



RIDGE

**ONE MEDLOCK STREET,
MANCHESTER
ENVIRONMENTAL STANDARDS
STATEMENT**
October 2022

5017012 – ONE MEDLOCK STREET, MANCHESTER

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Prepared for

Premier Inn Hotels & Dominvs Group

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1. INTRODUCTION

Ridge & Partners LLP has been appointed by the client to complete an Environmental Standards Statement for the redevelopment of the existing Premier Inn hotel site on Medlock Street in Manchester City Centre.

The proposal comprises the following development: *The demolition of the existing hotel buildings and structures and the development of the site for office uses (Use Class E), flexible office/community use (Use Class E/F1/F2) and purpose-built student accommodation (Sui Generis) comprising two separate buildings, along with associated ancillary internal and external amenity space, hard and soft landscaping, and associated highway works.*

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 2021 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 2.1, below.



Figure 2.1: Location Plan and Proposed Development

There is an existing development on the site, the Premier Inn Hotel, which is to be demolished as part of the project.

There is a development of student accommodation currently to the West of the site, the Mancunian Way to the South of the site and to the North of the site are apartments and commercial uses. To the East is Medlock Street.

The site has all major services (gas, water, telecoms and electricity) within the surrounding roads which do not present any risk in terms of requiring diverting or disconnections to develop the project.

The proposed site is approximately 0.94ha and sits at the junction of Medlock Street and the Mancunian Way (A57M).

The proposed development will comprise two buildings - Block A (comprising office use) and Block B (comprising principally PBSA use and flexible community use).

Block A will be located on the eastern section of the Site fronting Medlock Street. Block B will be located on the western section of the Site adjacent to the Downing River Street development.



The commercial development will provide 36,494m² GIA of commercial space (use class E).

The proposed PBSA development will provide 1014 purpose-built student accommodation units comprising a mix of studios, WCA studios, Twodio type A, Twodio type B, Threedio, 6 bed cluster type A and 7 bed cluster type A. Ancillary uses will also be provided including community and amenity space, cycle store, FM store, gym, and roof terrace.

The development also includes a high-quality landscaping scheme and public realm pocket park, along with service space at ground level, amenity space, car parking, cycle parking, and works to the junction of Medlock Street and River Street.

3. POLICY CONTEXT

3.1. National Planning Policy Framework

A revised National Planning Policy Framework (NPPF) was updated and published in July 2021 which sets out the government's planning policies for England and how they are expected to be applied. This framework replaces that published in February 2019. 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. Manchester Local Plan

The Manchester Local Plan 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 standard¹.*

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

This policy sets a requirement for non-residential developments of over 1,000 m2 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 CO₂ 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	+10% increase on Part L 2010
Target 3: Micro generation area	+15% increase on Part L 2010

It is considered that the proposed development is located within a Target 3: Micro Generation Area and therefore should target a 15% increase on Part L 2010. This is equivalent to a 9% increase over Part L 2013. The new Part L 2021 requirements are applicable to the scheme, which requires a 31% and 27% reduction in CO₂ emissions compared to the previous 2013 regulations for domestic buildings and non-domestic buildings respectively.

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 North West;
- 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.'*

3.3. 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 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 CO₂ 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

Construction related carbon emissions will be minimised by the use of grid electricity where possible to power construction site infrastructure, and the use of emissions will be recorded and monitored through the targeted BREEAM Man 03 credit and within the Site Resource Management Reporting system. The scheme is also targeting credits associated with minimising construction site waste, and maximising diversion from landfill of all site waste.

