



RIDGE

**ANCOATS DISPENSARY
ENVIRONMENTAL STANDARDS
STATEMENT**
10/05/2021

5014121 – ANCOATS DISPENSARY

10 May 2021

Prepared for

Great Places Housing Group
2A Derwent Avenue
Manchester
M21 7QP

Prepared by

Ridge and Partners LLP
Belvedere House, 5th Floor
12 Booth Street
Manchester
M2 4AW
Tel: 0161 833 9579

Contact

Susie Sidley
Associate
ssidley@ridge.co.uk

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1. INTRODUCTION

Ridge & Partners LLP have been appointed by Great Places Housing Group to complete an Environmental Standards Statement for the proposed residential development at Ancoats Dispensary, 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 2013 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

The former Ardwick and Ancoats Dispensary is a Grade II listed building located to the south of Old Mill Street, adjacent to Lampwick Lane in New Islington in Manchester ("the Site"). It is within the City Centre Fringe, to the east of Manchester City Centre.

The site location is shown in Figure 2.1, below.

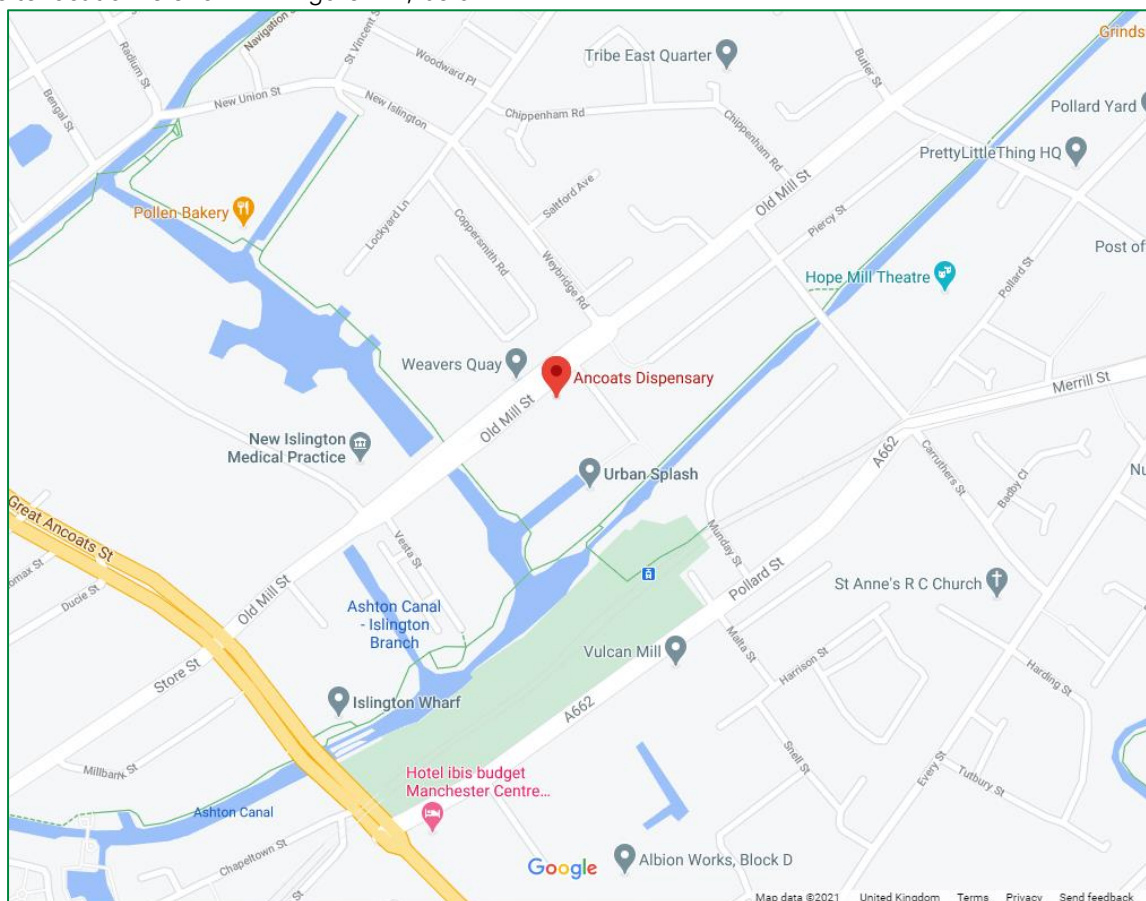


Figure 2.1: Location Plan (Google Map Data @2021)

New Islington is a regeneration priority for Manchester City Council and has been subject to significant investment to facilitate the delivery of residential development and community infrastructure over the years.

