and sport participation
  - Improved visitor numbers

HOW OUR PRIORITIES INTERRELATE

Inputs ⬇ / Outputs ➡	Business growth	Skills and employment	Connectivity and Infrastructure	Quality of place
Business growth		Growing businesses employ more people and provide demand for skills	Business growth in these areas enhances connectivity	Increases local buying power that helps to sustain local places
Skills and employment	Improved skills enable business growth		Improved skills enable growth in digital, energy and transport sectors	Increases local buying power that helps to sustain local places
Connectivity	Digital and transport connectivity and transformation to low carbon economy supports business growth	Connectivity provides opportunities to access skills and employment and growth in this area provides skills and employment opportunities		Improved connectivity enhances local places and facilitates more balanced housing markets
Quality of place	Quality places provide business advantage and attract high skilled workers, resilient business premises support growth	Growth in this area provides skills and employment opportunities, resilient skills institutions employment premises sustain skills and employment growth	Low carbon energy developments facilitate new transport opportunities, green infrastructure contributes to active travel, resilient infrastructure keeps SCR running	

METRICS

METRICS (1/2)

Theme	Indicator / aim	Data source
Overall	Productivity & GVA Growth	ONS GVA & Productivity Estimates
	Earnings Growth	ONS ASHE
	Carbon Emissions	TBC (ONS)
Connectivity and Infrastructure	Public transport usage	Annual cordon counts
	Car usage is falling	DfT car miles data
	Active travel mode share	Census
	5g and FF Broadband coverage	DCMS & Ofcom
Skills & employment	Employment growth	ONS
	Proportion of employees on low earnings	Annual Population Survey
	Proportion of employees in managerial professional occupations	Annual Population Survey
	Proportion of working-age population at NVQ3 and above	DfE admin data
	'Attainment 8' scores	DfE admin data
	Proportion of workless households	Annual Population Survey
	Out-of-work benefits claimant rate	DWP Longitudinal Study

METRICS (2/2)

Theme	Indicator / aim	Data source
Quality of place	Domestic energy efficiency: proportion of EPC C rated homes	MHCLG domestic EPC register
	Air quality: no. designated Air Quality Management Areas (AQMAs)	Defra
	Participation in cultural activity	Active Lives Survey
	CO2 emissions	(tbc)
	Neighbourhood deprivation	Index of Multiple Deprivation
	Fuel poverty rate	BEIS sub-regional fuel poverty statistics
	Index of private rental costs	VOA admin data
	House price to earnings ratio	ONS combined data
	Statutory homelessness	Local Authority admin data
Business Growth	Labour productivity	ONS
	GVA growth per capita	ONS National Accounts
	Business birth and survival	HMRC admin data
	Highly Skilled People in Labour Market (& Graduate retention)	Annual Population Survey (& DLHE survey)
	R&D investment	BERD Survey (tbc)

economy@sheffieldcityregion.org.uk

Sheffield City Region
11 Broad Street West
Sheffield
United Kingdom
S1 2BQ

Sheffield City Region

Sheffield City Region MAYORAL COMBINED AUTHORITY

INFRASTRUCTURE BOARD

24TH OCTOBER 2019

SCR ENERGY STRATEGY – CONSULTATION FEEDBACK AND TARGET SCENARIOS

Purpose of Report

This report updates on progress of the emerging draft SCR Energy Strategy including summarising Key Stakeholder feedback; the findings from the University of Sheffield's 'Provocation' Study; and the emerging Carbon Targets and Future Scenarios Analysis.

Thematic Priority

This report relates to the following Strategic Economic Plan priorities:

- Secure investment in infrastructure where it will do most to support growth.
- Facilitate and proactively support growth amongst existing firms.

Freedom of Information

The paper will be available under the Combined Authority Publication Scheme.

Recommendations

The Board are asked to:

1. Note and comment on the feedback from the Key Stakeholder consultation exercise in para 2.1, particularly in terms of the suggestion that the Strategy should have a greater emphasis on achieving zero carbon as well as on energy.

2. Note and comment on the University of Sheffield's Provocation Study report attached at Appendix 1, particularly in relation to the proposed recommendations for improving the Strategy.

3. Comment on the emerging findings of the Carbon Targets and Future Scenarios work set out in Appendix 2, including supporting the emerging sub-targets being proposed for informing Phase 2 of the Carbon Targets and Future Scenarios analysis.

4. Make recommendations to the LEP Board on headline changes to the improve the Draft Strategy.

1. Introduction

1.1 The development of an Energy Strategy for Sheffield City Region (SCR) is a response to the SCR Integrated Infrastructure Plan (IIP) which commits the Local Enterprise Partnership (LEP) and the Mayoral Combined Authority (MCA) to producing a low carbon energy strategy.

1.2 A draft of the SCR Energy Strategy was presented to the Infrastructure Board in August 2019. Since then Key Stakeholders have been consulted on the draft Strategy; the University of Sheffield has completed a 'Provocation Study' of the Strategy; and Phase 2 of the Carbon Targets and Future Scenarios commission well underway. This report presents the key findings and potential implications for the Strategy of all these outputs. The consultant Ricardo will present the emerging Carbon Targets and Future Scenario outputs.

2. Proposal and Justification

2.1 Stakeholder Engagement

On 4th September, 45 stakeholders from across the public, private and voluntary sectors attended a workshop, which was split into two parts: feedback directly on the SCR Energy Strategy; and input into Phase 2 of the Carbon Targets and Future Scenarios analysis. A full summary of the workshop is available on request and the key points raised at the workshop / followed up with written comments afterwards are:

- **Brand:**
  - Generally positive support for the 'Green Heart of Great Britain' brand.
  - The brand must be reflected in every SCR strategy to gain traction
- **Vision:**
  - Changing references from 'low carbon' to 'zero carbon'
  - Needs to include a greater sense of urgency
  - Missing the word 'affordable'
- **Goal 1 (Business):**
  - We are missing a skills element eg. need to specifically refer to the trades?
  - Focus on the biggest emitters
  - Wording too soft / not specific enough in places
- **Goal 2 (Generation/Storage/Distribution):**
  - May be too technology specific in some policies (e.g. heat networks)
  - Heat needs to be more prevalent
  - Could benefit from a greater focus on innovation
- **Goal 3 (Homes & Communities):**
  - New houses need to be zero carbon as soon as possible
  - Should be 'eliminating' avoidable excess winter deaths not just 'reducing'
- **Goal 4 (Transport):**
  - Public transport should be the quick win given the powers of local authorities and the South Yorkshire Public Transport Executive
  - Include avoiding travel (eg. more flexible working & working from home)
  - Should air quality be included since it is an indirect benefit of reducing carbon emissions from transport?
- **General:**
  - The Strategy should be about achieving zero carbon, not just about energy
  - Needs more of a focus on environmental factors e.g. tree planting and peatland restoration.

2.2 University of Sheffield 'Provocation Exercise'

Internal funding was awarded to Drs Nick Taylor-Buck and Alastair Buckley for twelve PhD students to carry out a 'provocation exercise' on the Draft Strategy. The work included:

- An internal facilitated workshop for 28 participants in June 2019 coupled with interviews with key University of Sheffield employees.

- The collection of background research data relating to UK and SCR decarbonisation in the areas of transport technology, transport strategy, power generation, energy use, policy scenarios, building energy performance, land use impacts and opportunities, mine water heat sources, air quality, fuel poverty, community energy and the co-benefits of decarbonisation.
- The synthesis of this background data into recommendations and reviews.

The Draft Final Provocation Report outlined 14 improvements to the SCR Energy Strategy and is attached at Appendix 1. The key recommendations include:

- The structure of the Strategy should better reflect the goals and key content.
- It should use a "biggest first" approach and prioritise sectors where the opportunity for regional intervention overlaps with significant energy use.
- It should more strongly reflect national policy's ambition for carbon reduction with a less emphasis on an economic focus and a greater focus on carbon / climate.
- It should be explicit about social and environmental co-benefits and risks, such as fuel poverty and public transport infrastructure.
- Policies should have enough detail to enable proper evaluation of impacts, and it would be useful for policies to be more focused on fewer high impact interventions.

2.3 Carbon Targets & Future Scenarios

In July 2019, 'Ricardo Energy and Environment' was appointed to carry out analysis to inform potential Carbon Targets and Future Scenarios. The commission is in three phases:

Phase 1
To produce a science-based carbon target for South Yorkshire based on the commitments within the UN Paris Agreement. The proportion of South Yorkshire's contribution to those commitments was calculated using the Local Authority CO_2 statistics and the SCATTER tool to ensure that whatever target produced could be compared to those of other local authorities in South Yorkshire/city region.

Phase 2
A 'bottom-up' approach is also being employed to assess the contribution of a number of 'tangible targets' that can be met or influenced directly / indirectly by SCR or other local authority partners. These 'tangible targets' will be assessed as future scenarios with differing levels of ambition and can be described as:

- Business as Usual (BAU): This assumes that only the bare minimum to be achieved is to meet any legal requirements that are expected, including an appropriate proportion of national requirements.
- Low ambition
- Medium ambition
- High ambition: This assumes all efforts are made to meet or exceed the progress required to stay within the overarching carbon budget.

The Stakeholders Group provided input into the Phase 2 of the Carbon Targets and Future Scenarios analysis at the Workshop on the 4th September, which has helped inform the consultant's work. These included the need to consider:

- ensuring low cost finance for enabling energy efficiency in businesses.
- similarly, enabling insulation and renewable heat installation in existing housing
- Enhanced incentives for 'green' businesses wanting to re-locate to South Yorkshire.
- Immediately decarbonise buses and taxis
- Expand coverage of safe, separate and continuous cycle routes as part of wider Active Travel interventions.
- New commercial buildings to be energy efficient and must have local energy Local energy generation installed where possible

- Invest in smart grid infrastructure to aid DSR and grid balancing
- Significantly Increase tree planting and restore upland and lowland peat.

Ricardo Energy & Environment will be presenting the emerging findings of the Phases 1&2 for the Infrastructure Board's consideration and steer – see Appendix 2. Phase 3 will be undertaken through November and December and will set out the potential impacts on GVA growth, Job creation and productivity of the preferred Target(s) and Scenario(s).

3. Consideration of alternative approaches

3.1 The preparation of the Strategy involved two consultants and a range of evidence and different options, approaches, objectives, vision etc which have been informed through consultation with key Stakeholders over the past 15 months and been considered by and a steer provided on various issues and elements by both the SCR Infrastructure Board and the SCR Housing and Infrastructure Board which preceded it.

The comments and suggestions on the Draft Strategy itself by Key Stakeholders and the University of Sheffield will further inform the revision of the content and approaches within the Strategy prior to it being finalised; as well as the Targets and Scenarios commission.

4. Implications

4.1 Financial

This work is supported by £40k from BEIS with a further £30k allocated from SCR funds. This budget is sufficient to complete the Strategy. Further support from BEIS was also secured to employ a full-time Senior Programme Manager to lead on Energy and Sustainability activity including to finalise the SCR Energy Strategy. The post is hosted by SCR and works alongside district lead officers across the SCR area as well as regionally through the North East, Yorkshire and Humber Energy Hub.

4.2 Legal

A Memorandum of Understanding has been agreed with BEIS related to their funding contribution to support the preparation of the Strategy.

4.3 Risk Management

A risk assessment has been undertaken for the project which is continually monitored.

4.4 Equality, Diversity and Social Inclusion

None arising from this report. The SCR Energy Strategy will help to address fuel poverty and the health and wellbeing of the local populations and, therefore, will contribute to improving social inclusion.

5. Communication

5.1 Proactive communications will be delivered across a range of channels, including digital, social and traditional media, once the Energy Strategy is in a position to be published.

6. Appendices/Annexes

Appendix 1 – University of Sheffield Provocation Draft Final Report
Appendix 2 - Carbon Targets and Future Scenarios Emerging Findings - Presentation

REPORT AUTHOR Karl Sample
POST Senior Programme Manager (Energy & Sustainability)
Director responsible Mark Lynam,
Email Mark.Lynam@sheffieldcityregion.org.uk
Telephone 0114 220 3445

Background papers used in the preparation of this report are available for inspection at: 11 Broad Street West, Sheffield S1 2BQ. Other sources and references: N/A.

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Sheffield City Region Energy Strategy: University of Sheffield Provocation

Final Report October 2019

Authors:
Dr Nick Taylor Buck, Dr Alastair Buckley, George Coiley, Carl Lee, William Mai, Alex Riley, Ismail Aboufirass, Hannah Mottram, Dilek Arslan, Shruti Patil, Stephen Opeyemi Aderinto, Solomon Wophoke, Ahmed Maelsheikh, Patrick Nsengimana, Sourabh Devardeka

Contents

The University of Sheffield (UoS) is represented on the Sheffield City Region (SCR) Energy Strategy project board, and recognises that the Energy Strategy is a regionally important initiative. As such the UoS is keen to support the development of a strategy that is robust and fit for purpose. With this in mind, early in 2019 UoS offered to carry out a brief 'provocation' exercise to support the strategy development process and underpin future SCR engagement workshops (Appendix 1). This report represents the current status (October 2019) of that provocation exercise. It is an academic exercise, although we have tried to consult as widely as possible with non-academic departments within the University.

Executive Summary

Our analysis has revealed two key messages:

1. Complete or near complete decarbonisation of **transport** and **buildings** is vital to the Region's emission reduction success. A 25% to 50% reduction in demand, and a near total change to clean energy sources is needed.
2. A programme of devolution to deliver these reductions in energy demand and a transition to clean energy sources is a feasible political project, since such a project presents substantial economic and social opportunities to the region.

Other important points to note are:

- Moving towards a net Zero Carbon economy needs to be the primary purpose of the SCR Energy Strategy and is a key opportunity to create growth across SCR.
- The climate emergency demands a **political programme** for a low carbon economy. We believe this should be coupled with an ambitious devolution deal. This is politically feasible and would bring considerable quality of life benefits to citizens in the region.
- Zero Carbon goals for transport and heat need to be communicated alongside the benefits they will have on quality of life, such as improved air quality; and reduced fuel poverty and winter deaths.
- In domestic, public and commercial buildings there needs to be a step change in insulation and a near total move away from gas as a heating fuel.
- In transport, there needs to be significant investment in public and active transport and support for the infrastructure needed for alternative fuel for private vehicles (electricity / hydrogen).
- There needs to be investment to support the introduction of alternative fuels for public and commercial transport (electricity, hydrogen and biogas).
- Community energy projects offer great scope in terms of regional renewable electricity generation and storage, engagement of the public, increased resilience of regional electricity networks and in terms of helping to upskill the regional workforce around the need to work with and live within our available resources.

1. Introduction - what should the SCR Energy Strategy do?

Climate change is fast climbing the political agenda in the UK due to the IPCC 1.5 degrees report (IPCC, 2018), School Strike 4 Climate, Extinction Rebellion, and record-breaking heat waves. Public concern is also surging. Realisation is dawning that decarbonisation (or at least defossilisation) of our economy is inevitable, that there will be significant regional economic and quality of life benefits arising from this process, and that there are considerable 'early adopter' benefits for regions that take this seriously (Gouldson et al., 2013). The SCR Energy Strategy (SCRES) provides an excellent chance to grasp this opportunity, although it is important to set out some guiding principles around its remit (Black Country LEP et al., 2018; Siemens PTI, 2018). Although a clearly written pragmatic document will help to underpin investment decisions, an Energy Strategy is not primarily a tool for marketing the region to business. Rather, an Energy Strategy:

- Sets out the transition to a Net Zero Carbon economy
- Draws on regional resources and plays to regional strengths
- Provides data that is quantified using standard methods
- Sets out the main co-benefits of decarbonisation of energy
- Explores how regional governance can (or cannot) support Net Zero Carbon

Broadly then, the purpose of an Energy Strategy in the 21st century is clear: *to reduce greenhouse gas emissions in line with agreed local / regional targets, in a socially just and feasible manner* (See Appendix 2 for more details). Therefore, the SCRES must provide answers to four basic questions:

1) **Baseline:** where do emissions occur in SCR?
2) **Targets:** where and by how much do emissions need to be reduced?
3) **Plan:** how can these reductions be made whilst maintaining or improving the lives of SCR citizens?
4) **Strategy:** what sort of political project is required to bring about these changes?

We aim to avoid re-treading ground covered by the existing draft Energy Strategy, and to focus on highlighting the most effective actions for the SCRES team. The existing SCRES draft already tackles question 1 above, so this provocation focuses on providing answers to questions 2-4.

The report is structured as follows. Section 2 discusses which emissions a local Energy Strategy should be concerned with and sets out the scale of reductions required of SCR. We argue that the SCR Energy Strategy should focus on bringing about large reductions and shifts in demand from the domestic heat and transport sectors. Accordingly, sections 3 and 4 focus on these sectors, each first describing the current state of demand in the sector, then outlining different reduction pathways, before finally discussing some ways to implement reductions in a socially just manner. Section 5 then discusses what political decisions could lead to the

successful implementation of such an Energy Strategy. Further information on the detail underpinning our analysis can be found in the appendices.

> Explainer: SCR Geographical Boundaries
>
> In the coming months it will be announced that the geographical boundaries of the Sheffield City Region LEP will be reduced to cover only the area known as South Yorkshire. Therefore, in this document we have only focused on South Yorkshire, rather than the current larger area covered by SCR.

2. Energy demand in SCR

The SCR is responsible for three categories of emissions. First, we directly emit greenhouse gases through everyday activities like heating homes, driving vehicles, farming, and generating electricity (Scope 1 Emissions). Second, fossil fuels are burnt directly on our behalf, primarily by electricity producers outside the region (Scope 2 Emissions). Third, emissions are associated with the goods and services imported into SCR, from imported food to the international servers that host our web pages (Scope 3 Emissions). This provocation focuses on how SCR can reduce Scope 1 and 2 emissions, primarily because these emissions are directly under our control. This does not devalue the importance of tackling Scope 3 emissions through reducing unnecessary consumption, and being wary of local action that simply displaces emissions from SCR to other regions. For example, the world needs steel, so it is better to decarbonise SCR's steel industry rather than have those emissions happen in another region or country.

Energy production and energy demand are intricately linked. However, in this report we primarily focus on the demand side of the equation. The reasons behind this are: the higher quality data available for the demand side of the equation; the fact that SCR imports most of its energy, so we have more control over the demand side; and there is limited (though not insignificant) potential for large-scale renewables in the region (see Explainer box below).

Explainer: Current SCR electricity production and potential for renewable generation

The draft Sheffield City Region LEP Energy Strategy claims that 18% (1.4TWh) of the region's electricity demand is imported and also breaks down the current electricity production mix. In order to shift from being a net energy importer to a net energy exporter whilst reducing emissions, the region would need to increase its renewable energy generation capacity significantly (from ~ 100 MW to ~ > 1 GW). (Note that changes in the geographical boundaries of Sheffield City Region LEP have a huge impact on current and future electricity generation capacity). In terms of opportunities for electricity generation from both solar PV and wind there are several important factors for the region. Regional agricultural land is relatively poor, and the land is fragmented by transport networks and suburban neighbourhoods. Therefore, Sheffield City Region is not ideal for large solar farm or onshore wind farm installations, and the ambition to be a net energy exporter is unlikely to be realistic. However, because the agricultural quality is low, and there are large areas of old mine workings and other post-industrial land, it could be argued that smaller scale renewable generation should be favoured over and above agriculture. More work would be required to quantify this potential as there are current discrepancies in data around regional capacity (Appendix 3). See Appendix 4 for maps detailing land types in Sheffield City Region.

