

# Environmental Standards Statement (including Energy and Carbon Statement)

Stocktons, 140 Great Ancoats Street, Manchester

July 2026



**Turley**  
Sustainability  
and ESG

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# 1. Introduction

## 1.1 Introduction

This Environmental Standards Statement (ESS), including Energy and Carbon Statement, has been prepared by Turley Sustainability & ESG, on behalf of Liquid Business (Manchester) Limited ('the applicant') to support the full planning application for a new residential-led development across two buildings on lands at Stocktons, 140 Great Ancoats Street, Manchester. It demonstrates the range of positive measures that are incorporated into the development proposals to ensure high levels of environmental sustainability performance in accordance with national and local policy objectives.

## 1.2 Site Context

The site is located to the eastern edge of Manchester City Centre and is approximately 0.73 hectares (1.8 acres) in area. The site is bounded by Great Ancoats Street to the north east which forms part of the Ring Road route around the city centre, Store Street to the east, existing Presbar Diecasting to the south, and Ducie Street to the west.

The city centre location of the site means that it is within walking distance of important destinations within the city centre and beyond including the main retail, leisure and commercial cores of the city. Manchester has an excellent sustainable transport network ('the Bee Network').

The site currently consists of the Stocktons Furniture showroom and warehouse and a surface car park located to the north eastern edge of the site fronting Great Ancoats Street.

The masterplan for the Stocktons redevelopment is shown in **Figure 1**, and illustrative proposals shown in **Figure 2**.

## 1.3 Proposed Development

The project planning description is as follows:

*'Full planning permission for the demolition of existing buildings and erection of 2no. new buildings providing up to 723 apartments (Use Class C3), Class E floorspace (comprising flexible office accommodation (Use Class Eg(i)) and Class Ea and b) and associated hard and soft landscaping (including works within the public highway), formation of vehicle accesses and servicing access together with associated works'.*

## 1.4 Document Structure

**Chapter 2** of this report provides an overview of relevant national and local legislation, planning policy and guidance.

**Chapter 3** reports the energy and carbon approach taken in line with the Greater Manchester Combined Authority (GMCA) Net Zero Submission Guidance.

**Chapter 4** provides details of the wider sustainability strategy of the proposed development, in line with local planning policy.

**Chapter 5** provides details of the BREEAM strategy, credits targeted and how the criteria will be met.

The following reports are appended:

- Energy and Carbon Proforma
- BREEAM Pre-assessment

Figure 1: Ground Floor Plan [to be updated]



Figure 2: Illustrative image of the Proposed Development (SimpsonHaugh) [to be updated]



## 2. Planning Policy Context

### 2.1 National Policy and Guidance

This section sets out a summary of current national guidance and policy in relation to sustainable development.

#### 2.1.1 National Planning Policy Framework

The National Planning Policy Framework<sup>1</sup> (NPPF) provides a framework for the development of locally prepared plans and the government's planning policies for England and how these are expected to be applied.

Chapter 2 of the NPPF sets out details on sustainable development, and how the planning system must perform three distinct objectives, aligned to the three pillars of sustainability, Economic, Social and Environmental, which should be pursued jointly.

Paragraph 8 outlines the environmental objective of the Framework which includes mitigating and adapting to climate change and moving to a low carbon economy.

Paragraph 161 similarly confirms that the planning system should support the transition to a low carbon future in a changing climate, including providing support to proposals which contribute to radical reductions in greenhouse gas emissions and encourage the reuse of existing resources, as well as the development of low carbon energy.

Paragraph 163 confirms that the need to mitigate and adapt to climate change should be considered in preparing and assessing planning applications,

considering the full range of potential climate change impacts.

Paragraph 164 expects new development to be planned for in ways that avoid increased vulnerability to the range of impacts arising from climate change, ensuring that suitable adaptation measures are provided where development is located in a vulnerable area.

Paragraph 166 of the Framework states that new development should:

- Comply with adopted Local Plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and
- Take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption.

Paragraph 167 states that LPAs should prioritise supporting energy efficiency and low-carbon heating improvements, such as installing heat pumps and solar panels, for both domestic and non-domestic buildings.

The NPPF recognises the role planning has to play in support of the UK's pursuit of the United Nations Sustainable Development Goals (UNSDGs) (**Figure 3**) which address social progress, economic wellbeing and environmental protection.

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<sup>1</sup> [UK Government | NPPF](#)

Figure 3: Example UN Sustainable Development Goals



### 2.1.2 Planning Practice Guidance

Planning Practice Guidance (PPG) provides further advice on various planning issues associated with development, including those linked to sustainability and renewable energy and underpins the policies within the NPPF.

PPG is a material consideration in planning decisions and should generally be followed unless there are clear reasons not to. It sets out how local authorities should include policies that protect the local environment and strategies to mitigate and adapt to climate change and supports developments that are functional and adaptable for the future.

### 2.1.3 National Design Guide

The National Design Guide published in January 2021<sup>2</sup> is based on the national planning policy practice guidance and objective for good design as set out in the NPPF. The Guide introduces ten characteristics of well-designed places which work together to create the developments Character and

Community, while positively addressing environmental issues affecting the climate.

### 2.1.4 Building Regulations

Part L, Conservation of Fuel and Power – Building regulations Part L 2021, which are currently in force, aim to deliver buildings that are of a higher quality with lower energy bills, and require reducing GHG emissions by around 30% for new homes and 27% for non-domestic buildings compared with Part L 2013.

On 15<sup>th</sup> June 2022, the building regulations were updated as an interim step towards part of the roadmap to the 'full' Future Homes and Buildings Standard.

The Future Homes Standard (FHS), an update of Part L, was confirmed on the 24th of March, with the following implementation dates:

- 24th March 2027 for non-high-risk building work, and
- 24th September 2027 for high-risk building work in England.

<sup>2</sup> [National Design Guide](#)

The evolving standard aims to deliver higher-quality homes with lower energy bills and reduced carbon emissions. For new homes, the FHS sets out requirements to be 'zero-carbon ready', meaning that they will require no retrofitting to achieve zero carbon emissions once the electricity grid fully decarbonises.

While developers retain flexibility in how they meet carbon reduction targets, key mandatory changes under the standard include:

- Low-carbon heating i.e. heat pumps.
- Solar PV covering a minimum area equivalent to 40% of the building's foundation footprint, with some exemptions.
- Other low-carbon technologies, such as wastewater heat recovery for homes.
- Airtightness targets of approximately 4 m<sup>3</sup>/m<sup>2</sup>/hr @ 50 Pa for new homes.

The FHS is expected to ensure new buildings align with the UK Government's legal commitment to achieving net zero emissions by 2050.

#### **Part S, Infrastructure for Charging Electric Vehicles -**

New approved document Part S sets out guidance for electric vehicle (EV) charging infrastructure and specifies that EV charge points must be provided for each dwelling (or where the total number of parking spaces is less than each dwelling, all spaces should be provided with an active EV charging point). Any remaining spaces must have cable routes for charge points to be installed.

**Part O, Overheating** - Part O sets out new requirements for mitigating overheating, specifying that residential developments must limit unwanted solar gains in the summer and provide means to remove heat. Compliance with Part O can be demonstrated using two methods to demonstrate the risk of overheating from rising summer temperatures has been mitigated following a

simplified prescribed glazing and free area ratio; or, use of a Dynamic Simulation Modelling.

#### **2.1.5 UKGBC Framework**

The UK Green Building Council's (UKGBC) Net Zero Carbon Buildings Framework<sup>3</sup> sets out high-level principles for achieving net zero carbon for construction (NZCC) and net zero carbon for operational energy (NZCO) within both homes and non-domestic buildings. Buildings can also be referred to as 'net zero ready' where they are able to meet NZCO should the occupiers purchase renewable energy.

The UKGBC Framework is referenced within Policy JP-S2 of Places for Everyone, as the definition for Net Zero.

The framework sets out a 'reduction first' approach to achieving net zero carbon, through reducing construction impacts, reducing operational energy use, increasing renewable energy supply, and finally offsetting any remaining carbon emissions using a recognised offsetting framework. For both NZCC and NZCO, development is expected to reduce emissions on-site as far as practical and then utilise high-quality offsets to mitigate residual emissions. The UKGBC does not currently have specific guidance around embodied or operational targets, however users are encouraged to review third-party resources (such as RIBA Climate Challenge Targets).

The UKGBC has released guidance<sup>4</sup> regarding the status of the Framework following the release of the UK Net Zero Carbon Building Standard.

#### **2.1.6 RIBA 2030 and London Energy Transformation Initiative (LETI) Standards**

RIBA and LETI have published performance standards which are viewed as best practice by addressing embodied carbon and both regulated and unregulated energy beyond that required by building regulations.

