



# RIDGE

**ALPHA HOUSE, WYTHENSHAW  
ENVIRONMENTAL STANDARDS  
STATEMENT**

28/11/2025

# ALPHA HOUSE, WYTHENSHAW ENVIRONMENTAL STANDARDS STATEMENT NOVEMBER 2025

## Prepared for

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## CONTENTS

|                                                                         |           |
|-------------------------------------------------------------------------|-----------|
| <b>1. INTRODUCTION</b>                                                  | <b>4</b>  |
| <b>2. DEVELOPMENT PROPOSALS</b>                                         | <b>4</b>  |
| 2.1. Site Overview and Development proposals                            | 4         |
| <b>3. POLICY CONTEXT</b>                                                | <b>4</b>  |
| 3.1. National Planning Policy Framework                                 | 4         |
| 3.2. Places For Everyone Joint Development Plan                         | 5         |
| 3.3. Manchester Core Strategy (2012 – 2027)                             | 11        |
| 3.4. Guide to Development in Manchester Supplementary Planning Document | 14        |
| <b>4. RESPONSE TO CLIMATE CHANGE</b>                                    | <b>15</b> |
| 4.1. Introduction                                                       | 15        |
| 4.2. Carbon Reduction                                                   | 15        |
| 4.3. Climate Change Adaptation                                          | 20        |
| <b>5. OTHER AREAS OF ENVIRONMENTAL &amp; SUSTAINABILITY PERFORMANCE</b> | <b>22</b> |
| 5.1. Introduction                                                       | 22        |
| 5.2. Materials and Waste Reduction                                      | 22        |
| 5.3. Daylight & Sunlight                                                | 23        |
| 5.4. Biodiversity                                                       | 23        |
| 5.5. Air Quality                                                        | 24        |
| 5.6. Noise Pollution                                                    | 25        |
| <b>6. CONCLUSION</b>                                                    | <b>25</b> |
| <b>APPENDIX A: SITE BOUNDARY</b>                                        | <b>28</b> |
| <b>APPENDIX B: EMBODIED CARBON SUMMARY</b>                              | <b>29</b> |

## 1. INTRODUCTION

This Environmental Standards Statement has been prepared by Ridge & Partners LLP on behalf of Muse ('the Applicant') in support of a full planning application for a residential development Alpha House, Wythenshawe. The Statement demonstrates how the development of the proposed energy and sustainability strategy takes into consideration and responds to the requirements of local planning policy and the 2022 Building Regulations.

The primary objective of this report is to contribute to the development of a low carbon and sustainable strategy for the site which will be carried through to detailed design, construction, and operation.

## 2. DEVELOPMENT PROPOSALS

### 2.1. Site Overview and Development proposals

The proposed development at Alpha House, Wythenshawe, involves a new multi-storey residential apartment building. The scheme will comprise a six-storey apartment block containing approximately 125 apartments, with an internal courtyard garden located at first floor level and an internal car park at ground floor level.

The total area of the proposed development is 0.361ha, and the small areas surrounding the building will be appropriately paved and landscaped. The previous use of the site is offices, and the proposed use is residential.

Please refer to drawing 18703-LB-ZZ-XX-D-A-102000 "Existing Site Plan" in Appendix A for further details regarding the site boundary.

## 3. POLICY CONTEXT

### 3.1. National Planning Policy Framework

The Government's planning policies for England are set out in the National Planning Policy Framework (NPPF). Section 2 of the NPPF highlights sustainability as a critical issue which underpins all planning policies, stating that "the purpose of the planning system is to contribute to the achievement of sustainable development".

Aligning with the U.N. definition, the NPPF defines sustainable development as "meeting the needs of the present without compromising the ability of future generations to meet their own needs", and outlines the three pillars of sustainability which must be pursued in tandem to ensure developments are truly sustainable:

- An **economic objective**, to help build a strong, responsive, and competitive economy, by ensuring that sufficient land of the right types is available in the right places, and at the right time to support growth, innovation, and improved productivity; and by identifying and coordinating the provision of infrastructure.
- A **social objective**, to support strong, vibrant, and healthy communities by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations, and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural wellbeing.
- An **environmental objective**, to contribute to protecting and enhancing our natural, built, and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

### 3.2. Places For Everyone Joint Development Plan

The Places for Everyone Joint Development Plan (2024) of Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford, and Wigan Councils sits at the foundations of proposals to improve employment opportunities for local communities, build the right homes in the right places, rejuvenate green spaces and reshape town centres. As a long-term plan for jobs, new homes, and sustainable growth, it will enable the region to tackle the inequalities experienced by many communities.

This section of the report summarises the policies within the Plan relevant to climate change and environmental sustainability, and to the proposed development site.

#### **Policy JP-Strat9: Southern Areas**

The economic competitiveness, distinctive local neighbourhood character and environmental attractiveness of the southern areas will be protected and enhanced. There will be a strong emphasis on making as much use as possible of suitable previously developed (brownfield) land and promoting the roles of the areas' town centres and its other key assets, including education and training facilities enabling people to gain access to employment opportunities. There will be an emphasis on improving transport connections and accessibility by public transport, cycling and walking, ensuring access to key employment opportunities in this area.

#### **Policy JP-S1: Sustainable Development**

Development should aim to maximise economic, social and environmental benefits simultaneously, minimise its adverse impacts, utilise sustainable construction techniques and actively seek opportunities to secure net gains across each of the different objectives. In preparing plans, authorities should make as much use as possible of suitable previously developed (brownfield) land and vacant buildings to meet development needs. In bringing forward previously developed sites for development, particular attention will be paid to tackling land contamination and stability issues, ensuring that appropriate mitigation and remediation is implemented to enable sites to be brought back into use effectively.

#### **Policy JP-S2: Carbon and Energy**

The aim of Policy JP-S2 is to deliver a carbon neutral Greater Manchester no later than 2038, with a dramatic reduction in greenhouse gas emissions. This will be supported through a range of measures, including:

- Promoting retrofitting of existing buildings with measures to improve energy efficiency and generating renewable and low carbon energy, heating and cooling.
- Promoting the use of life cycle cost and carbon assessment tools to ensure the long-term impacts from development can be captured.
- Taking a positive approach to renewable and low carbon energy schemes, particularly schemes that are led by, or meet, the needs of local communities.
- Increasing the range of nature-based solutions including carbon sequestration through the restoration of peat-based habitats, woodland management, tree-planting and natural flood management techniques.
- An expectation that new development will, unless it can be demonstrated that it is not practicable or financially viable:
  - Be net zero carbon which applies:
    - From adoption: to regulated operational carbon emissions
    - From 2028: to all emissions 'in construction'.

Starting from 2025, it will also be expected that carbon emissions from unregulated energy sources will be quantified and minimised. Reported through an energy statement, development proposals will

be required to set out how this has been achieved in accordance with the energy hierarchy, which, in order of importance, seeks to:

- i. Minimise energy demand
- ii. Maximise energy efficiency
- iii. Use renewable energy
- iv. Use low carbon energy
- v. Utilise other energy sources

Furthermore, from 2025, any residual carbon emissions that cannot be fully mitigated on-site should be offset, in agreement with the relevant local planning authority through a financial contribution to a carbon offset fund. As an interim measure, development should be consistent with the 2022 Part L Building Regulations, unless superseded by changes to building regulations and/or national or local planning policies.

- Incorporate adequate electric vehicle charging points in line with Part S of the Building Regulations, unless superseded by relevant Local Plan policies, to future proof for the likely long-term demand, taking account of the potential maximum energy demand for the site.
- Where practicable, prioritise connection to a renewable energy/heating/cooling network or a low carbon energy/heating/cooling network that is adaptable to non-fossil fuels at a later date.
- 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 Table 5.1 of the Plan. In summary, this requires houses to meet the following best practice thresholds from 2025:
  - Space heating demand of 30kWh/m<sup>2</sup> (houses) or 25kWh/m<sup>2</sup> (flats)
  - At least 20% energy demand reduction in the total heat required for hot water heating
  - Photovoltaic installation to equal at least 40% of ground floorspace

With regards to renewable energy generation, priority should be given to photovoltaic (PV) installation, where technically feasible. Alternative technologies will also be considered appropriate where the equivalent generation is evidenced.