2.1 SCR energy demand and projected necessary reductions

Historical SCR Energy demand is roughly equally split between domestic, transport and industry (Figure 1). Here, 'industry' includes manufacturing based industry, commercial, and public sector demand for energy. Industrial demand is actually a combination of energy used in buildings as well as manufacturing processes. This historical baseline can be extrapolated into future energy demand using the National Grid Future Energy Scenarios (FES). These different scenarios show how the national energy infrastructure could change under different political governance arrangements. They provide a way to compare and contrast how the decarbonisation of the energy system can proceed (Figure 2). All scenarios include substantial electrification of private vehicles and domestic heating and a substantial reduction in energy demand. They also include hydrogen as a fuel vector for transport and heating to greater and lesser extent, dependent on the level of investment in nuclear power.

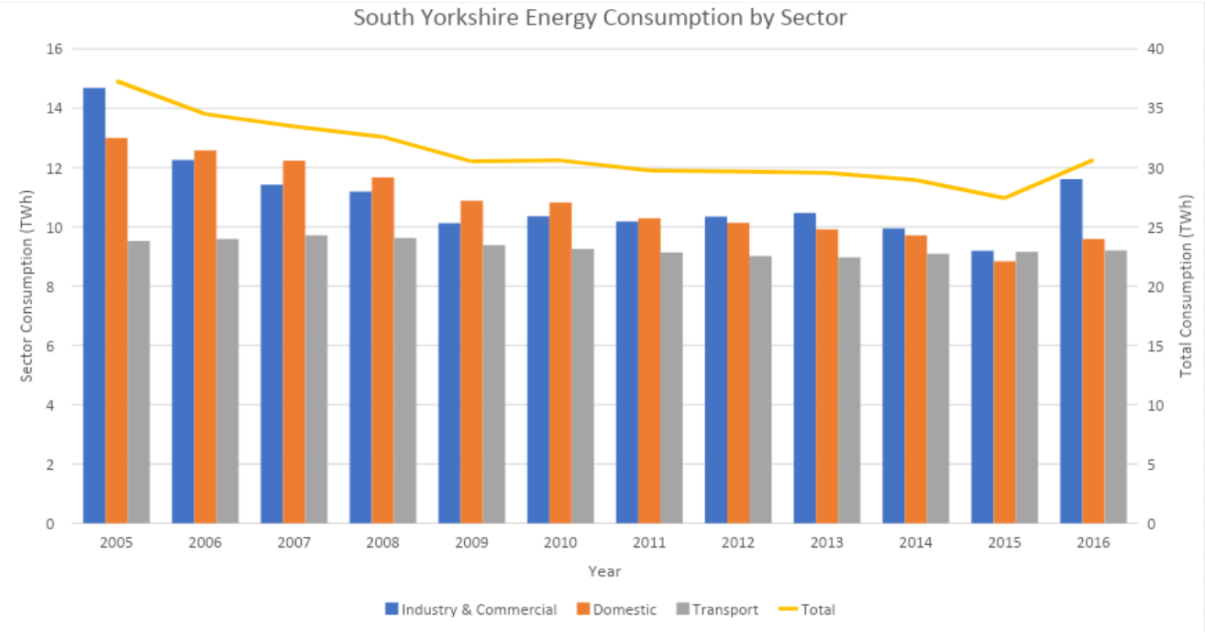


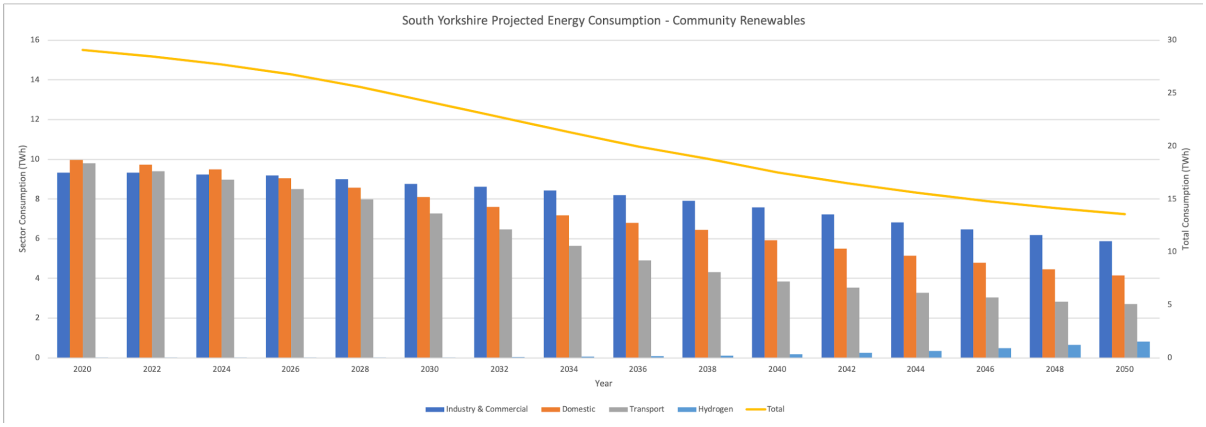
Figure 1: South Yorkshire Energy Consumption by Sector

Some aspects of a national decarbonisation programme are best managed at the national scale, while others are best managed regionally. For example, most industry sector scenarios indicate that demand for materials in the industrial sector (steel, cement, etc.) will increase by between 45 % to 60 % by 2050 relative to 2010 production levels. To achieve an absolute reduction in emissions from manufacturing processes within the industry sector will require a broad set of mitigation options going beyond current practices. Options fall into the following categories: energy efficiency; emissions efficiency (including fuel and feedstock switching, carbon dioxide capture and storage); material efficiency (for example through reduced yield losses in production); re-use of materials and recycling of products; more intensive and longer use of products; and reduced demand for product services. The industrial sector depends on different types of national policy (funding for research/innovation, grid energy mix, demand for products) (IPCC, 2014), so in the medium to long term it is important that SCR helps to shape relevant national policies and strategies, and works with high carbon industries to reduce carbon emissions through innovation via e.g. lightweighting, electrification etc. However, in the short term it is important that the SCRES focuses on the areas that are best managed regionally, prioritising sectors where the opportunity for regional intervention overlaps with significant energy use.

For this reason we focus on Domestic Energy Use and Transport. These are the areas where we have most control and where the biggest wins are to be achieved. Importantly, in all our scenarios, demand in these sectors must significantly reduce, as set out in the following sections.

Explainer: modelling used in this report

We can make predictions about what GHG reductions will look like into the future, under different demand scenarios. As a starting tool we have used the National Grid Future Energy Scenarios (FES) toolkit. This is an Excel based modelling tool that allows the exploration of different energy mix scenarios. National Grid use four different scenarios to illustrate different speeds of decarbonisation and levels of decentralisation. To apply these models to the SCR we have scaled them by the energy demand in each key sector (domestic, transport and industrial) based on historic energy consumption. This allows a simple model of future energy sources to be built. It begins to model the scale of reductions necessary to meet the ambitious targets being set by local authorities in the UK (e.g. Glasgow and Sheffield). The FES 'Community Renewables' and 'Two Degrees' scenarios are consistent with significant decarbonisation and are in line with the government's previous 2050 target of an 80% CO_2 reduction from 1990 levels. The main difference between these two scenarios is that Community Renewables involves a higher level of decentralisation. These scenarios, however, are not yet consistent with the more recently announced Net Zero targets. Updated FES are expected and will include a significant component of carbon capture and storage/utilisation.



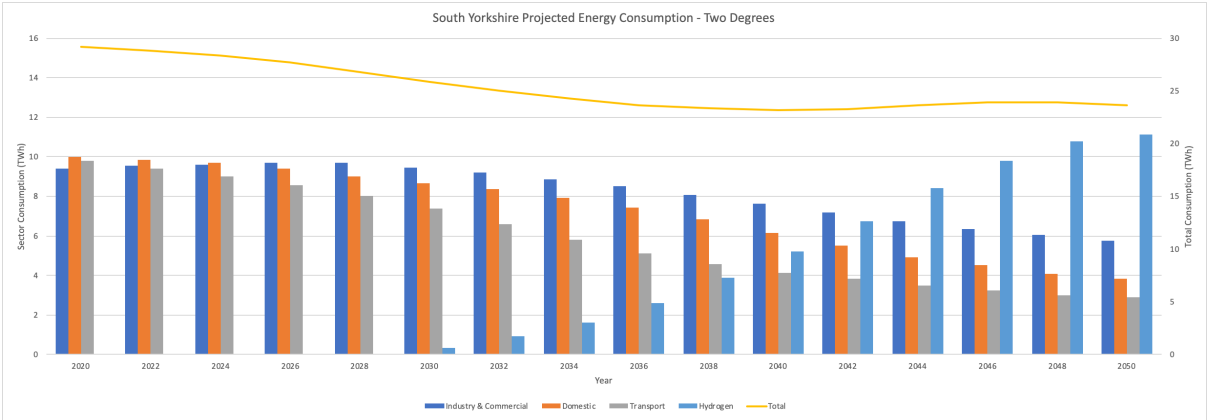


Figure 2: South Yorkshire Projected Energy Consumption by Sector in Different National Grid Future Energy Scenarios (FES). Note that these scenarios are not yet net zero. In FES Net Zero is mostly achieved by substantial bioenergy carbon capture and storage (BECCS). The energy demand (from electricity and gas) required to produce hydrogen energy is included as a separate column to show the distinction between scenarios involving higher and lower levels of decentralisation. SCR should be aware of the big differences in infrastructure requirements of the transition to a significant hydrogen economy (as in the Two Degrees scenario). In all scenarios there is a significant reduction in energy demand - of between 25% and 50%.

3. Domestic emissions

Domestic energy consumption in SCR is currently dominated by gas, which accounts for 77% of total consumption. Electricity makes up another 21% of domestic consumption (Figure 3). To achieve Net Zero by 2050, FES predicts that the average home will need to use 36% less energy than a typical home today, which requires a rapid reduction in the energy used to heat residential buildings. This needs to be achieved by both improving thermal efficiency of domestic buildings, and by moving away from gas as a heating fuel. Currently the housing stock in SCR has a relatively low average EPC rating of D (Figure 4), which although not unusual in a UK context, means that there is much room for improvement in terms of insulation.

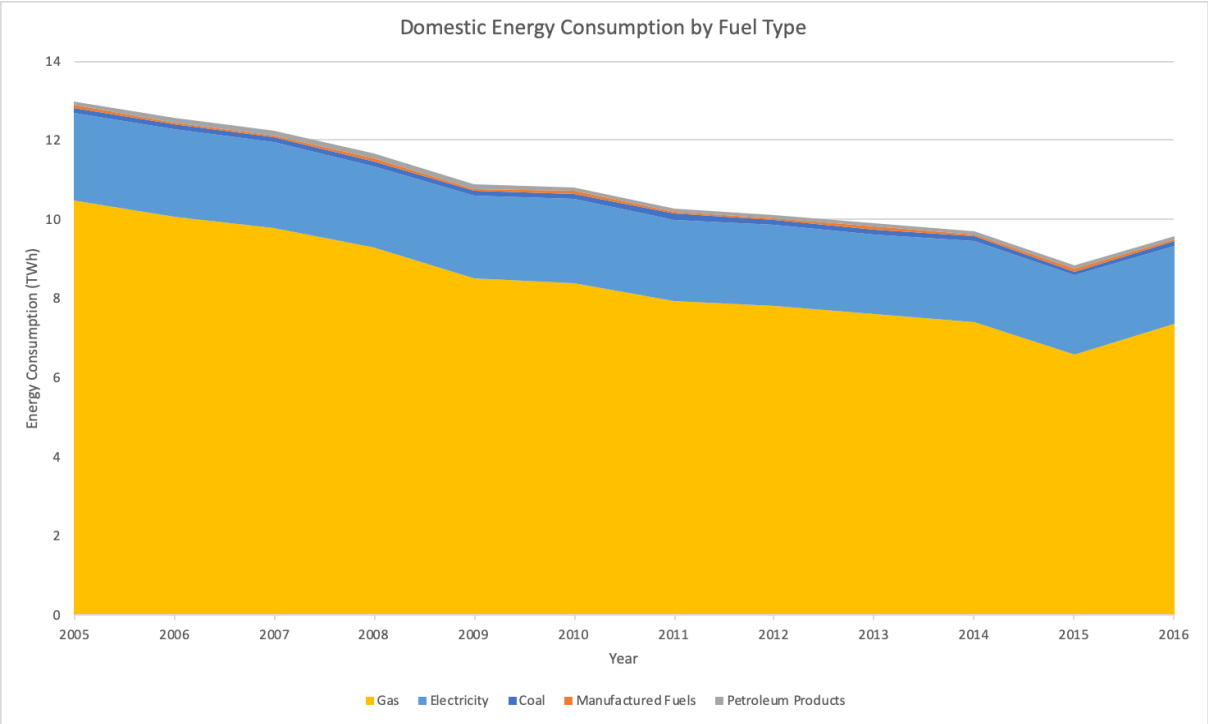


Figure 3: Historical South Yorkshire Energy Consumption by Fuel Type

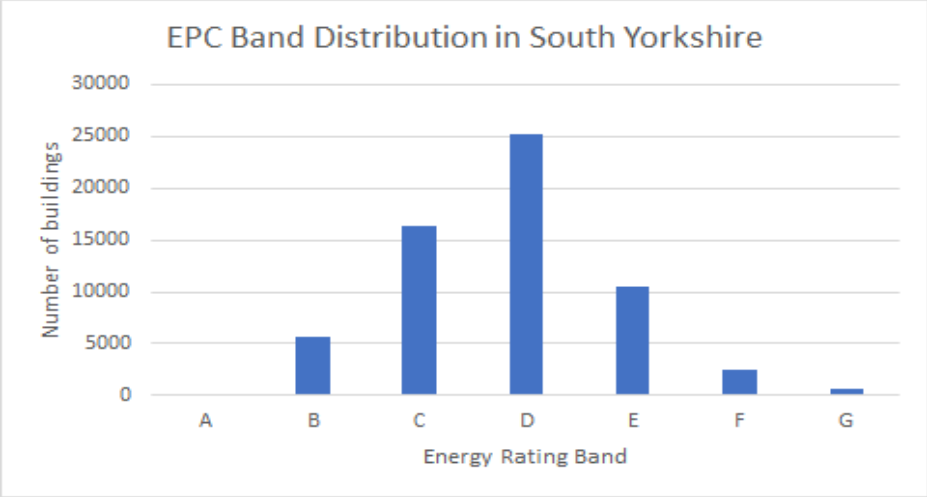


Figure 4: South Yorkshire EPC Band Distribution in South Yorkshire (60,941 Buildings)

As shown in Figure 5, according to FES both of the 2050 target-compliant scenarios require a 78% reduction in domestic gas consumption by 2050 compared to current levels. To achieve Net Zero by 2050, an even larger reduction will be required, meaning almost all domestic heat demand will need to be met by electricity and hydrogen.

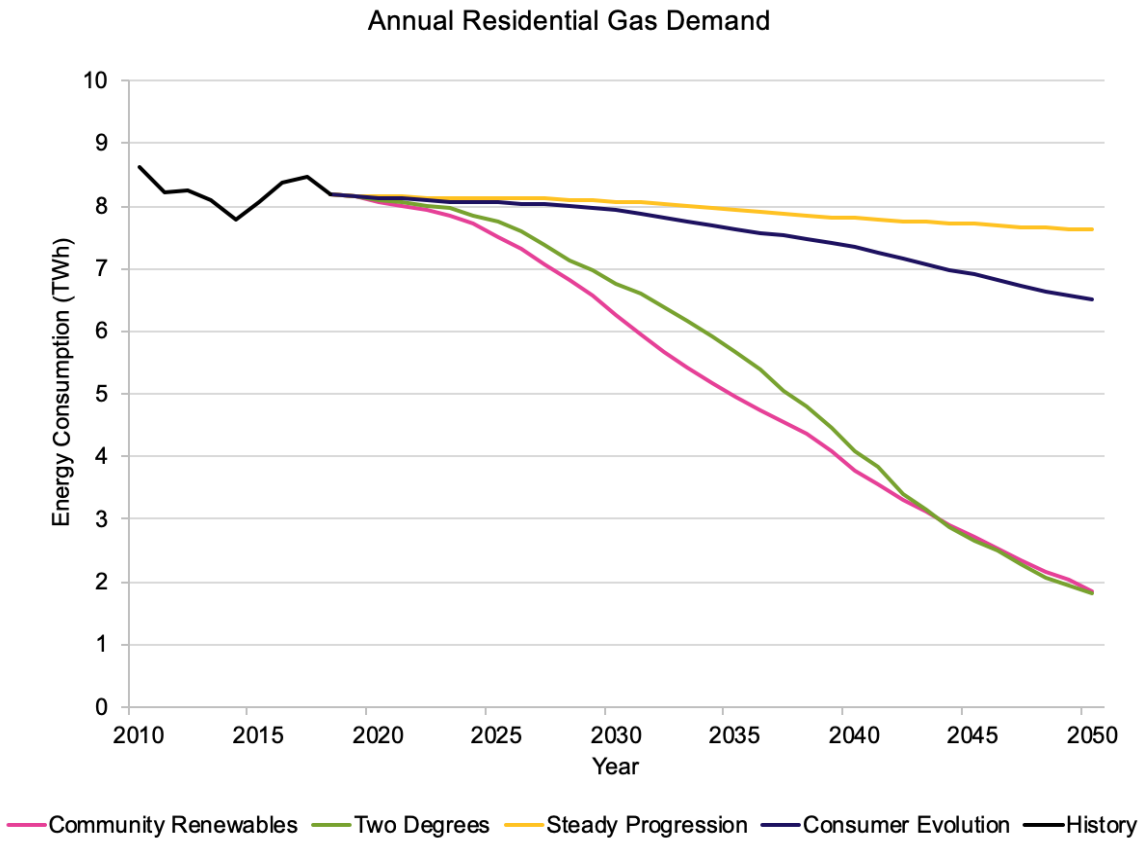


Figure 5: Projected SCR domestic gas reduction by FES scenarios.

3.1 Key benefits of reducing domestic emissions

A strategic intervention to improve housing stock efficiency (and decarbonise heating) would have a number of significant societal benefits for the region. First, **jobs would be created**, which would need to be underpinned by a comprehensive training programme to upskill workers.

Second, improving the efficiency of housing stock in the region would have a **significant impact on household fuel poverty**. Sheffield, Doncaster and Barnsley have almost identical rates of household fuel poverty (Appendix 5). There are three types of neighbourhood that exhibit high levels of fuel poverty:

1. Areas with a high proportion of BAME residents either predominantly living in rented accommodation or in owner occupied housing.
2. Areas of student accommodation in inner-urban Sheffield (e.g. Crookesmoor)
3. Inner-urban areas of Doncaster with high percentage of rental properties (e.g. Hexthorpe).

These types of neighbourhoods also tend to have buildings with a low average EPC rating (See maps in Appendix 6). All these three areas share the common trait of terrace housing dating from the mid 19th century through to 1910 predominating the housing stock and, although they are not necessarily the areas of highest deprivation, they are all in the lowest 20% Index of Multiple Deprivation cohort. Tackling fuel poverty effectively requires a geographically targeted approach that is able to engage with a variety of ethnic communities, private sector landlords and student organisations.

Third, improving the household energy efficiency of those experiencing fuel poverty could **positively impact on health outcomes and reduce pressure on local NHS services**. In young children cold homes have been linked to weight gain, asthma (due to mould, dust mites and damp), cardio-pulmonary disease and increased hospital admissions (Dear and Mcmichael, 2011). These health conditions often have impacts throughout the life course, can affect school achievement levels, and represent a large economic burden in terms of healthcare costs and lost working days.

3.2 Interventions to reduce domestic emissions

We believe that there is much more work to do in finding interventions that are both effective and socially desirable. As such, the below should be seen as a provisional list.

3.2.1 Reducing energy demand for heating

Retrofitting existing homes with insulation and draft reduction and ensuring new builds are insulated to the highest standard is a proven method to reduce household emissions from heat, as well as providing the benefits discussed. These could be subsidised or otherwise supported by SCR.