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<sup>3</sup> [Net Zero Carbon Buildings Framework - UKGBC - UK Green Building Council](#)

<sup>4</sup> [UKGBC Framework Implementation Guidance](#)

RIBA (Royal Institution of British Architects) Climate Challenge Targets<sup>5</sup> are a series of voluntary performance targets for practices to adopt to reduce operational energy, embodied carbon, and potable water. The targets have been developed in consultation with industry experts and UK professional bodies from across the built environment industries and are in line with the emission reductions necessary to achieve net zero carbon for the whole UK build environment by 2050. The standard sets out targets for residential and non-residential developments around operational energy, embodied carbon, potable water use, and health and wellbeing to achieve by 2030 with interim targets for 2025.

Both RIBA and LETI have been involved in the development of the UK Net Zero Carbon Building Standard.

### 2.1.7 UK Net Zero Carbon Building Standard

The UK Net Zero Carbon Building Standard<sup>6</sup> (UKNZCBS) has been developed by a wide range of stakeholders in the UK's built environment industry including UKGBC, LETI, and RIBA. It is therefore expected to supersede several industry guidance documents, including the UKGBC Framework (Section 2.1.5).

To ensure robustness of net zero claims, the standard set outs sectoral performance targets and limits which align with science-based trajectories needed to achieve net zero by 2050 and a 78% reduction by 2035 in the UK, i.e. what is known to be required to stand a reasonable chance of mitigating global warming to 1.5°C.

These limits and targets are based on commencement year and include:

- Energy use intensity (EUI)

- Upfront carbon
- Refrigerant global warming potential
- Being fossil-fuel free
- Renewable energy generation

For residential developments, the 2026 upfront carbon limit for flats is 525 kgCO<sub>2</sub>e/m<sup>2</sup> GIA.

### 2.1.8 Environment Act 2021

The Environment Act 2021<sup>7</sup> aims to improve air and water quality, protect wildlife, increase recycling and reduce plastic waste.

The Environment Act explicitly makes biodiversity net gain (BNG) a condition of planning permission by requiring all new developments in England to provide a 10% BNG, with the same rules applying to small sites from April 2024.

## 2.2 Local Planning Policy

Greater Manchester and Manchester City Council planning policy relating to sustainable development, energy and climate change is summarised below.

### 2.2.1 Places for Everyone

In March 2024, nine Greater Manchester (GM) councils adopted Places for Everyone (PfE) Joint Development Plan Document.<sup>8</sup> All policies within the plan are 'strategic policies' and local plans will need to be consistent with it and neighbourhood plans will need to be in general conformity with the strategic policies. The key sustainability, energy and climate change policies are summarised below:

**Policy JP-S1 Sustainable Development:** The policy reiterates GM's Vision to be at the forefront of action on climate change and sets out best practice thresholds for reducing energy demand and onsite

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<sup>5</sup> [2030 Climate Challenge](#)

<sup>6</sup> [UKNZCBS](#)

<sup>7</sup> [Environment Act 2021](#)

<sup>8</sup> [Places for Everyone Joint Development Plan Document \(2024\)](#)

renewable energy generation within residential developments as shown in **Table 1**.

**Table 1: Best Practice Thresholds**

|              | Space Heat Demand                                                   | Hot Water Energy Demand                                                  | Renewable Energy Generation Targets      |
|--------------|---------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------|
| 2021-2025    | Houses<br>30kWh/m <sup>2</sup><br><br>Flats<br>25kWh/m <sup>2</sup> | 20% energy demand reduction in the total heat required for water heating | PV – equivalent to 20% ground floorspace |
| 2025-onwards | Houses<br>20kWh/m <sup>2</sup><br><br>Flats<br>15kWh/m <sup>2</sup> |                                                                          | PV – equivalent to 40% ground floorspace |

**Policy JP-S2 Carbon and Energy:** The policy supports delivering a carbon neutral GM through the following measures:

- Promoting the retrofitting of existing buildings;
- Promoting the use of life cycle cost and carbon assessment tools;
- Taking a positive approach to renewable and low carbon energy schemes;
- Increasing the range of nature-based solutions;
- An expectation that new development will, unless it can be demonstrated that it is not practicable or financially viable:

a) Be net zero carbon:

- From adoption - to regulated operational carbon emissions
- From 2028 – to all emissions ‘in construction’.

From 2025 development should also calculate and minimise carbon emissions from unregulated emissions alongside regulated emissions, in line with the energy hierarchy.

From 2025 any residual carbon emissions that cannot be fully mitigated on-site should be offset. As an interim measure, development should be consistent with the 2022 Part L building regulations unless superseded.

- b) Incorporate adequate electric vehicle charging points, in line with Part S of the building regulations, unless superseded by relevant Local Plan policies.
- c) Prioritise connection to a renewable energy/heating/cooling network in the first instance or a low carbon network that is adaptable to non-fossil fuels at a later date.
- d) In residential developments, achieve energy demand reductions in terms of space heat demand; hot water energy demand and the delivery of on-site renewable energy generation, in accordance with the Best Practice Thresholds set out in Policy JP-S1.
- e) For non-residential developments, achieve at least BREEAM excellent standard (or equivalent) for the ‘Ene 01 – reduction of energy use and carbon emissions’ category rising to ‘BREEAM outstanding’ equivalent for Ene 01 from 2028.
- f) Include a detailed energy statement to demonstrate how the development has sought to maximise reductions in carbon emissions in line with relevant policy targets, including the minimisation of overheating risks and appropriate measures for post occupancy evaluation. Whole life cycle emissions should be considered where possible.

**Policy JP-S3 Heat and Energy Networks:** New residential developments that are '10 dwellings or more' shall:

- Connect to an existing or planned heat/energy network or be designed to enable future connection (where within 500m of such a network); and/or
- Install a site-wide or communal heat/energy network solution.

#### Policy JP-S4 Flood Risk and the Water Environment:

Developments are expected to manage surface water runoff through sustainable drainage systems and as close to source as possible.

As a minimum, residential development should meet the mandatory water efficiency standard of 125 litres/person/day as set out in building regulations, unless tighter water efficiency standard of 110 litres/person/day is set by local authorities.

**Policy JP-S6 Resource efficiency:** The policy requires using sustainable design and construction techniques to reduce carbon emissions, adapt and future proof to the impact of climate change, reduce and recycle waste and minimise water use.

**Policy JP-G8 Net Enhancement of Biodiversity and Geodiversity:** Through a range of measures, a net enhancement of biodiversity and resources will be sought.

Development is expected to follow the mitigation hierarchy to avoid harm to biodiversity and compensate for any harm caused. A measurable net gain of 10% should be achieved.

#### 2.2.2 Net Zero Design Guidance

In March 2025 the GMCA published three guidance documents and a proforma<sup>9</sup> to support the implementation of the energy and carbon policies in Places for Everyone. The guidance includes:

- **Design Guidance for Net Zero** - guidance for applicants on how to design to achieve net zero carbon buildings.
- **Low carbon heat** - guidance for applicants on how to deliver heating systems which are low carbon, cost effective and affordable.
- **Submission guidance** for Places for Everyone policies JP-S2 and JP-S3.
- An **energy and low carbon proforma** (excel spreadsheet) to demonstrate compliance with the policy when submitting energy statements to the Local Planning Authority.

An overview of each of these documents is provided below.

#### Design Guidance for Net Zero

This document sets out design considerations for residential and non-residential buildings to meet policy JP-S2 and JP-S3. It is a design guidance document that has been introduced to explain the requirements of the PfE sustainability policies and introduces several targets that are not adopted policy but aspirational for applicants.

The guidance reiterates that net zero is defined by the UKGBC Net Zero Carbon Buildings Framework, and provides the following principles to achieve this:

- **Minimise energy demand:** achieve the space heating demand limits through energy efficient fabric and ventilation.
- **Maximise energy efficiency:** meet the total energy use (regulated and unregulated), through low carbon and energy efficient heating systems.
- **Use renewable energy:** maximise the generation of on-site renewable energy. There should be a balance between predicted annual energy use and annual renewable energy generation.
- **Use low carbon energy:** the building must not connect to the gas network or, more generally, use fossil fuels through a heat network. Low carbon heating systems must be installed.
- **Reduce overheating risk:** assess the risk of overheating and minimise it through window design and shading strategies.
- **Minimise embodied carbon:** embodied carbon should be minimised through efficient design and low carbon material selection. The building should meet the upfront embodied carbon

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<sup>9</sup> [GMCA Net Zero Guidance](#)

benchmarks and the highest carbon materials used should be reported.

- Offsets: following the implementation of the above steps, financial contributions are the last step to offset the remaining emissions/energy. The decision to include offsetting will be determined by each local authority, with options currently under development.

Through the wording of the design guidance, it is understood that offsets would only be required for operational emissions, where an offset fund has been set up by the local planning authority.

Guidance is provided for applicants to design energy efficient and low carbon buildings, including considerations such as form factor, positioning of unheated facilities, ventilation, and building fabric.