- For non-residential developments, achieve at least BREEAM Excellent standard (or equivalent) for issue Energy 01 "Reduction of energy use and carbon emissions", rising to 'BREEAM Outstanding equivalent from 2028 (for issue Energy 01).
- Include a detailed energy statement to demonstrate via site relevant evidence how the development has sought to maximize 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. Districts may set out specific carbon emission reduction and energy demand targets within Local Plans.

Please note that the June 2022 release revision of "Approved Building Regulations Part L 2021" will be referred to as "Part L 2022" throughout this report, in accordance with the naming convention used in Policy JP-S-2.

### **Policy JP-S3: Heat and Energy Networks**

The provision of decentralised energy infrastructure is critical to the delivery of the objectives for low carbon growth, carbon reductions, and an increase in local energy generation. The following measures will assist in achieving this:

1. Delivery of renewable and low carbon energy schemes will be supported, with particular emphasis on the use of decentralised energy networks in areas identified as "Heat and Energy Network Opportunity Areas". These have been identified where:
  - a. Existing heat/energy networks are operational or have been commissioned;
  - b. Proposals for new heat networks/energy networks are being progressed, or future opportunities have been identified in city-region master planning;
  - c. Sufficient density of existing heat demand occurs; and
  - d. Significant future development is proposed at the strategic development locations.
2. Within the identified "Heat and Energy Network Opportunity Areas", unless it can be demonstrated that there are more effective alternatives for minimising carbon emissions or such connection is not practicable or financially viable, it is expected that:
  - a. New residential developments that are '10 dwellings or more' or other developments over 1,000m<sup>2</sup> floorspace shall:
    - i. 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
    - ii. Install a site-wide or communal heat/energy network solution.
  - b. An expectation that new industrial development will demonstrate that opportunities for using waste heat locally have been fully examined, and included in proposals;
  - c. An expectation that where publicly owned buildings and assets adjoin new major development sites, opportunities for these buildings and assets to connect to site-wide proposals will be considered; and
  - d. An expectation that any site-wide networks will be designed so as to enable future expansion to adjoining buildings or assets as appropriate.

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

An integrated catchment-based approach will be taken to protect the quantity and quality of water bodies with reference to the North West River Basin Management Plan and managing flood risk, by:

1. Returning rivers to a more natural state, where practicable;
2. Working with natural processes and adopting a natural flood management approach to slow the speed of water drainage and intercept water pollutants;
3. Locating and designing development so as to minimise the impacts of current and future flood risk, including retrofitting or relocating existing developments, infrastructure and places to increase resilience to flooding;
4. Expecting developments to manage surface water run-off through sustainable drainage systems and as close to source as possible. Development should achieve greenfield run-off rates unless it is demonstrated to be impracticable. District local plans should consider setting more detailed surface water drainage policies to reflect local circumstances, including alternative surface water discharge rates, such as in areas with critical drainage issues;
5. Ensuring that sustainable drainage systems:
  - a. Are designed to provide multifunctional benefits wherever possible, including for water quality, nature conservation and recreation;
  - b. Avoid adverse impacts on water quality and any possibility of discharging hazardous substances to ground;
  - c. Are delivered in a holistic and integrated manner, including on larger sites split into different phases; and

- d. Are managed and maintained appropriately to ensure their proper functioning over the lifetime of the development.
6. Securing the remediation of contaminated land and the careful design of developments to minimise the potential for urban diffuse pollution to affect the water environment; and
7. As a minimum, residential development should meet the mandatory water efficiency standard of 125 litres/person/day as set out in Building Regulations. District local plans may and should consider setting a tighter water efficiency standard of 110 litres/person/day where there is a clear local need with reference to national guidance on housing optional technical standards.

#### **Policy JP-S5: Clean Air**

A comprehensive range of measures will be taken to support improvements in air quality, focusing particularly on locations where people live, where children learn and play, where there are impacts on the green infrastructure network and where air quality targets are not being met, including:

- Locating and designing development, and focusing transport investment, so as to reduce reliance on forms of transport that generate air pollution;
- Determining planning applications having regard to the most recent development and planning control guidance published jointly by the Institute of Air Quality Management (IAQM) and Environmental Protection UK (EPUK), and the most recent IAQM Guidance on the Assessment of Dust from Demolition and Construction, or relevant successor guidance, including the requirement for developers to submit construction management plans as appropriate;
- Requiring applications for developments that could have an adverse impact on air quality to submit relevant air pollution data so that adverse impacts on air quality can be fully assessed and development only permitted where they are acceptable and/or suitable mitigation can be provided;
- Restricting developments that would generate significant point source pollution such as some types of industrial activity and energy generation;
- Significantly expanding the existing commercial network of electric vehicle charging points, both for public and private use, including as part of new developments;
- Implementing the Clean Air Plan and associated measures;
- Facilitating the more sustainable distribution of goods within the urban area, including through accommodating urban consolidation centres and urban distribution centres that use ultra-low-emission vehicles, and local delivery facilities to reduce repeat delivery attempts;
- Designing streets to avoid trapping air pollution at ground level, including through the appropriate location and scale of buildings and trees;
- Controlling traffic and parking within and around schools, early years sites and other locations that are particularly sensitive to air quality;
- Promoting actions that help remove pollutants from the air, such as enhancing the green infrastructure network and using innovative building materials that capture air pollutants; and
- Development should be located in areas that maximise the use of sustainable travel modes and be designed to minimise exposure to high levels of air pollution, particularly for vulnerable users.

#### **Policy JP-S6: Resource Efficiency**

The achievement of a circular economy and a zero-waste economy will play a key role in meeting Greater Manchester's ambition of becoming a leading green city region by 2038. Application of the following measures will help achieve this:

- Development and implementation of the Zero Waste Strategy for Greater Manchester which promotes overall reduction in the levels of waste produced and supports resource efficiency within the Plan area in order to gain the maximum value from the things we produce;
- Recognition of the role of existing infrastructure in managing our waste and protecting such facilities to ensure adequate waste management capacity is maintained; and

- 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-G6: Urban Green Space**

To ensure there is an appropriate scale, type, quality and distribution of accessible urban green space that can support a high quality of life and other important green infrastructure functions:

- Existing urban green space will be protected and enhanced in balance with other considerations;
- We will work with developers and other stakeholders to deliver new high quality urban green spaces.

Development should be designed to support the positive use of nearby green spaces, such as by offering a high-quality setting, providing natural surveillance, and facilitating easy access by walking and cycling.

#### **Policy JP-G8: A Net Enhancement of Biodiversity and Geodiversity**

Through local planning and associated activities, a net enhancement of biodiversity resources will be sought, including, where relevant, by:

1. Increasing the quality, quantity, extent and diversity of habitats, particularly priority habitats identified in national or local biodiversity action plans and those that support priority species;
2. Improving connections between habitats, to protect and enhance the provision of corridors, ecological networks (including Nature Recovery Networks) and steppingstones that enable the movement of species, especially as the climate changes;
3. Enhancing the management of existing habitats, including through habitat restoration, avoiding habitat fragmentation and combating invasive species;
4. Protecting sites designated for their nature conservation and/or geological importance, with the highest level of protection given to international and then national designations;
5. Facilitating greater access to nature, particularly within urban areas;
6. Supporting the development and implementation of the Great Manchester Wetlands Nature Recovery Network; and
7. Safeguarding, restoring and sustainably managing our most valuable soil resources, tackling soil degradation/erosion and recovering soil fertility, particularly to ensure protection of peat-based soils and safeguard 'best and most versatile' agricultural land.

Development will be expected to:

- a. Follow the mitigation hierarchy of:
  - i. Avoiding significant harm to biodiversity, particularly where it is irreplaceable, through consideration of alternative sites with less harmful impacts, then
  - ii. Adequately mitigating any harm to biodiversity, then
  - iii. Adequately compensating for any remaining harm to biodiversity
- b. Avoid fragmenting or severing connectivity between habitats;
- c. Achieve a measurable net gain in biodiversity of no less than 10%
- d. Make appropriate provision for long-term management of habitats and geological features connected to the development;
- e. Where appropriate, development should: mitigate air pollution impacts on Manchester Mosses SAC; mitigate urban edge, functionally linked land and recreation disturbance impacts on the South Pennine Moors SAC/SPAs; and assess and potentially mitigate boat movement, water pollution, and light spillage and shading impacts on the Rochdale Canal SAC; and
- f. Development proposals should be informed by the findings and recommendations of the appropriate biodiversity/ecological assessment(s) in the PfE evidence base and/or any

updated or appropriate biodiversity/ecological assessments submitted as part of the planning application process.