The region also needs to invest in low carbon domestic heating systems. From 2025 gas heating systems will no longer be allowed in new homes, and retrofit programmes should

include replacing gas based heating systems with electric (heat pump or resistive heating, hydrogen or in some cases biomass systems). The choice of technology should be planned at regional level to take into consideration local electricity grid capacity, heat availability (from mine water for example) and access to Hydrogen gas and district heating networks. An example of how such a programme of retrofit could work is given by Energiesprong, a Dutch organisation (https://www.energiesprong.uk/). Changes in regulation were coordinated with investment and a first market through the social housing sector. SCR has the skills within The University of Sheffield to drive the acceleration of this work through data analytics and advanced manufacturing.

In the short term some progress can be made by reducing the carbon intensity of natural gas by blending hydrogen with domestic heating gas. This approach can deliver carbon savings of around 5%. However, this method is still being trialled and undergoing safety tests. It is doubtful whether such an approach has the necessary impact in terms of carbon reduction in isolation, although it could form part of a suite of interventions.

There is also significant potential in the region to use mines for heat storage (see Appendix 7 for more detail).

3.2.2 Community energy

Since community renewable projects feed into the distribution network, they can be conceptualised as a demand reduction measure. Similarly community energy storage could also be important, e.g. where community scale batteries store community produced renewable energy to increase self sufficiency and self consumption. The recent change of policy by the UK government has had a negative impact on community renewables capacity, and will be aggravated by the plans to increase VAT on panels and batteries. The SCR has the ability to create an environment where community energy can be encouraged and facilitated. This can be done by boosting community energy schemes and implementing community energy in housing/spatial planning. The largest engaged programme in the SCR addressing fuel poverty and household interventions in energy conservation is run by the Sheffield Energy Centre based at Heeley City Farm, Sheffield. To demonstrate the ‘hand to mouth’ contract nature of this work and the consequential difficulty in planning and delivery such service options, a list of contracts totalling less than £100,000 over four years, including sources of funding and targeted outcomes, is provided for the Sheffield Energy Centre for 2018-19 (See Appendix 8). Central to putting the financial footing for such programmes on a firmer basis right across the SCR is the Mayor’s Community Energy Fund which could be used to support current initiatives as well as new initiatives across the SCR.

3.2.3 Household energy use

Sustainable additions to the home, such as second generation smart meters (SMETS2) and smart appliances, may enable households to better manage their energy use. While these metering devices do not currently contribute to significant energy demand reduction on their own, they do enable energy companies to manage homes within the smart grid and this can have a significant impact on overall decarbonisation through greater utilisation of renewable sources of electricity. These devices can also support households to make lower-carbon

decisions through education and awareness, for example improving understanding of appliance energy labels.

4. Transport emissions and interventions

Given the emphasis placed on transport related emissions in this document, it is essential that there is close alignment between the SCR Energy Strategy and the SCR Transport Strategy.

In terms of land use, SCR is relatively mixed for a region that could be described as a semi-urban conurbation. As might be expected, the majority of road transport emissions stem from private cars, with most of the remainder accounted for by road freight vehicles (Figure 6). Buses represent a relatively small proportion of emissions.

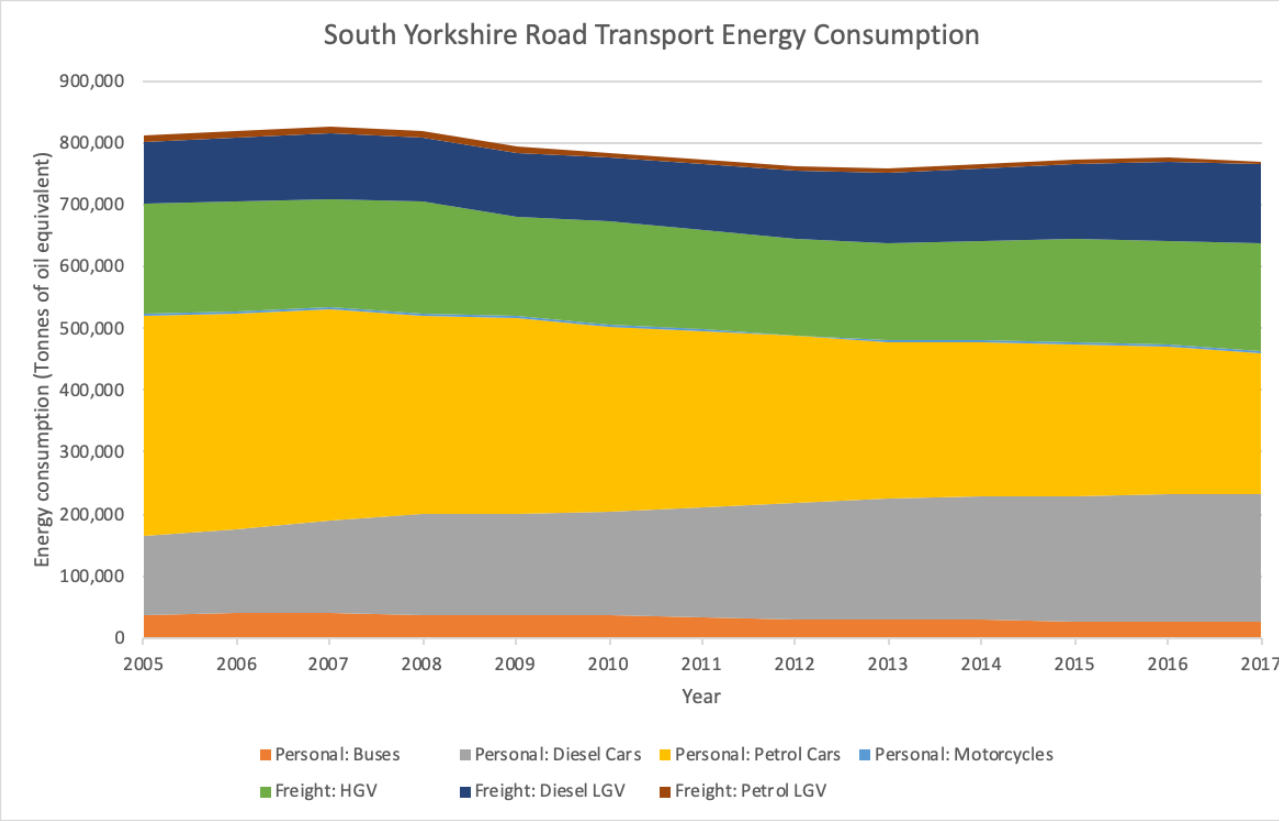


Figure 6: South Yorkshire Road Transport Energy Consumption

As can be seen in Figure 7, to meet the 2050 Net Zero carbon target, petrol and diesel will need to be phased out completely in favour of electricity, hydrogen and a small proportion of natural gas. At the same time, overall energy expenditure on transport will need to decrease by around 70%.

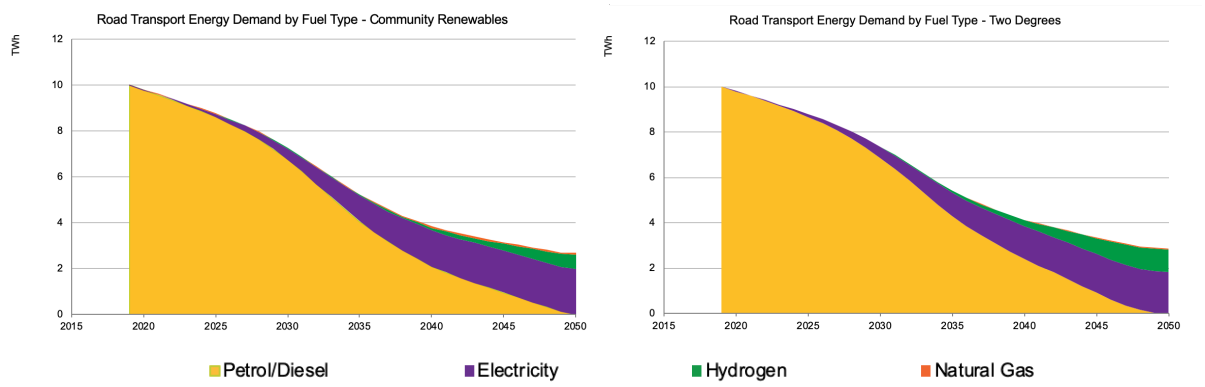


Figure 7: Projected South Yorkshire Road Transport Fuel Mix to 2050 for 'Community Renewables' and 'Two Degrees' Scenarios

4.1 Key benefits of reducing transport emissions

There are several key benefits of reducing emissions from transportation in SCR. Strategic support for more **active modes of transportation (walking / cycling) will improve citizen health**. Gross Domestic Product of SCR transport is £500m alone (Trading Economics, 2019), and **significant commercial opportunities** could arise out of the Zero Carbon transition (both through the provision of transport and the indirect benefits of improved transport on the local economy). The region should be ready to take advantage of them, rather than trying to align the transition with the current existing strengths of the region. Finally, **air pollution would be significantly reduced.**

Air pollution adversely affects human health through exacerbating respiratory conditions, and has recently been estimated to account for up to 500 premature deaths per year in Sheffield. Air pollution also causes chronic conditions that result in lost working days. These have estimated economic costs of around £160 million per year in Sheffield. Current air quality policies are in place, although in Sheffield several air quality objectives have been exceeded (the annual average level of nitrogen dioxide, the hourly mean level of nitrogen dioxide and 24-hour mean level for fine particles), meaning overall air quality has not improved, particularly in places near motorways and busy trunk roads.

4.2 Interventions to reduce transport emissions

There are areas where SCR is well placed to deliver improvements, as well as the associated benefits. LEPs are expected to deliver major local transport schemes, and SCR published its transport strategy in March 2019 (Sheffield City Region Local Enterprise Partnership, 2019a). The main goals of the strategy are:

- Residences and businesses connected to economic opportunity
- A cleaner and greener Sheffield City Region
- Safe, reliable and accessible transport network.

However there is now a need to review the region's transport strategy to ensure it aligns with the emerging Energy Strategy, and that it contributes towards the Net Zero Carbon target. Both documents should be mutually supportive. The current transport strategy does not prioritise the

need to reduce carbon emissions and energy use, nor does it consider how suggested changes could be implemented - such as through further devolution (Sheffield City Region Local Enterprise Partnership, 2019b). Similarly the current Energy Strategy mentions the transport strategy, but does not acknowledge the importance of increasing use of public transport and active transport towards reducing carbon emissions, as well as electrification. These conflicts must be addressed.

The University of Sheffield and Sheffield City Council are part of the DecarboN8 project, led by the University of Leeds (EPSRC, 2019). Partners across the North of England will collaborate to identify and evaluate approaches to decarbonise the transport sector. The project will look specifically at how cities can switch to electric vehicles and how different decarbonisation management strategies interact. SCR should seek to be an active partner in this research project.

In terms of suitable interventions for SCR, we will follow the four approaches identified by the IPCC (2014) to reduce transport emissions, which are: avoidance of journeys; shifting to more efficient modes (such as from private cars to public transport, walking and cycling); improving efficiency; and switching to lower carbon fuels or energy carriers (for example electric or hydrogen vehicles).

4.2.1 Avoidance of journeys

Reducing transport activity can be achieved by avoiding unnecessary journeys in the following ways:

- Encouraging businesses to allow flexible working times and tele-commuting which would reduce rush hour congestion and number of journeys
- Widening support for school buses
- Shortening travel distances through densification and mixed-zoning of cities. (IPCC, 2014). The SCRES should include consideration of how SCR can work with local partners to ensure travel distances are considered in planning activities and regulations

4.2.2. Shifting to more efficient modes

Shifting transport choices towards more efficient modes such as public transport, walking, and cycling, can be encouraged by urban planning and the development of a safe and efficient infrastructure (IPCC, 2014). This is acknowledged in the current draft SCRES, although it does not identify how these changes might be delivered. The current transport strategy recognises that public and active transport also have further benefits, such as improved public health, greater social inclusion and access to economic opportunities.

One key SCR issue is low public transport use, and the current complexity of bus provision (Figure 8). This may be explained by an over-reliance on a market-led approach, meaning that routes with low demand have been abandoned altogether, reducing the catchment area, and bus times are limited and inconvenient for many users.

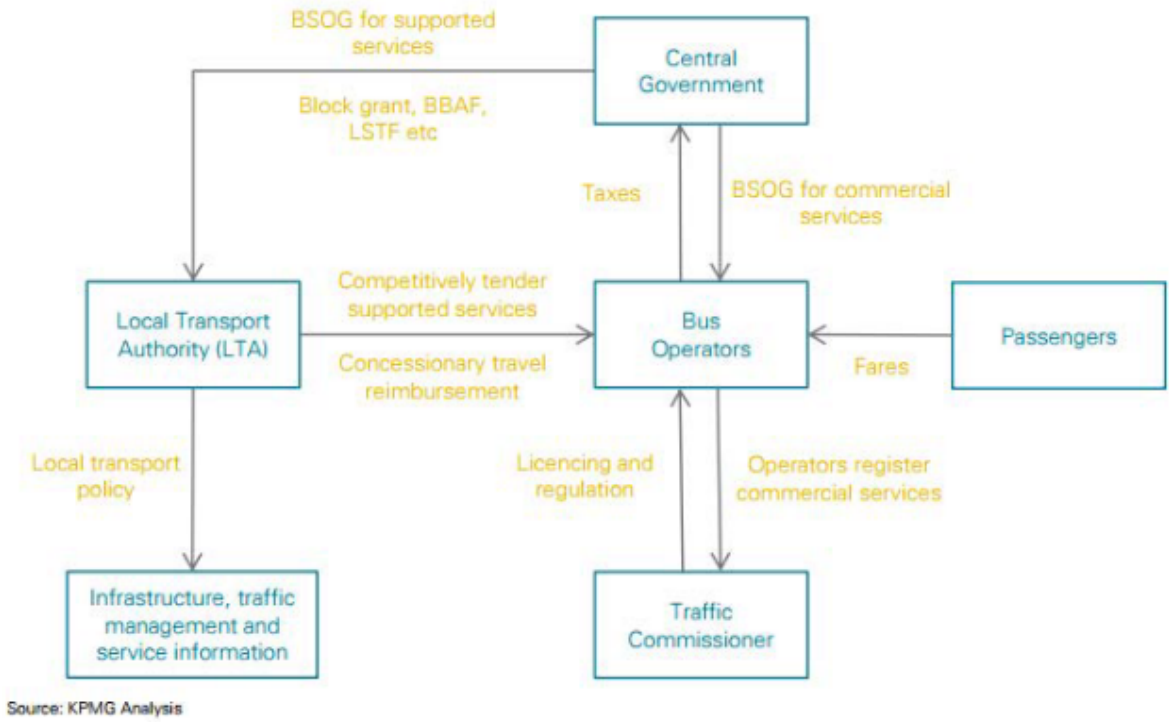


Figure 8: The UK System for Bus Service Provision (KPMG, 2015)

Another factor is strategic coordination. Implementation plans for Rail, Active Travel, Roads and Strategy Transport Network are all currently being worked on, although they are at different stages of development. These plans will need to be developed coherently to align with each other and with the SCRES. Air quality and future mobility are seen as cross-cutting issues across these plans, but to develop a more coherent strategy for the region, decarbonisation should also be considered as a cross-cutting issue in transport. This is particularly relevant when there appears to be more progression on developing the implementation plan for roads rather than for more low-carbon transport modes.

It is also worth mentioning that emissions from air travel are not captured in our models, however the proposed expansion of Doncaster Sheffield airport and the necessary associated extra infrastructure is unlikely to align with energy and emissions strategies for the region.

4.2.3 Improving efficiency

Encouraging improvements in the performance efficiency of vehicles and engines is best tackled at a national level by influencing manufacturers and raising public awareness (e.g. properly inflated tires improve miles per gallon, using the correct grade of motor oil and keeping the engine tuned can increase fuel efficiency). Similarly optimizing operations and logistics (especially for freight movements) can also result in lower fuel demand, and is probably best tackled nationally (IPCC, 2014). However, at a regional level SCR could employ approaches that improve traffic flows and reduce emissions from congestion, such as improving public transport infrastructure, and advocating for Low Emission Zones.

4.2.4 Switching to lower carbon fuels and energy carriers

Switching to lower carbon fuels and energy carriers is technically feasible, such as by using sustainably produced biofuels or electricity and hydrogen (when produced using renewable energy) or other low-carbon technologies. (IPCC, 2014). Encouraging private and freight vehicles to be electric, hydrogen or hybrid is part of the SCR implementation strategy for a low carbon transport system. However, it does not address how this should be done. This will involve SCR advocating at a national level for policy changes, supporting appropriate incentives to switch fuel type (at the moment, EVs can only be promoted to those with the means to purchase), as well as addressing barriers such as availability of charging points locally.

The SCR transport strategy acknowledges that private vehicles should be used '*primarily for trips that cannot be made by sustainable alternatives, such as public transport, walking and cycling*'. This demonstrates a recognition that electrification of transport alone is not the solution to decarbonising the sector.

5. The politics of change

Our core argument here is that a business as usual approach cannot bring about the decarbonisation required, and therefore cannot deliver the economic and societal benefits desired by policy makers. In this section we therefore set out an alternative approach, examining the national political context; the strategy for implementation; and finally the argument for a devolved response to the climate emergency.

5.1 National political context

In 2017 (HM Government, 2017), BEIS requested that the devolved regions of England create energy strategies to support the long term goals of decarbonisation. These strategies have become even more important since the UK government has committed in law to a Net Zero Carbon target.

Currently action from central government is behind where it should and could be (see Appendix 9 for diagnosis of current policies). Some headway has been made decarbonising the power sector, but lack of progress is particularly stark in the sectors upon which this report has focussed. Transport is the UK's largest emitting sector, and emissions from buildings were higher in 2018 than in 2015, partly due to weak policies addressing emission reduction in the area. However, as momentum for climate action increases, SCR governance should be prepared to act dynamically according to, and exceeding, national policy.

Explainer: policy commonalities between future scenarios

See Appendix 10 for expected future policy scenarios. There are some policies that all the scenarios share. These are useful to identify, since they represent low risk areas that should be prioritised for strategic development. They include:

- Strong, no regrets policy action can be taken immediately to improve the thermal efficiency of housing, and to accelerate the decarbonisation of domestic heating
- Prioritisation of active transport and efficient public transport networks
- Installation of smart EV infrastructure (although the amount varies)

While this report has focussed on reducing the region's emissions, there is a consensus that regions must also focus on adapting to the impacts of climate change. SCR is particularly vulnerable to climate induced drought and flood events (Hunter, 2019; Blöschl et al, 2019). Extreme heat events are also occurring with more intensity and frequency (Kendon et al, 2018). The 2018 National Adaptation plan asks local authorities to "Embed climate risk management in the built environment; strengthen the climate resilience of infrastructure; address and build resilience to the health and wellbeing impacts of climate change; address climate impacts on Business and Services" (DEFRA, 2018). No regrets policy planning and implementation can be taken immediately in these areas.

5.2 Strategy for implementation

There are currently two other key strategies being written by SCR: the 'refreshed' Strategic Economic Plan (SEP) and the Local Industrial Strategy (LIS). It is important that these strategies are consistent with the Energy Strategy, which will present challenges because decarbonising economies cannot be achieved whilst continuing business as usual. For example, sectors of the economy which are often argued to be central to economic development, like aviation, must be deprioritised in favour of other sectors (Vogel et al., 2019). Yet integrating climate action with broader economic strategy will also present considerable opportunities such as increased jobs in building retrofit and public transport; these should be identified and quantified by SEP and LIS.