Metrics and key performance indicators (KPIs) recommended within the guidance document relevant to the Proposed Development are summarised in the below **Table 2**.

**Table 2: GMCA Net Zero Guidance Metrics and KPIs relevant to the Proposed Development**

|                         |                           |
|-------------------------|---------------------------|
| Space heating           | ≤15kWh/m <sup>2</sup> /yr |
| Fossil fuel free        | Yes                       |
| Reduce overheating risk | Meet CIBSE TM59           |

### Low Carbon Heat

This guidance document provides applicants with further information on how to deliver low carbon heating systems in line with policies JP-S2 and JP-S3.

It confirms that gas-fired heating systems are not compatible with achieving net zero carbon buildings and recommends the use of all-electric heating systems such as heat pumps.

Further detail is provided around heat and energy network opportunity areas in GM, and the guidance

confirms that applicants assessing the feasibility of heat networks and low carbon heating should address the following:

- Environmental performance: whether the system uses fossil fuel or not and whether it will create any local pollution issues.
- Impact on residents: estimated energy, maintenance and replacement costs and additional costs compared to a 'benchmark' low carbon heating system.
- Impact on viability: estimated capital costs of selected heating system and additional costs compared to a 'benchmark' low carbon heating system.
- Infrastructure development: whether the scheme is proposing to connect to the local low carbon heat network or not with suitable justification for exemption if required.
- Consideration of embodied carbon/whole life carbon (optional).

A 'Low carbon heat appraisal' is recommended for all applications.

### Submission Guidance

This document sets out the requirements for different types of applications including pre-app, outline, and detailed, to meet the requirements of policies JP-S2 and JP-S3.

For major residential full applications, the submission requirements are as follows:

- Energy and Carbon Statement
- Energy and Carbon Proforma

For detailed applications, the proforma is expected to be completed based on predictive modelling. The Energy and Carbon Statement is expected to include sections on:

- Building fabric and ventilation
- Maximise energy efficiency

- Renewable energy generation
- Low carbon heating
- Overheating risk
- Materials
- Offsets

### Energy and Carbon Proforma

A proforma document is provided and must be completed for all applications.

### 2.2.3 Manchester Core Strategy Development Plan Document (2012)

Manchester's Core Strategy (2012)<sup>10</sup> is the key document in the Manchester Local Plan. It sets out the long-term strategic policies for Manchester's future development and forms the framework against which planning applications are assessed.

An addendum to Manchester Core Strategy was issued in 2024<sup>11</sup> listing where policies have been partially replaced by Places for Everyone. This addendum has been addressed in the below policy summaries.

**Policy EN4 Reducing CO<sub>2</sub> emissions by enabling low and zero Carbon Development:** Development should be designed in accordance with Policy JP-S2 from PfE.

Wherever possible new development must be located and designed in a manner that allows advantage to be taken of opportunities for low and zero carbon energy supplies.

Where possible new development will be used as a mechanism to help improve energy efficiency and provide low and zero carbon energy supplies to existing buildings.

Where appropriate new development will be required to connect to and/or make contributions to low or zero carbon energy schemes and/or to incorporate provision to enable future connection

to any existing / potential decentralised energy schemes.

The use of building materials with low embodied carbon is encouraged.

**Policy EN6 Target framework for CO<sub>2</sub> reductions from low or zero carbon energy supplies:** Applications for development over 10 dwellings or 1,000m<sup>2</sup> floor area are expected to meet sustainability targets which align with PfE Policy JP-S2.

**Policy EN8 Adaptation to Climate Change:** All new developments are expected to be adaptable to climate change and developments should have consideration of adaptation measures including:

- Minimising flood risk through sustainable drainage systems;
- Reducing the urban heat island effect through green infrastructure;
- Minimising overheating through passive design; and
- Meeting PfE policies JP-S2, JP-S4, and JP-G8.

**Policy EN9 Green Infrastructure:** New development is expected to maintain existing green infrastructure in terms of its quantity, quality and multiple function. Developers are also encouraged to enhance existing green infrastructure where possible.

**Policy EN 14 Flood Risk:** Development should be directed away from sites at the greatest risk of flooding, and towards sites with little or no risk of flooding. Development must also meet PfE Policy JP-S4.

**Policy EN 15 Biodiversity and Geological Conservation:** Developers will be expected to identify and implement reasonable opportunities to enhance, restore or create new biodiversity. Development must also meet PfE Policy JP-G8.

<sup>10</sup> [Manchester's Core Strategy \(2012\)](#)

<sup>11</sup> [Addendum to Manchester Core Strategy \(2024\)](#)

**Policy DM1 Development Management:** All new development should have regard to a range of sustainability issues including site location, accessibility, waste management, biodiversity and flood risk, as well as incorporating sustainable construction techniques which includes the application of BREEAM.

**Policy CC5 Transport:** Developers should work to ensure that all users are able to access the development by sustainable means, especially taking account of times when developments are likely to be busiest.

#### **2.2.4 Guide to Development in Manchester Supplementary Planning Document (SPD) (2007)**

This SPD<sup>12</sup> provides guidance to develop and enhance environments within Manchester which are visually attractive, have a unique and positive sense of place and where properly caters for the functions which it accommodates, both now and in the future.

Chapter 4 of the SPD sets out Manchester City Council's expectations on the content of Environmental Standards Statements and includes a requirement for new development to achieve a BREEAM Very Good rating.

#### **2.2.5 Validation Requirements**

Manchester City Council Validation Checklist (January 2020) requires applications for major new development to be accompanied by an Environmental Standards Statement to address the sustainability of the development proposals, in particular, Policies EN4 and EN6 of the Core Strategy.

The Statement must also confirm the proposals for the provision of onsite renewable energy to provide 20% of final site energy demand and CO<sub>2</sub> reduction.

#### **2.2.6 Local Plan Regulations 19**

The final draft of the Manchester Local Plan Publication Draft (Regulation 19)<sup>13</sup> was officially approved by the Council in July 2026 with public consultation scheduled to run in August -September 2026. The draft confirms the spatial policies and strict carbon targets required to ensure Manchester achieves its statutory target of becoming a zero-carbon city by 2038 at the latest.

#### **2.2.7 Manchester Climate Change Framework 2020-25**

The Manchester Climate Change Framework 2020-25<sup>14</sup> responds to Manchester City Council's declaration of a climate emergency in July 2019 and target to be net zero by 2028.

The Framework sets the following objectives to be met by 2025:

**Objective 1: Staying within our carbon budgets –** Including reducing CO<sub>2</sub> emission from our homes, workplaces and ground transport by at least 50% during 2020-25.

**Objective 2: Climate adaptation and resilience –** Adapting the city's buildings, infrastructure and natural environment to the changing climate.

**Objective 3: Health and wellbeing –** Improving the health and wellbeing of everyone in Manchester through actions that also contribute to our climate change mitigation and adaption objectives.

**Objective 4: Inclusive, zero carbon and climate resilient economy –** Ensuring Manchester establishes an inclusive, zero carbon and climate resilient economy where everyone can benefit.

The framework was updated in October 2022 to present the findings of detailed modelling undertaken to assess the city's carbon budget, provide an overview of progress against the framework so far, and recommend actions for the

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<sup>12</sup> [Guide to Development in Manchester SPD \(2007\)](#)

<sup>13</sup> [Manchester Local Plan \(Regulation 19\)](#)

<sup>14</sup> [Manchester Climate Change Framework](#)

transition to a zero carbon and climate resilient city. Key recommendations include:

- Ensure new buildings are constructed to high standards of low carbon performance covering operational and embodied energy.
- Produce goods and services more sustainably, moving to a circular economy, alongside becoming more sustainable consumers.
- Reduce waste, including unnecessary food waste, and manage unavoidable waste as sustainably as possible, maximising reusing and recycling.

## 2.3 Planning Policy Summary

Both local and national policy aims to ensure the delivery of sustainable and well-designed development which mitigate and adapt to the impacts of climate change.

Places for Everyone policy sets a number of new requirements for development, including a

requirement for net zero operational carbon with any remaining carbon to be offset via an offset fund (meeting building regulations as an interim measure). It is noted that the offset funds have not been set up yet for either MCC or GMCA.

Manchester City Council's Core Strategy and the Guide to Development in Manchester SPD requires all new commercial development to achieve a BREEAM Very Good rating.

Ensuring the development is resilient to a changing climate is a further key requirement at both national and local levels, particularly in relation to increased risk of floods and summertime overheating.

The Validation Checklist sets out key requirements and how responses should be set out in Environmental Standards Statements.

**Chapter 3** details the approach proposed to address these policy requirements.

# 3. Energy and Carbon Strategy

## 3.1 Introduction

This chapter presents the Energy and Carbon Strategy proposed for the Stocktons development in Manchester, setting the foundations to deliver a net zero carbon development to meet the ambition of the GMCA and MCC.

