

RIDGE

VIADUX PHASE 2, MANCHESTER ENVIRONMENTAL STANDARDS STATEMENT

13/11/2024

VIADUX PHASE 2, MANCHESTER

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1. INTRODUCTION

Ridge & Partners LLP have been appointed by Salboy Central Ltd to complete an Environmental Standards Statement for the proposed residential tower in the Deansgate area of Manchester.

This Environmental Standards Statement has been produced to support the full planning application for the development by demonstrating that careful consideration has been given to the context of the site, local planning policy and the 2022 Building Regulations in the development of the proposed energy and sustainability strategy. 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 & Development proposals

The site location is shown in Figure 1 below.

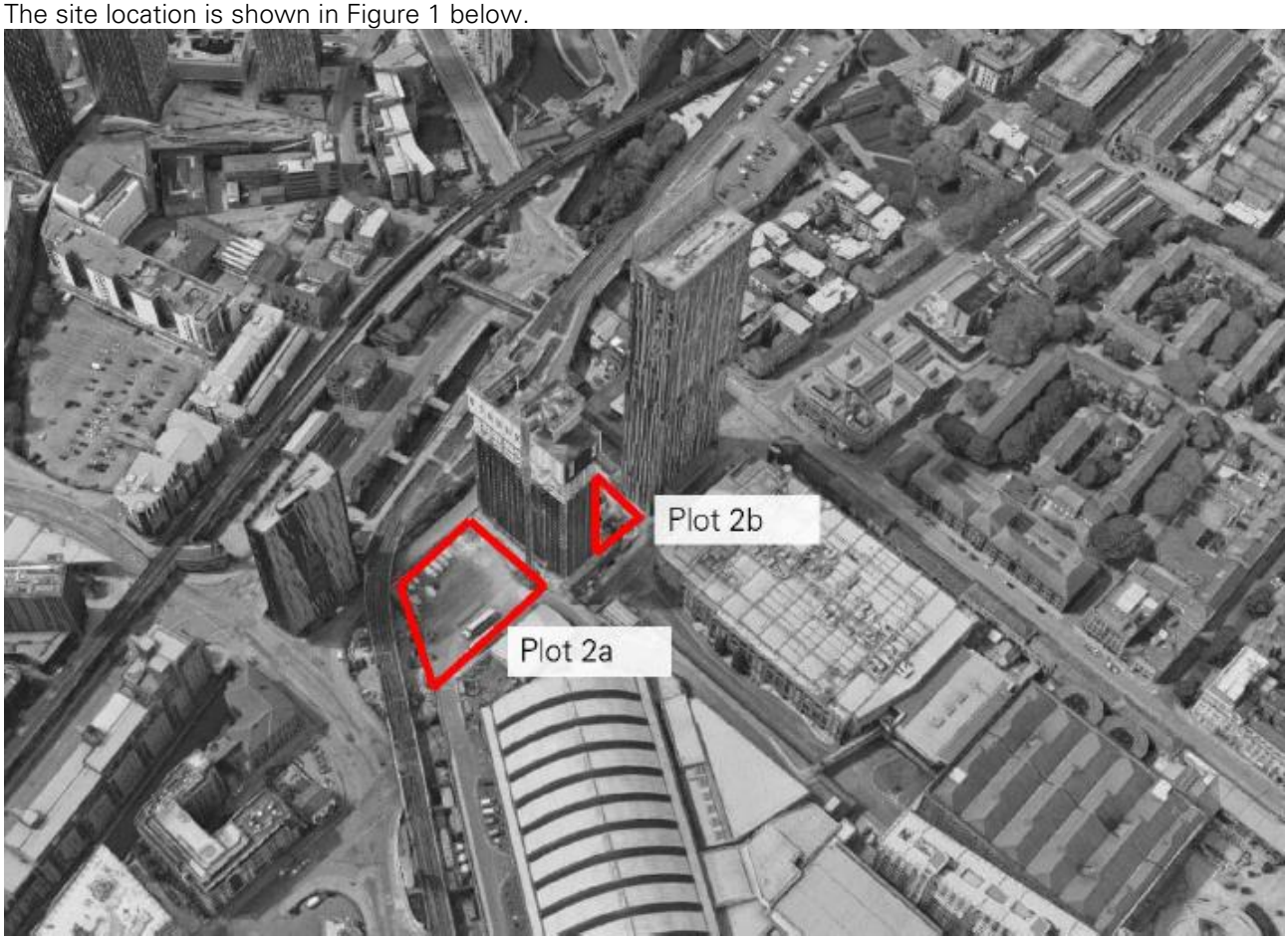


Figure 1: Location Plan

The Site is located in Manchester city centre. It is bounded by the Manchester Central Conference Complex and Great Northern Warehouse to the north, Albion Street to the east, the Deansgate Castlefield Metrolink station and Deansgate Locks to the south, and the Beetham Tower to the west. It extends to 1.49 ha.

The Proposed Development will deliver a hotel and 585 residential apartments, including 133 affordable homes, within two buildings; residential amenities; secure cycle parking; public realm improvements and new green landscaping; and associated works to the public highway.

The Proposed Development will be delivered across two plots Plot 2A and 2B.