Making strategies consistent with one another is important, but how should SCR think about the challenge of implementing the Energy Strategy? Broadly, SCR has three options:

1. **Try and do everything but probably fall short.** SCR currently has limited powers to effect change in the region. Nonetheless, SCR could write a strategy that tries to negotiate its way to Zero Carbon using these powers. This would be an exercise in compromise, since it would have to align with the priorities of local industries and the higher profile companies in the region. It could pay lip service to the other regional strategies and plans without really addressing the key purpose of the Energy Strategy - i.e. decarbonisation.
2. **Do nothing (by design).** The braver and more honest approach is to openly acknowledge that currently SCR only has very limited powers to intervene in the region's

GHG emissions. The SCR strategy could say this and pass back responsibility to central government.

3. **Ask for the powers to implement effective interventions.** We believe the right thing to do is identify the powers that are needed to action decarbonisation at the regional level and then to go back to central government to ask for these powers by negotiating a Local Energy Devolution Deal - as proposed in Dan Jarvis' Manifesto (Jarvis, 2018). The next section gives more detail about what this proposal might contain.

5.3 The argument for a devolved response to the climate emergency.

It is worth noting that if we see more action from central government then local energy strategies could conceivably become less important (see Appendix 10). However, in the event that we see strong climate action from central government, it is still likely that action would be needed at a local level. Indeed, there are certain sectors where interventions at a local level are necessary. One of the main reasons the decarbonisation of transport and domestic sectors has stalled is that action is required at the local level, yet regional and local authorities lack both the obligation and capacity to confront carbon emissions (Willis, 2019). As authorities in SCR voluntarily take on the obligation by announcing climate emergencies, they must now find a way to build the necessary capacity.

We believe that for the Energy Strategy to have teeth, the mayor would have to ask central government to devolve substantial power to SCR. This would not be without precedent; London is the obvious example, and Andy Burnham is currently pressing for new devolution of powers to Manchester. SCR's mayor could justify the demand for devolution by appealing to the UK's newly amended Net Zero Carbon legislation, which when taken seriously will entail urgent action at all levels of government.

What sort of powers could the mayor ask for? Detailed work needs to be done, but as a starting point it is instructive to look to a report produced by SPERI and CLES in 2016 (McInroy et al., 2016), which argues that devolution should '*[enable] local authorities to forge a progressive social, economic, democratic and environmental future*'. Drawing from this, three powers to underpin a climate emergency could be powers to borrow, to manage transportation, and to control local employment policy and support. These would have wide ranging applications, but the following examples illustrate the point.

1. Powers to control borrowing and to manage transportation would allow the SCR's authorities to revitalise public transport, an essential step to reducing the transport sector's emissions and to achieve national government's goal to ensure citizens *'choose the most sustainable mode of travel'* for each journey they take (HM Government, 2018).
    a. There is evidence that the current methodology that governs investment in infrastructure is biased towards the South East (Coyle and Sensier, 2018), meaning valuable infrastructure projects that would drive the development of regional transport infrastructure currently struggle to get funding.
    b. Given new powers to borrow, SCR could invest in local rail, for example Stocksbridge to Sheffield City Centre (donvalleyrailway.org, 2019), and at the same time take control of buses (an idea that is gaining support at the grassroots

level (ACORN, 2019)), to ensure fast, affordable, and integrated public transport throughout the region
    c. It has been demonstrated that improved public transport results in robust economies (e.g. Campaign for Better Transport, 2014; Mackie et al, 2012).
2. Powers over borrowing would also allow enable the aforementioned Mayor's fund, which could support domestic and council owned renewable projects, domestic insulation schemes, and development of low carbon heating solutions. There are several examples for Energy Service Companies (ESCOs) in the UK that provide potential models for SCR, including Robin Hood Energy (RobinHoodEnergy, 2019). This model could be expanded from energy generation and storage to also include assets such as low carbon buses/taxis.
3. As noted earlier, research shows that there are considerable commercial and employment opportunities that will arise out of strong climate action in the region (Baxter & Cox, 2017; Robins et al, 2019).
    a. The SCRES should take aim to take advantage of these opportunities, and not rely too much on aligning a low carbon transition with the current existing strengths of the region.
    b. Therefore, a key pillar of moving to a low carbon economy must be a just transition (Page, 2019). This means genuinely supporting people whose jobs have been displaced, or businesses have been impacted by the changing economy. With a higher proportion of workers employed in high carbon industries, SCR will be more impacted by this shift than other regions (Robins et al., 2019). Local authorities are best placed to understand local labour markets and provide appropriate support, which they can best accomplish with control over employment policy and resources.

Even the brief examples above have the potential to be extremely popular with citizens of SCR. As detailed earlier in the report, reducing demand in the domestic and transport sectors comes with a host of direct benefits to citizens in SCR. A fifth of households in SCR are in fuel poverty and would benefit considerably from high quality insulation and heating systems. Air quality is at illegal levels in numerous parts of the region, something that cannot be tackled without addressing private car use, which in turn requires fit for purpose public transport. Improving transport links is a proven way to create jobs and strong local economies. Most politicians recognise that a just transition is desirable, but it is usually spoken about abstractly; much more concrete is actually providing the support and training required for people to move to new high quality work created by the low carbon transition. This is a politically feasible project that would have significant benefits on the region's social, environmental and economic capital.

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Appendices

Appendix 1: The Provocation Exercise Process

This Provocation Exercise involved the following steps:

- The collation of feedback from UoS academic and professional services staff on the Jan 2019 draft of the SCRES in March 2019
- An internal facilitated workshop for 28 participants in June 2019 to widen out the pool of UoS respondents and a series of interviews with key UoS employees. Workshop participants included:
    - Dr Sol Brown
    - Dr Rob Marchand
    - Dr Alistair Buckley (Energy Institute)
    - Keith Lilley (Director of Estates & Facilities Management)
    - Professor Tony Ryan (Grantham Centre for Sustainable Futures)
    - Jenny Patient
    - Dr Alan Dunbar
    - Dr Janice Lake
    - Yasmin Knight
    - Dr Nick Taylor Buck
    - Professor Neil Hyatt
    - Katie Johnson
    - Dr Rachel Lee
    - Tom Wild
    - Sourabh Devardekar
    - Shruti Patil
    - Ismail Aboufirass
    - Carl Lee
    - Alex Riley
    - Rowena Harris
    - Phil Riley
    - William Mai
    - George Coiley
    - Dilek Arslan
- The collection of background research data relating to UK and SCR decarbonisation in the areas of transport technology, transport strategy, power generation, energy use, policy scenarios, building energy performance, land use impacts and opportunities, mine water heat sources, air quality, fuel poverty, community energy and the co-benefits of decarbonisation. This background data has been shared with SCR.
- The synthesis of this background data into recommendations and reviews. The culmination of which is this report.

Appendix 2: Parameters for the Energy Strategy

General principles for an Energy Strategy

1. Use clear and consistent terminology e.g. does “clean” mean zero or low carbon?
2. Science-based carbon targets should be adopted
3. Plan for meaningful participation of communities, businesses and other stakeholders - A diverse range of people and organisations will need to be involved for successful implementation of the strategy
4. Its structure should be easy to understand for a wide range of stakeholders and build on and communicate global, national and regional contexts. e.g. National goals > Establish energy baselines > Justify carbon targets and present scenario model > Establish strategic priority areas > Delivery plan
5. Its structure should be driven by goals and content rather than trying to duplicate the structure used in other SCR strategies
6. The SCRES should be explicit about social and environmental co-benefits and risks, such as fuel poverty and public transport infrastructure
7. It should use a “biggest first” approach and prioritise sectors where the opportunity for regional intervention overlaps with significant energy use
8. It should reflect national policy and ambition for carbon reduction i.e. moving away from a purely economic focus towards a carbon / climate focus
9. The SCRES should be rich in region-specific details that can have a significant impact
10. The SCRES should be aligned with other regional and local strategies, including the strategic economic plan, to capitalise on their interdependencies. This could be achieved under the umbrella of a region-wide Climate Emergency declaration from the Mayor
11. Regional planning policies should actively enable local energy initiatives (production, storage, integration and efficiency improvements) whether these are community led or commercially led
12. Impact statements should be bold and significant rather than focusing on e.g. solving “range anxiety”
13. Policies should have enough detail to evaluate, and it would be useful to see policies far more focused on fewer high impact interventions
14. The SCRES could make more explicit use of policy scenarios to aid decision making

Appendix 3: SCR Renewables Capacity

Fuel Type	SCR Draft (MW)	NPG capacity register (MW)
Solar PV	275	64.7
Natural Gas	4,796	705
Hydro	2	1
Waste	62	2

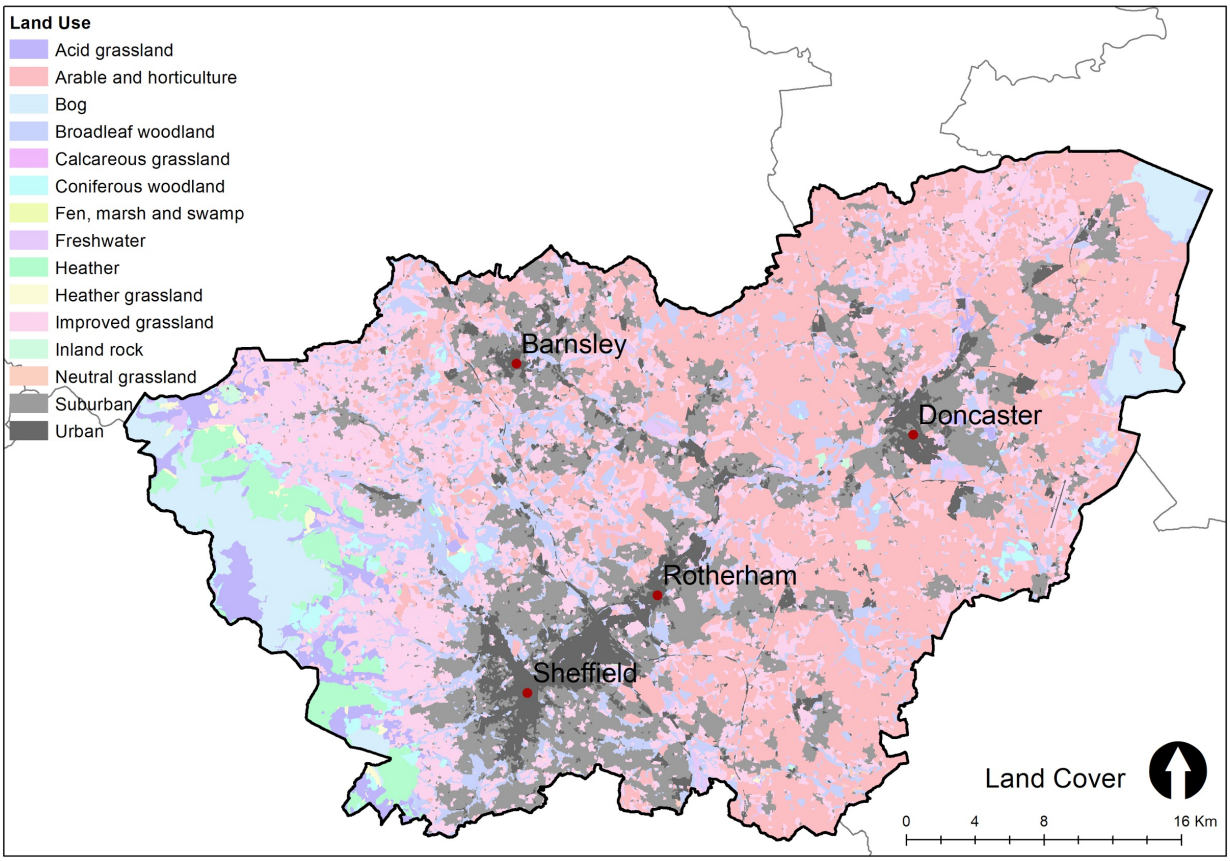
SCR Renewables Capacity as set out in current SCRES draft and Northern Power Grid Capacity Register. The difference between renewable generation capacity between the two different data sets is partly due to changes in the regional definition of SCR (this was originally South Yorkshire plus North Derbyshire plus North Nottinghamshire, but the new definition will be South Yorkshire only) but also partly due to differences in the source data used. NPG solely uses the renewables register maintained by Northern Power Grid. The table highlights the difficulty of monitoring deployed renewable capacity.

Appendix 4: SCR Land Types

Our agricultural areas are important elements of our clean energy and climate mitigation policy, as they cover majority of SCR region: 50%, 63%, 54% of the total land area of Barnsley, Doncaster and Rotherham, respectively. These areas could provide space for renewable energy generation through solar PV farms or PV combined with soil grown crops (Agrivoltaics).

Approximately 11% of SCR land is forest. Forestry currently provides 43.000 jobs in the UK and adds £2 billion to the economy.

Data from the Centre for Ecology and Hydrology and DEFRA were extracted to identify the land types and distribution within the SCR.



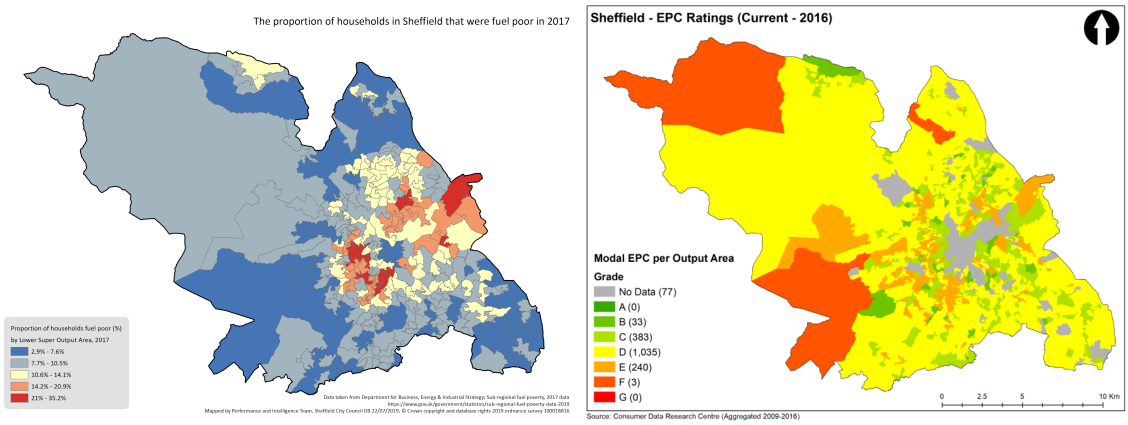
South Yorkshire Land Use Map

Habitat	Area (km²)	% of SY Area
Agriculture	781.2	49
Forestry	176.76	11
Industry	34.06	2
Landfill and Waste Disposal	0.51	0.03
Minerals and Mining	0.98	0.06
Offices	1.04	0.07
Residential	35.17	2.2
Retail	2.68	0.17
Transport	10.9	0.68
Water	22.7	1.42
Other	531	33.27

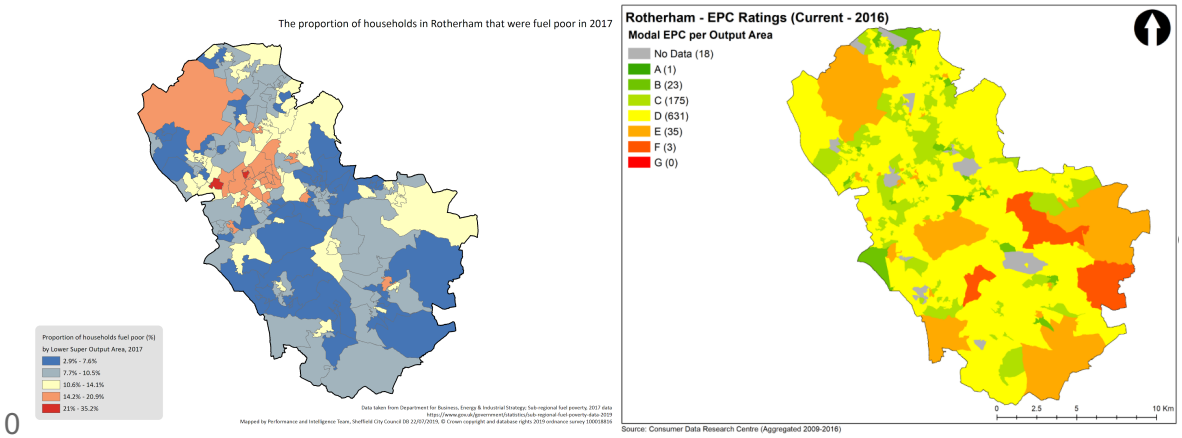
Appendix 5: Fuel Poverty & Household Disposable Income

	Fuel poor households	**Average annual household disposable income**
Sheffield	10.76%	£15,057
Doncaster	10.77%	£15,595
Barnsley	10.57%	£15,552
Rotherham	7%	£15,465

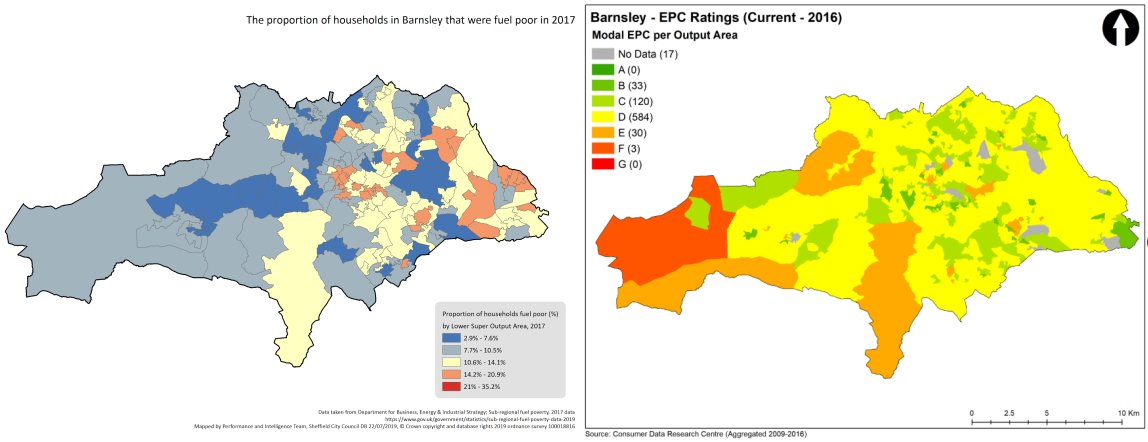
Appendix 6: EPC ratings and fuel poverty