PfE supports the UK Government's objectives for energy efficient and low carbon development. Policies **JP-S1**, **JP-S2**, and **JP-S3** require reductions in energy use and carbon dioxide emissions in line with Greater Manchester's ambition to be carbon neutral by 2038.

**Policy JP-S2** requires energy demand to be minimised as far as possible on site. The following sections are presented in line with the energy hierarchy and GMCA Net Zero Design Guidance as summarised in **Section 2.2.2**:

- Minimise energy demand (building fabric and ventilation)
- Maximise energy efficiency
- Renewable energy generation
- Low carbon heating
- Overheating
- Materials

## 3.2 Minimise Energy Demand

Reducing the primary energy demand of a building through the use of an efficient fabric ('the fabric first approach') is widely regarded as best practice and is therefore the first and most important step to reducing carbon emissions.

This 'fabric first' approach has a number of distinct benefits including:

- Carbon savings delivered are 'locked-in' for the lifetime of the building (60 years or more) rather than the much shorter lifespan (around 25 years) of a renewable energy technology;
- Virtually no maintenance and/or replacement costs to maintain carbon reductions through improved fabric;
- No reliance on an occupier's behaviour to deliver carbon reductions.

**Table 3** shows the proposed material specification that will be incorporated within the building design to limit heat loss and ensure efficient operation of the proposed development.

**Table 3: Proposed material specifications**

| Element          | Part L 2021 Specification           | Development Specification                                                                      |
|------------------|-------------------------------------|------------------------------------------------------------------------------------------------|
| Floor            | 0.18 W/m <sup>2</sup> K             | 0.11 W/m <sup>2</sup> K                                                                        |
| Curtain walling  | 1.6 W/m <sup>2</sup> K              | 0.72 - 0.73 W/m <sup>2</sup> K                                                                 |
| Roof             | 0.16 W/m <sup>2</sup> K             | 0.11 W/m <sup>2</sup> K                                                                        |
| Glazing          | 1.6 W/m <sup>2</sup> K              | 0.72 - 0.73 W/m <sup>2</sup> K                                                                 |
| Air permeability | 8 m <sup>3</sup> /hr/m <sup>2</sup> | 1 Bed: 2.75 m <sup>3</sup> /hr/m <sup>2</sup><br>2+3 Bed: 2.5 m <sup>3</sup> /h/m <sup>2</sup> |

As shown above, the design of the proposed development exceeds the requirements of the Part L 2021 through a range of enhanced fabric and energy efficiency measures, and maximises the benefits associated with the first step of the energy hierarchy.

An overview of each design measure to minimise energy demand is provided in **Table 4** below.

**Table 4: Proposed Approach to Minimise Energy Demand in line with the Net Zero Design Guide**

| Design Measure                                         | Proposed Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Building Form</b>                                   | Each building has been designed efficiently, whilst maintaining a high quality design which promotes a sense of community. It is anticipated that a form factor of 0.71 for Building A and 0.84 for Building B will be achieved in line with the Net Zero Guidance KPI of less than 2.                                                                                                                                                                                                     |
| <b>Elevations and Windows</b>                          | Windows will be sized and orientated to balance heat gain, heat loss and internal daylight in occupied spaces. The external (curtain) walls and windows will have a u-value of 0.73W/m <sup>2</sup> K for Building A and 0.72W/m <sup>2</sup> K for Building B.                                                                                                                                                                                                                            |
| <b>Heated and Unheated Spaces</b>                      | Unheated spaces are grouped, with plant rooms and bin stores placed together on the ground floors of the buildings. Heated areas will be appropriately insulated to prevent wasted transfer of heat.                                                                                                                                                                                                                                                                                       |
| <b>Building Fabric Specification and Air Tightness</b> | <p>The buildings incorporate passive design measures that exceed the Part L 2021 requirements including an air tightness of 2.5 and 2.75 m<sup>3</sup>/hr/m<sup>2</sup> @50Pa for 1 bed and 2+3 bed respectively.</p> <p>The external wall and glazing specifications have been mentioned above, and additionally both the floor and roof will achieve a u-value of 0.11W/m<sup>2</sup>K, which is a 44% improvement over Part L 2021 for the floor, and 37% improvement for the roof.</p> |
| <b>Ventilation</b>                                     | <p>All apartments will have access to natural ventilation via perimeter purge panels within the unitised facade.</p> <p>Auxiliary ventilation will also be provided via Mechanical ventilation with heat recovery (MVHR).</p>                                                                                                                                                                                                                                                              |
| <b>Space Heating Demand</b>                            | It is anticipated that Building A will achieve a space heating demand of 6.18kWh/m <sup>2</sup> / yr and Building B of 4.71kWh/m <sup>2</sup> / yr demonstrating a significant improvement over the Net Zero Design Guide space heating demand target of less than 15kWh/m <sup>2</sup> / yr.                                                                                                                                                                                              |

### 3.3 Maximise Energy Efficiency

Operational carbon emissions can be reduced through active measures such as specifying energy efficient equipment. The following measures have been incorporated into the design to ensure building services are energy efficient:

- High levels of water heating efficiency
- Reduced standing losses from pipes and cylinders
- Efficient LED lighting with controls to reduce unnecessary use i.e. through presence and absence detection
- Efficient and low energy motors in pumps and fans
- Combined natural and mechanical ventilation systems, with mechanical ventilation heat recovery (MVHR) within dwellings

#### Predictive Energy Modelling

**Tables 5 and 6** demonstrate the carbon savings delivered by the development, as modelled by Futureserv.

**Table 5: Energy Modelling Results for Block A**

| Parameter                                                                             | Performance (Resi) | Performance (Landlord area) |
|---------------------------------------------------------------------------------------|--------------------|-----------------------------|
| <b>Part L 2021 Target Emission Rate (TER) (kgCO<sub>2</sub>/m<sup>2</sup>/year)</b>   | 13.30              | 3.09                        |
| <b>Part L 2021 Building Emission Rate (BER) (kgCO<sub>2</sub>/m<sup>2</sup>/year)</b> | 3.22               | 3.00                        |
| <b>CO<sub>2</sub> Improvement (%)</b>                                                 | 76%                | 3%                          |

**Table 6: Energy Modelling Results for Block B**

| Parameter                                                                             | Performance (Resi) | Performance (Landlord area) |
|---------------------------------------------------------------------------------------|--------------------|-----------------------------|
| <b>Part L 2021 Target Emission Rate (TER) (kgCO<sub>2</sub>/m<sup>2</sup>/year)</b>   | 13.13              | 4.75                        |
| <b>Part L 2021 Building Emission Rate (BER) (kgCO<sub>2</sub>/m<sup>2</sup>/year)</b> | 3.06               | 4.62                        |
| <b>CO<sub>2</sub> Improvement (%)</b>                                                 | 77%                | 3%                          |

As shown within **Tables 5 and 6**, the residential elements of the proposed Stocktons development could achieve a 76% and 77% reduction in carbon emissions for Block A and B respectively against Part L 2021, through highly improved u-values, air tightness, energy efficient MEP systems, the use of ASHP's and solar PV.

### 3.4 Renewable Energy Generation

A review of renewable energy technologies which may be suitable for inclusion in the buildings' design, with a summary provided below.

#### Solar Photovoltaics (PV)

Solar photovoltaic (PV) systems generate zero carbon electricity from sunlight and are well suited to the proposed development due to consistent electrical base load. Furthermore, they require minimal maintenance once installed.

#### Solar Thermal

Solar thermal systems generate zero carbon hot water from sunlight in a similar manner to solar PV. They require insulated tanks to store the hot water and have greater maintenance demands than solar PV. Whilst they are likely to be suitable for the development, the benefits delivered by solar PV are preferred and roof space will be prioritised for electricity generation.

## Wind Turbines

Wind turbines have been discounted due to the resulting visual/noise impact from the equipment, and relatively poor performance of the solution when used within Urban and Sub-Urban locations.

Solar PV has been identified as the most suitable renewable energy source for the Proposed Development.

## Renewable Energy Balance

The percentage of energy demand met by renewable energy generation is shown in **Table 7** below.

The useable roof area per gross internal floor area is a significant constraint to deliver a renewable energy balance and net zero carbon in operation.

**Table 7: Renewable Energy Balance**

|         | Total energy used (kWh/yr) | Renewable Energy Generated (kWh/yr) | Renewable Energy Balance |
|---------|----------------------------|-------------------------------------|--------------------------|
| Block A | 1,965,444                  | 2,633.44                            | 0.13%                    |
| Block B | 688,993.4                  | 1,558.14                            | 0.23%                    |

## 3.5 Low Carbon Energy

Policy JP-S3 states that developments should connect to a district heating scheme where such schemes exist, unless it can be demonstrated that there are more effective alternatives for minimising carbon emissions, or where such connection is not practical or financially viable.