Plot 2A

Plot 2A is located immediately east of the recently completed Phase 1 building, on land currently comprising the grade II listed Castlefield Viaduct. This plot will deliver a 76-storey mixed use tower comprising a hotel (Use Class C1) and residential units above comprising 1, 2 and 3 bed, and penthouse apartments (Use Class C3). Residents' amenity spaces and commercial units (Use Class E) are provided within the arches at ground floor opening onto Great Bridgewater Street. Secure cycle spaces, serving this and the Phase 1 building, are provided within the basement. At viaduct level, a redesigned service yard for the conference centre is enclosed by a new podium structure with residents' external amenity space above. A section of the Great Bridgewater Street bridge (deck) is removed to bring light into the street below.

Plot 2B

Plot 2B, located at the western-most section of the Site between the viaduct and Beetham Tower, consists of a 23-storey residential building accommodating affordable 1-, 2- and 3-bed apartments (Use Class C3), secure cycle parking spaces, flexible commercial units (Use Class E) opening onto the viaduct, and public realm enhancements on Great Bridgewater Street.

3. POLICY CONTEXT

3.1. National Planning Policy Framework

A revised National Planning Policy Framework (NPPF) was updated and published in December 2023 which sets out the government's planning policies for England and how they are expected to be applied. This framework replaces that published in September 2023. This framework confirms in section 2. Achieving Sustainable Development that:

'*the purpose of the planning system is to contribute to the achievement of sustainable development*.'

This highlights sustainability as a critical issue that runs throughout all of the planning policies. The National Planning Policy Framework (NPPF) defines sustainable development in agreement with the U.N. definition of "meeting the needs of the present without compromising the ability of future generations to meet their own needs". The NPPF outlines how three overarching objectives need to be pursued in mutually supportive ways in order to achieve sustainable development. These objectives are outlined below:

a. 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.

b. 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 well-being.

c. 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) is the document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford & Wigan. With respect to climate change and sustainability considerations, the following policies are included within the Places for Everyone Joint Development Plan. Relevant extracts are provided below.

Policy JP-Strat2: City Centre

This policy states that the City Centre will be a priority for investment in development and infrastructure. This will include addressing current network capacity issues in the City Centre which will enable the future expansion of the rapid transit public transport network across Greater Manchester. Improvements in the public realm, walking and cycling facilities, and green infrastructure will help to enhance the local character and environmental quality of the City Centre so that it can rival city centres across the globe, enabling it to compete effectively at the international level for investment, businesses, skilled workers, residents and tourists. A broad range of commercial accommodation will be delivered, helping the City Centre to capture growth across key economic sectors.

Policy JP-S1: Sustainable Development

This policy states that development should aim to maximise its 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

This policy states that the aim of delivering a carbon neutral Greater Manchester no later than 2038, with a dramatic reduction in greenhouse gas emissions, will be supported through a range of measures including:

- Promoting the retrofitting of existing buildings with measures to improve energy efficiency and generate 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;

a. Be net zero carbon which applies:
- 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. Development proposals should set out how this has been achieved in an energy statement 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; and
v. Utilise other energy sources.

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.

b. 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;

c. Where practicable, prioritise connection to a renewable energy/heating/cooling network in the first instance or a low carbon energy/heating/cooling 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 Table 5.1.

For renewable energy generation priority should be given to PV installation where technically feasible, alternative technologies will be appropriate where the equivalent generation is evidenced.

d. 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.

e. 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

This policy states that 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 help to achieve 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 1,000 m^2 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

This policy states that Greater Manchester is located within a complex hydrological network that extends into surrounding districts and beyond. This means that individual areas cannot be viewed in isolation, as rainfall and activities in one place can have significant impacts on the water environment in other locations. High-risk areas include some of the most deprived communities as well as some of the most economically important locations and can be subject to a combination of risk sources (e.g. river, surface water and sewer flooding) which can impact separately and together. There are also areas in which groundwater flooding can pose risks and where extensive canal and reservoir infrastructure generates flood risks, associated with potential overtopping and embankment breaches. Climate change is expected to significantly increase peak river flows and surface water run-off as a result of more intense rain events, potentially placing many more properties at risk in the future unless flood defences, drainage and run-off management are improved. A coordinated catchment-wide approach to all types of flood risk will be required to address these challenges and minimise potential harm to people and property, including actions upstream of Greater Manchester.

The aim of the tests are to steer new development towards areas with the lowest risk of flooding first before considering higher risk locations. If it is not possible for development to be in zones with a lower risk of flooding, new development must provide wider benefits to the community and can be made safe from flooding for its lifetime.

The North-West River Basin Management Plan provides a framework for protecting and enhancing the benefits provided by the water environment across Greater Manchester and beyond. It sets out legally binding objectives for the quality of water bodies, with the default being that they should be classified as 'good' overall based on their ecological status or potential and their chemical status. Very few water bodies in Greater

Management currently reach the required standard. Addressing this will require a wide range of measures, including;

- naturalisation of watercourses,
- reductions in storm overflow sewage discharges,
- better land management, and
- improved management of surface water.

Some of these actions will also assist in managing flood risk. Sustainable Drainage System (SuDS) schemes can provide appropriate solutions to addressing both flood risk and water quality issues and are mandatory for major development unless clear evidence indicates that they would be inappropriate. Development proposals should achieve greenfield run-off rates where possible, depending on site conditions. Alternative surface water discharge rates can be set out in district local plans to reflect local circumstances and evidence. In addition to the general need to improve water quality, the Environment Agency has defined source protection zones for groundwater sources such as wells, boreholes and springs used for public drinking water supply. The control of potentially contaminating activities is particularly important in these locations.