### **Policy JP-P1 Sustainable Places**

Greater Manchester aims to become one of the most liveable city regions in the world, consisting of a series of beautiful, healthy and varied places, each having the following key attributes that all development, wherever appropriate, should be consistent with:

1. Distinctive, with a clear identity that:
  - a. Conserves and enhances the natural environment, landscape features, historic environment and local history and culture;
  - b. Enables a clear understanding of how the place has developed; and
  - c. Respects and acknowledges the character and identity of the locality in terms of design, siting, size, scale and materials used
2. Visually stimulating, creating interesting and imaginative environments which raise the human spirit through the use of green space, public art and quality design
3. Socially inclusive:
  - a. Responding to the needs of all parts of society;
  - b. Enabling everyone to participate equally and independently;
  - c. Providing opportunities for social contact and support; and
  - d. Promoting a sense of community
4. Resilient, capable of dealing with major environmental events
5. Adaptable, able to respond easily to varied and changing needs and technologies
6. Durable, being built to last and using robust materials that reflect local character, weather well and are easily maintained
7. Resource-efficient with:
  - a. A low carbon footprint;
  - b. Efficient use of land;
  - c. Minimised use of new materials;
  - d. High levels of recycling
8. Safe, including by designing out crime and terrorism, reducing opportunities for anti-social behaviour and by ensuring that developments make appropriate provision for response and evacuation in the case of an emergency or disaster.
9. Supported by critical infrastructure, such as energy, water and drainage and green spaces
10. Functional and convenient, enabling people and uses to act efficiently with minimal effort, and responding to needs relating to servicing, recycling facilities, refuse collection and storage
11. Incorporating inclusive design within all spaces with support for tackling inequality and poverty to form part of creating sustainable places
12. Legible, being easy to understand and navigate, with the protection and enhancement of key views and new development well-integrated into the place
13. Easy to move around for those of all mobility levels, particularly by walking and cycling, with enjoyable routes free from obstacles and disorienting stimuli, and with places to rest
14. Well-connected to other places, particularly by public transport and digital infrastructure enabling everyone to take advantage of the employment, cultural and leisure opportunities across Greater Manchester and beyond
15. Comfortable and inviting, with indoor and outdoor environments:
  - a. Offering a high level of amenity that minimises exposure to pollution; and
  - b. Addressing microclimate issues such as sunlight, indoor air quality, overheating, shade, wind and shelter
16. Incorporating high quality and well managed green infrastructure and quality public realm, with:

- a. Opportunities for recreation and outdoor play for children, and interaction between the generations;
  - b. Public and private spaces clearly distinguished;
  - c. Development clearly defining, and promoting activity within, public spaces;
  - d. High quality landscaping with schemes
17. Well-served by local shops, services and amenities, including education and health facilities.

### 3.3. Manchester Core Strategy (2012 – 2027)

Adopted in 2012, the Manchester Core Strategy is a key document within the wider Manchester Local Plan. It sets out the long-term strategic policies for Manchester's future development forms the framework that planning applications are assessed against. A summary of key policies relevant to the development are provided within this section.

#### **CS Policy DM 1: Development Management**

All development should have regard to a number of development principles for which more detailed guidance may be given within a supplementary planning document. It also states that, "subject to scheme viability, developers will be required to demonstrate that new non-domestic development to achieve a BREEAM Rating of 'Very Good' or for domestic development to achieve the Code for Sustainable Homes standard".

#### **Policy EN4: Reducing CO2 Emissions by Enabling Low and Zero Carbon Development**

It must be demonstrated that the energy hierarchy has been applied to:

- Reduce the need for energy through design features that provide passive heating, natural lighting and cooling.
- Reduce the need for energy through energy efficient features such as improved insulation and glazing.
- Meet residual energy requirements through the use of low or zero carbon energy generating technologies.

(Note: That the above section of Policy EN 4 is now replaced by Places for Everyone (PfE) Policy JP-S2)

Furthermore, the following is also required:

- Wherever possible, new development and retrofit projects, including energy generation plant, 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 and retrofit projects 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 and retrofit projects 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 in new development and refurbishment schemes must be considered.

#### **Policy EN5: Strategic Areas for Low and Zero Carbon Decentralised Energy Infrastructure**

This policy sets a requirement for key developments to consider being part of or providing an anchor to a new local energy network.

Within specific strategic areas (including the Oxford Street corridor) new development, regeneration and retrofit projects, will be expected to take place in the context of more detailed proposals for decentralised low and zero carbon energy infrastructure in the form of energy proposals plans. The Council will work with all

relevant stakeholders, which may include developers, landowners, residents, community groups, private sector partners, utilities companies, neighbouring authorities, and other public sector bodies, as appropriate, to bring forward such plans.

Where investment or development is being undertaken into or adjacent to a public building/asset or district heating network, full consideration shall be given to the potential role that these can have in providing an anchor load within a decentralised energy network or in creating opportunities for CO<sub>2</sub> reduction funded by contributions.

#### **Policy EN 6: Target Framework for CO<sub>2</sub> Reductions from Low or Zero Carbon Energy Supplies**

Residential developments of 10 or more units will be expected to achieve a minimum performance target as shown in the table below, unless this can be shown not to be viable. This should be demonstrated through an energy statement, submitted as part of the Design and Access Statement. Such a statement will be expected to set out the projected regulated energy demand and associated CO<sub>2</sub> emissions for all phases of the development’.

| Target                                  | % Minimum requirement                                                                          |
|-----------------------------------------|------------------------------------------------------------------------------------------------|
| Target 1: Network development area      | CHP/district heating anchor or connection or where not feasible, a 15% increase on Part L 2010 |
| Target 2: Electricity intense buildings | +15% increase on Part L 2010                                                                   |
| Target 3: Micro generation area         | +15% increase on Part L 2010                                                                   |

(Note: Most of Policy EN 6 is now replaced by PfE Policy JP-S2)

#### **Policy EN 8 Adaptation to Climate Change**

All new development will be expected to be adaptable to climate change in terms of the design, layout, siting and function of both buildings and associated external spaces. In achieving developments which are adaptable to climate change developers should have regard to the following, although this is not an exhaustive list:

- Minimisation of flood risk by appropriate siting, drainage, and treatment of surface areas to ensure rainwater permeability.
- Reduction in urban heat island effect through the use of Green Infrastructure such as green roofs, green walls, increased tree cover and waterways.
- The need to control overheating of buildings through passive design.
- The opportunity to provide linked and diverse green space to enhance natural habitats which will assist species adaptation.

Developers will be permitted to use green infrastructure elements such as green roofs, green walls, street trees and waterways to contribute to compliance with CO<sub>2</sub> mitigation under Policy EN6, subject to sufficient evidence to quantify their contribution to compliance.

(Note: The first and fourth bullet points of Policy EN 8 are now replaced by PfE Policies JP-S2, JP-S4 and JP-G8)

#### **Policy EN 14 Flood Risk**

The following requirements are stated within Policy EN 14:

- In line with the risk-based sequential approach contained within PPS25, development should be directed away from sites at the greatest risk of flooding, and towards sites with little or no risk of flooding; this

should take account of all sources of flooding identified in the Manchester-Salford-Trafford Strategic Flood Risk Assessment (SFRA).

- In addition to the requirements for site-specific Flood Risk Assessments (FRAs) set out in PPS25, an appropriate FRA will also be required for all development proposals, including changes of use, on sites greater than 0.5ha within Critical Drainage Areas (CDAs) and Canal Hazard Zones identified in the SFRA.
- All new development should minimise surface water run-off, including through Sustainable Drainage Systems (SUDS) and the appropriate use of Green Infrastructure. Developers should have regard to the surface water run-off rates in the SFRA User Guide. In CDAs, evidence to justify the surface water run-off approach / rates will be required.
- Developers should have regard to the surface water run-off rates in the SFRA User Guide. In CDAs, evidence to justify the surface water run-off approach / rates will be required.
- The City of Manchester contains many sections of rivers which are culverted or 'hidden'; where these are indicated in the SFRA beneath the proposed development site, further investigation will be required and the development proposal should take this into account; where feasible and appropriate development should seek to open up culverted/hidden rivers to reduce the associated flood risk and danger of collapse, taking advantage of opportunities to enhance biodiversity and Green Infrastructure.