Existing heat networks in Manchester City Centre include the gas-fired Manchester Civic Quarter Heat Network. This heat network is over 1,000m from the site and is therefore not suitable for connection.

Furthermore, with the continued decarbonisation of the electricity network, the carbon benefit of gas fired systems has been eliminated and the use of gas fired systems is not considered suitable to

deliver carbon savings in line with Manchester's net zero strategy.

The Future Homes Standard effectively bans the use of fossil fuels for heating in all new-build properties.

Connection to a heat network is therefore not considered further as carbon emissions associated with electricity are expected to continue to reduce as the grid decarbonises, leading to greater savings in carbon emissions over the lifetime of the development.

## Fossil Fuel Free

The Proposed Development will be fossil fuel free for heating, hot water, and cooking equipment.

## Proposed Systems for Heating and Hot Water

### Heat Pumps

Heat pumps provide low carbon heat sourced either from the ground (ground source heat pumps, GSHPs), water (water source heat pumps, WSHPs), or air (air source heat pumps, ASHPs).

The relatively minimal maintenance, efficiency and capital cost of an ASHP system means that it is suitable for incorporation into the energy strategy for the proposed development. The heat pumps will draw from grid electricity and deliver carbon savings due to the increasing amount of renewable in the UK power generation mix.

This approach aligns with the principles of the UKGBC Net Zero Carbon Buildings Framework.

Air source heat pumps will be utilised for domestic hot water generation. Heating will be provided via electric panel heaters.

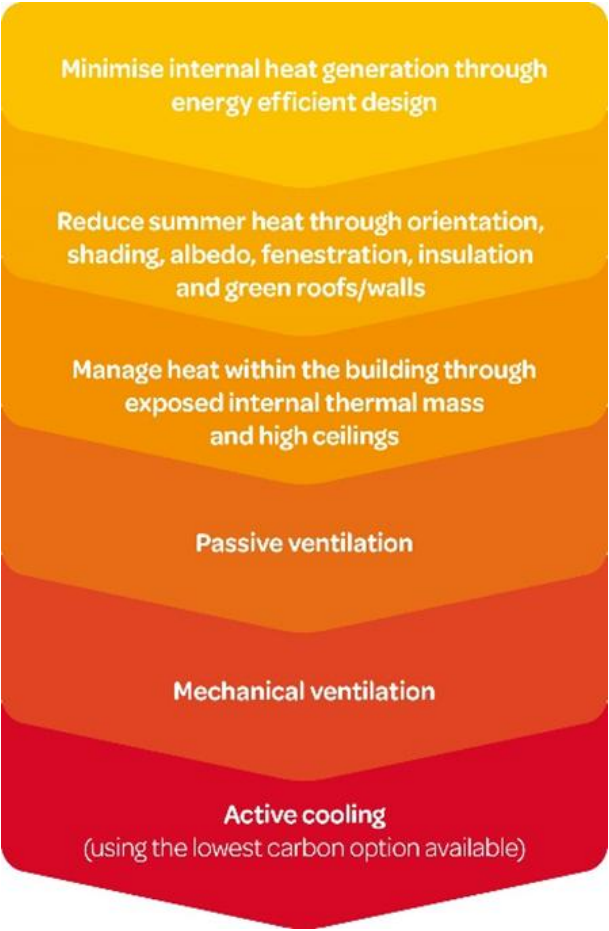
## 3.6 Overheating

With increasing summer temperatures there is an increasing risk of overheating in buildings which could adversely affect building occupants and users.

Buildings will be designed in accordance with the cooling hierarchy, as shown in **Figure 4**, which aims to reduce any potential overheating in buildings through minimising heat generation first, followed

by the consideration of passive cooling measures, and finally the use of active cooling using the lowest carbon option.

Figure 4: Cooling Hierarchy



Incorporating the cooling hierarchy into the design process means buildings will be better equipped to manage their cooling needs and to adapt to and mitigate climate change, while also minimising the carbon emissions associated with reducing overheating risk.

The residential development within both Blocks A and B have undergone overheating assessment in

line with the requirements of Part O of the Buildings Regulations using CIBSE TM59 methodology to assess and reduce the risk of summer overheating by taking into account future climate scenarios.

All apartments will have access to natural ventilation via perimeter purge panels within the unitised facade. Auxiliary ventilation will also be provided with MVHR. The results from the TM59 / Part O assessment showed that all the assessed bedrooms, kitchen, living and dining areas comply with the TM59 overheating criteria.

Commercial units will be comfort cooled to prevent overheating, and as part of the BREEAM strategy will meet the Hea 04 Thermal Comfort requirements for both current and future climate scenarios.

3.7 Materials

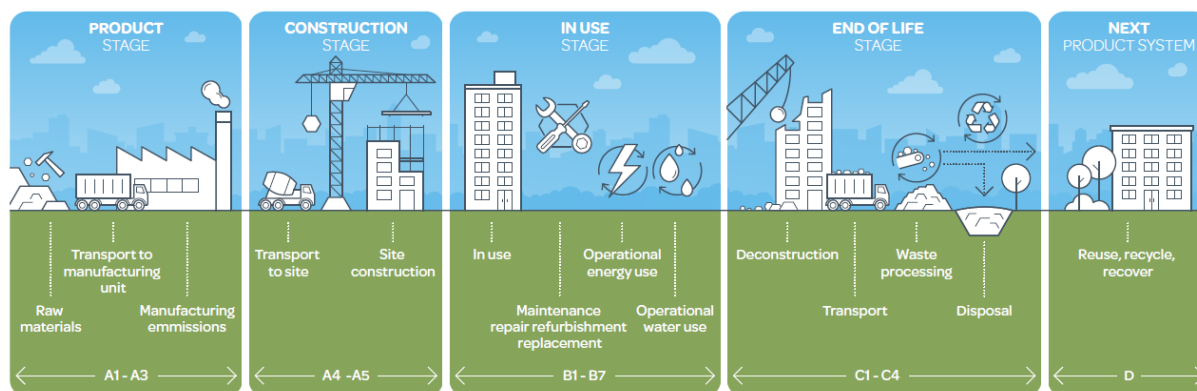
Progressive reduction of operational carbon within building regulations means that carbon associated with building materials and construction is an increased proportion of a buildings total carbon footprint and a greater contribution to climate change.

**Policy JP-S2** requires whole lifecycle emissions to be considered where possible. A Whole Lifecycle Carbon Assessment (WLCA) has therefore been completed at Concept Design to inform the design and compare results against industry benchmarks.

A WLCA considers all asset-related GHG emissions and removals, both operational and embodied, over the life cycle of an asset, including its disposal.

**Figure 5** below illustrates the life stages of an asset included in the assessment.

Figure 5: Lifecycle Stages of an Asset



The WLCA has been undertaken in line with the Royal Institution of Chartered Surveyors (RICS) Professional Standard Whole life carbon assessment for the built environment 2nd edition<sup>15</sup> using One Click LCA software, with information provided by the project team.

### Design Stage Results

Upfront carbon<sup>16</sup> associated with construction is estimated to be 40,627 tonnes, equivalent to **565 kgCO<sub>2</sub>e/m<sup>2</sup>**. Embodied carbon<sup>17</sup> of the proposed asset is estimated to be 65,181 tonnes, equivalent to **868 kgCO<sub>2</sub>e/m<sup>2</sup>** accounting for grid decarbonisation.

The structural elements such as ready-mix concrete, reinforcement rebar, and aluminium cladding are major carbon contributors due to their large quantities. Concrete is the highest impact material, contributing to **35%** of the total embodied carbon impact of the development.

Table 8: Top 10 Impact Materials

| Resource name                   | Embodied Carbon % | Embodied Carbon (tCO <sub>2</sub> e) |
|---------------------------------|-------------------|--------------------------------------|
| Ready-mix concrete              | 35.1%             | 17,032                               |
| Laminate flooring               | 25.8%             | 12,532                               |
| Rebar                           | 7.7%              | 3,725                                |
| Aluminium framed curtain wall   | 7.2%              | 3,483                                |
| Low voltage cable               | 7.0%              | 3,390                                |
| Electricity distribution system | 6.4%              | 3,124                                |
| Heat pumps                      | 3.3%              | 1,621                                |
| Solar shading and facade system | 3.0%              | 1,479                                |
| PVC ventilation ducts           | 2.4%              | 1,182                                |
| Aluminium cladding panels       | 2.0%              | 974                                  |

### Comparison with Industry Benchmarks

As set out in **Section 2.1.7**, the UKNZCBS includes limits which buildings must meet to be considered net zero aligned. The upfront carbon limits from the standard have been used as a benchmark to allow for comparison with best practice carbon performance.