It is important that water is conserved and efficiently used as much as possible to help build resilience to periods of drought; avoid over abstraction; reduce carbon emissions from water treatment and disposal; and protect river and wetland habitats from degradation. All new homes have to meet mandatory national standard set out in Building Regulations (of 125 litres/person/day). Where there is a clear local need, the government's Housing Optional Technical Standards paragraph 013 and 014 set out that local authorities may also consider tighter water efficiency requirements for new homes (110 litres a day) to help manage water demand.

Policy JP-S5: Clean Air

This policy states that 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

This policy states that 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. The following measures will help achieve this:

- Development and implementation of the Zero Waste Strategy for Greater Manchester which promotes overall reduction in the level 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

This policy states that 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

This policy states that 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

This policy states that the aim 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 Local Plan

The Manchester Core Strategy (2012) is the Adopted Development Plan for Manchester City Council. With respect to climate change and sustainability considerations, the following policies are included within the Manchester Local Plan Core Strategy (2012). Relevant extracts are provided below.

CS Policy DM 1: Development Management

This policy requires all development to 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'*[1].

Policy EN4: Reducing CO2 Emissions by Enabling Low & Zero Carbon Development

This policy requires development to '*follow the principle of the Energy Hierarchy, being designed:*

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

It also states that:

- *'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 & refurbishment schemes.'*

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 CO2 reduction funded by contributions.

Policy EN6: Target Framework for CO2 reductions from low or zero carbon energy supplies

This policy sets a requirement for 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.

The policy states that *'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_2 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

Guidance on what the energy statement should contain and how to decide which target applies to a development proposal is given in Appendix A of 'Manchester's Local Development Framework, Core Strategy Development Plan Document, Adopted 11th July 2012'.

Policy EN 8 Adaptation to Climate Change

This policy requires all new development *'to be adaptable to climate change in terms of the design, layout, siting & function of both buildings & associated external spaces. In achieving developments which are adaptable to climate change developers should have regard to the following, 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 CO2 mitigation under Policy EN6, subject to sufficient evidence to quantify their contribution to compliance'.

Policy EN 14 Flood Risk

This policy states that:

- *'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.*
- *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.'*

Policy EN 15 Biodiversity and Geological Conservation

This policy states that *'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 Nutsford 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.'

Policy EN 16 Air Quality

This policy states that *'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'.

Policy EN 19 Waste

This policy states that 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

The Guide to Development in Manchester Supplementary Planning Document (SPD) was adopted in April 2017. The SPD is a material planning consideration for applications; however, it is not part of the development plan. While 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 details how the proposed development will address the issue of climate change, in line with Manchester City Council's policies identified in Chapter 3. In particular, this section looks to address the Places for Everyone Plan policy JP-S2 and Manchester Local Plan policies EN4, EN6 and EN8.

4.2. Carbon Reduction

Carbon reduction is key to tackling climate change. When discussing carbon in relation to climate change, this is a term used to cover all greenhouse gas emissions and is measured in terms of CO_2 equivalent. The carbon emissions associated with the development include embodied carbon, construction related carbon, and operational carbon, associated with the energy demand and transport needs of the occupants.

Buildings emit greenhouse gas emissions throughout their operation; this is associated with the energy used to heat, cool, light and ventilate the building, and also energy associated with any other systems used within the building (e.g., plug-in equipment). There are also more indirect operational carbon emissions 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 from which the building is built.

4.2.1. Construction-Related Carbon Emissions

Due to the nature of the development, it is expected that there will be significant construction related carbon emissions, however through the assessment of the embodied carbon calculations this will be reduced and mitigated as far as possible.

While operational carbon occurs gradually over the life of a building, embodied carbon emissions occur predominantly in the building materials and therefore are emitted immediately. Once the building is constructed, they cannot be reduced further. Reduction of embodied carbon emissions therefore plays an essential part in achieving the net zero targets. Typically, the embodied carbon emissions will represent over 24% of the total carbon emissions of a residential development.

Ridge LLP have undertaken an assessment of embodied carbon associated with the scheme to feed into the Climate Change Chapter of the EIA. The modelling results are based on Stage 2 design information and assumed material quantities where necessary to provide a best estimate of the scheme's impact at this stage. The scheme is currently located within Band D of the RIBA Embodied Carbon rating scale, narrowly exceeding the RIBA 2025 Target for residential buildings by 3,291 tCO2eq. The headline results are reported below:

	Embodied Carbon (Modules A1-A5, B1-B4 & C1-C4)	
	tCO_2eq	**$kgCO_2eq/m^2$ GIFA**
Phase 2 Total (91,860m^2)	76,779	836

Given the high-rise nature of the scheme, and the challenges associated with constructing the scheme around the existing viaducts, the structural solution on the scheme is significant. As such, the Concrete Frames are the most significant material impact across the scheme by some margin, with 32% of the total embodied carbon impact attributed to reinforced concrete columns, core walls and floor slabs. In addition to the significant structural solution, the result is also influenced by the high carbon intensity of cement production (which is used within the concrete).