(Note: The third bullet point of Policy EN 14 is now replaced by PfE Policy JP-S4)

### **Policy EN 15 Biodiversity and Geological Conservation**

The Council will seek to maintain or enhance sites of biodiversity and geological value throughout the City. Particular consideration will be given to:

- sites with international or national designations for their biodiversity value. Manchester contains one Site of Special Scientific Interest (SSSI) (Cotteril Clough); there is a Special Area of Conservation (SAC) and an SSSI just over the border in Oldham (both on the Rochdale Canal within Oldham).
- other sites of biodiversity value, including Sites of Biological Importance (SBIs) and Local Nature Reserves (LNRs); Manchester currently has 35 SBIs (including the Rochdale and Ashton Canals) and 7 LNRs; priority habitats found within Manchester, as listed in the Manchester Biodiversity Strategy, and included in the Greater Manchester Biodiversity Action Plan (GM BAP).
- protected and priority species, as listed in the Manchester Biodiversity Strategy and included in the Greater Manchester Biodiversity Action Plan (GM BAP).
- sites that are recognised for their geological importance;
- the Council's objective to protect and conserve the City's existing trees and woodlands and the aim for a net increase in trees across the City.

Developers will be expected to identify and implement reasonable opportunities to enhance, restore or create new biodiversity, either on-site or adjacent to the site, contributing to linkages between valuable or potentially valuable habitat areas where appropriate, with reference to:

- the Manchester Biodiversity Strategy, which provides further details of priority habitats within Manchester and opportunities for biodiversity enhancement including corridors such as the Mersey, Medlock and Irk River valleys, the canals and disused railway lines and areas of managed greenspace particularly in parks.
- the Green Infrastructure Framework for Greater Manchester, which encompasses an ecological framework that seeks to guide and inform habitat creation and repair, including identifying large 'biodiversity opportunity areas' including the Moston Brook Corridor and Knutsford Vale;
- the Open Space, Sport & Recreation Study, which identifies areas where there is a deficit of natural and semi-natural greenspace, opportunities for green corridors and other linkages.
- Manchester's Climate Change Action Plan.
- the Strategic Flood Risk Assessment (SFRA) for Manchester.

- the Habitats Regulations Assessment (HRA) for Manchester, which gives detailed consideration to Special Areas of Conservation (SACs), including the Rochdale Canal SAC just outside the district boundary.
- the River Basin Management Plan for the Northwest.
- the Manchester Tree Strategy.

Any adverse impacts on biodiversity will need to be justified against the wider benefits of the proposal, assessed against other LDF policies. Where adverse impacts are unavoidable, developers will be required to provide appropriate mitigation and/or compensation.

Development should wherever possible seek to maintain, enhance, or restore existing geology.

(Note: “Either on-site or adjacent to the site” in the second paragraph and the last sentence of Policy EN 15 are now replaced by PfE Policy JP-G8)

### **Policy EN 16 Air Quality**

The Council will seek to improve the air quality within Manchester, and particularly within Air Quality Management Areas, located along Manchester’s principal traffic routes and at Manchester Airport. Developers will be expected to take measures to minimise and mitigate the local impact of emissions from traffic generated by the development, as well as emissions created by the use of the development itself, including from Combined Heat and Power and biomass plant.

When assessing the appropriateness of locations for new development the Council will consider the impacts on air quality, alongside other plan objectives. This includes cumulative impacts, particularly in Air Quality Management Areas.

(Note: “and particularly within Air Quality Management Areas, located along Manchester’s principal traffic routes and at Manchester Airport” from first sentence of Policy EN 16 is now replaced by PfE Policy JP-S5)

### **Policy EN 19 Waste**

The Council will:

- Require all developers, including those of new waste management facilities within the District, to demonstrate the proposal’s consistency with the principles of the waste hierarchy (prevention, reduction, re-use, recycling/composting, energy recovery, final disposal)
- Require all developers to submit a waste management plan to demonstrate how both construction and demolition waste will be minimised and recycled on site wherever possible and how the sustainable waste management needs of the end user will be met.
- Promote the development of innovation and technological advancement within the sustainable waste management industry, aiming to achieve a closed-loop waste management system.
- Require waste management practices to have full regard to the environmental, social & economic impacts of such development and encourage long-term benefits in improving the environment, the regeneration of areas in need of investment and co-location with other employment uses where appropriate.
- Encourage communities to take responsibility for the waste created by provision of accessible facilities.

## **3.4. Guide to Development in Manchester Supplementary Planning Document**

Adopted in 2017, the Guide to Development in Manchester Supplementary Planning Document (SPD) is a material planning consideration for applications. That said, it is not part of the Development Plan. Whilst it references policies from the old Local Plan (UDP), which have been superseded, it is still useful as a general

guide to development. It includes a section on environmental standards, with sub sections on energy efficiency, renewable energy, environmental design, water management and weather resilience, waste management, construction management, biodiversity, and waterways.

## 4. RESPONSE TO CLIMATE CHANGE

### 4.1. Introduction

This section of the report summarises the proposed design response to potential climate change impacts, in line with Manchester City Council's policies identified in Chapter 3, notably the Places for Everyone Plan policy JP-S2 and Manchester Core Strategy policies EN4, EN6 and EN8.

### 4.2. Carbon Reduction

Carbon reduction is key to tackling climate change. The term "carbon", in relation to climate change, covers all greenhouse gas emissions, and is measured in terms of CO<sub>2</sub> equivalent. The carbon emissions associated with the development include embodied carbon, construction related carbon, and operational carbon. Operational carbon is associated with the energy used to heat, cool, light and ventilate the building, known as "regulated energy", and also the energy associated with unregulated systems, such as plug-in equipment. A further, and indirect, source of operational carbon emissions are associated with people's transport to, from and within the development. In addition, there are also significant carbon emissions associated with the construction of the building, including embodied carbon within the materials used for construction.

This section outlines the steps taken to reduce construction and operational emissions.

#### 4.2.1. Construction Carbon Emissions

An assessment of the embodied carbon associated with the proposed residential development at Alpha House has been undertaken by Ridge and Partners and is detailed in their Embodied Carbon Summary Report (see Appendix B). The assessment was carried out using OneClick LCA in accordance with best practice methodology, following the RICS Whole Life Carbon Assessment (Version 2). The embodied carbon modelling is based on the Arcadis Stage 2 cost plans, supplemented by design information and assumed material quantities where necessary to provide a robust estimate of the building's impact at this stage.

The total embodied carbon for Alpha House is calculated at 817 kgCO<sub>2</sub>e/m<sup>2</sup> GIFA, equivalent to 6,150 tCO<sub>2</sub>e (covering carbon modules A1–A5, B1–B4, and C1–C4). The results indicate that MEP services represent the most significant contributor to embodied carbon, driven by the substantial initial material input and the predicted frequency of component replacements over the building's lifetime (Module B4). The structural solution also contributes significantly, reflecting the mid/high-rise nature of the development. Combined, the lowest floor, upper floors, frame, and foundation account for the largest material impacts across the building.

More detailed and accurate Whole Life Carbon Assessments will be undertaken as the designs for the buildings are developed as part of the construction stage design, with a commitment of aligning with the RIBA 2030 Climate Challenge target for construction. Options will be considered at this next stage of design to reduce the embodied carbon totals down as much as feasibly possible, through the development of a Construction Embodied Carbon Management Strategy. Additional measures to be considered include:

- Consideration of alternatives for the structural frame, such as Light Gauge Steel Frames (LGSF) for apartment blocks and timber frames for town houses.
- Inclusion of cement replacement (GGBS) within the concrete mix for the substructure, the superstructure and ground floor. This would significantly reduce the embodied carbon associated with

these elements. The application of the recommended rates of cement replacement will be subject to review at a later stage by the structural engineers for the scheme.

