

Climate Impact Assessment – Housing Growth Delivery Plan #68

Please note – Officers can view this CIA on the Climate Impact Assessment App and looking for existing assessment number 68. This CIA has been approved by the Climate Team.

Basic Details

- **CIA Author:** Max Ellaby
- **Date Created:** 5/11/24
- **Title:** Housing Growth Delivery Plan
- **Project Description:**

Sheffield City Council declared a climate emergency in 2019. We have an ambition to become a net zero carbon city and Council by 2030. The Housing Growth Delivery Plan sets out ambitions and plans to grow housing within the city, and it is acknowledged that any construction of homes will have an impact on carbon emissions. The plan outlines why housing growth is needed, and the ways that carbon emissions can be mitigated and managed. It is important to note that the Plan itself is high-level and does not directly reduce emissions. However, there are key priorities, strategies and details within the plan that contribute towards the ambition to reduce carbon emissions to net zero by 2030.

The purpose of the Plan is to detail how the Council intends to grow housing in the city, identifying city growth programmes, including a significant amount of new Council housing stock. It is essential to increase housing stock within the city due to the national and local housing crisis, we do not have enough homes to adequately meet housing need in Sheffield.

Building and constructing new housing has an unavoidable impact on emissions. A significant proportion of a buildings carbon emission will arise from the materials used and the construction process. The embodied carbon emissions of a building can be equivalent to years of the building operational carbon emissions. This is unavoidable; however, the Council has a role to play both in setting an example of low carbon development and in helping to signpost and regulate others. We can mitigate and manage this by ensuring our new homes are sustainable and fit for long term purpose, meeting the needs of the local population and reducing the need to travel. Homes will be built to high standards, meeting new standards, building regulations, legislation and the Council's own ambitions to be a leader in this industry.

The Plan ties in with both the Sheffield (Local) Plan and the Housing Strategy.

The Housing Strategy has key priorities to:

- Increase Affordable Housing Providing
- Increase the range of good quality homes for all resident
- Accelerate Regeneration and develop new Lifetime Neighbourhoods
- Build Homes for the future.

Following approval of the Housing Strategy we will be developing a Residential Net Zero delivery plan, which will include actions to reduce the environmental impact of new development.

The Sheffield (Local) Plan has policies within it to help tackle the climate emergency by guiding how development takes place through design, layout and mitigations. Developments that result in new dwellings or new non-residential buildings will be required to reduce their regulated carbon emissions by at least 64% from 1 January 2025 and be net zero carbon (in terms of both operational carbon and embodied carbon) from 1 January 2030. This will include developers using a fabric first approach to reduce emissions, the generation of renewable energy or connection to a renewable energy network and the use of sustainable and/or recycled materials wherever possible.

Full scoring is not possible in this Climate Impact Assessment (CIA) due to the high-level nature of the plan. Each new build housing development will have an individual CIA that will consider carbon emissions impacts in more detail. This plan will provide a summary of our key actions and activities that will have a positive contribution to the Council's ambition to Net Zero.

- **Business Case or Committee Report:** Committee Report
- **Budget Proposal:** No
- **Does this project fit any of the following themes?** Yes - New and Existing Buildings
- **Is this project over £500k or does it affect more than one ward?** Yes

Projects that are valued at over £500k, or that fit into any of the above themes will be automatically sent for approval by the Sustainability & Climate Change Team

- **Strategic Priority:** More homes for a sustainably growing city with choice, quality and affordability across Sheffield.
- **Lead Member:** Douglas Johnson (Cllr)

- **Lead Officer:** Kate Martin
- **Committee(s):** Strategy and Resources
- **Portfolio:** City Futures
- **Director Area:** Regeneration and Development

Rapid Assessment:

How does this project contribute to your service's climate targets? N/A

Select all that apply – and continue to baseline assessment:

- Buildings & Infrastructure
- Energy
- Resource Use
- Waste
- Nature and Land use

Baseline Assessment:

The aim of this stage is to describe the potential impacts of your project or proposal and identify the relevant sub-categories in each section.

Building & Infrastructure:

Description of Impact:

The plan details programmes of construction which will have an impact on emissions. The Council will set examples of low carbon developments through its own stock increase programmes, and signpost and regulate other developments. New homes built today will still be in use in many years to come and will be built in line with new regulations and carbon reduction requirements.

Each development will have an individual CIA to assess impact and work towards the lowest possible impact on emissions. Our CDS service will advise on the most appropriate building materials and sustainable design principles that are low carbon.

The Housing Growth Delivery Plan includes:

- To ensure that any new build scheme commencing after 2026 will be required to meet the anticipated Future Homes Standard 2025 Building Regulations update, adding the capacity for net zero in operational carbon when the grid decarbonizes.
- To ensure that the newly introduced revised Building Regulations in 2023, are met by all developments – which will ensure new build housing is significantly more energy efficient.
- To ensure high standards of design for its own stock increase programme.
- That the Sheffield (Local) Plan will help to regulate, signpost and control private development locations and standards. This includes the priority to develop brownfield sites where possible.
- Plans to reduce demand for transport by sustainable developments with housing where it is needed, e.g. city centre housing development.
- A plan to use smaller parcels of land, which is sustainable, best use of sites and can reduce fly-tipping and other environmentally damaging activity.
- To explore and use Modern Methods of Construction where possible, as they have the potential to deliver low carbon housing at pace through precision manufacturing processes in a controlled factory environment. The Council has piloted volumetric MMC housing projects at Knutton Rise and Duffield Place.
- Developments will have mitigations built in to encourage low carbon living, for example, bicycle storage, recycling bins, EV charging, Passive cooling and BND requirements.