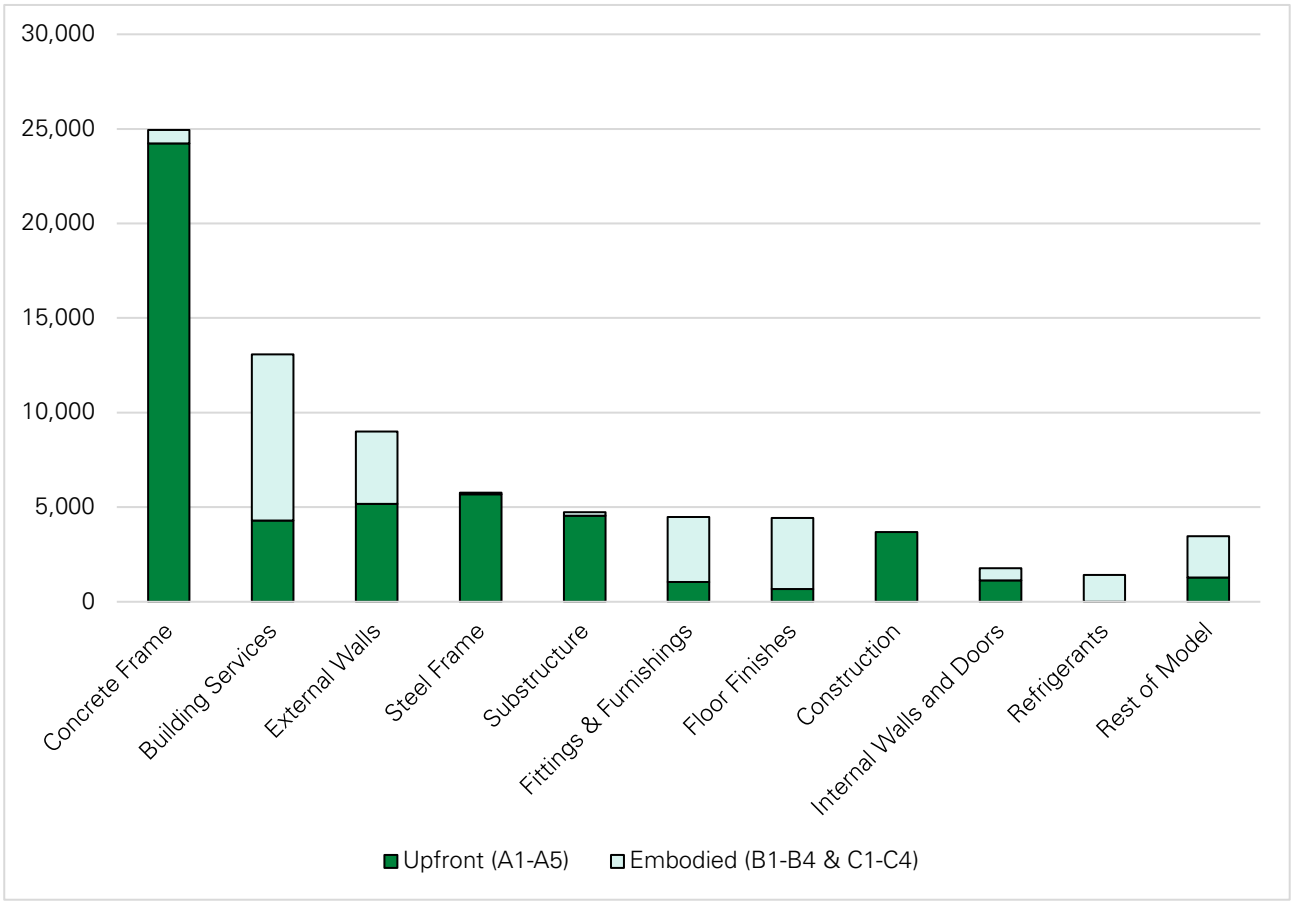


Figure 2. Embodied Carbon by key elemental impacts, or Viadux Phase 2.

4.2.2. Operational Carbon and Energy

The development will aim to minimise operational CO_2 emissions from the development and the associated impact upon climate change by adhering to the energy hierarchy below, demonstrating compliance with Policy EN 4 Reducing CO2 Emissions by Enabling Low & Zero Carbon Development (summarised in section 3.2) and the Places for Everyone Framework Policy JP-S2. Ridge have produced an 'Energy Strategy Report' dated 30.10.24 which includes full details on this.

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.

The scheme has been designed in accordance with the energy hierarchy principles:

- Lean - Use advanced building modelling & passive construction techniques as far as is cost effective.
- Mean - Incorporate high efficiency systems and effective controls throughout the design.
- Green - Incorporate renewable and low carbon energy sources where necessary and economically viable to achieve targets or provide desirable benefits.

4.2.2.1. Passive Measures – Be Lean

The team have maximised passive measures to ensure the initial demand for energy within both the hotel and residential aspects of the Viadux Plot 2a development is low from the outset when utilising passive measures.

U values are defined as the ability of an element to transmit heat from a warm space to a cold space in a building, and vice versa. The lower the U-value, the better insulated the building element. The scheme will use U values that exceed minimum Building Regulation Standards 2022 Part L2 as below;

Residential Areas

Building Fabric Element	Limiting U-Value (w/m²K)	Target U-Value (w/m²K)	% Betterment
Curtain Walls	1.6	0.9	43%
Floors	0.18	N/A	-
Flat Roofs	0.16	0.15	16%
Windows	1.6	0.9	43%

Hotel Areas

Building Fabric Element	Limiting U-Value (w/m²K)	Target U-Value (w/m²K)	% Betterment
Walls	0.26	0.15	42%
Floors	0.18	0.15	16%
Flat Roofs	0.18	0.15	16%
Windows	1.6	1.4	12%

4.2.3. Target Air Permeability

The proposed development has utilised air permeability that exceeds Building Regulations which will result in less energy required to maintain comfortable conditions inside the buildings as well as the buildings performing better as an insulator. This in turn will maximise the use of natural sources for cooling and ventilation and consequently reducing energy consumption and CO2 emissions.