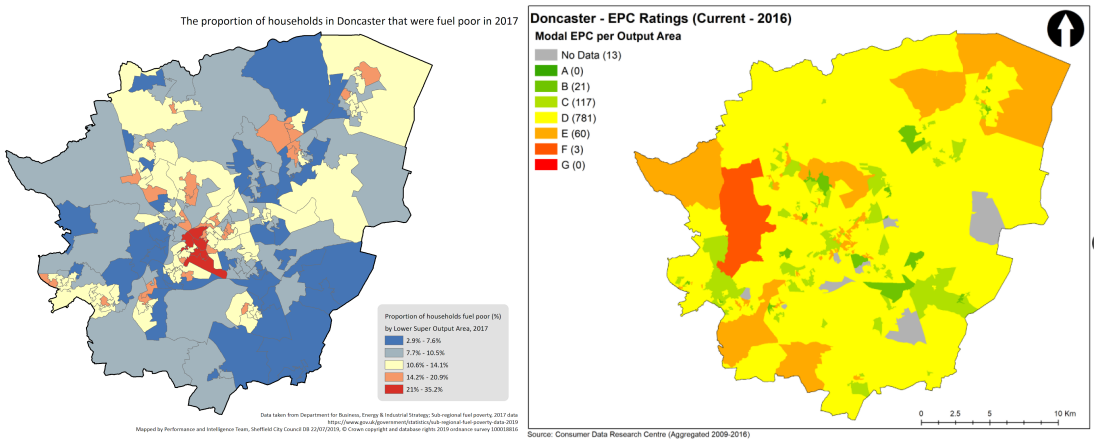
Sheffield



Rotherham



Barnsley

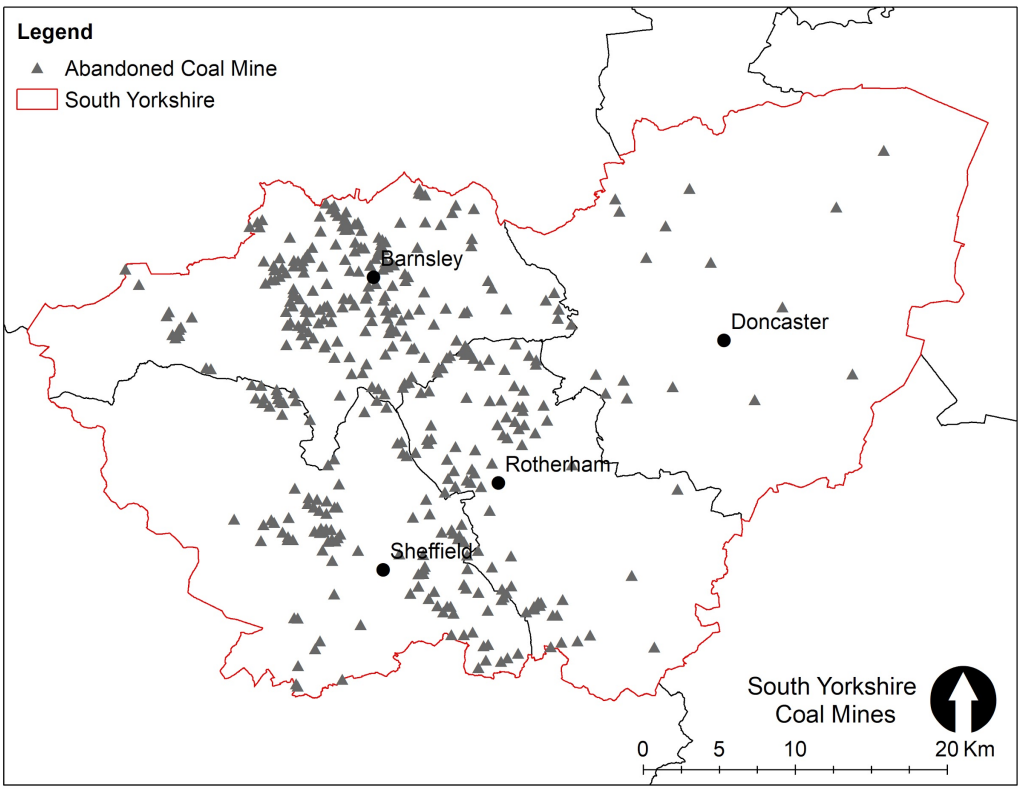


Doncaster

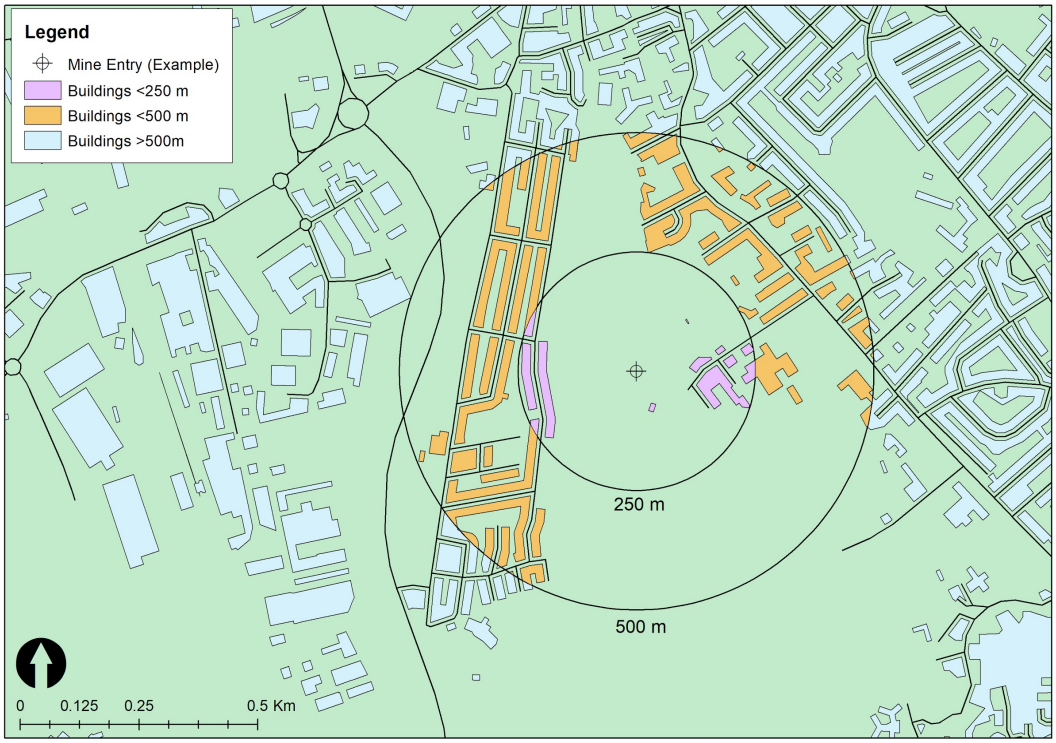
Appendix 7: Mines for heat

The SCR has a long history of coal mining, which rapidly declined during the late 20th century, resulting in an abundance of legacy abandoned coal mine networks in the region. Following mine abandonment, pumping efforts to keep mine workings dry and accessible are switched off, allowing for gradual rebound of groundwater levels within the system. Given the high volume and connectivity of flooded mine networks, there is potential to harness the thermal storage potential of such artificial aquifers through heat-exchange technology. Given that mine water temperatures can increase by 1-3°C with every 100m depth, and given the high efficiency of modern heat pumps, extraction of a few °C from mine waters can produce significant thermal potential. The thermal storage potential of abandoned mine systems can be used for both space heating (e.g. domestic heating, pre-warming of industrial machinery) and space cooling (e.g. cooling of industrial warehouses in summer, removal of waste heat from large-scale computing servers) (Banks et al., 2019).

Data adapted from the Northern Mine Research Society suggests a total of 402 coal mines in South Yorkshire, predominantly in the Barnsley and Sheffield districts (196 and 112, respectively), with a lower occurrence in Rotherham and Doncaster (78 and 16, respectively). To identify opportunities for mine heating/cooling in SCR, mine entries must be assessed on a case-by-case basis, primarily considering; the accessibility of mine waters (i.e. depth of groundwater and proximity of mine entry to end-user), the suitability of waters (e.g. mine water temperature and chemistry), and engineering aspects (e.g. the required heating/cooling demand, and efficiency of heat pump employed) (Ramos et al., 2015). An example feasibility study based upon building proximity to mine entries is provided below, whereby two radii of 250m and 500m are used to highlight the effect that increasing pumping distance can have on potential reach. Given the appropriate dataset (available from the Coal Authority), such desk studies could be performed for all mine entries in the SCR for each of the considerations listed previously, with areas of overlap being the buildings most-suited to this technology. Given the high degree of interconnectivity between variables (e.g. lower feasible pumping range for lower temperature waters), a thorough suitability assessment must be performed before candidate schemes proposed.



Abandoned Coal Mines in South Yorkshire



Example Feasibility Study (Proximity-Based)

Domestic mine water heating schemes have been successful elsewhere in the UK. In 1999, 16 new-build dwellings were provided with heat in Shettleston, Glasgow. Mine waters were extracted from 100m depth at 12°C, circulated through a heat pump, and returned at 3°C, producing water at a temperature of 55°C for use in domestic radiators and immersion heaters. As a result, annual heating costs were reduced to £19-30, and annual hot water costs reduced to £55-60 per annum per dwelling (2003 prices). Domestic heat pumps were also successfully used in 2001 to heat 18x 1950s three-storey tenement flats in Lumphinnans, Fife, indicating that retrofitting to existing housing is a possibility.

While the potential benefits of mine water domestic/district heating are clear, there remain obstacles to implementation which must be addressed, the key risks and considerations being (in no particular order);

1) The use of high Fe content mine waters (common for coal mine waters in the UK) runs the risk of ochre (iron oxyhydroxide) precipitation clogging heat pumps/pipes if water becomes oxygenated. This may be mitigated against by using a closed-loop system (immersed underground pipelines) rather than an open-loop (direct water abstraction) system, and regular maintenance schedules.
2) The risk of reinjected (cool) water breaking through mine pathways to the abstraction (warm) shaft, adversely affecting heat exchange potential.
3) Uncertain legal issues - must guarantee longevity of pumping operations and accept future liability for any resulting mine water pollution. This was one of the factors contributing to the failure of the proposed Shawfair development.
4) Borehole drilling, if required, would require costly licences and permissions which could add years to the payback period for smaller-scale schemes.
5) A long-term heating/cooling demand must be established in the vicinity of the mine entrance. For new builds, this requires a commitment to mine heating from project initiation.

Appendix 8a: SYEC Contracts and funding for 2018/19

Project title and funder	**Dates – from and to**	**Activities**	**Notes**
Scottish Power Energy People Trust Wiser and Warmer	December 2016 – March 2018	To support families and older people in some of the city's most hard to reach neighbourhoods providing peer-to-peer support around energy efficiency, affordable warmth and fuel poverty. Targets: 250 fuel poor/vulnerable individuals	Total grant, £49,425 Target achieved - reached a total of 772 vulnerable individuals – more than 3 times the original target.
Department for Business, Energy and Industrial Strategy and Citizen's Advice Bureau Big Energy Savings Network (BESN), 2018-19, across the city with focus in key areas: Lowedges Jordanthorpe and Batemoor; Darnall and Tinsley; Heeley and Sharrow	October 2018 – March 2019	Targets: 200 consumers 80 Front Line Workers	Funding £10,000 £8,000 paid in November 2018 £2,000 to be paid on completion of project Targets achieved – reached 205 consumers and 86 front line workers

National Lottery Awards for All Green bees – buzz around our energy trail	No start or end date set but aiming to develop over spring 2019 for delivery in the summer holidays	Eco detective trail and crafts around the Farm and in the Energy Centre	Funding £8,750 – paid November 2018 No formal reporting but photos of completed trail encouraged
PKW Heeley and Gleadless Community Partnerships Development programme Fuel poverty advice in Heeley and Gleadless areas	January 2018 – December 2019	Energy bills weekly drop-ins	Total contract £25k per annum for 2 years to support the delivery of health and well-being activities and the management of the Community Partnership
PKW Community Wellbeing Programme for Darnall and Tinsley Fuel poverty advice in Darnall and Tinsley areas	September 2018 – March 2019	2 drop ins Partnership meetings - attend at least one a quarter Carry out at least 10 face to face appointments or home visits.	Funding £1,350 Quarterly reporting through PKW channels
PKW Community Wellbeing Programme for Lowedges, Batemoor and Jordanthorpe Fuel poverty advice in LBJ in particular at the 2 local Foodbanks	2019-2020	To support the delivery of community based activity relating to ABCD outputs	Funding £1,750
Community Benefit Fund – Sheffield Renewables	March 2019 – February 2020	To work with 100 households in Sheffield in fuel poverty	Funding £2,400

Appendix 8b: SYEC Potential contracts and funding

Source	Amount (£)	Notes
Sheffield City Council	No current funding	Could propose that the Council buy the SYEC building as an asset and lease to the Farm on a peppercorn rent. Would demonstrate an investment in fuel poverty and climate change action for the city.
Individual Energy Companies	Approx £20k	Warm Homes Discount – industry initiatives scheme.
Esmee Fairbairn Foundation	Up to £20k	As part of our winter preparations offer – organise 'make do and mend' events to add linings to curtains, make draught excluders, make foot warmers and include our energy advice
Smart Meters GB	£25k	No date for applications currently but offered annually Target group is older people (60+) and involves highlighting the benefits of installing a smart meter
Energy Redress Scheme – Energy Saving Trust	Minimum grant is £20k – includes revenue and capital Total of £2.5m available for voluntary and community organisations	Applied in May 2018 but registration failed on the financial due diligence test of the Farm's accounts. Encouraged to apply again if the situation improves.
Northern Powergrid Partnering Communities Fund	£10k bid submitted	Applied in January 2018 – proposed project was a good match for the fund criteria but there were concerns about the financial viability of the Farm. Encouraged to apply again if the situation improves.

Ebico Trust	Bid for £40k submitted in January 2018	Application submitted in February 2018 – response 'plan was considered to be a worthwhile venture but there are a great many calls on the Trust funds and regretfully your application has not been successful on this occasion.' Encouraged to apply again.

Appendix 9: Current policies

Diagnosis of current policies and expected future policy environment

According to the UK Climate Change Committee, current policies are currently insufficient to meet UK decarbonisation targets: *'Progress in deploying measures to reduce emissions is off-track across transport, buildings, agriculture and land use. In these areas, progress to date is behind virtually every indicator we track, often by a wide margin.'*

Nonetheless, climate change will continue to gain political salience in the UK as the climate crisis worsens. As this document is being written, several countries in Europe are experiencing record breaking heat waves, attributed to climate change. Simultaneously, public opinion is already overwhelmingly supportive of taking climate action. Therefore, it is extremely likely that climate mitigation policy will become central to any administration's policy platform within the next few years. If the UK had a change in administration, climate policy is likely to accelerate even faster. For instance, the 2019 Labour Party conference passed a motion for a 'Green New Deal', which aims to get the UK's emissions to Net Zero Carbon by 2030.

1. Current national policies

1a) Legislated targets

The original 2008 Climate Change Act (CCA) legally bound the UK "to reduce [scope 1 and 2] carbon emissions and associated greenhouse gases by at least 80 per cent from 1990 levels by 2050" (FES, p. 31). In 2019, the CCA was amended to a net zero emission target by 2050. This new target permits international offsets, however it still constitutes a considerable increase in Parliament's ambition to reduce greenhouse gas emissions. The target does not include emissions from international aviation and shipping, which went against the recommendation from the CCC.

Parliament is responsible for delivering emission reductions according to a "a series of five-yearly carbon budgets. So far, the Government has set carbon budgets up until 2032, and these progressively reduce the amount of greenhouse gases the UK can legally emit in each five-year period" (FES, 31)

1b) Governance over targets

Since meeting the CCA's target is a statutory duty, responsibility to ensure that targets are met ultimately falls on the Prime Minister. However, currently responsibility for implementing the required changes in policy primarily falls with BEIS.

1c) Existing national climate change policies

These are some national policies already in place or promised.

Policies:

- Transport
    - Government will end the sale of all new conventional petrol and diesel cars and vans by 2040. “By 2040, we want cycling and walking to be the natural choices for shorter journeys, or as part of a longer journey… we are spending £1bn to drive the uptake of ULEVs [ultra low emission vehicles]” (clean growth strategy)
    - “Increasing the supply and sustainability of low carbon fuels in the UK through a legally-binding 15-year strategy to more than double their use, reaching 7% of road transport fuel by 2032” (road to zero)
    - “Continuing to offer grants for plug-in cars, vans, taxis and motorcycles until at least 2020.” (road to zero)
    - “Introducing a new voluntary industry-supported commitment to reduce HGV greenhouse gas emissions by 15% by 2025, from 2015 levels.” (road to zero)
- Domestic
    - Banning new gas boilers by 2025
    - Promised: £3.6bn to upgrade the energy efficiency of a million homes, with the Energy Company Obligation (ECO) extended to 2028 at its current level.
    - As many homes as possible” to reach Energy Performance Certificate (EPC) Band C by 2035. Private rental properties already have to meet E
    - Renewable Heat Incentive is already being reformed to focus more on long-term decarbonisation via technologies such as heat pumps and biogas. It will spend £4.5bn to support innovative low-carbon heat technologies in homes and businesses between 2016 and 2021.
- Energy
    - Unabated coal phase out by 2025
    - Offshore wind will compete for up to £557m in low-carbon support, confirmed yesterday but first announced in 2016
    - Innovation and collaboration to develop carbon capture, usage and storage, with a commitment to deploy subject to cost reduction
    - Carbon price floor capped at £18.08 till 2021
- Industry
    - £2.5 billion will be invested by the government to support low carbon innovation from 2015 to 2021
    - Develop a package of measures to support businesses to improve their energy productivity by at least 20% by 2030
    - To publish joint industrial decarbonisation and energy efficiency action plans with 7 of the most energy intensive industrial sectors
    - Energy Entrepreneurs fund to support the development and demonstration of state of the art technologies, products and processes
- Other
    - Research and development commitments
        - £900m between 2015 and 2021 in power sector
        - £265m to “reduce the cost of electricity storage, advance innovative demand response technologies and develop new ways of balancing the grid”
        - £177m renewables

    - £162m Energy Resource Process Efficiency

1d) Expected policy in the near-term

A white paper on energy policy was expected from BEIS in July '19, but due to political circumstances its publication has been delayed. Nonetheless, some more expected policy can be gleaned from a tranche of consultations released in the place of the white paper. These include:

- Citizens will part fund the construction of new nuclear generation through their energy bills, including taking on investment risks. This set-up is known as the Regulated Asset Base Model.
- Considering funding Rolls-Royce to develop advanced modular reactors.
- Harness existing oil and gas infrastructure to develop CCS, to potentially reduce costs for the industry that is yet to get off the ground. The government will suspend decommissioning wells and pipelines to give projects time to develop.
- Policy is being considered regarding creating a market for Carbon Capture and Underground Storage (CCUS). This would probably be based on penalties being levelled against emitters.
- The government will likely comply with new EU rules that stipulate that for generators to receive payments on the capacity market they must emit no more than 550 grams CO2 per KWh. This will prevent coal power stations from participating in the capacity market.
- Allow new suppliers to more easily enter the energy retail market, to promote innovation and the smart grid.
- Policies to encourage energy efficiency improvements for businesses are likely to be introduced.
- Policies to bring as many fuel poor homes up to EPC rating C as possible are likely. These will be aligned with a sustainability principle, avoiding fuel poverty to be tackled at the cost of carbon reduction targets.

Appendix 10: Policy Scenarios

Diagnosis of current policies and expected future policy environment

Given our political context, what sort of policies should we expect to emerge in the short to medium term? There are several options.

1) Benchmark - Business as usual

Electricity production continues to slowly be decarbonised, but by 2050 natural gas still provides a significant proportion. Government support continues to be unambitious and piecemeal regarding the key sectors of transport, domestic housing, and land use & agriculture. This means that progress slows closer to 2050 as low hanging fruit disappears. We can expect to see some support for higher proportion of hydrogen in the gas network, some support for renewables, and maintained support for electric vehicle charging.

2) Climate Change Committee (CCC)

The CCC does not propose specific policies, but benchmarks by which progress can be measured. By 2050 all electricity generation is low carbon and is likely to be quite centralised due to a high reliance on CCS, all surface transport, including HGVs is decarbonised, industry emissions have reduced by 90% through the use of CCUS, large-scale emissions removal and hydrogen production is in place, policies supporting the decarbonisation of aviation and shipping are well-established, hydrogen use and production is well-established, and the UK has seen a 20% fall in consumption of beef, lamb, and dairy.

It's unlikely that such a transformation could occur without significant government intervention, which would likely be focused on incentivising large companies to decarbonise energy production (through the continued use of mechanisms like the carbon price floor), allowing citizens access to low-carbon versions of consumer goods available today, significant investment in low carbon domestic heating (probably hydrogen), and large investment in research and development.

3) Green capitalism

This scenario holds that a low carbon transformation of the UK is feasible through primarily market driven innovation. Proponents of this approach argue that it can enable the 2050 targets to be met, although this is not uncontested. At the very least, this scenario requires that the decarbonisation of the UK economy will become a top priority for consumers.