- Reducing site reliance upon high carbon diesel fuel during the construction stage (through the acquisition of a grid electricity connection, or the use of diesel alternatives / on-site renewables to minimise diesel requirements). This would significantly reduce the embodied carbon associated with the construction site impacts. In addition, targeting low effective construction waste totals, and a high degree of waste segregation and diversion from landfill, to maximise lower carbon will also assist in reducing the impact of the site construction phase.
- Utilising materials containing a recycled content reduces the need for raw material extraction and processing, consequently lowering carbon emissions. Further steps to specify reused or higher recycled content products or materials could be made for the external walls and internal blockwork walls, through exploring initiatives such as using reclaimed bricks and blocks containing cement replacement. The use of unfired bricks for the external and non-bearing internal walls could also be investigated as these contain significantly less embodied carbon than standard clay bricks.
- Review of specific finish products to explore increasing the duration of the service life of the finishes specified. This emphasises the importance of optimising the finishes specification by modelling and comparing products, verified using EPDs, to ensure long lasting and durable products are selected.
- The significant contribution of Mechanical, Electrical and Public Health (MEP) systems carbon emissions to Embodied Carbon for the Proposed Development is influenced by several factors. The MEP equipment is often replaced multiple times over the building's lifespan, and therefore maintenance, replacement, and other emissions such as refrigerant leakage, can massively increase the contribution of services equipment to a building's embodied carbon footprint. Prioritising passive design solutions, such as natural ventilation and the optimisation of building orientation alongside effective shading strategies can minimise the reliance on mechanical and electrical components. Identifying and selecting durable equipment which provides a greater service life, to reduce through-life maintenance requirements should also be considered as the design progresses. Additionally, any further rationalisation of wiring, pipework, ducting extent would help to reduce the total impact of this element.
- Without exact information default assumptions have been applied to the MEP elements at this time, during the remaining design and construction stages, where the service design is further progressed and manufacturers can provide documentation showing their products are guaranteed for a longer period than specified, these assumptions can be amended to reduce the emissions associated with replacement. This will provide a much more accurate overview of the emissions associated of their systems, and their service life.

#### 4.2.2. Operational Carbon Emissions

Operational CO<sub>2</sub> emissions associated with the day-to-day running of the development will be minimised in line with the energy hierarchy, thus conforming to the requirements of Manchester Core Strategy Policy EN 4 "Reducing CO<sub>2</sub> Emissions by Enabling Low & Zero Carbon Development" and the Places for Everyone Framework Policy JP-S2 (summarised in Sections 3.2 and 3.3). Civic's Energy Strategy Report (document reference 18703-CIV-XX-XX-T-O-00002), Ventilation Statement (document reference 18703-CIV-XX-XX-T-M-20001) and Part O Overheating Compliancy report (document reference 18703-CIV-XX-XX-T-O-00002) all dated November 2025, provides full details of how this is achieved.

A summary of the Energy Strategy report is provided within this section of the Statement. Please note that the June 2022 release revision of "Approved Building Regulations Part L 2021" will be referred to as "Part L 2022" throughout this report in accordance with the naming convention used in Policy JP-S-2.

This design strategy has been developed in line with the energy hierarchy, as outlined below:

- Be Lean: Reduce energy demand through passive measures and construction techniques.
- Be Clean: Supply energy cleaning and efficiently through the incorporation of high efficiency systems and effective controls.
- Be Green: Incorporate renewable and low carbon energy sources to meet any residual energy demand.

Further details are provided in the following sections.

#### 4.2.2.1. Passive Design Measures (“Be Lean”)

A number of measures have been applied to reduce the energy demand associated with the development. In the first instance, the development will include the implementation of passive design measures and optimise the building envelope in terms of orientation, air tightness, and insulation.

The proposal is targeting a low carbon classification through a holistic low energy design concept as it will be designed with a fabric first approach whereby Passivhaus design standards are aspired to for all fabric U-values and air permeability targets, whilst consideration is given to building orientations, solar shading devices and natural means of ventilation. A summary of U-values and air permeability targets applied to residential units is provided in Tables 1 and 2.

Table 1: Proposed U-values (residences)

| BUILDING FABRIC ELEMENT | PART L NOTIONAL U-VALUE<br>(W/M <sup>2</sup> K) | PROPOSED TARGET U-VALUE<br>(W/M <sup>2</sup> K) | % BETTERMENT |
|-------------------------|-------------------------------------------------|-------------------------------------------------|--------------|
| Walls                   | 0.18                                            | 0.18                                            | -            |
| Floors                  | 0.18                                            | 0.12                                            | 33.33%       |
| Roof                    | 0.13                                            | 0.11                                            | 15.4%        |
| Windows                 | 1.4                                             | 1.3                                             | 7.14%        |

Table 2: Proposed air permeability target (residences)

| AIR PERMEABILITY PART L NOTIONAL     | TARGET AIR PERMEABILITY              |
|--------------------------------------|--------------------------------------|
| 5 m <sup>3</sup> /m <sup>2</sup> /hr | 3 m <sup>3</sup> /m <sup>2</sup> /hr |

Glazing with a G-value of 0.56 is also specified to limit the amount of unwanted solar gain to avoid habitable rooms from overheating.

#### 4.2.2.2. Energy Efficient Services (“Be Clean”)

The following Energy efficiency measures have been established to meet the energy demand of the building;

- all flats will have Mechanical Ventilation with Heat Recovery (MVHR).

#### 4.2.2.3. Meeting Demand Efficiently (“Be Green”)

The final aspect of the design has been to establish what renewable and low carbon technologies can be adopted. A review of possible technologies has been completed. Air Source Heat Pumps (ASHP) will be used

to generate hot water to the individual apartments as well as heating and cooling to the amenity areas of the development.

#### 4.2.2.4. Operational Carbon Emissions (Results)

Energy saving from the use of renewable technologies is provided in Table 3 below.

Table 3: Energy saving from renewables for Alpha House.

| SAMPLE     | TARGET FABRIC ENERGY EFFICIENCY | DWELLING FABRIC ENERGY EFFICIENCY | IMPROVEMENT |
|------------|---------------------------------|-----------------------------------|-------------|
| 1 Bed Flat | 15.52                           | 15.48                             | 0.27%       |
| 2 Bed Flat | 23.86                           | 23.59                             | 1.15%       |

|                                                        |        |
|--------------------------------------------------------|--------|
| Energy saving from the use of renewables (kWh)         | 2945.8 |
| Saving on emissions from the use of renewables (kg)    | 882.9  |
| Saving on energy demand from the use of renewables (%) | 74.6%  |

#### 4.2.3. Transport

The Framework Travel Plan, prepared by Curtins (document references 088423-CUR-XX-XX-T-TP-00002), dated November 2025) and submitted as part of this planning application, provide an overview of the existing transport conditions associated with the site, and outline the sustainable transport measures considered to reduce transport-related emissions associated with the new development.

##### 4.2.3.1. Public Transport

The nearest bus stops to the site are located at Wythenshawe Interchange, which is located 300m away from the development. The interchange is served by several bus routes which provide connections to Manchester Piccadilly Gardens, Manchester Airport, Altrincham, Stockport, Eccles and Macclesfield at a high frequency. These services provide frequent access to Greater Manchester facilities, in addition to larger public transport interchanges across town, such as Piccadilly Gardens and Stockport across the week.

The Manchester Metrolink light rail Navy Line serves the Civic Centre connected to the development via the Core Walking Route. The Navy line provides frequent services to Manchester Victoria via Exchange Square and Manchester Airport, at a high frequency both during the weekday and weekend periods. The site is therefore considered highly accessible by Metrolink.

The site is accessible by multiple sustainable modes of transport, which are also usable by those with limited mobility and are wheelchair accessible. The surrounding area also exhibits good levels of pedestrian infrastructure and public transport networks, especially through multi-modal trips.

The site achieves a Greater Manchester Accessibility Level (GMAL) score of 6. The GMAL score is calculated using an interactive tool managed and maintained by Transport for Greater Manchester (TfGM). The tool measures accessibility by public transport of a point of interest and provides a score between 1 and 8, where 1 is a low level of accessibility and 8 is the highest level of accessibility. As such, the site is considered to have a good level of accessibility within a suburban area.

##### 4.2.3.2. Amenities

The development is connected to a number of amenities via a pedestrian route called the Core Walking Route, which runs through the centre of the Civic Centre to the east-west. The site is considered to be situated

within a highly accessible area. Access to a selection of amenities is summarised in the Transport Assessment, as per Table 3 (taken from the Transport Assessment report).