Residential Areas

Air Permeability	Limiting Air Permeability	Target Air Permeability	% Betterment
$M_3/(h.m_2)$ at 50 Pa	8	3	62%

Hotel Areas

Air Permeability	Limiting Air Permeability	Target Air Permeability	% Betterment
$M_3/(h.m_2)$ at 50 Pa	8	3	63%

Glazing that limits the amount of unwanted solar gain will be used to avoid habitable rooms from overheating with G-Values of 0.4.

Adopting passive design measures will allow the proposed development to maximise natural sources of cooling and ventilation in addition to allowing the heating systems to perform more efficiently.

The residential apartments within the development will adopt perforated opening panels to facilitate purge ventilation coupled with Mechanical Ventilation Heat Recovery (MVHR) with summer-by-pass, mitigating the need for artificial cooling in the majority of residential areas.

The panels are designed to be utilised for peak summer conditions with rapid ventilation with the MVHR utilised for general background ventilation. An example of perforated opening panels is shown in in the image adjacent.

4.2.3.1. Energy Efficiency Measures – Be Clean

The next stage of the design development was to establish energy efficiency measures to meet the demand of the building, as follows:

- Mechanical Ventilation Heat Recovery
- LED Lighting
- High efficiency/Low specific fan power (SFP's) ventilation fans
- Demand Operated Systems
- Variable Speed operation of mechanical plant
- Power Management
- BMS

4.2.3.2. Renewable & Low Carbon Technologies – 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 (see Ridge - 'Energy Strategy Report' dated 3.10.24). It is proposed that Variable Refrigerant Flow (VRF) reverse cycle heat pumps with heat recovery will provide the heating and cooling to the hotel bedrooms and hotel amenity spaces. This will be delivered via the ambient loop. Hot water within the hotel development will be generated via heat pumps. The hot water heat pumps have a typical co-efficient of performance (CoP) of 2.5 - 4.

For the residential areas, Air Source Heat Pumps (ASHPs) will be used to generate heating and cooling (if necessary). Each apartment will have a localised Air Source Heat Pump hot water cylinder which will provide the apartments hot water needs.

The average co-efficient of performance (CoP) of Air Source Heat Pumps are typically 2.5-4, although greater efficiency units are available. The CoP means that for every 1kW of electrical power the heat pumps use, 2.5-4kW of heat energy is generated, reducing the carbon emissions and operational energy.

By including heat pumps, this ensures the proposed development is in compliance with policies EN 4 'Reducing CO2 Emissions by Enabling Low and Zero Carbon Development' and EN 6 'Target Framework for CO2 reductions from low or zero carbon energy supplies'.

The Energy Strategy Report also identifies that the scheme is compliant with Part L 2022, and therefore the scheme complies with the interim measure set out within the Places for Everyone Framework Policy JP-S2

4.2.3.3. Energy Related Carbon Emissions

Regulated CO2 emissions are those associated with heating, lighting and ventilation. Ridge have modelled this emission scenario for each plot is summarised as below;

Area	Target Emission Rate	Building / Dwelling Emission Rate	Betterment over Part L2 2022
Residential	12.91	2.91	77.42%
Hotel	10.59	8.79	17%

The current proposed developments all exceed the Part L: 2022 Target emission rate. This goes beyond the requirements of policy EN6 'Target Framework for CO2 reductions from low or zero carbon energy supplies' (which requires a betterment of 15% on Part L 2010). Additionally, the hotel element of the scheme is currently achieving greater than 4no credits under the BREEAM credit Ene 01 related to energy performance, which is the Excellent minimum standard for that specific credit (whilst the wider assessment is at Very Good level).

Unregulated carbon emissions are much harder to determine as they depend upon the building users' use of 'plug-in' equipment. Building users will be encouraged to minimise their unregulated energy use through the

provision of information and guidance, for example on the use of energy efficient white goods and other electrical equipment.

4.2.4. Transport

A Transport Assessment and Framework Travel Plan has been prepared by SLR (November 2024), which includes a review of the existing situation with regards to transport to and from the site, including by car, public transport, walking and cycling. The site is located in Manchester City Centre which is an area of high public transport accessibility and has a GMAL score of 74.08 according to the latest January-2024 data upload.

The site is in an area of well-established pedestrian network which caters for journeys on foot. The site is located within a 500m walking distance of several other residential areas within the local community, and within several bus and tram stops along Albion Street. Overall, the footways in the area are of good quality, well-lit and wide. Importantly, there are dropped kerbs, tactile paving but with no push-button signal-controlled pedestrian facilities. Cycle lanes are provided along both sides of Albion Street in the vicinity of the site and form part of National Cycle Route 6. Advanced cycle stop lines are also provided at the junctions with Great Bridgewater Street and Whitworth Street West. Overall, the development is well suited to pedestrian and cycle access.

The existing bus, Metrolink and train services operating in the vicinity of the Site provide the opportunity for many people travelling between the proposed development and the rest of the city, with 4 different bus services that run by the Site and the Metrolink that is located within Zone 1 and has an average of 8 Metrolink lines running through it. The site is also located near Deansgate railway station, and in walking distance of Manchester Piccadilly and Victoria stations with mainline services across the UK. The site's city centre location offers an excellent level of public transport. The site is also within walking distance of local amenities and services including various food outlets, and a school.