4.2.2. Operational Carbon and Energy

The development will aim to minimise operational CO₂ 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 (See: Ridge 'Energy Strategy Report')

- 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 – Lean

The team have maximised passive measures to reduce the initial load of the building in terms of heating and anticipated lighting loads with the following measures:

- U values that exceed or match minimum Building Regulation Standards 2021 Part L2 as below

Element	Limiting U-Values from Approved Building Regulations 2021 L2 (w/m2K)	Proposed U-Value Office (w/m2K)	Proposed U-Value PBSA (w/m2K)
Wall	0.26	0.23	0.15
Floor	0.18	0.18	0.13
Windows	1.60	1.3	1.4
Roof	0.18	0.18	0.15

- Air leakage rates that exceed minimum Building Regulations:

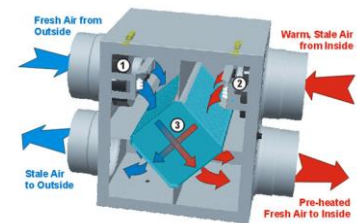
Air Permeability	Worst acceptable standard	Office Target	PBSA Target
M ³ /(h.m ²) at 50 Pa	8	3	3

- Optimising solar gain through the provision of openings and shading.
- Optimising natural ventilation in the PBSA residential spaces.
- A Passive Design Analysis has been undertaken as part of the BREEAM Ene 04 Excellent target.

4.2.2.2. Energy Efficiency Measures - Mean

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

- Heat recovery in offices and PBSA amenity space, as shown in the image to the right.
- Low specific fan power ratings to ventilation fans
- High efficiency LED lighting throughout
- Reduced Standing Losses from Pipes and Cylinders.
- Increased Hot Water Generating Efficiencies
- Improved Lighting Controls.
- Low Energy Motors in Pumps and Fans.
- Enhanced panel heater controls



4.2.2.3. Renewable & Low Carbon Technologies - 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'). It is proposed that Solar Photovoltaic Panels and air source heat pumps be incorporated across the design of the office scheme.



Rooftop photovoltaic panels are proposed to the office building to generate zero carbon electricity for the development, and air source heat pumps are proposed for use on both the office and PBSA for space heating, cooling (for the office) and domestic hot water use. These measures demonstrate compliance with EN 4 Reducing CO₂ Emissions by Enabling Low & Zero Carbon Development & EN6 Target Framework for CO₂ reductions from low or zero carbon energy supplies

4.2.2.4. Energy Related Carbon Emissions

Regulated CO₂ emissions are those associated with heating, lighting and ventilation. Ridge has modelled each building and reported the following predicted performance against the new regulations -

Office Assessment	TER	BER	Betterment over Part L2 2021
1. Part L 2021 U Values, Space Heating: ASHP, DHW: ASHP, PV Array	3.83	3.8	0.78%

PBSA Assessment	TER	BER	Betterment over Part L2 2021
1. Part L 2021 U Values, Space Heating: ASHP, DHW: ASHP	7.84	5.83	25.64%

The office development is predicted to have an average regulated CO₂ emission rate of 3.8 kgCO₂/m²/per annum. This represents a 0.78% carbon reduction compared to the Part L2: 2021 Target emission rate. (As detailed in Ridge Energy Statement) this exceeds the requirements of EN6. Target Framework for CO₂ reductions from low or zero carbon energy supplies, given that the requirements relate back to a 15% saving against Part L 2010, which equated to a 9% betterment against Part L 2013, and meeting the new Part L 2021 requirements equate to a 27% improvement under Part L 2013.

The PBSA development is predicted to have an average regulated CO₂ emission rate of 5.83 kgCO₂/m²/per annum. This represents a 25.64% carbon reduction compared to the Part L2: 2021 Target emission rate (as detailed in Ridge Energy Statement) this exceeds the requirements of EN6. Target Framework for CO₂ reductions from low or zero carbon energy supplies, given that the requirements relate back to a 15% saving against Part L 2010, which equated to a 9% betterment against Part L 2013, and meeting the new Part L 2021 requirements equate to a 31% improvement under Part L 2013.

Unregulated carbon emissions are much harder to determine as they depend upon the occupant use of 'plug-in' equipment, which is unknown for the speculative office development and highly variable for the residents of the PBSA. For the office, the base build development will be designed to ensure that the scheme minimises unregulated energy use. For the PBSA, residents 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.