If such consumer action materialised, under this scenario, it is likely that current incentivisation to decarbonise a centralised power sector is gradually ramped up alongside the incentivisation of CCS, electric cars would become the dominant mode of transportation, and many individuals would install high quality home insulation and low carbon heating solutions.

4) Green New Deal

Passed at the 2019 Labour conference (motion here), the Green New Deal (GND) is a Keynesian-style programme that proposes massively increased government investment in low carbon infrastructure and associated industries: “a systematic programme of investment in green infrastructure of at least £50 billion a year”. It explicitly aims to provide social benefits alongside carbon reductions, “providing skilled-jobs, making homes warmer and keeping energy costs down." Such a programme would see the UK reach net zero emissions as early as 2030.

The GND has not yet been brought together into one coherent policy programme, but policies would include properly funding many of the projects proposed by the CCC, plus enabling community energy projects (both power generation and district heat systems), empowering local government to make decisions regarding low carbon development, and a concentrated focus on a just transition. If this policy scenario occurred, a focus on low-carbon development should be the mainstay of industrial strategy within SCR.

How do these scenarios map onto the energy projection scenarios?
The National Grid Future Energy Scenarios (FES) are the industry standard for future energy demand projections. While the following above policy scenarios do not map perfectly onto the FES scenarios, each one has a close relative. Note that each would have to be adjusted to be aligned with the new 1.5°C goal.

Policy Scenario	FES scenario
Business as usual	Steady Progression
Committee on Climate Change	Two Degrees
Green Capitalism	Consumer Evolution
Green New Deal	Community Renewables/1.5°C

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RICARDO

Provision of carbon target setting and future scenario modelling

James Harries

Thursday 24th October

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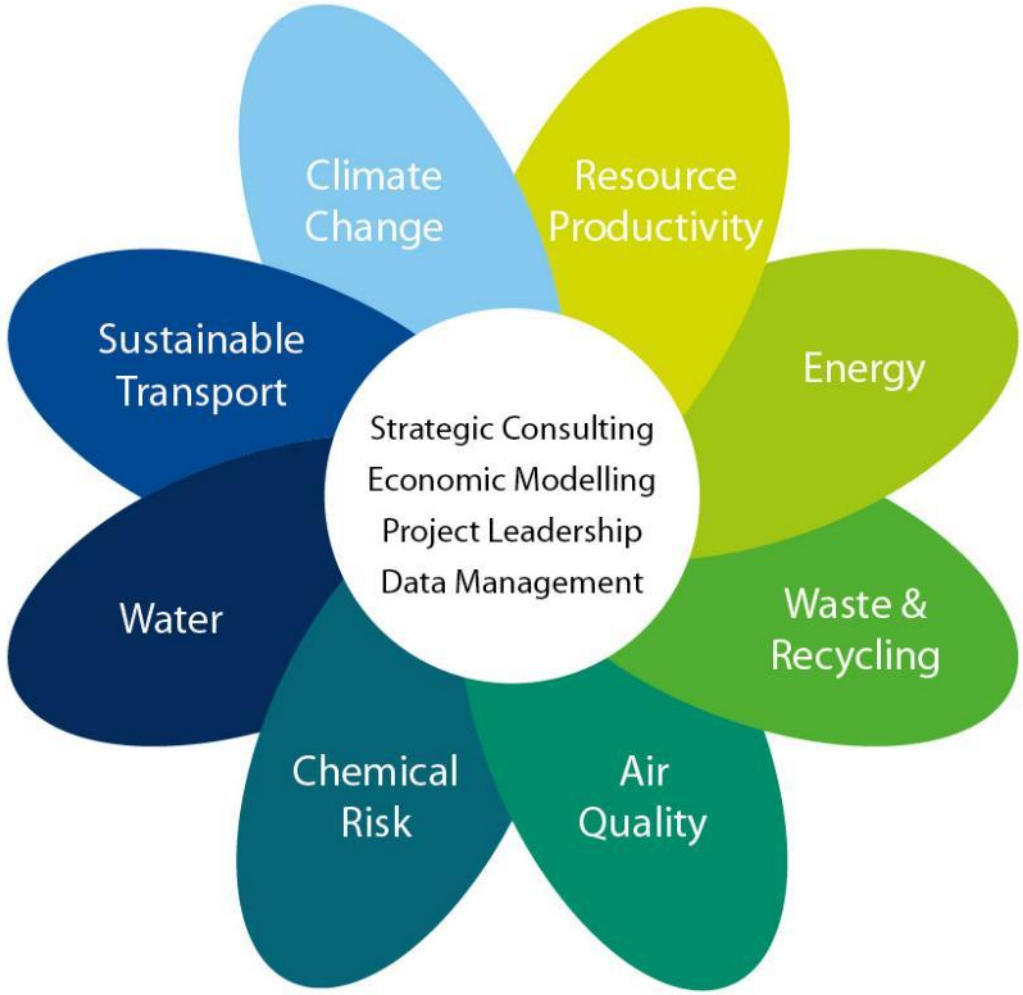


This project

Target

- Nature of target?
  - Energy-related CO_2? All GHG?
  - Scope – what to include?
- Level of ambition?

Action

- How to meet the target
  - Sectoral share of effort
  - Specific interventions
  - Policies

A carbon neutral / net zero target

- A balance between emissions and ‘removals’ (e.g. forestry, negative emissions technologies).
- What are other LAs doing?

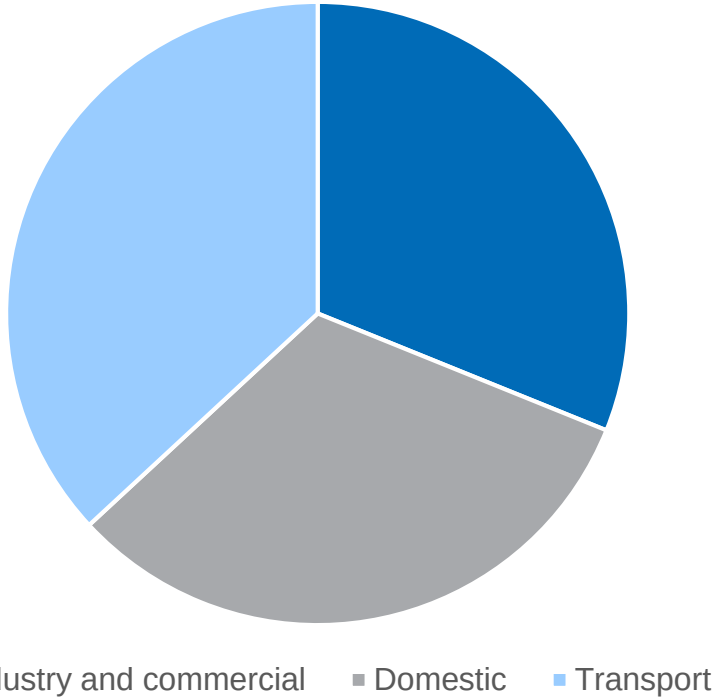
Target date	Council
2050	LB of Merton (plus 2030 for Council’s own emissions), London, Durham CC (amendment for 2030 defeated), Kent CC, South Cambridgeshire DC, RB of Windsor & Maidenhead
2045	Barnsley MBC
2038	Manchester CC
2030	Around 50! (including Sheffield)
2025-2030	Leicester CC
2028	Nottingham CC
2025	LB of Tower Hamlets, Teignbridge DC
Others	Some LAs have a target to ‘aspire’ to net zero by a certain date (e.g. 2030) – Bedford, Birmingham, Cheshire West and Chester
	Bradford MDC – 90% reduction by 2030 compared to 2005 levels
	No targets – some not yet voted on, others voted down (e.g. Devon CC). Doncaster to establish a date.
	No dates – e.g. Gwynedd CC & Powys CC - “carbon neutral eventually”
	Council operations only – e.g. LB of Redbridge

Committee on Climate Change advice

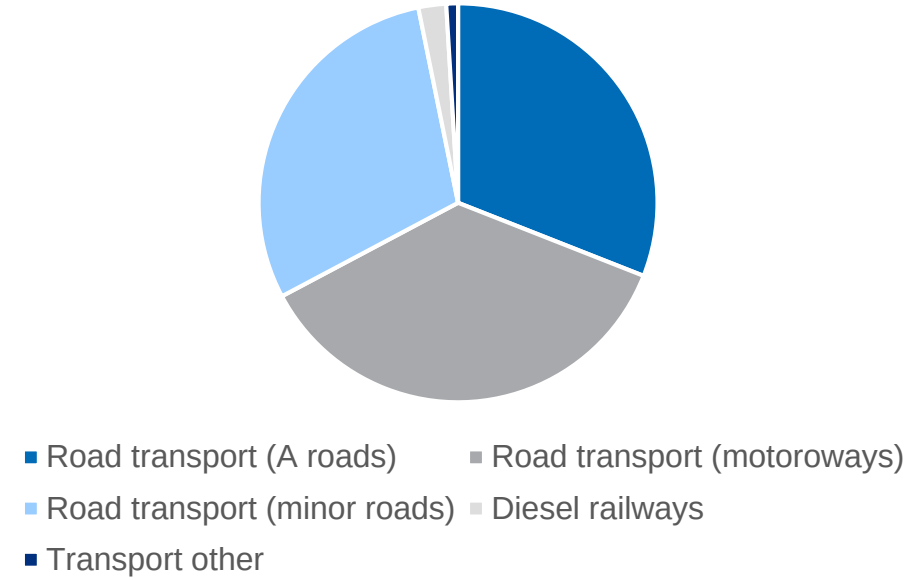
- UK should commit to net zero by 2050 (2045 for Scotland, 95% by 2050 for Wales).
- A net-zero GHG target for 2050 will deliver on the UK's commitment under the Paris Agreement.
- Current policy is insufficient for even the existing targets – while many of the policy foundations are in place, a major ramp-up in policy effort is now required.
- Overall costs are manageable but must be fairly distributed (annual resource cost of up to 1-2% of GDP to 2050).
- Some sectors (e.g. the power sector) could reach net-zero emissions by 2045, but for most sectors 2050 currently appears to be the earliest credible date.
  - "Setting a legal target to reach net-zero GHG emissions significantly before 2050 does not currently appear credible and the Committee advises against it at this time".
- To meet the target:
  - Resource and energy efficiency
  - Some societal choices, e.g. diet
  - Extensive electrification, particularly of heating and transport
  - Development of a hydrogen economy (to demand for some industrial processes, for applications in long-distance HGVs and ships, and for electricity and heating in peak periods)
  - CCS
  - Changes in the way we farm and use our land

The current situation

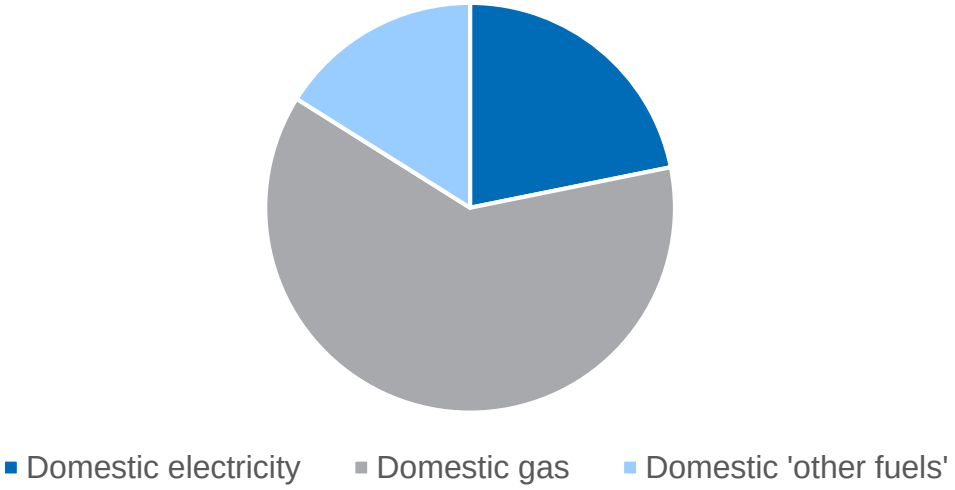
2017 CO2 emissions



2017 Transport CO2 emissions



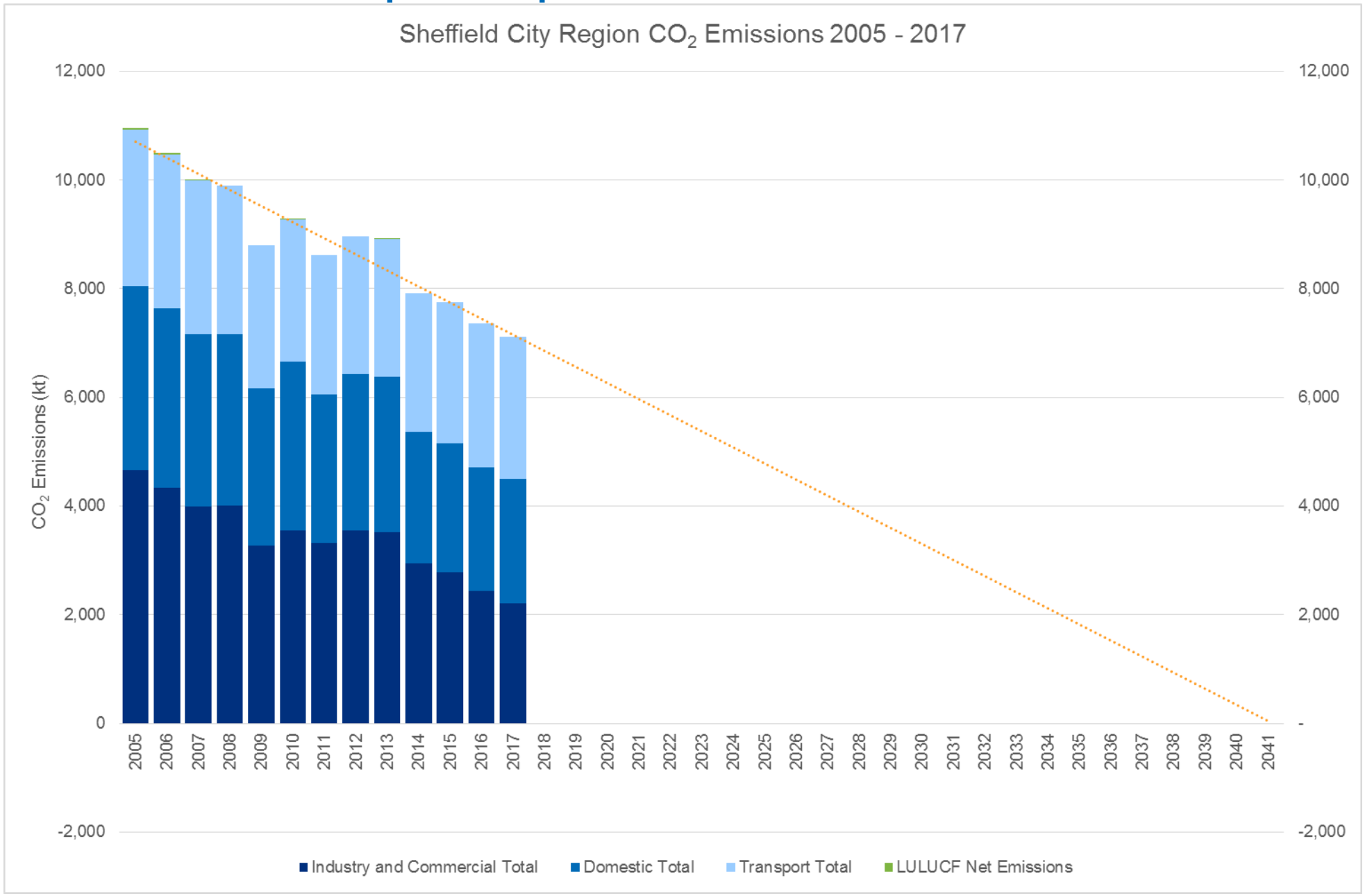
2017 Domestic CO2 emissions



The future?

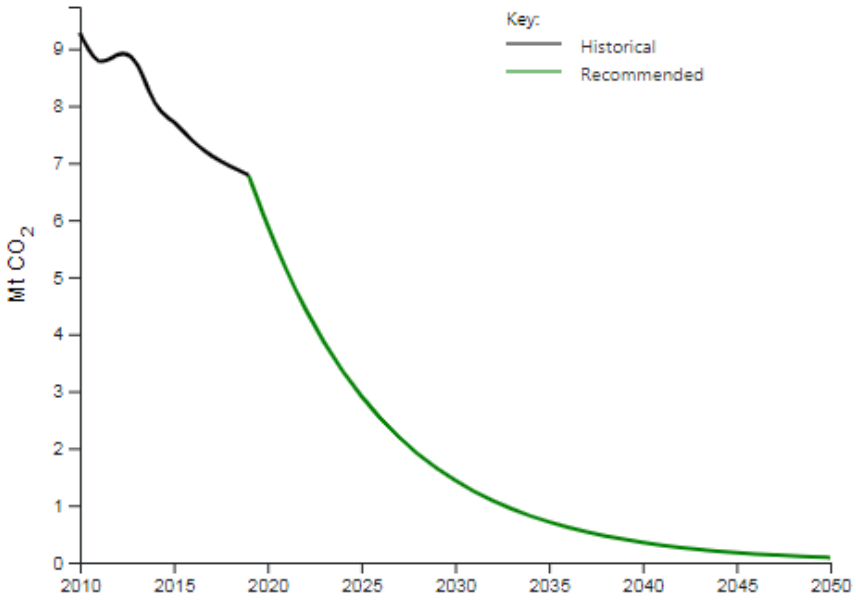
- What does net zero actually look like?
- Size of residual emissions depends on assumptions about removals.
  - The more removals that are assumed, the greater the residual emissions can be.
- But NETs are inherently uncertain – risky to bank on them too much?
- Precautionary approach – assume that any removals cover residual emissions in non-energy sectors (e.g. agriculture, waste) and that energy sectors reduced to zero?
- But – CCC advice = CCS is a necessity not an option. Assume aggregate annual capture and storage of 75-175 $MtCO_2$ in 2050.
- Paradox – the earlier the target date, the less you can justifiably rely on NETs.
  - Can't assume CCS for a 2030 target. Challenging to assume much CCS for a 2040 target.