<sup>15</sup> [RICS Whole Life Carbon Assessment for the Built Environment 2<sup>nd</sup> edition, November 2023](#)

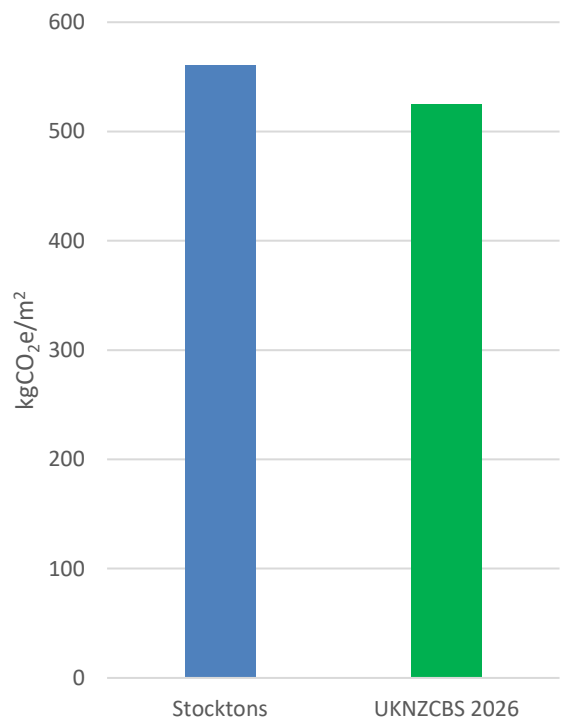
<sup>16</sup> GHG emissions associated with materials and construction processes up to practical completion (modules A1–A5).

<sup>17</sup> GHG emissions and removals associated with materials and construction processes, throughout the whole life cycle of an asset (modules A1–A5, B1–B5, C1–C4).

The UKNZCBS upfront carbon limit excludes external areas and solar PV systems. With external areas and solar PV excluded, the estimated upfront carbon impact of the development is **560 kgCO<sub>2</sub>e/m<sup>2</sup>**. This figure marginally exceeds the 2026 UKNZCBS limit of **525 kgCO<sub>2</sub>e/m<sup>2</sup>** (Figure 6).

It should be noted that this assessment has been undertaken at an early design stage and the results are subject to change as the design develops. Materials associated with fittings and furnishings have not been included in the assessment at this stage. These results include a 6% ‘top up factor’ which is required by RICS to account for uncertainty at the design stage. As the design develops and more detailed information becomes available, the estimated upfront carbon emissions are expected to change. In addition, a range of carbon reduction opportunities will be explored, where feasible, as outlined in the following section.

**Figure 6: Comparison with UKNZBS Upfront Carbon Limits**



### Carbon Reduction

A number of carbon reduction opportunities have been considered as part of the assessment.

The most effective way to reduce the upfront carbon impact of development is through lean design and material efficiency to reduce the total amount of materials used. The project team will consider reducing the quantum of cement used on site, either through material efficiency or replacement with less carbon intensive materials such as ground granulated blast-furnace slag (GGBS). Additional considerations will include increasing the recycled content within aluminium façade modules, curtain walling and soffits, and specification of hardwearing and durable floor finishes.

Products will be procured locally where possible, to reduce emissions associated with transport of materials to site. Construction site emissions will also be reduced where possible, through minimising diesel usage in generators and machinery.

The demolition of the furniture store and warehouse provides opportunity for the reuse of materials on site. Reusable materials are likely to include concrete which can be crushed for use as aggregate, and any high-quality steel. Where materials are unsuitable for reuse, they will be recycled in the first instance at appropriate licensed facilities. An audit of existing materials will be undertaken to ascertain whether any can be used within the construction of the proposed development.

Furthermore, the location of the site provides an opportunity to maximise sustainable travel options including walking / cycling and public transport in preference to the private car. This approach will deliver further carbon emission reductions whilst promoting the health and wellbeing of building occupants through active travel.

### 3.8 Environmental Design

The applicant is targeting a BREEAM 'Very Good' rating for the office element of the development to ensure high levels of sustainability performance. This commitment supports Manchester's declaration of a climate emergency and journey to net zero carbon.

**Chapter 5** of this Statement reports the proposed BREEAM strategy as established via BREEAM Pre-assessment and team workshops that have been

undertaken to establish how 'Very Good' performance can be achieved.

### 3.9 Offsetting

The GMCA Net Zero Design Guidance confirms that offsetting will be at the discretion of the local planning authority. As there is no offset fund set up by MCC, a commitment to offset carbon cannot be made at this stage.

# 4. Sustainability Strategy

## 4.1 Introduction

In addition to energy and carbon strategy discussed in **Chapter 3**, the Proposed Development will be designed with a holistic approach to sustainability that addresses a wide range of issues relating to the environment and climate change. The following sections align with the Manchester Local Plan requirements for an Environmental Standards Statement.

## 4.2 Water Management & Weather Resilience

Water management and weather resilience issues in new developments are becoming increasingly important as a result of climate change, with effects such as increased winter rainfall, decreased summer rainfall and increased summer temperatures already being experienced.

The Met Office's latest UK Climate Projections (UKCP18) include significant changes to climatic conditions in Manchester by the 2050s, including increased summer and annual temperatures, increased winter rainfall and reduced summer rainfall.

### 4.2.1 Flood Risk & Drainage

The Flood Risk Assessment (FRA) completed by Renaissance confirms that the site is located within Flood Zone 1 according to the Environment Agency (EA) Flood Map. Therefore, the risk of flooding from rivers and sea across the site is very low.

The site is not located in an area shown to be at risk of groundwater flooding according to the Manchester, Salford and Trafford SFRA Groundwater flooding map. Therefore, the risk of groundwater flooding is considered to be low.

The EA Reservoir flood risk map indicates that the site is located outside the maximum flood extent of

a breach to any local reservoir, therefore, the risk of flooding due to reservoirs is considered to be very low.

The site has a high (>3.3%) risk of surface water flooding within the existing car park, however, this type of flooding can be difficult to predict and is based on the best information available to the EA.

To mitigate the risk associated with surface water flooding, the proposed development will ensure finished floor levels are set above external levels with falls provided away from the building plots. The development is to also include a dedicated surface water drainage network that will actively drain the site, whilst providing attenuation and flow reductions to the surround sewerage infrastructure.

The Drainage Strategy developed for the site by Renaissance estimates the existing and proposed surface water discharge rates and demonstrates the feasibility of the overarching drainage strategy for the proposed development.

PfE Policy JP-S4 expects developments to manage surface water runoff through sustainable drainage systems and as close to source as possible. It is therefore proposed that the total runoff from the site is limited to 5.0 l/s to minimise the risk of blockage and overland flooding. When compared with the 1 in 100-year brownfield run-off this represents a circa 89% betterment.

The post development discharge rates will include for an increase in the rainfall intensity of 40% and 45% for the 3.3% and 1% annual exceedance probability respectively, to allow for climate change as is consistent with a design life of the development of 100 years.

To achieve a run-off rate of 5l/s, a Sustainable Drainage System (SuDS) strategy has been

developed. The SuDS strategy incorporates the following:

- Grassed areas that allow direct infiltration of rainwater;
- Permeable paving around tree pits;
- Green and blue roofs; and
- Attenuation structures installed below ground to provide runoff storage.

Further details regarding the flood risk and drainage strategy are provided within the FRA and Drainage Strategy submitted as part of the planning application.

#### 4.2.2 Potable Water Efficiency

Potable water is an increasingly important natural resource and with the majority of the UK classed as being in an area of moderate or severe water stress the conservation of water is becoming a more significant sustainability metric.

Dwellings will aim to reduce water consumption through a range of water efficiency measures such as:

- Reduced flush WCs;
- Low flow fittings such as taps and showers; and
- Where appropriate, water efficient equipment.

Through the use of these measures new dwellings will target a water consumption rate of 125 l/p/d in line with PfE Policy JP-S4 requirements.

The office element of the development is targeting two credits under BREEAM Wat 01 Water Efficiency, which would deliver a 25% saving over industry baseline.

These measures will help ensure the development reduces demand on local potable water supplies and therefore promote resilience to potential water constraints such as summer droughts.

### 4.3 Waste Management

Sufficient storage for operational recyclable and non-recyclable waste will be provided in accordance with Manchester City Council's Waste Storage & Collection Guidance for New Developments GD04 (Version 6, September 2017)<sup>18</sup>. This guidance provides minimum standards for the storage and collection of refuse and for recycling facilities in new domestic and commercial development.

SLR has prepared a Waste Management Strategy Report, which considers the potential impacts that may arise from waste generated during the operational phase of the proposed development and sets out the strategy for legislative compliance and good practice in the separation, storage, management and collection of waste arising. The report also provides waste forecasts for each element of the development.

All on-site waste will be managed in accordance with the waste hierarchy which priorities reduction, reuse, recycling, recovery and disposal as a last resort.