As an overview, the proposed development will be car-free, however there is parking available nearby with 2 disabled parking bays and 3 standard parking bays on Great Bridgewater Street and a considerable amount of parking available nearby with approximately 3,300 spaces across several car parks within a 10-minute walk of the site as well as residential amenities; secure cycle parking; public realm improvements and new green landscaping; and associated works to the public highway.

The Transport Assessment states that *'as there will not be any on-site parking provision, it is unlikely that the proposed development will generate many vehicle trips except for waste and servicing trips and pick-up / drop-off activity e.g. taxi trips.'* It is therefore considered that while there will be carbon emissions associated with transport to and from the site, these have been minimised as much as possible.

4.3. Climate Change Adaptation

As the scheme design develops, the team will ensure that the effects of climate change on the development are mitigated wherever possible as directed by EN8 Adaptation to Climate Change. The change in climate will be considered when designing both the external envelope and the building services and the buildings will be future proofed where reasonably possible. 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 temperatures (including the heat island effect)
- flood risk
- increased weather volatility
- impacts on water resources.
- changes in ground conditions

The heat island effect occurs when a development is significantly warmer than surrounding rural areas. Sustained high temperatures can have impacts on health, local microclimate/weather conditions and energy use (for cooling). Methods which will be considered for adapting to or reducing the heat island effect include, but are not limited to:

- design to enable airflow throughout the development.
- external finishes that are designed to avoid heat absorption (e.g., light-coloured surfaces)
- site layout/orientation to maximise microclimatic cooling.

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 flood risks. Methods for adapting to increased flood risk include, but are not limited to:

- flood resilient buildings and materials
- managing flood pathways
- use of sustainable drainage systems

The above has been considered as part of the Flood Risk Assessment report produced by Renaissance ('V2B-REN-XX-XX-RP-C-00001' – November 2024), which accounts for climate change scenarios. The Environment Agency maps confirm that the site is wholly in Flood Zone 1 (low probability from flooding). The risk of flooding from pluvial, surface water, groundwater and reservoirs are all considered to be low. Regarding drainage, the drainage strategy has utilised the drainage hierarchy to prioritise drainage options, and the strategy has included for increase in storm intensities associated with climate change of 40% and 45% for the 1 in 30-year and 1 in 100-year events respectively. The surface water will be managed using SuDS methods to control the water at source, reduce pollutants, and to reduce the risk of flooding to areas within or near the site. This demonstrates compliance with policies EN 8 Adaptation to Climate Change and EN 14 Flood Risk.

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

Sustainability measures that consider the site as a whole are proposed to be integrated into the final design solution, in line with the requirements of national, regional, and local planning policy.

5.2. BREEAM

Ridge and Partners have undertaken a BREEAM Pre-Assessment for the Hotel element of the development, to demonstrate how this can achieve the required Very Good rating in line with Manchester Local Plan Policy DM 1. A summary of this is provided in Appendix A.

5.3. Materials and Waste

Sustainable use of resources includes both efficient use of materials and minimisation of waste. The development will be designed to be durable and resilient. This will help to reduce the need to repair and replace materials resulting from damage to exposed elements of the building and landscape. The proposed development will seek to minimise waste as much as possible in line with best practice efficiency benchmarks and the provision of a centralised residential waste storage area, with space for recyclable and general waste. This waste facility should demonstrate compliance with Policy EN 19 Waste & JP-S6: Resource Efficiency.

As part of the BREEAM assessment, the hotel development is targeting a waste efficiency benchmark of 11.1 tonnes of construction waste per 100m2 gross internal floor area, and 70% by volume / 80% by tonnage of non-demolition waste to be diverted from landfill,

5.4. Biodiversity

A Preliminary Ecological Appraisal (PEA) has been produced by Penny Anderson Associates Ltd. The proposed site area of Viadux Phase 2 is c.1.49ha and is dominated by built structures and hardstanding with small patches of ephemeral/short perennial vegetation scattered across the site. The site is bordered by major roadways and residential dwellings and therefore is isolated from any larger areas of natural or semi-natural habitat. Due to the lack of suitable habitat or shelter for protected species in this urban environment, it was concluded that the only species relevant to the assessment are roosting bats and nesting birds. The PEA consisted of a desk study which included records of designated sites, and a field survey which informed habitat mapping, an assessment of the possible presence of protected or priority species and the likely importance of habitat features.

Overall, the majority of the site is unsuitable for most protected species, however it was recommended that a Preliminary Roost Assessment (PRA) be carried out and this report concluded that there were no bats present within the site boundary and the structure has negligible potential to support future bats nesting. Nesting birds were also considered as part of the PEA and it was concluded that the site offered little to no opportunity for foraging and nesting potential on the underside of the bridge on Great Bridgewater Street however it is thought this area will remain undisturbed during site works.

Within the PEA it was recommended that the planting of native or pollinator-friendly species would benefit invertebrates & birds. Additionally, integrating bat roosts to increase opportunities for roosting bats and potentially including a green/brown roof to enhance foraging opportunity for birds.

The scheme is also targeting a minimum of a 10% net gain under the statutory Biodiversity Net Gain metric.

The above demonstrates compliance with Policy EN 15 Biodiversity and Geological Conservation and Policy JP-G8: A Net Enhancement of Biodiversity and Geodiversity from the Places for Everyone Framework.

5.5. Air Quality

An Air Quality Assessment has been prepared by Hydrock Consultants Limited. The site is located within an Air Quality Management Area (AQMA). There are no background monitoring locations in the vicinity of the proposed development site, therefore background concentrations of NO_2, PM_{10} and $PM_{2.5}$ have been obtained from the closest monitoring location to the Site (MA77NO) located off Hewitt Street.