Impacted Sub-Categories: Construction / Operational Use / Land Use in Development

Energy:

Description of Impact:

Emissions from residential buildings accounted for a fifth of greenhouse gas emissions in the UK in 2022. (Source - Final UK greenhouse gas emissions national statistics: 1990 to 2022 - GOV.UK) This comes mainly from fuel combustion and electricity use. Homes can be

decarbonised by installing low-carbon heating systems (such as heat pumps), ensuring they are energy efficient and by using renewable energy systems (e.g. solar panels).

The plan is high level and does not specifically detail energy impacts. However, in the stock increase programmes we have a number of examples of developments that have a positive impact towards energy use. This includes the design of energy efficient buildings, using MVHP technology, installing Solar PV Panels. Our Council developments are leading the way with a shift away from fossil fuel use. We aim for the highest possible rating for new build properties with EPCs (Energy Performance Certificates).

Existing stock in Sheffield also has many properties with solid walls, cavity walls and lofts or roofs that are uninsulated, leading to increased damp and mould, increased heat and energy demand and increased running costs. Our new build developments will not experience these issues due to their new energy efficient designs.

Impacted Sub-Categories: Decarbonisation of Fuel / Demand Reduction / Energy Efficiency / Increasing Infrastructure for Renewables Generation.

Resource Use:

Description of Impact:

The plan will increase water, product and service demand due to the nature of new home developments. However, this will be mitigated in a number of ways with well planned sustainable developments.

Each new development the Council undertakes will have an individual CIA to assess impact.

It is routine practice to install water meters in all of our stock increase programmes, and where applicable, high rated appliances are always installed. (e.g. Washing machines). Water harvesting and grey water use is also explored in each development. The Draft (Local) Sheffield Plan expects all developments to incorporate features such as water efficiency measures (e.g. grey water recycling and rainwater harvesting).

Developments in sustainable areas will reduce pressure on products and services, e.g. city centre regeneration schemes will concentrate higher density of accommodation that can reduce demand for travel of services. The building regulations have also introduced new requirements for EV charging facilities that can also improve demand for resources.

Impacted Sub-Categories: Water Use / Products / Services

Waste:

Description of Impact:

Although new homes will increase the total volume of waste, their efficient designs will seek to minimise this as far as possible.

All developments have waste strategies considered individually within planning permission, and we work closely with waste services to ensure that there are adequate waste and recycling facilities in all developments. We lead the way with Council stock increase programmes, e.g. our new OPIL schemes have worked with waste services to ensure the best quality waste management strategies and storage have been incorporated into plans.

The Sheffield (Local) plan policies promote waste minimisation and the maximising of recycling during construction and operation. This also includes setting a requirement for Sustainable Urban Drainage (SUDs) and attenuation tanks to be used for all new developments where viable. There are also environmental policy changes that consider surface run off, sewage and wastewater arrangements. SUDs have been successfully implemented in Council Housing developments at Ouse Road and Scotia Drive, and Sheffield Housing Company developments on Harborough Rise. By using SUDs, water can be channelled or collected into area to drain naturally over time. The Grey to Green project in the city centre is another example of the city's use of SUDs. Planting in the city centre around a series of drainage channels has allowed for some water absorption across a wide area of the scheme, rather than allowing water to build up in the event of a flood.

Impacted Sub-Categories: Waste Reduction / Waste Hierarchy

Nature and Land Use:

Description of Impact:

There is a requirement for Biodiversity Net Gain (BNG) for all new developments to increase biodiversity by 10% from baseline. This was set out in the Environment Act (2021) and became mandatory in February 2024, BNG makes sure that habitats for wildlife are left in a measurably better state than they were before development. This is a positive impact for all new developments.

There is also a requirement for Nutrient Net Neutrality. “Habitats Sites” are protected under the Habitats Regulations 2017. Any new development must not negatively impact these sites’ nutrient levels. This legislation ensures that the level of phosphates and nitrates entering these sites through wastewater is not increased.

The Sheffield (Local) Plan seeks sustainable building design, advocating the use of sustainable building materials, the reuse of existing buildings where possible, the creation/ restoration of habitats that absorb carbon (e.g. wetlands, woodland).

In terms of Flood Management, Planning policy requires developments to consider how the discharge of water of a new development will impact the surrounding area. In Sheffield, we embrace a variety of solutions, including the use of permeable materials, and attenuation tanks.

Impacted Sub-Categories: Biodiversity / Carbon Storage / Flood Management

Full Impact Assessment: N/A

Attachments: N/A

Approval & Sign Off: This CIA has been approved by the Climate Team.

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