Waste storage facilities provided at Stocktons will reflect the various waste streams that are generated and will be collected by the local waste authority. By making it clear and convenient for building users to separate waste at source, a reduction of waste sent to landfill will be supported.

Further details are provided within the Waste Management Strategy Report accompanying the planning application. Construction waste is discussed further in **Section 3.6** below.

### 4.4 Construction Management

The proposed development will ensure that construction minimises waste and impact on the surrounding area.

The development will be registered with the Considerate Constructors Scheme and achieve

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<sup>18</sup> [Manchester City Council Waste Storage and Collection Guidance \(2017\)](#)

certification against the Code of Considerate Practice.

As set out further in **Section 5**, BREEAM credits associated with Responsible Construction Practices have been maximised in the proposed target for a Very Good rating.

A Pre-Demolition Audit and Site Waste Management Plan (SWMP) will be developed prior to the demolition, providing details on how waste will be segregated and processed where not re-usable on site. These proposed measures will help incorporate principles of circular economy and reduce the embodied carbon associated with ‘end-of-life’ of the previous buildings, and also the emissions associated with construction stage where they can be re-used.

The reduction, reuse and recycling of demolition and construction waste is to be prioritised through measures such as avoidance of over-ordering, supervision of deliveries, use of secure materials storage facilities and reuse of materials onsite where feasible.

## 4.5 Biodiversity

Urban Green has undertaken a Preliminary Ecological Appraisal (PEA) at the proposed development site.

The habitats on site are limited to young, planted trees, and there are negligible habitats for local wildlife. The proposed development necessitates the removal of three tree groups within the site boundary. However, it is noted that all the trees are of low value. The tree loss will be mitigated against through onsite replacement tree planting and the production of a robust soft landscaping scheme.

A Green and Blue Infrastructure Statement has been prepared to support the planning application, and proposes the following enhancements to the site:

- New tree planting
- Greenspaces within the public realm
- Connection to local green infrastructure such as the proposed East Village Central Development Framework.

## 4.6 Waterways

The closest watercourse to the site, the Shooters Brook, a tributary to the River Medlock, is culverted and passes beneath the site. Ashton Canal (West) is located 150 meters southeast of the site. Rochdale canal is located 250 meters northwest of the site. A Demolition and Construction Environmental Management Plan will be developed to ensure that measures are in place to reduce dust, air and water pollution in line with best practice.

# 5. BREEAM Strategy

## 5.1 Introduction

Manchester City Council requires a minimum BREEAM 'Very Good' rating for all new non-domestic development. This chapter sets out the strategy proposed by the applicant to achieve the required rating under the latest New Construction V6.1 scheme on the office element of the proposed development. The residential elements are not applicable to BREEAM.

## 5.2 BREEAM Strategy

Turley Sustainability has undertaken a BREEAM Pre-assessment (see **Appendix 1**) using the New Construction V6.1 'Office' methodology. **Table 9** sets out a potential route to BREEAM 'Very Good' and targeted percentage within each section.

**Table 9: BREEAM 'Very Good' Breakdown**

| Category           | Percentage Targeted       |
|--------------------|---------------------------|
| Management         | 7.33%                     |
| Health & Wellbeing | 6.55%                     |
| Energy             | 8.00%                     |
| Transport          | 11.50%                    |
| Water              | 3.89%                     |
| Materials          | 7.50%                     |
| Waste              | 3.82%                     |
| Land Use & Ecology | 6.92%                     |
| Pollution          | 6.00%                     |
| Exemplary          | 1.00%                     |
| <b>Score</b>       | <b>62.51% (Very Good)</b> |

The current anticipated BREEAM score of 62.51% achieves the minimum 55% score required for

BREEAM 'Very Good' with a margin of security and includes relevant mandatory requirements.

Please note that the route to BREEAM Very Good compliance, as set out in the BREEAM Pre-assessment, is subject to change during ongoing detailed design and construction.

A summary of credits targeted within each category, and the value that meeting the criteria brings to the development, is discussed in the following sections.

### 5.2.1 Management

The management category encourages the adoption of sustainable management practices in connection with design, construction, commissioning, handover and aftercare.

The credits associated with Responsible Construction Practices have been maximised within this section, to ensure best practice in construction and reduce impacts on the local area

Relevant practices which will be undertaken include life cycle costing at technical design, and best practice commissioning.

### 5.2.2 Health & Wellbeing

The Health and Wellbeing category of the BREEAM schemes has been aligned with the 'WELL' Standard, bringing the comfort of building occupiers to the forefront of the design.

Summertime overheating within buildings is likely to be an increasing risk from climate change and will be considered within the design for both current and future climate scenarios.

The indoor air quality, visual comfort, acoustic performance and safety and security of the proposed development will also be considered.

### 5.2.3 Energy

The building services strategy minimises operational carbon emissions using the energy hierarchy as set out in Section 3.2.1 to deliver savings beyond building regulations.

Unregulated energy will also be reduced through careful specification of large energy consuming systems such as lifts, and domestic scale white goods.

Sub-metering of energy uses will allow the building user to monitor and close the performance gap between 'as designed' and 'in use' energy performance.

### 5.2.4 Transport

A Transport Statement has been produced to assess the effect of the development on local transport infrastructure. A Travel Plan has also been produced to set sustainable transport measures to reduce private car travel to and from site.

Credits are awarded on the basis of number of transport options available to the site pre-development and improvements made as a result of the development.

Given the extremely accessible nature of the development in terms of public transport and local amenities, the proposed development is able to maximise the credits associated with sustainable transport measures.

Cycle storage spaces will be provided for building users with associated shower facilities for office staff.

### 5.2.5 Water

The aim of the Water category is to reduce the consumption of internal and external potable water over the lifetime of the building and minimising losses through leakage.

To reduce water consumption through sanitary uses and achieve a minimum 25% reduction of the baseline water use defined by the BRE, the following measures will be implemented:

- Low flush WCs
- Flow restricted showers and taps.

Water usage will also be monitored through water meters and a leak detection system.

### 5.2.6 Materials

The Materials category encourages development to take a 'whole life cycle' approach to construction products, considering impacts of the supply chain from raw material to end-of-life.

To reduce material wastage associated with maintenance and replacement, protection measures will be incorporated into the design to protect from damage that may arise from building users and visitors, such as protecting internal areas from trolley movement, pedestrian traffic or external areas from parking and/or delivery vehicles.

The design team has also considered the effect of environmental factors such as water ingress, solar radiation and temperature variation on the building.

Manufacturers with responsible sourcing accreditation, for example, BES6001, ISO14001, FSC and CARES certification will be prioritised. Sisk has implemented a Sustainable Procurement Plan which sets out targets to reduce environmental and social impacts through the supply chain.

### 5.2.7 Waste

The waste category encourages the reduction of waste associated with construction methods through measures implemented during the design and on-site management. The category also rewards design measures encouraging the building users to recycle waste during building operation.

The proposed development will minimise construction and operational waste in line with the measures set out within the **Section 4.3** of this report.

The office design is flexible by being adaptable to climate change, change in use, and refurbishment to

reduce the environmental impacts of excess material usage and waste in the future.

#### 5.2.8 Land Use & Ecology

The aim of the Land Use and Ecology category is to encourage sustainable land use, habitat protection and creation and improvement of long-term biodiversity.

As discussed within **Section 3.7**, a PEA has been undertaken by Urban Green to assess the ecological value of the site and set out mitigation measures to protect local habitats and species.

#### 5.2.9 Pollution

The aim of the Pollution category is to address the prevention and control of pollution, and surface waste run-off associated with the building's location and use.

Pollution issues covered within this section include light, noise, flooding and emissions to air, land and water.

As the building services strategy is all-electric and there will be no fossil fuels combusted on site, there will be no adverse impact on local air quality.

Furthermore, pollution impacts associated with light and noise will be reduced and managed appropriately.

The site is within an area at low risk of flood (Flood Zone 1) and surface water run-off will be managed to ensure risk to the proposed development and neighbouring areas does not increase.

### 5.3 Summary

The above sections summarise the approach taken by the office element to achieve a BREEAM 'Very Good' rating. The credits targeted equate to a score of 62.51% which would achieve BREEAM 'Very Good' (55%) with a margin of safety.

It should be noted that the route to the targeted rating set out in this chapter is subject to change as part of detailed design and construction.

## 6. Conclusions

This Environmental Standards Statement demonstrates how the Stocktons development meets national and local planning policy in relation to sustainability, energy and climate change.

The proposed development at Stocktons incorporates a range of measures to ensure high levels of environmental sustainability performance in accordance with relevant national and Manchester City Council policy and guidance.

A BREEAM 'Very Good' rating is targeted as sought by Manchester City Council planning policy. This will ensure high performance across a range of sustainability issues during both construction and operation.

### Energy and Carbon

Energy modelling undertaken indicates a 76% and 77% reduction in carbon emissions is achievable for Block A and B respectively against Part L 2021 by implementing the energy hierarchy.