It is not anticipated that any significant adverse impacts on local air quality will occur from the construction phase or operational phase of the project, and the Proposed Development is considered to be compliant with the NPPF and MCC Planning Policies. From the evidence presented, the Proposed Development is expected to comply with all relevant air quality policy. As such, air quality should not pose any significant obstacles to the planning process thus demonstrating compliance with EN 16 Air Quality & JP-S5: Clean Air.

5.6. Noise Pollution

A noise and vibration survey has been carried out by Jameson Acoustics. Manchester City Council require that BS 4142 should be used to assess the likely impact of noise from new items of plant. A manned environmental noise survey was carried out on Friday 13th October 2023 between approximately 21:00h and 23:00h, to ascertain entertainment noise levels associated with Deansgate as well as several additional automated surveys that were held on 1st September 2023 – 7th September 2023, 12th October 2023 – 19th October 2023 & 13th December 2023 – 14th December 2023 that were typical of the lowest background noise levels for noise impact at the surrounding residential receptors during the anticipated operating hours of the building and associated plant as well as tram associated noise. The nearest noise sensitive receptors were identified as the neighbouring residences, moreover the noise receptors were positioned in various locations around the viaduct and the manned survey took place along and around Whitworth Street West. Importantly, the proposed development will be mechanically ventilated, any externally mounted ancillary equipment to be acoustically insulated.

Overall, in line with the requirements of Manchester City Council, the noise impact report suggested that noise should not be considered a limiting factor in granting planning permission for the proposed development and that the cumulative impact of building services noise will be negligible.

6. CONCLUSION

When reviewing the energy and sustainability strategy for this development, careful consideration has been given to the context of the site, local planning policy and the 2022 Building Regulations.

The approach taken for the proposed energy strategy for the development has followed a sequential approach. The Energy Hierarchy has been adopted - assessing in turn the feasibility of reducing the energy demand of the building, using energy more cleanly and finally applying renewable technologies.

Several measures are to be implemented including optimising the thermal performance of the building envelope beyond the minimum U value and air infiltration standards set out in Part L Volume 1 of the Building Regulations. Key proposed energy efficient building services systems include the use of heat pumps, LED lighting installations, and low energy mechanical ventilation systems.

A feasibility assessment has been undertaken into the applicability of renewable technologies. The proposed scheme implements air source heat pumps for domestic hot water generation. The Energy Model has been calculated to take account the selected renewable energy technology proposed for this proposed development. Current results are showing an betterment over the 2022 Part L average baseline, which is a significant improvement on the 15% improvement required against Part L 2010 to satisfy the requirements of Policy EN6 of the Manchester Core Strategy Development Plan. The scheme also meets the interim measure set out within the Places for Everyone Framework Policy JP-S2. The scheme will continue to see decarbonisation in line with decarbonisation of the UK electricity grid.

Wider sustainability aspects are also proposed for the scheme, these include provision of secure cycle storage together with a strategy for the key issues of materials and waste efficiency. The hotel element of the scheme is targeting BREEAM Very Good, as demonstrated in the BREEAM Pre-Assessment Report.

It is considered that the scheme has maximised the opportunities for sustainable improvement and decarbonisation on the site compared to and within the constraints of the existing area and proposed end use.

7. APPENDIX A – BREEAM AP SUMMARY REPORT

BREEAM AP REPORT

RIDGE

Viadux Phase 2 Hotel

BREEAM AP: JLH (BREEAMAP1000246)

Project No.: 5022344

Date: 08.11.24

Assessment Overview

We are conducting a BREEAM V6.1 New Construction (Other, Short Stay Residential – Hotel), fully-fitted assessment for the hotel component of a proposed new 76-storey tower in the Deansgate area of Manchester. Our target is to achieve a minimum BREEAM Very Good certification (score of 55% including mandatory credits) which is required for MCC planning.

The overall scheme includes a combination of residential apartments (top half of the main tower), a hotel (bottom half of the main tower), with supporting works to the retained viaduct, and an adjacent affordable housing block. The BREEAM assessment is only required on the hotel, as the only commercial aspect of the scheme.

A pre-assessment meeting was held by JLH and JW of Ridge (both accredited BREEAM assessor and BREEAM AP's) with key project team members (Artal, Simpson Haugh, Renaissance, Ridge MEP) on 17.10.24, to review and agree a reasonable target for the scheme, and to inform the team on risks, opportunities and key early actions. Subsequent work has been carried out to secure the target, and prioritise the early actions required in the targeted credits.

Current Status Report

- Current target score

Results Summary			
Sector	**Total Available**	**Weighting**	**Very Good Score**
Management	21	11.0%	8.90%
Health & Wellbeing	18	14.0%	7.77%
Energy	23	16.0%	9.04%
Transport	12	10.0%	6.66%
Water	9	7.0%	2.33%
Materials	14	15.0%	9.64%
Waste	10	6.0%	3.60%
Land Use & Ecology	13	13.0%	9.00%
Pollution	12	8.0%	4.66%
Total Predicted Score			**61.60%**
Innovation	10	10.0%	**1.00%**
Total Score			**62.60%**
BREEAM Rating			**VERY GOOD**

- The above target score of 62.6% exceeds the BREEAM Very Good requirement by 7.6%, and includes all relevant minimum standard credits required to achieve a Very Good rating.
- Currently in RIBA Stage 2 – pre-planning
- Planning anticipated November 2024
- INTERIM certificate not sought.