*Table 4: Examples of local amenities accessible from the site*

| AMENITY                                                   | TYPE        | DISTANCE (M) |
|-----------------------------------------------------------|-------------|--------------|
| Wythenshawe Town Centre                                   | Commercial  | 250m         |
| Multi Storey Car Park                                     | Parking     | 250m         |
| Asda Wythenshawe Superstore (inc. Pharmacy & Post Office) | Supermarket | 350m         |
| Wythenshawe Forum Library                                 | Education   | 400m         |

#### 4.2.3.3. Active Travel and Pedestrian and Cyclist Networks

The pedestrian infrastructure which connecting the site to the local amenities identified is well lit and contains wide footways with a number of controlled crossing points across key roads. The site is situated within a highly accessible area and benefits from strong connections to the interchange and nearby tram stop and bus services which will be prioritised to encourage active travel and public transport usage.

There will be two main pedestrian access points provided to the building, the first will allow connection from Rowlandsway Road to the southwest and will provide access to the post room, bike store and lifts. The second will be from Wavell Road to the northeast providing access to the lifts, scooter store, bike and bin store. There is dedicated access for cyclists into the cycle stores via both Rowlandsway and Wavell Road. The existing footway across the northwest corner of the site is proposed to be replaced with an improved pedestrian connection along the perimeter of the development.

66 secure cycle parking spaces will be provided for residents in for form of two cycle stores, located at the north and south of the development. Additionally, secure scooter parking for 18 spaces in the form of two scooter stores will be provided.

#### 4.2.3.4. Private Car Parking

The parking provision at the development has been formulated in consultation with Manchester City Council and will include a parking area with 16 disabled parking bays compliant with the guidance within the Disability Discrimination Act.

Based on the benefits provided to the development from its Civic Centre location a low provision of disabled only parking is proposed. The levels of parking on site will act as an initiative to encourage site residents to utilise the various public transport and cycle options available.

#### 4.2.3.5. Travel Plan

A framework travel plan has been produced by Curtins (document ref: 088423-CUR-XX-XX-T-TP-00002) to support the planning application, and also to encourage sustainable transport practices and reduce transport emissions associated with the development. As confirmed in the report, the objectives of this document are:

- To increase the level of walking to and from the site
- To increase the level of cycling to and from the site
- To increase the level of public transport use to and from the site
- To encourage car sharing and shared transport to and from the site
- To encourage uptake of Ultra Low and Zero Emission vehicles

The plan proposes a number of further measures to be implemented after handover.

### 4.3. Climate Change Adaptation

As the scheme develops, further consideration will be given to designing in mitigation features to protect the development against the effects of climate change, as directed by Manchester Core Policy EN8 “Adaptation to Climate Change”. Mitigation features will apply to the external envelope and building services, and future proofing will be considered, where appropriate. An assessment of the effects of climate change on the scheme has been undertaken as part of the Climate Change Chapter of the EIA.

The potential impacts of climate change considered include:

- Increased flood risk
- Increased frequency of extreme weather events
- Wetter winters, including increased moisture and driving rain
- Hotter summers, including increased solar radiation

An early-stage climate resilience workshop was undertaken with the design team to examine the climate resilience assessment, required as part of the EIA, and to identify inherent and additional mitigation measures. The mitigation measures discussed, and confirmed by further design reports, are outlined in the following sections.

#### 4.3.1.1. Overheating

An Overheating Assessment was undertaken by CIVIC MEP (report reference 18703-CIV-XX-XX-T-O-00001, dated October 2025), to evaluate the development’s performance under future climate scenarios, with the objective of ensuring compliance with thermal comfort criteria as temperatures rise. A full dynamic thermal model was produced in accordance with CIBSE AM11: Building Energy and Environmental Modelling. The results confirm that all habitable rooms meet the thermal comfort requirements set out in CIBSE TM59:2017.

Compliance with overheating criteria will be achieved through the following design features and mitigation measures:

- Enhanced natural ventilation via increased window openability, with profiles designed to open beyond 35 degrees.
- High-performance glazing with a solar control g-value of 0.56 to reduce solar gain.
- Mixed-mode ventilation (CMEV) with openable windows for apartments on the east and south elevations.
- Mixed-mode ventilation with MVHR incorporating a boost mode to 20 l/s for all bedrooms in apartments on the west and north elevations.

The overheating assessment concludes that the proposed design is not at significant risk of summertime overheating and will provide acceptable thermal comfort conditions for occupants.

#### 4.3.2. Flood Risk

Rising sea levels and increases in average winter precipitation, as well as a general increase in the frequency, duration and intensity of rainfall, may result in an increased risk of flooding. This is considered as part of the Flood Risk Assessment (FRA) report produced by Alan Johnston Partnership Ltd. (document reference 18703-AJP-XX-ZZ-T-C-003000 dated November 2025), which accounts for climate change scenarios. The FRA confirms that the site is located within Flood Zone 1 and has a low risk of flooding from all sources, including rivers, sea, surface water and reservoirs.

The results from the intrusive site investigation undertaken confirms infiltration will not be possible for the site. Due to the distance across previously developed land, discharging surface water runoff to the nearest watercourse identified as Baguley Brook located 900m west of the site, is also considered unfeasible. The surface water runoff from the development is proposed to discharge into the existing public combined sewer located within the western boundary of the site.

Discussions with United Utilities have informed the Wythenshawe Town Centre Masterplan, which includes a proposed public surface water sewer along Rowlandsway to reduce reliance on the combined sewer network. Although the development will initially discharge to the existing 525mm combined sewer, AJP has agreed that, once the new surface water sewer is constructed, runoff from Alpha House will be redirected accordingly. To facilitate this, the drainage design incorporates a pipe stub from the final site manhole, enabling future connection to the Rowlandsway surface water sewer.

In accordance with the consultation feedback provided by United Utilities, the surface water runoff will be restricted to a maximum discharge rate of 5 L/s. This will be achieved via a flow control device prior to combining with the foul water discharge from the site, which will then discharge into the public combined sewer. The surcharged run off will be attenuated with the proposed below ground cellular attenuation tank and drainage network.

The drainage strategy to be refined at technical design is likely to comprise components such as inspection chambers, manholes, catchpits, drainage channels and gullies, vortex flood control device, a green roof to the first-floor courtyard area and a cellular attenuation tank. A maintenance strategy will be adopted to ensure a routine maintenance and cleaning regime of the surface water and foul water drainage system is undertaken by the client / end user.

The new building levels associated with the development will be constructed to ensure the overland flood routes exit towards the surrounding highways, for use in exceptional circumstances. This strategy considers the increases in the storm intensities of 40% and 45% for the 1 in 100-year events, which is consistent with the effects of climate change for a development with a design life of 100 years, as outlined in NPPF. This demonstrates compliance with policies EN 8 Adaptation to Climate Change and EN 14 Flood Risk.

### 4.3.3. Increased Frequency of Extreme Weather Events

The frequency of extreme weather events such as storms, droughts, heatwaves and cold spells are likely to increase as a result of climate change. As part of the EIA Climate Resilience Assessment, the following mitigation measures have been confirmed:

- Increased likelihood of storms (including high winds):
  - The design of the buildings and roofs will be in line with the relevant Eurocodes to mitigate against the potential impacts of high winds, which can result in a risk of structural damage to buildings and reduction of mechanical ventilation capacity.
  - Weather rated louvres will provide protection against high winds.
- Increased likelihood of heatwaves and cold spells, and warmer summers and wetter winters:
  - An early stage overheating analysis has been completed to assist in designing out the risk of overheating in occupied space. The project is designed to 2020 medium scenarios, as described in Section 4.3.1.
  - MVHR has the ability to boost further to increase the rate of ventilation.

- Street tree planting will help to mitigate extreme external temperatures and provide shading. In addition, the light-coloured surfaces specified in the landscape plan will attract less heat.
  - To mitigate against extreme cold events, building fabric has been designed in accordance with Part L, reducing heating loads as far as possible.
  - The proposed landscape planting has been designed to account for extremes of temperature and precipitation events. The proposed landscaping scheme includes areas of habitat creation and native hedgerow around the perimeter.
  - To mitigate against damage to external building elements and materials from increased solar radiation, robustness and durability will be a key consideration when selecting materials. Furthermore, the design life of the buildings is 60 years, with the roof and external wall materials having a minimum service of 40 years.
  - To mitigate against potential damage to fabric and services resulting from increased moisture and rain, the external fabric will be designed as a weathertight structure. Roof and external wall materials will have a design life of a minimum of 40 years.
  - Additional surface water runoff will be dealt with through an appropriately designed drainage system, and a selection of SudS, as described in Section 4.3.2.
- Increased likelihood of droughts, including reduced summer rainfall:
    - Low water consuming sanitaryware and appliances will be specified where appropriate to minimise water demand.
    - Water meters will be installed on the water supply for each apartment so that occupants can monitor their water consumption. The landlord will have pulsed meters.
    - The drying of soils can result in structural damage to buildings. The foundations will be piled into mudstone to mitigate against ground swell and changes to volume.