The proposed energy strategy is further future proofed by being 'all electric' and incorporating renewable energy generation using a roof mounted solar PV array. This strategy will benefit from the significant further decarbonisation of the UK electricity grid that is forecast by the Government. Therefore, the development will contribute to Manchester City Council's ambition to become carbon neutral by 2038.

The energy strategy aligns with the principles of the UKGBC Net Zero Carbon Buildings Framework,

which requires energy demand and usage to be reduced as far as possible and served by an all-electric building services strategy with renewable energy generation. The development can therefore be considered 'net zero ready' in line with the principles of the framework and **Policy JP-S2**.

In addition to the low carbon energy strategy, the location of the site provides an opportunity to maximise sustainable travel options including walking / cycling and public transport in preference to the private car. This approach will deliver further carbon emission reductions whilst promoting the health and wellbeing of building occupants through active travel.

A WLCA has been completed at Concept Design to inform the design and compare results against industry benchmarks.

The upfront carbon limits from the UKNZCBS have been used as a benchmark to allow for comparison with best practice carbon performance. The estimated upfront carbon emissions of **560 kgCO<sub>2</sub>e/m<sup>2</sup>** marginally exceed the 2026 UKNZCBS limits of **525 kgCO<sub>2</sub>e/m<sup>2</sup>**. As the design develops and more detailed project information becomes available, the estimated upfront carbon emissions are expected to change. A range of carbon reduction opportunities will be explored as the design progresses to reduce the carbon impact of the development, where feasible.

### Environmental Design

The office element of the development seeks to achieve a BREEAM 'Very Good' rating, and the Pre-assessment provided within **Appendix 2** demonstrates how this can be achieved.

### Water Management and Climate Resilience

The application site is at low risk of flooding and the development will make use of SuDS to ensure that risk of flooding is not increased.

The development is resilient to the impacts of climate change and will reduce overheating through measures such as natural, and auxiliary ventilation with MVHR's.

Water efficiency will be managed through a range of measures such as low flow fittings, including taps and showers, and other water efficient equipment. New dwellings will target a water consumption rate of 125 l/p/d to meet PfE Policy JP-S4, and the office element will target two BREEAM Wat 01 Water Efficiency Credits as a minimum to deliver a 25% improvement over the baseline.

### Construction and Waste Management

A pre-demolition audit will be undertaken to ascertain whether any materials from the furniture store and warehouse can be re-used on site. Where this is not possible, the waste hierarchy will be followed to re-use off site and recycled before going to landfill.

Construction phase waste management and appropriate operational waste storage will help ensure the development contributes to waste recycling targets and minimises the amount of waste sent to landfill.

### Biodiversity

The proposed development site is predominantly building and hard standing. The site's habitats are limited to young, planted trees, which are of low value. The proposed development necessitates the removal of some trees within the site boundary. However, the tree loss will be mitigated against through onsite replacement tree planting and the production of a robust soft landscaping scheme.

### Waterways

The closest watercourse to the site, the Shooters Brook, a tributary to the River Medlock, is culverted and passes beneath the site. Ashton Canal (West) is located 150 meters southeast of the site. Rochdale canal is located 250 meters northwest of the site. A Demolition and Construction Environmental Management Plan will be developed and the contractor will implement best practice pollution prevention policies and procedures on-site, in accordance with Pollution Prevention Guidelines.

# Appendix 1: Energy and Carbon Proforma

## Energy and Carbon Proforma Residential

Major development (+10 homes)

**GMCA** GREATER  
MANCHESTER  
COMBINED  
AUTHORITY

Version 1.0

Project Name: Stocktons, 140 Great Ancoats Street

Application ref: **142535/FO/2025**

Date: May-26

|                                  |                                                                                                                         | Ref.<br>name                        | Block A                                                | Block B                              |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------|--------------------------------------|
|                                  |                                                                                                                         | No.<br>dwellings                    | 523                                                    | 200                                  |
|                                  |                                                                                                                         | Area (m <sup>2</sup><br>GIA)        | 34,328                                                 | 12,060.6                             |
|                                  |                                                                                                                         | Target<br>values                    | Building 1                                             | Building 2                           |
| Minimise<br>energy<br>demand     | Space heating demand (kWh/m <sup>2</sup><br>GIA/yr)                                                                     | ≤ 15<br>(flats)<br>≤ 20<br>(houses) | 6.18<br>kWh/m <sup>2</sup><br>GIA/yr                   | 4.71<br>kWh/m <sup>2</sup><br>GIA/yr |
|                                  | Calculation methodology used to calculate<br>space heating demand and confirmation<br>that this covers all homes/blocks | Predictive<br>energy<br>model       | CIBSE TM54 (to be<br>undertaken at detailed<br>design) |                                      |
|                                  | Form factor per building                                                                                                | ≤ 2                                 | 0.71                                                   | 0.84                                 |
|                                  | Average external wall U-value (W/m <sup>2</sup> K)                                                                      | ≤ 0.15                              | 0.73<br>(curtain<br>walling)                           | 0.72<br>(curtain<br>walling)         |
|                                  | Average window U-value (W/m <sup>2</sup> K)                                                                             | ≤ 1 (triple)                        | 0.73                                                   | 0.72                                 |
|                                  | Air permeability rate (m <sup>3</sup> /h/m <sup>2</sup> @ 50 Pa)                                                        | ≤ 1                                 | 2.75 (1<br>bed)<br>2.5 (2+3<br>bed)                    | 2.75 (1<br>bed)<br>2.5 (2+3<br>bed)  |
| Maximise<br>energy<br>efficiency | Energy use intensity (kWh/m <sup>2</sup><br>GIA/yr)                                                                     | ≤ 35                                | 57.26                                                  | 57.13                                |
|                                  | Calculation methodology used to calculate<br>energy use intensity and confirmation that<br>this covers all homes/blocks | Predictive<br>energy<br>model       | CIBSE TM54 (to be<br>undertaken at detailed<br>design) |                                      |

|                          |                                                                                                                                                 |           |                                             |           |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------------------------|-----------|
| Use renewable energy     | PV footprint area (% of ground floor space)                                                                                                     | ≥ 40      |                                             |           |
|                          | Annual renewable energy generation (kWh/m <sup>2</sup> building footprint/yr)                                                                   | -         | 0.075                                       | 0.129     |
|                          | Renewable energy balance (%)                                                                                                                    | -         | 0.13                                        | 0.23      |
|                          | Total energy used (kWh/yr)                                                                                                                      | -         | 1,965,444                                   | 688,993.4 |
|                          | Total energy generated on-site (kWh/yr)                                                                                                         | -         | 2,633.44                                    | 1,558.14  |
| Use low carbon energy    | Fossil fuel free (yes/no)                                                                                                                       | Yes       | Yes                                         | Yes       |
|                          | Heat source                                                                                                                                     | Electric  | Electric                                    | Electric  |
|                          | Low Carbon Heat Appraisal completed                                                                                                             | Yes       | Yes                                         | Yes       |
|                          | Heat network suitability                                                                                                                        | -         | No                                          | No        |
|                          | Exemption requested                                                                                                                             | -         |                                             |           |
|                          | Efficiency of heating system (SCOP)                                                                                                             | ≥ 3.5     | 1.0                                         | 1.0       |
|                          | Carbon content of heat (gCO <sub>2</sub> /kWh)                                                                                                  | ≤ 100     | 160.4                                       | 160.5     |
| Reduce overheating risk  | Have Part O overheating requirements been met without the use of mechanical cooling?                                                            | Yes       | Yes                                         | Yes       |
|                          | If no, how many homes are cooled?                                                                                                               | Yes       | N/A                                         | NA        |
|                          | Has a CIBSE TM59 assessment been carried out using DSY2 and DSY3 weather files? Have any additional passive measures been included as a result? | Yes       | No                                          | No        |
| Minimise embodied carbon | Upfront embodied carbon (kgCO <sub>2</sub> e/m <sup>2</sup> GIA)                                                                                | ≤ 500-600 | 565                                         |           |
|                          | List top three materials with the highest upfront embodied carbon emissions (kgCO <sub>2</sub> e/m <sup>2</sup> GIA): Material 1                | -         | Ready-mix Concrete                          |           |
|                          | Material 2                                                                                                                                      | -         | Reinforcement steel                         |           |
|                          | Material 3                                                                                                                                      |           | M&E systems                                 |           |
|                          | Lifecycle embodied carbon (kgCO <sub>2</sub> e/m <sup>2</sup> GIA) - for large major developments only                                          | -         | 868                                         |           |
| Offsets                  | Offset contribution (£)                                                                                                                         | -         | N/A – no details on offset scheme available |           |

## Appendix 2: BREEAM Pre-assessment

## **Turley Manchester**

Level 5, Transmission,  
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Manchester, M3 3GS

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**Turley**  
Sustainability  
and ESG