Progress in the Current Period

Team to provide all Stage 2 reports for review as listed below, prior to planning submission.

Information Required – RIBA Stage 2 (pre-planning) Actions

Credit		Time requirements	Comment / Action
Man 01 Req 1-3	Project Delivery Planning	Prior to the end of RIBA Stage 2 all the project delivery stakeholders will meet, identify, and define roles, responsibilities & contributions during each key phase.	Artal – PM procedures followed pre-planning, and information and guidance have been provided
Man 01 Req 8	Pre-Requisite - BREEAM AP	The project team and client will formally agree (contract or letters of appointment) strategic performance targets, including the BREEAM rating, early in the design process.	Artal – the Very Good target is expected to be a planning requirement with MCC, which the project team are formally required to comply with
Man 01 Req 9	BREEAM AP (Concept Design)	A BREEAM AP is appointed and works with the team during Concept Design to assist in maximising BREEAM performance.	Ridge Sustainability have been working on the Concept Design of the scheme, and are accredited BREEAM AP's
Hea 06 Req 1-3	Security of Site and Building	A Suitably Qualified Security Specialist (SQSS) conducts a Security Needs Assessment (SNA) during or prior to Concept design (RIBA Stage 2).	Simpson Haugh – an SNA has been produced for planning. This will need to be implemented into the design
Ene 04 Req 1-4	Passive Design Analysis	A Passive Design Analysis (PDA) is undertaken during Concept Design stage (RIBA Stage 2) which identifies opportunities for the implementation of passive design solutions that reduce demands for energy consuming building services. (Passive design measures must be implemented to reduce energy demand).	Passive Design principles, including the BREEAM requirements, have been incorporated into the project Energy Strategy Report produced by Ridge MEP
Ene 04 Req 9-12	Low Zero Carbon	Prior to the end of RIBA Stage 2, an energy specialist must produce a BREEAM compliant Low Zero Carbon feasibility study. (A LZC technology must be implemented in line with the findings of the study which reduces CO_2 emissions)	LZC technologies, including the BREEAM requirements, have been incorporated into the project Energy Strategy Report produced by Ridge MEP)
Tra 01	Transport Assessment & Travel Plan	Requires that during Concept Design Stage (RIBA Stage 2) it is assumed that a BREEAM compliant Transport Assessment and draft travel plan will be produced.	SLR – Transport Assessment has been completed for the planning submission

Credit		Time requirements	Comment / Action
Mat 01 Req 1-5	Building LCA-Superstructure	Impact compliant Life Cycle Assessment (LCA) at RIBA Stage 2, which considers LCA options for 4 suitably different superstructure options. Mat 01 Calculator will need to be submitted to BRE at Stage 2.	Project Team - A project LCA has been carried out, with carbon optioneering of the superstructure in conjunction with SHP, Renaissance and the client team
Wst 05	Adaption to Climate Change	Requires production of a Climate Change Adaptation Strategy Appraisal using a risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle. And to develop recommendations to mitigate the identified impact before the end of RIBA Stage 2.	Project Team - An Adaption to Climate Change document has been developed by the project team, in line with the BREEAM requirements
Wst 06 Req 1-2	Design for disassembly and adaptability - Recommendations	Requires production of a study to explore the ease of disassembly and the functional adaptation potential of different design scenarios by the end of Concept Design (RIBA Stage 2) and to develop recommendations or solutions based on the study that aim to enable and facilitate disassembly and functional adaptation.	Project Team - A Design for Disassembly and Functional Adaptability document has been developed by the project team, in line with the BREEAM requirements
LE 02 Req 4-6 & LE 03 Pre-requisite	Ecological Survey & Evaluation	Prior to planning application conduct an extended ecological survey and produce an evaluation report into the state of existing ecology, local ecological networks, and possible enhancements.	PAA – An Ecology Survey and Evaluation Study has been provided by PAA for planning
LE 02 Req 7-10 & LE 03 pre-requisite	Determining Ecological Outcome	Meetings should be held during the Concept Design Stage (RIBA Stage 2) with ecologist, local wildlife and environmental stakeholders, client / end user and design team (incl. landscape architect and drainage engineer) to discuss and agree possible ecological impacts, enhancement and mitigations.	PAA / Project Team – An Ecology Workshop was held with the project team on 06.11.24, to review the ecological situation and to agree on optimal ecological outcomes
LE 03 Req 2-4 & LE 04 & 05 Prerequisite	Planning Measures on Site	During Concept Design Stage (RIBA Stage 2) appoint a Project Environmental Champion to manage environmental impacts and establish the necessary roles and responsibilities to maximise the ecological outcomes and start implementation process & review potential impact of site prep & construction on the ecology.	PAA / Project Team – An Ecology Workshop was held with the project team on 06.11.24, which included discussing ecology roles and responsibilities and identified upcoming actions to prioritise to maximise ecological outcomes

Areas of Concern

- Ensure all Stage 2 reports listed above are provided prior to planning submission. Good progress has been made already to ensure these elements are in hand ahead of planning submission.
- No other areas of concern, the agreed target is relatively low risk, the project team have been engaged in the BREEAM process so far, and there are clear actions and responsibilities in future stages set out to ensure the hotel achieves BREEAM Very Good

Meeting Schedule

- BREEAM MEP review meeting – 16.10.24
- Project Team pre-assessment meeting – 17.10.24
- Stage 2 Ecology Meeting – 06.11.24



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