It is thought that extreme weather events may occur as a result of climate change, including storms, high winds, cold events, and heatwaves. The confidence level in predictions for these is low and there are a number of diverging projections. However, it is important to ensure the development is designed so that it will be resilient against future extreme weather wherever possible. This will be taken into consideration when specifying materials and structural detailing.

## **5. OTHER AREAS OF ENVIRONMENTAL & SUSTAINABILITY PERFORMANCE**

### **5.1. Introduction**

The wider sustainability measures to be incorporated into the project, in line with the requirements of national, regional, and local planning policy, are summarised within this section of the report.

### **5.2. Materials and Waste Reduction**

As detailed within the Construction Management Framework (report reference CMF Alpha Nov 25) produced November 2025, it is anticipated that low carbon and sustainable materials will be considered further in the design process, where the use of materials with Environment Product Declarations (EPDs) will help drive the specifications. EPDs communicate the environmental performance of products, allowing specifiers to make informed decisions regarding materials from both a performance and environmental perspective.

Additionally, it is stated within the Framework Construction Management Plan that the Principal Contractor will be encouraged to minimise waste on site and recycle as much as possible. An environmental

management plan will be developed by the Principal Contractor to address issues surrounding waste, environmental legislation, pollution and nuisance such as noise, vibration and dust.

### 5.3. Daylight & Sunlight

A Daylight & Sunlight Assessment has been produced by GIA (document reference 21918-251029-EP) to assess the impact of the proposed development on neighbouring sites in accordance with BRE Guidelines.

The daylight levels of the neighbouring six properties as a result of the development have been assessed using the Vertical Sky Component test (VSC), a measure of the amount of sky visible from a given point. All windows assessed met the guidelines as detailed by the BRE, concluding a 100% pass rate.

The daylight distribution within the rooms of the neighbouring six properties as a result of the development were assessed using the No Sky Line (NSL) method. Of the six properties evaluated, all met the requirements as per BRE Guidelines.

The Probable Sunlight Hours (APSH) method was applied to assess that amount of sunlight that a given window is projected to be provided with over a period of a year. Four of the six neighbouring windows assessed fully accord with the BRE criteria, which complies with the criteria. The two windows which did not fully pass are considered small supplementary windows that form part of a wider bay window arrangement and have a low expectation of sunlight due to their north-west facing orientation.

The impact of the Proposed Development on neighbouring buildings has been assessed and overall, the Development will have insignificant residual effects on neighbouring properties, therefore no mitigation measures are considered necessary. As a result of the Assessment the development is considered to be designed with due regard for the amenity of the neighbouring properties, this accords with Policy DM1 of the Manchester Core Strategy.

### 5.4. Biodiversity

An Ecological Constraints Walkover (ECW) was undertaken by Greengage Environmental Limited to establish the current ecological baseline and assess the site's potential to support protected species. The survey included a site walkover and desktop review. Direct access to the site was not possible at the time due to active clearance and demolition works; fencing around the boundary allowed observation from outside but prevented entry.

The site primarily comprised a building under active demolition, with large rubble piles and areas of existing hardstanding. Four areas of non-native introduced shrub habitat were identified, although a detailed species list could not be compiled due to restricted access. The southeastern parcel was dominated by cotoneaster with occasional coralberry. Several areas of modified grassland were present along the site edges adjacent to the fence line, appearing heavily managed historically. Six individual trees were also identified within grassland areas. The introduced shrubs and scattered trees provide suitable nesting habitat for common bird species, though the site is considered to have negligible suitability for Schedule 1 birds due to the absence of specialised habitats. The ECW also concluded that the site offers limited potential for roosting bats; however, roosting cannot be fully ruled out without further assessment of the trees. The site offers some suitable habitat foraging and commuting habitat for bats due to the presence of individual trees and introduced shrub. However, due to the heavy urbanised nature of the site and the surrounding area, suitability is considered to be limited, and no further survey is considered to be required.

Recommendations and Enhancements within the ECW include the following:

- Designated Sites: Five non-statutory designated sites lie within 2 km of Alpha House, the closest being 325 m northeast. Due to the urban context and scale of development, impacts on these sites during construction and operation are considered highly unlikely. No further action is required in relation to designated sites.
- Nesting Birds: Habitat suitable for nesting birds should be retained where possible. However, as all trees on-site are expected to be removed, clearance should occur outside the nesting season (March–August inclusive).
- Further Surveys: A Ground Level Tree Assessment (GLTA) is recommended prior to tree removal to confirm bat roost potential.
- Invasive Non-Native Species (INNS): INNS have been confirmed on-site (TN1). No further surveys are required, but vegetation clearance should prevent spread during removal and disposal.
- Landscape Enhancements:
  - Incorporate tree planting within the landscape design where feasible.
  - Provide compensatory native shrub planting to create nesting opportunities for birds.
  - Use a diverse grassland mix to support invertebrates and foraging bats.
  - Install bird and bat boxes on newly constructed buildings.

In line with the Environment Act 2021, National Planning Policy Framework, and local policy, the development must deliver at least 10% Biodiversity Net Gain (BNG), evidenced through a complete BNG appraisal. Greengage has completed the appraisal, which identified that the proposals do not meet BNG Trading Rules for Mixed Scrub and Urban Trees. The assessment confirms that the 10% BNG target cannot be fully achieved on-site, requiring off-site compensation for residual units totalling 0.69 Habitat Units (HU) (0.67 HU for Urban Trees and 0.01 HU for Mixed Scrub).

The appraisal recommends exploring off-site compensation options following the BNG mitigation hierarchy:

- Off-site within the client's ownership
- Off-site outside the client's ownership
- Local market purchase
- Statutory credits (as a last resort)

## 5.5. Air Quality

As detailed within the air quality assessment report, produced by Hilson Moran (report reference XX-HML-XX-XX-RP-U-820001, dated 6<sup>th</sup> November 2025) and submitted as part of this planning application, the proposals have the potential to cause air quality impacts at sensitive locations during the construction and operational phases, as well as expose future residents to any existing air quality issues at the site. As such, the air quality assessment was undertaken to determine baseline conditions, consider location suitability for the proposed end use, and assess potential effects as a result of the scheme:

- **Construction phase:** A qualitative assessment of construction phase impacts has been carried out. There is a Low to Negligible risk of dust soiling during demolition, earthworks and construction, and trackout activities. With regards to fugitive PM10 emissions during the construction phase the risk is classified as Low to Negligible for demolition, earthworks, construction and trackout activities. Through good site practice and the implementation of suitable mitigation measures, the impact of dust and PM<sub>10</sub> releases will be minimised. The residual effect of the construction phase on air quality is therefore not significant.
- **Operational phase:** A quantitative road traffic assessment of the operational phase has been scoped out as the development-generated trips do not breach the modelling threshold set out by IAQM/EPUK. A trend analysis has been undertaken for NO<sub>2</sub>, PM10 and PM2.5 to assess the site feasibility. The measured NO<sub>2</sub>, PM10 and PM2.5 data indicates compliance with the relevant AQS objectives. The trend analysis undertaken for NO<sub>2</sub> and PM10 data indicate a statistically significant downward trend at specified

monitoring locations, at varying significances. The trend analysis for PM2.5 data indicated no statistical significance based on limited monitoring data however a downward trend was observed throughout the whole monitoring period. It is reasonable to expect that future pollution concentrations should continue to decrease with the implementation of local air quality initiatives and plans and therefore it is concluded that site specific mitigation to protect existing and future users of the Proposed Development from poor air quality is not required.

In summary, the residual effect of air quality is not significant, and with the recommended mitigation measures in place the proposals would be compliant with NPPF and MCC planning policies EN16 Air Quality and JP-S5 Clean Air.