Top-down assessment: simple extrapolation



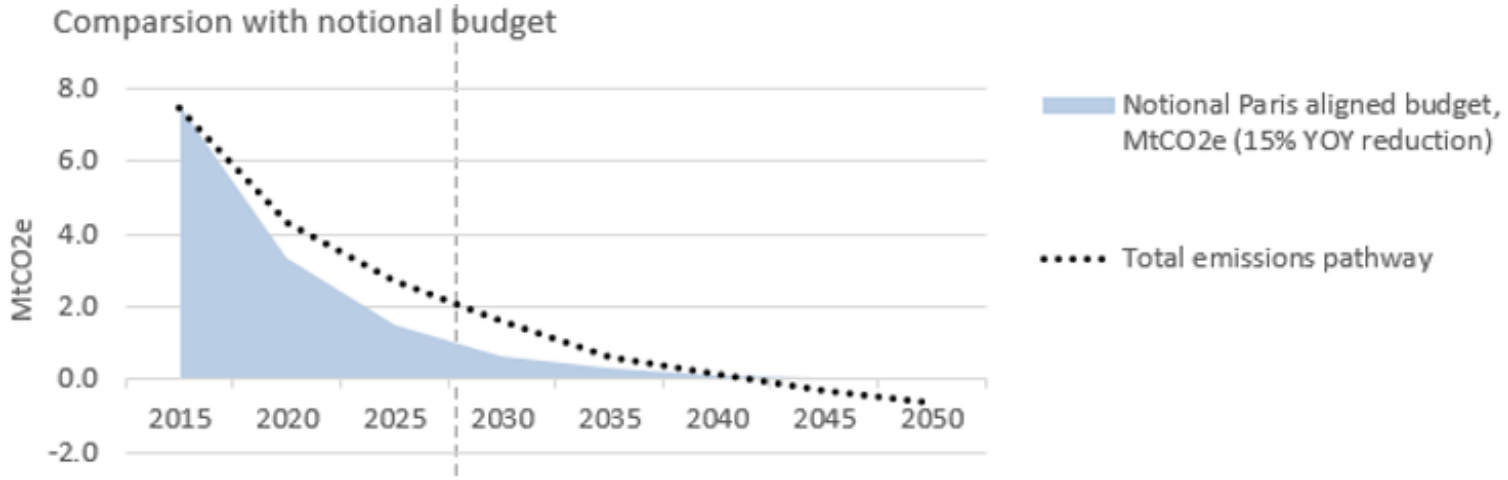
Top-down assessment: Tyndall Centre analysis

- Takes a global carbon budget and ‘shares it out’ to countries and then shares the UK portion to local authorities.
- Not an exact science, and does not indicate deliverability.
- Key messages:
  - SCR should stay within a maximum cumulative CO_2 emissions budget of 44.7 MtCO2 for the period 2020 to 2100. At 2017 CO2 emission levels, SCR would use this entire budget within seven years from 2020.
  - Reach zero or near zero carbon no later than 2042 (5% of carbon budget remains).
  - Would require average annual emissions reductions of 13.2%.
- LULUCF:
  - SCR should increase sequestration of CO_2 through LULUCF in the future, aligned with CCC’s high level ambition of tree planting, forestry yield improvements and forestry management.
  - Recommend it compensate for the effects of non-CO_2 GHG emissions (within the geographical area) that cannot be reduced to zero, such as non-CO2 emissions from agriculture .
- Also need to take action on aviation and shipping.



Bottom-up assessment: SCATTER

- A tool to assess different low carbon scenarios.
- A series of ‘levers’ – can choose level of ambition (1-4).
- Tool shows how emissions will change under different scenarios for each LA or combined authority.



- If all levers set to maximum – SCR would achieve net zero by between 2040 and 2045.
- So what does this mean…

SCATTER: emerging example assumptions for meeting net zero emissions

- Transport sector:
  - 25% reduction in total travel demand by 2030; share of distance travelled by car reduces by 22% by 2050
  - By 2035, 100% zero emissions vehicles and buses, complete railway electrification by 2025
  - 100% of zero emission cars use batteries by 2050
  - Road modal share falls to 50%; greater hybridisation. Rail freight is all electric
- Buildings sector:
  - 60% homes insulated, average thermal leakiness decreases by 75%
  - Energy demand for domestic lights and appliances decreases by 60%
  - Energy used for domestic cooking is entirely electric
- Commercial and industry:
  - Space heating demand drops by 40%, hot water demand by 30%, cooling demand by 60%
  - The proportion of commercial heat supplied using electricity is 80-100%
  - Electricity demand for lights & appliances decreases by 25%; energy demand for cooking decreases by 22%
- Waste sector:
  - Quantity of waste decreases 20%
  - 65% Recycling, 10% landfill, 25% incineration achieved by 2035, increasing to 85% by 2050

Bottom-up assessment: CURB

- A model developed for the World Bank for us by cities.
- Allows user to vary assumptions about specific policy interventions (i.e. not pre-set like SCATTER).

<<Modelling work is still ongoing and an update on CURB will be given at the Infrastructure Board meeting.>>

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Sheffield City Region MAYORAL COMBINED AUTHORITY

INFRASTRUCTURE BOARD

24th OCTOBER 2019

PERFORMANCE DASHBOARD

Purpose of Report

This paper and accompanying performance dashboard provide board members with up to date performance information on the Infrastructure programme delivered on behalf of the LEP and MCA

Thematic Priority

Secure investment in infrastructure where it will do most to support growth.

Freedom of Information

This paper is not exempt from FOI requests and will be published in line with the Combined Authority Publication Scheme.

Recommendations

The Board are asked to:

1. Scrutinise the performance information provided in order to identify future performance deep-dives or significant areas of risk.

1. Introduction

1.1 Performance dashboards for the Infrastructure programme of the LEP and MCA are attached for members to review

2. Proposal and justification

2.1 The following is a summary of performance by programme.

2.2 Infrastructure

Further programme detail is provided in **Appendix 1a**
A full performance dashboard is provided at **Appendix 1b**

The Infrastructure programme is now in the fourth year of a 5-year initiative to grow the economy in the Sheffield City Region and the schemes within the programme are continuing to deliver and contribute to the outputs/outcomes required to support the overarching goals of the Strategic Economic Plan 2015-2025.

The Strategic Economic Plan 2015-2025 valued the package offered by the SCR Infrastructure programme at £596m, and SCR asked for a 36% match funding

contribution from government, a minimum £217m for the period 2015-2021 with £29.2m in 2015/2016.

The SCR is continuing to work, secure and accelerate the delivery of the Infrastructure package of investment that currently comprises of 53 schemes, Table 1 shows the status of each in terms of their position within the SCR assurance framework together with the total value of SCR Local Growth Fund attributed to each.

Table 1: Scheme Status

Status	No. of Schemes	£ LGF Fund Value (Baseline)
Complete	24	£99,144,818
In Delivery	21	£96,368,888
Pending Contract	2	£8,495,372
Pipeline	6	£23,145,228
Total	**53**	**£227,154,306**

Performance Summary

The Strategic Economic Plan 2015-2025 stated that the SCRIF Programme was forecast to return benefits with 24,000 associated jobs contributing to the overall growth deal target of 70,000 and unlocking the delivery of over 14,000 houses.

Outputs/ Outcome

Table 2 illustrates how the Infrastructure Programme outputs/ outcomes are currently performing based on the Q1 2019/20 performance reports returned by the Scheme Promotors. The baseline figure is taken from figures defined in a either a business case or part of the contracted funding agreement.

Table 2 Output/Outcome Performance

Outputs/Outcome	Baseline	Actual to Date
Jobs Created:	45,570	4,014
Housing Units	9301	403
Newly Built Road (km)	13	9
Commercial Floorspace (m2)	1,628,508	71870
Reduced Flooding (m2)	23,588	2,581

Management Action

There is one project which is identified as high risk because wider works set out in the contract will not be completed. Discussions are ongoing with the project sponsor with a view to receiving a proposed contract change for consideration. Seven projects have amber risks including potential cost overruns and delayed or non-delivery. Close monitoring of risks and issues takes place and discussions are ongoing with all project partners about whether activity can conclude within the LGF Programme window or whether projects should be deferred until additional funding becomes available. A wide evaluation to appraise the viability of schemes is underway, with outcomes expected to be reported and agreed at the November LEP Board.

3. Consideration of alternative approaches

3.1 The Performance Dashboard is the first iteration of data for the Thematic Boards and reflects the feedback taken from the meeting. Members can shape how the dashboard looks and the data and information included to fulfil their remit for performance management.

4. Implications

4.1 Financial

LGF – Allocations must be spent within the funding year, therefore all approved schemes which enter into contract are monitored closely to ensure any potential underclaims are mitigated to prevent loss of funding to the programme and the scheme promoter**.**

4.2 Legal

Funding Agreements are in place for all schemes/programmes where the MCA is the accountable body, where appropriate they include payment clauses linked to performance.

4.3 Risk Management

Risks on all schemes are recorded in a scheme Risk Register and mitigation actions are reviewed and escalated as appropriate. Risks are incorporated into the individual thematic dashboards to enable members further oversight.

4.4 Equality, Diversity and Social Inclusion

All schemes promote inclusivity to ensure residents across SCR can access support/opportunities regardless of where they live. A series of inclusive growth targets have recently been included in all new LGF approvals.

5. Communications

5.1 All existing schemes form part of the organisations communication plans.

6. Appendices/Annexes

6.1 Appendix 1a - Infrastructure Programme Summary
Appendix 1b - Infrastructure Dashboard

REPORT AUTHOR	Peter Hague
POST	Programme Management Officer - Programme and Performance Unit
Director responsible	Ruth Adams
Organisation	SCR Executive
Email	Ruth.adams@sheffieldcityregion.org.uk
Telephone	0114 2203442

Background papers used in the preparation of this report are available for inspection at: 11 Broad Street West, Sheffield S1 2BQ
Other sources and references:

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Scheme Name:	**Infrastructure**
Funder:	Local Growth Fund
Programme value:	*£227,154,306*

Deliverers and Contract Values:

Promoter	Projects	Funding	Status
Barnsley MBC	Better Barnsley Town Centre Retail and Leisure Development/ Glassworks	Complete	£7,430,000
Barnsley MBC	Junction 36 Strategic Site Acquisition	Complete	£109,000
Bassetlaw DC	Harworth and Bircotes Step Change Programme Road Improvements	Complete	£450,000
Bassetlaw DC	Worksop site delivery and Vesuvius scheme	Complete	£500,000
Bassetlaw DC	Worksop Phase 2a	Complete	£1,246,440
Bassetlaw DC	Bassetlaw Employment Sites – Retford	Complete	£725,000
Chesterfield BC	Peak Resort	Complete	£2,900,000
Derbyshire CC	Seymour Link Road	Complete	£3,780,000
Doncaster MBC	Doncaster Urban Centre - Colonnades	Complete	£2,280,000
Rotherham MBC	A618 Growth Corridor	Complete	£759,000
Rotherham MBC	Forge Island	Complete	£1,500,000
SCRUDF	EZ Funds	Complete	£5,000,000
Sheffield CC	Purchase of the Advanced Manufacturing Park (AMP) Technology Centre	Complete	£7,500,000
SCRUDF	SCR Property Intervention Fund	Complete	£8,119,902
SCRUDF	SCR JESSICA Loan	Complete	£15,000,000
Sheffield CC	AMRC Lightweighting Centre Phase 1	Complete	£10,000,000
Sheffield CC	Olympic Legacy Park Infrastructure Works	Complete	£4,899,000
Sheffield CC	Grey to Green Phase 1 - Sheffield Riverside Business District	Complete	£2,464,000
Sheffield CC	University of Sheffield Campus - Phase 1	Complete	£2,891,923
Sheffield CC	Central Retail - SRQ	Complete	£3,514,000
SYPTE	BRT(N)	Complete	£4,015,087
Chesterfield BC	Chesterfield Waterside	Complete	£2,696,896
Doncaster MBC	Doncaster Urban Centre - Waterfront West	Complete	£750,000
Barnsley MBC	Superfast South Yorkshire	Complete	£10,614,570
Barnsley MBC	M1 Junction 36 – A6195 Dearne Valley Economic Growth Corridor (Phase 1 Hoyland)	In Delivery	£15,708,075
Bassetlaw DC	Worksop Phase 2 b	In Delivery	£1,150,560
Bassetlaw DC	Harrison Drive, Langold	In Delivery	£135,000
Chesterfield BC	Northern Gateway	In Delivery	£5,830,000
Doncaster MBC	St Sepulchre Gate Ph.1 & 2	In delivery	£7,500,000
Doncaster MBC	Yorkshire Wildlife Park	In Delivery	£5,000,000
Doncaster MBC	DSA Capacity Expansion - Loan	In Delivery	£3,500,000
Doncaster MBC	Doncaster Urban Centre - The Civic & Cultural Quarter (CCQ)	In Delivery	£635,000
Doncaster MBC	DN7 Unity - Hatfield Link Road	In Delivery	£12,545,000
Doncaster MBC	Finningley and Rossington Regeneration Route Scheme - Phase 2 (FARRRS)	In Delivery	£9,100,000

Doncaster MBC	Doncaster Urban Centre - Markets Ph1	In Delivery	£3,189,000
Doncaster MBC	Doncaster Urban Centre - Quality Streets	In Delivery	£1,350,000
Rotherham MBC	Gullivers Infrastructure	In Delivery	£1,500,000
Sheffield Hallam	National Centre of Excellence for food Engineering - NCEFE	In Delivery	£618,704
Sheffield CC	Parkwood Ski Village	In Delivery	£4,800,000
Sheffield CC	Knowledge Gateway	In Delivery	£4,115,000
Sheffield CC	Upper Don Valley Flood Alleviation Scheme	In Delivery	£3,460,000
Sheffield CC	G2G 2 - Castlegate	In Delivery	£3,320,000
Sheffield CC	Inner Ring Road	In Delivery	£3,787,000
Rotherham MBC	Waverley Local Centre	In Delivery	£7,000,000
Barnsley MBC	Digital Media Centre 2	In Delivery	£2,125,549
Barnsley MBC	M1 Junction 36 – A6195 Dearne Valley Economic Growth Corridor (Ph. 2 Goldthorpe)	Pending Contract	£7,324,000
Barnsley MBC	M1 J37 Phase 1 - Claycliffe	Pending Contract	£1,171,372
Barnsley MBC	M1 Junction 37 Ph2 –Economic Growth Corridor (Claycliffe)	Pipeline	£10,636,628
Doncaster MBC	Doncaster Urban Centre - St Sepulchre West / Station Forecourt Phase 3	Pipeline	£1,600,000
Doncaster MBC	DSA Capacity Expansion - Grant	Pipeline	£5,020,600
Doncaster MBC	Doncaster Urban Centre Markets Phase 2	Pipeline	£1,488,000
Rotherham MBC	Forge Island Phase 2	Pipeline	£2,800,000
Rotherham MBC	Century BIC Phase II	Pipeline	£1,600,000

Timescale:	2015- 2021
Geography covered:	All South Yorkshire
Description:	To deliver economic growth and jobs across the region by working in partnership with the regions Local Authorities and Private Sector Businesses. Securing investment in infrastructure where it will do the most to support growth, including providing access to key markets outside the City Region, unlocking key development opportunities and ensuring that the local actions contribute to the overarching goals of the Strategic Economic Plan
Target Beneficiaries:	Local Authorities and Private Sector Businesses across the Sheffield City Region

Outputs (2015-2020 Programme):

24 projects claimed all their LGF funding allocation to the value of £99,144,818.

Key Outputs delivered to date:	**No.**
• Jobs Created (No.)	4,014
• Housing Units (No.)	403
• Newly Built Roads (km)	9
• Commercial Floorspace Created (m2)	71,870
• Reduced Flooding (m2)	2,581

Additional Outputs delivered to date:	**No.**
• Length of Road Resurfaced (km)	11
• Commercial Area of reclaimed/redeveloped lane (Ha)	8
• Commercial Floorspace refurbished (m2)	3,065
• Commercial broadband access (m2)	111,661

Executive Board: Infrastructure

This Quarter: Q1 2019/20

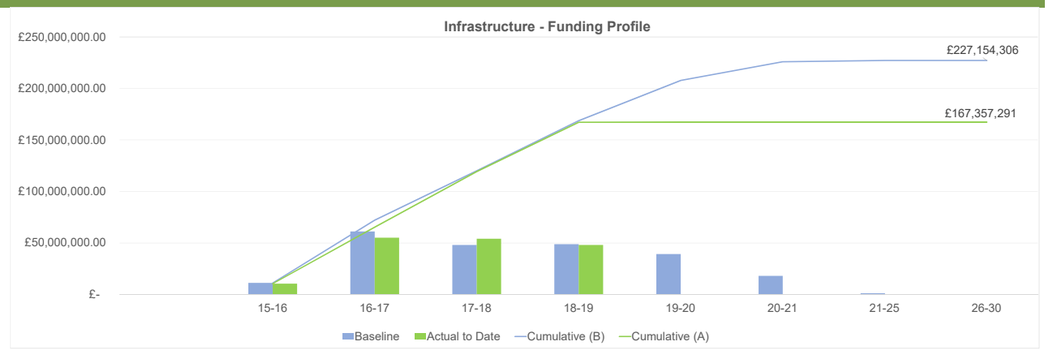
Financial Progress

Local Growth Funding	In Contract	Pending Contract
£227,154,306	£195,513,706	£8,495,372

	Total	Complete	In delivery	Pending Contract	Pipeline
Projects (No.)	53	24	21	2	6
Local Growth Fund (£)	£ 227,154,306.00	£99,144,818	£96,368,888	£8,495,372	£23,145,228

Local Growth Fund	This Quarter	Financial Year								Total
		15-16	16-17	17-18	18-19	19-20	20-21	21-25	26-30	
Baseline		£11,042,790	£61,054,892	£48,084,652	£48,679,760	£39,082,583	£18,036,162	£1,173,467	£0	**£227,154,306**
Actual to Date		£10,454,176	£54,928,515	£53,951,358	£47,942,756	£80,486	£0	£0	£0	**£167,357,291**
Forecast		£0	£0	£0	£0	£36,655,496	£21,343,138	£1,600,000	£0	**£59,598,634**
Variance		-£588,614	-£6,126,377	£5,866,706	-£737,004	-£2,346,601	£3,306,976	£426,533	£0	**-£198,381**
% Progress		95%	90%	112%	98%	0%	0%	0%	0	**74%**

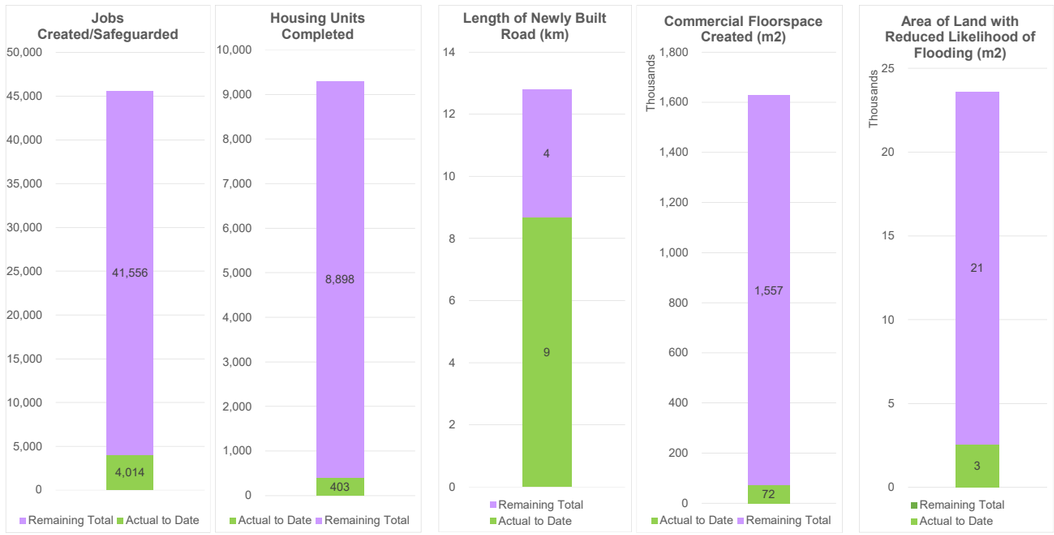
Financial Progress Comments:
The current financial profile indicates an Infrastructure LGF commitment of £204,009,078 across 47 projects. There is also a pipeline of 6 projects with the potential to spend a further £23,145,228. The financial profile for the early years of the programme show an underspend against the baseline profile as some projects have submitted project change requests to reprofile financial spend into future years.