4.2.3. Embodied Carbon Emissions

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 50-60% of the total carbon emissions of a commercial / high rise development.

As part of the BREEAM targeted credits a detailed Life Cycle Analysis will be carried out, alongside modelling the main impacts of the newly specified superstructure, sub structure, and hard landscaping during the detailed design stages. Optioneering will seek to reduce the initial assumptions by incorporating low carbon, locally sourced alternatives as well as using low carbon construction techniques where appropriate.

4.2.4. Transport

A Transport Statement has been prepared for the planning application by Vectos (VN912290 TA, October 22), 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 west of the A5013 Medlock Street, and River Street forms the northern site boundary, in Manchester in an area of high public transport accessibility.

The site is in an area of well-established pedestrian network which caters for journeys on foot. All roads comprising the local highway network have kerbed pedestrian-only footpaths and crossing points, connecting the site to nearby amenities and public transport. A new pedestrian crossing way is proposed on Medlock Street north of River Street.

The site is within 10 minutes walking or cycling distance of most of the University of Manchester (UoM) campus which is located on the southern side of the A57 Mancunian Way.

The site is within walking distance of numerous bus stops, given the proximity to the city centre and associated arterial bus routes. The closest stop is on City Road East around 50m north of the northern entrance to the site. The Site is also approximately 500m walk from Deansgate Train Station and Metrolink Stop. Oxford Road Train station is also 800m away from the northern entrance to the site. The site has an accessibility index of 56.48, which demonstrates a high level of accessibility via public transport).

The site is also within walking distance of local amenities and commercial services, including various convenience stores, restaurants, ATM, open space, and a Cinema all within 500m of the site. Furthermore, the site has good access to cycle routes.

The proposals also include provision of new public realm areas and enhancement to the current surrounding area such as improving paving, lighting, and landscape features.

The site is proposed as car free. On the site there will only be disabled car parking spaces available (two for the PBSA and 6 for the Office). An Enterprise Car Club parking bay is located 300m away from the site. There are sufficient on-street parking spaces and over 2000 off-street parking spaces within walking distance of the site. Long-stay cycle parking will be provided for each building (284 for the Office and 434 for the PBSA), in excess of the Manchester Core Strategy Cycle parking standards of 1 space per 200sq.m. Short Stay cycle stands will also be readily available in the new public realm areas.

A Travel Plan has been also prepared for the site which includes measures proposed to further encourage the use of sustainable modes of transport. (VN912290 TP, October 22).

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. As several of the targeted BREEAM credits, 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.

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
- increased foliage coverage

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 have been considered as part of the Drainage Strategy that is submitted with the application, which accounts for climate change scenarios. The Environment agency maps confirm that the site is in a Flood Zone 1, or Low probability from flooding.

Approximately 85% of the current site is made up from impermeable area. The development is expected to lead to a minor increase in the impermeable area to 95% due to the increased footprint of the new buildings compared to the Premier Inn and the high-rise buildings intercepting rainfall that would have previously landed outside the site boundary.

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.

Low summer rainfall could lead to water shortages and a decrease in water quality due to low flows in watercourses having less of a dilution effect on pollutants.

Sustainable Drainage Systems (SuDS) will be implemented to mitigate the increase in impermeable area. Porous surfacing may be considered. Blue Roofs are being considered alongside oversized drainage pipes.

Storage tanks installed below the lowest Ground level of vehicular or pedestrian landscaped areas are under consideration but require further coordination with the Landscape architects.

For water consumption a minimum 12.5% improvement over the notional water use baseline is being targeted. This will be done by the installation of utilities and bathroom facilities with low water consumption rates.

The main supply to the buildings will be fitted with a pulsed water meter and water sub meters will be fitted for any water consuming plant/building areas consuming 10% or more of the building's total water consumption.

A leak detection system will also be installed, and flow control devices will regulate the water supply to the communal toilet areas or sanitary facilities in both developments. These features will not be installed in the ensuite rooms in the PBSA development, as the domestic nature of these spaces reduces the benefits of flow control.