## **5.6. Noise Pollution**

Noise pollution can adversely affect wildlife and the physical and mental wellbeing of residents and building users. To ensure the proposed development does not significantly contribute to noise impacts, a Noise Impact Assessment (NIA) was undertaken by Azymuth Acoustics (Report Ref: Z65495RevA, dated 7 November 2025). The assessment identified that the primary source of noise affecting the site is traffic from surrounding roads, particularly Rowlandsway, which experiences a constant flow of vehicles due to its town centre location. Measured noise levels were:

- Rowlandsway: Day ~66 dB LAeq,16hr; Night 57–62 dB LAeq,8hr
- Wavell Road: Day 59–62 dB LAeq,16hr; Night 50–53 dB LAeq,8hr

Elevations facing Rowlandsway present a medium to high risk of adverse noise and overheating (as per ProPG and AVO guidance), while other elevations generally pose a low to medium risk. Vibration measurements indicated a negligible risk of adverse effects.

Within the NIA, Azymuth have provided the following recommendations to mitigate the effects of any external noise to the internal areas of the development:

- Glazing
  - Elevations facing Rowlandsway: min. 32dB RW and 28dB Rw+Ctr
  - All other elevations: min. 29dB Rw and 25dB RW+Ctr
- Ventilation
  - Dwellings facing Rowlandsway: MVHR
  - All other dwellings: MVHR
- Other Elements of Building Envelope
  - External walls: min. 55dB Rw
  - Roof: min. 45dB Rw

If the above recommendations are to be adhered to then the noise levels inside the development shall satisfy the assessment criteria contained within the recommended standards and Manchester City council requirements.

## **6. CONCLUSION**

Sustainability is a key driver for the design and delivery of the Alpha House development, with consideration given to national and local planning policy throughout all stages.

### **Construction carbon emissions (embodied carbon)**

- An assessment of the embodied carbon associated with the RIBA Stage 2 Concept Design of the dwellings has been undertaken in line with the RICS best practice methodology.
- Possible mitigation measures have been proposed, and the design team are considering alternative frame designs to reduce embodied carbon as far as possible to achieve the RIBA 2030 Climate Challenge targets.

### **Operational energy and carbon**

- The development is designed to be highly energy-efficient, using a fabric-first approach with insulation, airtightness and glazing standards that exceed Building Regulations Part L requirements.
- The scheme is fully electric with no gas, supporting Manchester's ambition to phase out fossil fuels and transition towards a zero-carbon future.
- Air Source Heat Pump hot-water systems are provided to all homes, delivering efficient, low-carbon domestic hot water, while space heating is provided by electric panel heaters in line with the fully electric, no-gas design strategy.
- The design includes provisions for on-site renewable energy, with photovoltaic (PV) panels planned on suitable roof areas to further reduce electricity demand and carbon emissions.
- The proposals follow the Energy Hierarchy: first reducing energy demand through high-performance building design, then meeting demand efficiently, and finally incorporating low-carbon and renewable energy technologies.
- The overall strategy ensures the development delivers a highly energy-efficient, low-carbon scheme with significantly reduced energy demand and substantial reductions in operational carbon emissions.

### **Transport**

- A Framework Travel Plan has been produced to support the provision of sustainable transport measures and reduce transport-related carbon emissions.
- The site is well connected to public transport links and local amenities, and active travel will be encouraged through high quality public realm design, traffic calming measures, and appropriate levels of cycle parking provision. Sufficient car parking is to be provided for disabled users, without encouraging over car use.

### **Climate change adaptation**

- In line with Manchester Core Policy EN8 "Adaptation to Climate Change", a climate change resilience assessment has been undertaken, and careful consideration has been given to ensuring climate change mitigation and adaptation measures are embedded within the scheme. The site is located within Flood Zone 1 and therefore is at minimal risk of flooding.

### **Materials and waste:**

- Further sustainable material selection will be informed through reviews of Environment Product Declarations (EPDs) prior to specification.
- It is anticipated that low carbon and sustainable materials will be considered further in the design process, where the use of materials with EPDs will help drive the specifications.
- The Principal Contractor will be encouraged to minimise waste on site and recycle as much as possible. An construction environmental management plan will be developed by the Principal Contractor to address wider issues surrounding materials and waste.

**Biodiversity:**

- Tree planting, native shrub planting and biodiverse grassland will be incorporated into the landscaping design wherever feasible.

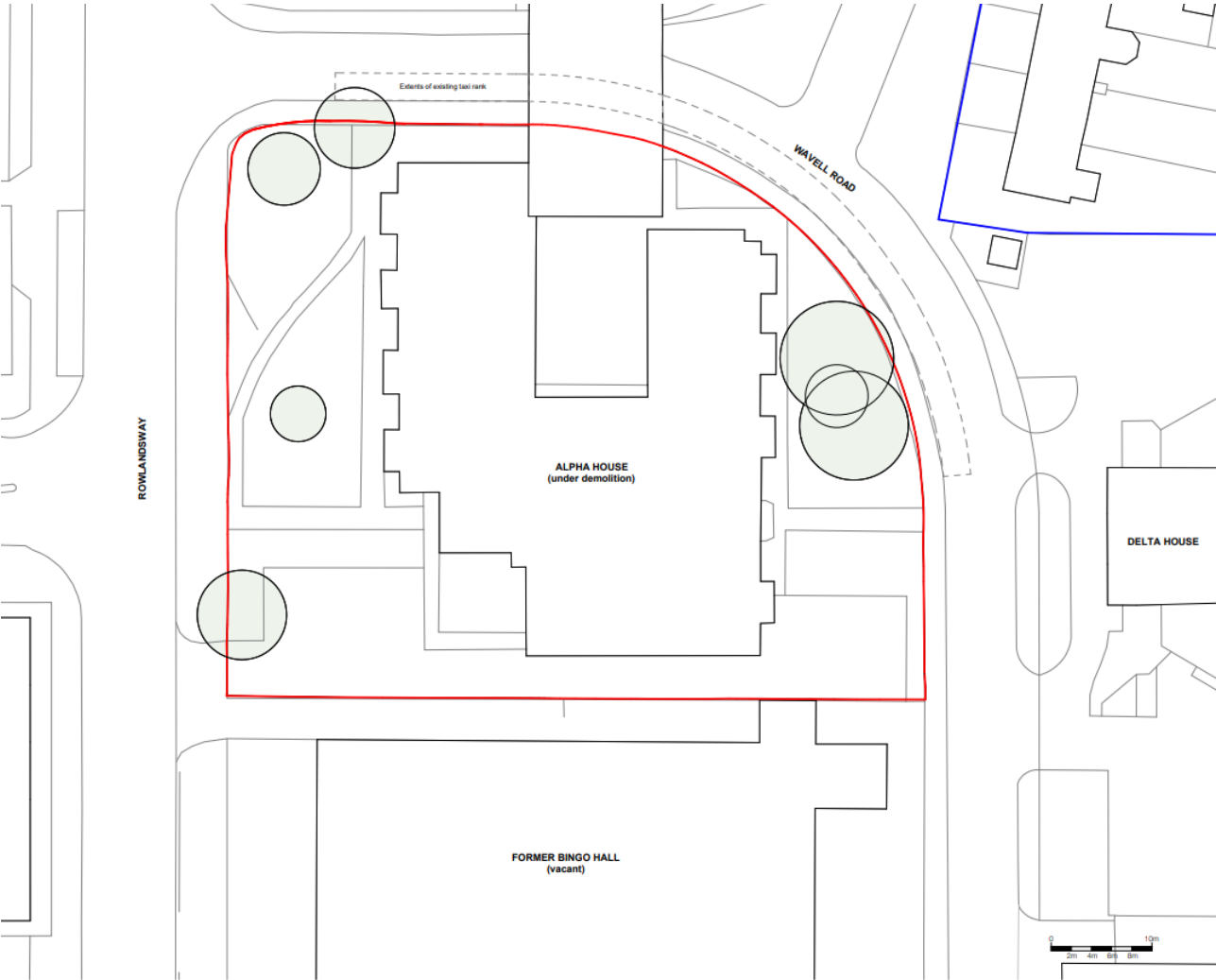
**Air Quality:**

- There will be no significant adverse impacts on local air quality will occur from the construction phase or operational phase of the project, as the proposed development is considered to be compliant with the NPFF and MCC planning policies EN 16 Air Quality and JP-S5: Clean Air.

**Noise Pollution:**

- With the proposed mitigation, internal noise levels will meet the required standards, and the development will comply with Manchester City Council requirements.

APPENDIX A: SITE BOUNDARY



APPENDIX B: EMBODIED CARBON SUMMARY



# RIDGE



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