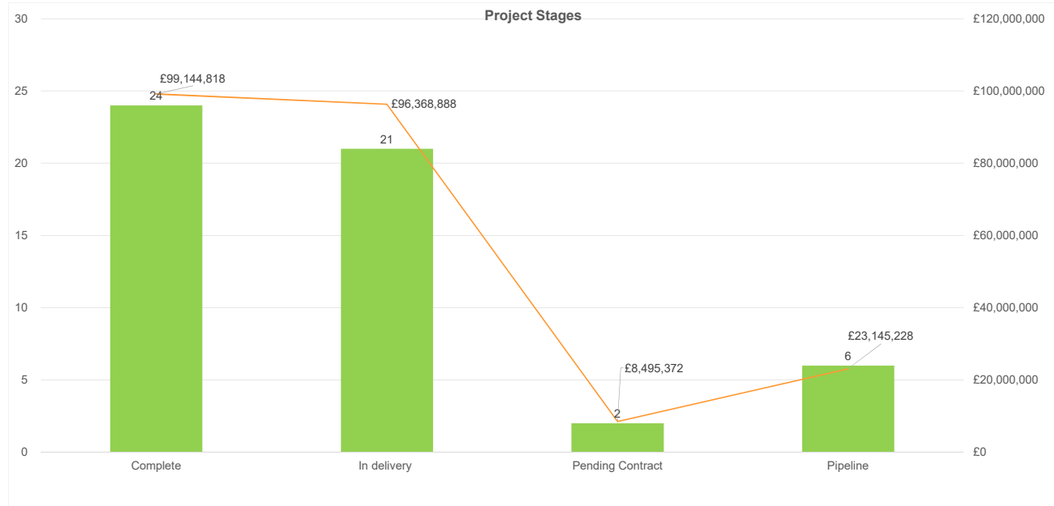


Outputs / Outcomes

	This Quarter	Financial Year								Total
		15-16	16-17	17-18	18-19	19-20	20-21	21-25	26-30	
Jobs Created/Safeguarded										
Baseline	-	633	408	1,435	3,076	4,292	5,407	22,689	7,630	45,570
Actual to Date	-	82	55	929	2,458	490	0	0	0	4,014
Forecast		0	0	0	0	3,528	6,327	25,668	3,703	39,226
Variance	-	-551	-353	-506	-618	-274	920	2,979	-3,927	-2,330
% Progress	-	13%	13%	65%	80%	11%	0%	0%	0%	9%
Housing Units Completed										
Baseline	-	0	50	100	304	1,317	4,349	2,281	900	9,301
Actual to Date	-	0	0	0	403	0	0	0	0	403
Forecast		0	0	0	0	769	4,756	2,421	900	8,846
Variance	-	0	-50	-100	99	-548	407	140	0	-52
% Progress	-	-	0%	0%	133%	0%	0%	0%	0%	4%
Length of Newly Built Road (km)										
Baseline	-	0	4	0	3	0	4	2	0	13
Actual to Date	-	0	4	2	3	0	0	0	0	9
Forecast		0	0	0	0	2	4	0	0	6
Variance	-	0	0	2	0	2	0	-2	0	2
% Progress	-	-	100%	-	100%	-	0%	0%	-	68%
Commercial Floorspace Created (m2)										
Baseline	-	0	12,090	242,732	104,211	62,627	56,907	843,978	305,963	1,628,508
Actual to Date	-	0	12,090	788	54,115	4,877	0	0	0	71,870
Forecast		0	0	0	0	182,556	505,047	1,127,970	31,522	1,847,095
Variance	-	0	0	-241,944	-50,096	124,806	448,140	283,992	-274,441	290,457
% Progress	-	-	100%	0%	52%	8%	0%	0%	0%	4%
Area of Land with Reduced Likelihood of Flooding (m2)										
Baseline	-	0	2,581	0	0	0	21,007	0	0	23,588
Actual to Date	-	0	2,581	0	0	0	0	0	0	2,581
Forecast		0	0	0	0	0	21,007	0	0	21,007
Variance	-	0	0	0	0	0	0	0	0	0
% Progress	-	-	100%	-	-	-	0%	-	-	11%

Outputs / Outcomes Comments: The table indicates that the projects that are progressing or that have been completed have started to deliver the key outputs and outcomes, but with a slight lag. Good progress has been made in terms of delivering 9 km of newly built road with a further 6 km to be delivered, surpassing the baseline figure of 13km of newly built road. Slow progress has been made in delivering the jobs, housing units, commercial floorspace and flood alleviation, however, performance is forecast to improve significantly from 2019/20. Of the 45,570 jobs anticipated, approximately 5,500 are pipeline projects awaiting appraisal and assessment, with the remaining in contract.





Risk Log

Risk No.	Risk Event	Consequence	Mitigation	Likelihood (1-5)	Impact (1-5)	Score (1-25)
1	Signifcant cost escalation across some projects making them unaffordable/ poor value for money.	Potential for project(s) to be taken out of the programme.	On going review of projects and an acceptabe level of over programming.	2	4	8
2	Loss of future LGF funding	Unable to initiate new Economic Growth projects.	Quarterly review of project performance of the programme.	1	5	5
3	Failure to deliver outputs and outcomes	No benefit to SCR Economy. Possible clawback of funds by SCR	Quarterly review of outputs and outcomes across all projects in delivery across the programme	2	3	6
4	Potential for projetcs to slip funding profile past the end of the programme.	Reputation	Stimulate interest and engage with project promotors	1	3	3

Risk Assessment	Risk Assessment Comments:
7	The key risks are those associated with failing to deliver projects within the time frame of the LGF programme. Consequently, the programme fails to maximise on its investment in terms of delivering the desired outputs and outcomes in support of the SEP. This could potentailly impact on the ability of SCR to attract future capital funding.

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Sheffield City Region MAYORAL COMBINED AUTHORITY

INFRASTRUCTURE BOARD

24th OCTOBER 2019

LOCAL GROWTH FUNDING UPDATE

Purpose of Report

This paper provides members with an update relating to the current LFG programme commitments and the scale of projects in the over-programmed pipeline

Thematic Priority

Cross cutting theme

Freedom of Information

The paper will be available under the SCR Publication Scheme

Recommendations

The Board is asked to:

1. Consider and note the scale of the pipeline and actions in progress to address the over-programming position.

2. Note the need to maximise claims at Q2 ahead of the annual performance review.

1. Introduction

1.1 LGF is a 6 year, £360m funding programme secured through three rounds of Local Growth Fund bids. 2019/20 is the fifth and penultimate year of funding. Some investment made in the early years of the programme have now repaid loan funding back to the programme which has increased the total value of available programme funding to £378m

1.2 In the first four years of delivery £239m has been spent (defrayed). A further £49m is committed to projects currently in contract and a further £19m has been approved for projects which are in the process of satisfying contract conditions. The total combined value of approved projects and spend to date is therefore £307m.

1.3 The LGF grant allocation includes a ringfenced amount of £40.5m for a major transport project which is retained for separate approval by the DfT, this funding cannot be utilised for other projects

1.4 The level of funding remaining available for LGF projects across all thematic areas (the programme headroom) is now £30.2m.

1.5 All funding needs to be fully spent (defrayed) by 31st March 2021.

2. Proposal and justification

2.1 When the 2019/20 budget was approved by the MCA in March 2019 the pipeline of projects indicated that there was potential over-programming of up to £24.4m.

As projects have developed some cost estimates have increased and a number of new projects have come forward seeking funding. As a result of these changes the current combined value of projects in the pipeline (including the retained major) has increased to £120.5m this equates to £80m excluding the retained major and therefore the potential over-programming has now increased to £49.8m.

This calculation includes a number of new inward investment projects.

2.2 The current profile of project approvals and the remaining pipeline is set out below by theme;

Executive Board	Approved	Pipeline	Total	Comments
Business Growth	£46m	£42.5m	£88.5m	This is £36.5m above the notional allocation and it is unlikely that all projects will land in the region or be able to complete works by 31st March 2021. This also includes the latest inward investment schemes which have yet to be accepted to the programme.
Housing	£10.0m	£1.35m	£11.35m	£4.05m of the £10m housing funding is currently committed to schemes, the remaining £6m is held in the housing fund for pipeline schemes.
Infrastructure	£199.3m	£20.1m	£219.4m	This includes several highways schemes designed to unlock development space for employment and housing
Skills and Employment	£18.3m	£7.5m	£25.8m	This is £2.2m below the notional allocation and it is unlike that all projects will be able to complete works by 31st March 2021.
Transport	£28.5m	£49m	£77.5m	This includes the £40.5m retained major transport project.
Total	**£302.1m**	**£120.5m**	**£422.6m**	

This shows that the total request for project funding is £423 m. There is a £5.1m corporate commitment which covers the costs associated with carrying out the accountable body functions for the LGF programme. The total spend requirement is therefore £428m.

2.3 It will not be possible to approve all the projects currently seeking funding based on the current programme, and continuing to approve schemes as they become ready, the programme could be fully committed by the January cycle, although this full commitment point has slipped throughout the year so far.

2.4 The LEP Board in September considered a range of options to address the over programming position and agreed to 3 actions;

1. Scheme promoters to self-evaluate the deliverability of schemes within the funded window (to March 2021) and nominate schemes to defer or remove from the programme
2. SCR to seek opportunities to find additional resource (e.g. consider decommitting uncontracted elements from the programme, legacy Growing Places Funding, housing fund allocations etc) and
3. Undertake a LEP prioritisation process following the actions 1 and 2 if there remains an over programmed position

2.5 The outcomes of actions 1 and 2 have been requested to report back to the LEP Board in November in order to facilitate this the self-evaluation action was discussed with Directors of Finance and Economic Development Directors at their meeting on 18th September. Directors were asked to coordinate a response with their delivery teams and to nominate schemes to defer or remove from the LGF Programme.

This evaluation is to look at;

- all projects in the pipeline but not yet approved
- all projects approved but not yet in contract and
- all projects in delivery but likely to underclaim.

A list of projects in the pipeline and not yet in contract has been shared with all Authorities along with a self-evaluation form. The Programme and performance unit have also contacted business project promoters and project promoters where there is a potential for the scheme to underclaim.

2.6 A deadline of 4th October for the self-evaluation to be completed was set as this aligns with the Q2 LGF project return deadline, early indications show 2 projects have already confirmed that they will defer to a later funding programme but the pipeline has increased from its previous position.

2.7 A copy of the current project list is attached at **Appendix A.**

2.8 LGF claims at Q1 were only £1.4m despite starting the year with £34.5m of committed spend, this equates to 3.9% of the minimum required in year spend (£35.5m) and 2% of the current expected in year spend (£68m).

The annual performance review takes place before the Q3 returns are received, hence it is important that Q2 claims are maximised otherwise the delivery rating for the region will again be impacted and monthly claims should also be considered for projects in delivery

3. Consideration of alternative approaches

3.1 The LEP meeting in September also considered the following options which were discussed but not agreed

3.2

- If no further action is taken the programme will consider projects for funding approval as they are ready rather than based on any other priorities.
- Pause the process of taking decisions on scheme approvals until SCR undertake a full review of all projects in the pipeline.

An independent full review of projects was undertaken in 2018/19 and was successful in speeding up the rate of projects progressing to delivery, however some projects missed their delivery milestones and are now in the competitive element of the programme.

Pausing the programme is likely to have a negative impact on the ability to achieve the required spend profiles.

4. Implications

4.1 Financial

This paper explores the financial implications of the LGF programme in the approach to the final year of delivery.

£40.5m of the remaining pipeline is funded via the DfT retained majors programme which is ringfenced for this project only, hence this is not included in the calculation of remaining programme headroom of £30.2m.

The £5.1m corporate commitment which covers the costs associated with carrying out the accountable body functions for the LGF programme is a mandatory requirement and equates to 1.3% of the total programme.

4.2 Legal

None as a result of this paper, however legal implications will need to be considered for any de-commitment scenarios.

4.3 Risk Management

This paper presents the risk of over-programming of the Local Growth Funding

4.4 Equality, Diversity and Social Inclusion

5. Communications

5.1 Statutory Officers have temporarily closed the open call for new schemes until a decision has been reached on the process for resolving the over-programming. LEP Board may wish to reserve the right to accept schemes in the case of an exceptional inward investment application

6. Appendices/Annexes

6.1 Appendix A –Project lists

REPORT AUTHOR	Sue Sykes
POST	AD – Programme and Performance Unit
Officer responsible	Ruth Adams
Organisation	Sheffield City Region
Email	Ruth.Adams@sheffieldcityregion.org.uk
Telephone	0114 220 3476

Background papers used in the preparation of this report are available for inspection at: 11 Broad Street West, Sheffield S1 2BQ

Other sources and references:

*Thematic Priorities

1. Ensure new businesses receive the support they need to flourish.
2. Facilitate and proactively support growth amongst existing firms.
3. Attract investment from other parts of the UK and overseas, and improve our brand.
4. Increase sales of SCR's goods and services to other parts of the UK and abroad.
5. Develop the SCR skills base, labour mobility and education performance.
6. Secure investment in infrastructure where it will do most to support growth.

APPENDIX A

Project Pipeline – Main Programme

Thematic Area	District	Project	19/20 £	later years	Total Spend all years (£M)
TRANSPORT	RMBC	Waverley Lower Don Valley A630	2,965,000	37,495,000	40,460,000
INFRA	DBC	DSA Capacity Expansion - Grant	5,000,000	0	5,000,000
SKILLS	BMBC	Barnsley College Digital Innovation Hub	2,590,000	0	2,590,000
INFRA	BMBC	M1 Junction 37 Ph2 –Economic Growth Corridor (Claycliffe)	1,376,678	9,259,950	10,636,628
TRANSPORT	DBC	A630 Westmoor Link Dualing	2,500,000	2,500,000	5,000,000
TRANSPORT	RMBC	Greasbrough Road Junctions	0	3,518,236	3,518,236
INFRA	DBC - Project Deferred	Doncaster Urban Centre Markets Phase 2	1,488,000	0	1,488,000
INFRA	RMBC	Forge Island Phase 2	2,800,000	0	2,800,000
SKILLS	DBC	Doncaster UTC Ltd	100,000	200,000	300,000
INFRA	DBC - Project Deferred	Doncaster Urban Centre - St Sepulchre West / Station Forecourt Phase 3	0	1,600,000	1,600,000
SKILLS	SCC	Digital Innovation Partnership	0	2,000,000	2,000,000
SKILLS	CBC	DRIIVE	200,000	2,396,782	2,596,782
INFRA	RMBC	Century BIC Phase II	600,000	1,000,000	1,600,000
		Total	19,619,678	59,969,968	79,589,646

Project Pipeline – BIF

Thematic Area	Type	Project	19/20	later years	Total Spend all years (£M)
BUSINESS	Inward Invest	Project Merthyr	0	£5,000,000	£5,000,000
BUSINESS	Inward Invest	Project Chorus	0	£8,000,000	£8,000,000
BUSINESS	Inward Invest	Project Switzerland	0	£15,000,000	£15,000,000
BUSINESS	Inward Invest	Project Ebbwvale	0	£9,000,000	£9,000,000
BUSINESS	Inward Invest	Project Robotics	0	£1,000,000	£1,000,000
BUSINESS	Inward Invest	Project Underground	0	£2,000,000	£2,000,000
BUSINESS	BIF (Sub £2m)	Project Hot Air	£500,000	£0	£500,000
BUSINESS	BIF (Sub £2m)	Project Illinois	£400,000	£0	£400,000
BUSINESS	BIF (Sub £2m)	Project Bannana	£350,000	£0	£350,000
BUSINESS	BIF (Sub £2m)	Project Sheep	£500,000	£0	£500,000
BUSINESS					£0
BUSINESS	Made Smarter and Productivity	Various	£796,397	£0	£796,397
		Total	**£2,546,397**	**£40,000,000**	**£42,546,397**

Project Pipeline – Housing Fund

Thematic Area	District	Project	19/20	later years	Total Spend all years (£M)
HOUSING	RMBC	Rotherham Town Centre	0	3,916,915	3,916,915
HOUSING	BMBC	Nanny Marr Road	0	367,500	367,500
HOUSING	SCC	Foxhill crescent	1,250,000	1,250,000	2,500,000
HOUSING	Derbyshire Dales	Bradwell CLT	270,000	0	270,000
HOUSING	SCC	Claywood*	0	300,000	300,000
		Total	**£1,520,000**	**£5,834,415**	**£7,354,415**

Projects with Full approval but not yet in contract – Main Programme

District	Project	19/20	later years	Total Spend all years (£M)	Approval Date
BMBC	Infra - M1 J37 Phase 1 – Claycliffe	1,171,374	0	**£1,171,374**	29/01/2018
RMBC	Infra - Waverley Local Centre	2,583,561	£4,416,439	**£7,000,000**	03/06/2019
SCC	Skills - Digital Engineering Skills Development Network	583,546	£3,129,109	**£3,712,655**	29/07/2019
DMBC	360 VFX	906,000	0	**£906,000**	03/06/2019
SCC	Skills - teenager to employee	494,900	0	**£494,900**	06/08/2019
	Total	**5,739,381**	**7,545,548**	**13,284,929**	

Projects with Full approval but not yet in contract – BIF

District	Project	19/20	later years	Total Spend all years (£M)	Approval Date
SCC	ITM Power	400,000	0	**400,000**	Feb-18
DMBC	Abbey Glen	0	100,000	**100,000**	Oct-18
DMBC	360 Media	1,400,000	2,700,000	**4,100,000**	Jun-18
SCC	First Group Contact (First Group)	643,964	1,106,036	**1,750,000**	Nov-18
SCC	Nprime	92,910	2,090	**95,000**	Feb-19
RMBC	Ricardo	284,402	1,695,598	**1,980,000**	Mar-19
SCC	Fernite	135,000	0	**135,000**	Mar-19
BMBC	Reliance High-Tech Ltd	121,000	0	**121,000**	Jul-19
SCC	Skyline	0	619,000	**619,000**	Aug-19
	Total	**3,077,276**	**6,222,724**	**9,300,000**	

Projects with Full approval but not yet in contract – Housing Fund

District	Project	19/20	later years	Total Spend all years (£M)	Approval Date
RMBC	Modern Methods of Construction Pilot	663,880	0	663,880	14.02.19
SCC	Little Kelham	1,000,000	0	1,000,000	14.02.19
	Total	**3,181,024**	**0**	**3,181,024**	

Infrastructure Board Forward Plan 2019/20:

- Thematic strategy and policy leadership
- Programme - development and delivery
- Performance and Risk Management
- Funding and Financial Decision Making (up to £2m)

Date	Suggested Agenda items
09/01/19	• **Utilities Roundtable Discussion** • **SCR Energy Strategy – Revised Final Draft** • **Strategic Employment Land Study** • **Spatial Planning Performance** • **Infrastructure Investment decisions (tbc)** OTHER MATTERS TBC
27/02/20	• **Infrastructure Place Packages** • **Enterprise Zone Audit** • **SCR Draft Digital Infrastructure Plan** • **Performance and Risk Management** • **Infrastructure Investment decisions (tbc)** OTHER MATTERS TBC
30/04/20	tbc
02/07/20	tbc
w/c 24/08/20 (tbc)	tbc
w/c 19/10/20 (tbc)	tbc

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SCR – Transport Board

25th October 2019 at 10am

Venue: 11 Broad Street West, Sheffield, S1 2BQ

DRAFT AGENDA

Agenda Ref No	Subject	Lead	Page
1.	Apologies	Mayor Dan Jarvis	
2.	**Declarations of Interest by individual Members in relation to any item of business on the agenda** Declarations of Interest by individual Members in relation to any item of business on the agenda.	Mayor Dan Jarvis	
3.	Urgent items / Announcements	Mayor Dan Jarvis	
4.	Public Questions of Key Decisions	Mayor Dan Jarvis	
5	Minutes of the last meeting	Mayor Dan Jarvis	
6.	Transforming Cities Fund		
7.	Local Highway Maintenance Challenge Fund and Local Pinch Point Fund		
8.	Future Mobility		
9.	Bus Overview		
10.	Implementation Plans		
11.	Integrated Transport Block		
12.	STAF Funding		
13.	Transport for the North update		
15.	Draft 2020/21 South Yorkshire Transport Revenue Budget & Capital Programme		
16.	Dashboard (SYPTE)		
17.	Dashboard (SCR)		
18.	SEP / LIS Update		

	Any Other Business		Mayor Dan Jarvis
DATE OF NEXT MEETING — 10th January 10am 11 Broad Street West, Sheffield S1 2BQ			