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. 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 communal bin store and dedicated recycling area for both developments. Demonstrating compliance with EN 19 Waste. A specific Waste Management Strategy has been developed for the operational phase of the scheme, to ensure the design accommodates the necessary logistical considerations for site waste management (Waste & Servicing Strategy Report, Vectos, VN91290, September 2022).

5.3. Biodiversity

A Preliminary Ecological Appraisal has been produced by Greengage (PEA, Greengate, October 2022). The survey area consisted of the current hotel building which inhabits the site and associated car parking, with small areas of common and widespread habitats of low ecological value. The report also concluded that the site possesses only common and widespread habitats of little ecological value, and negligible potential to support all notable and/or protected species, besides nesting birds.

The report concluded that the only requirement to avoid impacts on notable and/or protected species was to ensure that tree felling, and vegetation clearance is carried out outside of nesting season (March to August).

The report also set out a series of ecological enhancement recommendations to ensure that the scheme development will result in a net gain in ecological value and wider benefits for biodiversity generally. These

measures included the use of rain gardens in the landscaping which would incorporate pollinator-friendly planting, linear tree planting to provide ecological linkages through the site, and bird and bat boxes.

The above demonstrates compliance with EN 15 Biodiversity and Geological Conservation

5.4. Pollution

An Air Quality Assessment has been prepared by Temple Group. The site is located within the Manchester Air Quality Management Area due to elevated pollutant levels above the relevant standards for air quality. It is considered that the Proposed Development will have a negligible impact during demolition and construction, and the operational phase of the development.

As such, air quality does not present a constraint at this Site. 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

A noise impact assessment has been undertaken by Temple Group to ensure that any noise breakout associated with the development is managed below the background noise levels, and also to establish the indoor ambient noise levels within the PBSA residential areas. For office areas of the proposed development there are no obligated noise limits within these areas set by the local planning policies; however, the design will ensure that noise levels in the office are controlled to an acceptable level based on relevant guidance and legislation (such as BS 8233).

This report concluded that the impact of noise during demolition and construction would have temporary negligible to moderate minor adverse effects with the implementation of Best Practicable Means and a Construction Environmental Management Plan. Any noise generated during the development's operational phase is anticipated to have a negligible effect, and that the predicted internal ambient noise levels achieve the recommended criteria for residential dwellings

5.5. BREEAM

A BREEAM pre-assessment has been undertaken by a licensed BREEAM Assessor. This indicates that both elements of the scheme will separately achieve BREEAM Very Good certification. It is proposed that a Managed Post Construction Assessment be carried out with the final stage certificate being available within 6 months of occupation.

Many of the BREEAM targeted credits also support and demonstrate how the development addresses and often exceeds the Policies listed above, as the BREEAM methodology focuses on holistic sustainability across a wide variety of factors, and the intention is that BREEAM rewards performance over and above Building Regulations generally.

Achieving a BREEAM Very Good certificate at post Construction stage for each part of the development meets the requirement to achieve a minimum of BREEAM 'Very Good' set out in CS Policy DM 1: Development Management.

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 2021 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.

A number of passive design 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 LED lighting installations, heat recovery and low energy mechanical ventilation systems.

A feasibility assessment has been undertaken into the applicability of renewable technologies. PV panels were identified as the most appropriate form of LZC technology for application to the scheme. A PV array is proposed for the office development, and air source heat pump heating and hot water is proposed on both the office and PBSA developments. Preliminary energy performance calculations have been undertaken utilising government approved SAP software to verify the Building Regulations Part L Vol 1 compliance of the proposed strategy. The calculations indicate a betterment on current Building Regulation emissions compliance which is equivalent to a greater than 15% improvement on the Part L 2010 target emission rates.

Wider sustainability aspects are also proposed for the scheme, these include provision of cycle storage, minimised car parking, together with a strategy for the key issues of material, water and waste efficiency.

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 development and proposed end use.

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