Old Mill Street provides an important route from Great Ancoats Street through New Islington, connecting the neighbourhood with Manchester City Centre and the surrounding neighbourhood of Miles Platting, which mostly comprises of two storey residential terraces.

Immediately to the south is the Manchester Life Lampwick development, which is under construction. This development comprises of ten-storey, five-storey and six-storey buildings, set around a central courtyard. The development will provide 209 apartments and four duplex homes, along with four commercial units at ground floor level. The homes are proposed to be for private rent.

Circa 40 metres to the east of the Ancoats Dispensary is Stubbs Mill, a former textile machinery mill, which now provides 27,500 sq ft of workspace which has been fully let to global sports brand Fanatics. The vacant site to the east of Lampwick Lane received planning permission in 2016 for Yo! Homes' 6 storey building to form 24 no. unique residential apartments. This permission has since expired.

To the north of Old Mill Street and the Site is the Weavers Quay development, which completed construction in July 2019 and comprises of 201, one, two and three bedroom apartments for rent.

2.2. Development Proposals

The proposed development comprises the retention and refurbishment of the former dispensary building's two principal facades, facilitated by: partial demolition works; extension of the building's footprint southwards; and, extension to its height by 1.5 storeys, together with the removal of the entrance steps and lowering of the ground floor level, and the re-instatement of a central tower, to provide affordable housing units (Use Class C3), with creation of an external secure cycle store, bin store, boundary treatments and associated works.

3. POLICY CONTEXT

3.1. National Planning Policy Framework

A revised National Planning Policy Framework (NPPF) was published in February 2019 which sets out the government's planning policies for England and how they are expected to be applied. This framework confirms on page 5 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.*

¹ On the 25th March 2015 the Government issued a Written Ministerial Statement setting out the conclusion of the Housing Standards Review. The statement set out a new policy on the application of technical housing standards that applied immediately to all local planning authorities and qualifying bodies. This had a direct effect on the application of existing Code policies, and the setting of new Code policies. The Government elected to remove the Code for Sustainable Homes and incorporate new additional optional Building Regulations on water and access, and a new national space standard.

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 and refurbishment schemes.'*

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

This policy sets a requirement for residential development of 10 units or more 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	+15%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.

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 and function of both buildings and associated external spaces. In achieving developments which are adaptable to climate change developers should have regard to the following, although this is not an exhaustive list:*

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

Developers will be permitted to use green infrastructure elements such as green roofs, green walls, street trees and waterways to contribute to compliance with 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 and 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 they create through the 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.

3.4. Net Zero Carbon and Climate Emergency

In June 2019, the UK Government committed the country to a legally binding target of net zero carbon emissions by 2050. Following this, a month later, Manchester City Council (MCC) adopted a motion to declare a climate emergency which commits the Council to action to combat climate change. The Council have set out their aim of making Manchester a zero-carbon city by 2038 or before.

The Manchester Climate Change Framework 2020–25 is MCC’s high-level strategy for meeting their commitment on climate change that builds on the Draft Manchester Zero Carbon Framework 2020-38 and the declaration of a climate emergency in July 2019. This was endorsed by MCC at the Executive meeting in March 2020 and will develop over the next five years, in line with changes in policy, climate science, rate of progress and other factors. The framework has set out four objectives to facilitate this:

Objective 1 – Staying within our carbon budgets. This involves taking action in the following relevant areas:

- *‘Direct CO2 emissions: staying within our 15 million tonne carbon budget for 2018-2100, including reducing the CO2 emitted from our homes, workplaces and ground transport by at least 50% during 2020-25.*
- *Indirect CO2 emissions: understanding and taking action on the things that we consume, and which generate greenhouse gases through their production, transportation and disposal.’*

Objective 2 – Climate adaptation and resilience. This will require the adaption of *‘the city’s buildings, infrastructure and natural environment to the changing climate and increasing the climate resilience of our residents and organisations.’*

Objective 3 – Health and wellbeing. This aims to improve the *‘health and wellbeing of everyone in Manchester through actions that also contribute to our objectives for CO₂ reduction and adaption and resilience’.*

Objective 4 – Inclusive, zero carbon and climate resilient economy. This aims to ensure that *‘Manchester establishes an inclusive, zero carbon and climate resilient economy where everyone can benefit from playing an active role in decarbonising and adapting the city to the changing climate’.*

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 EN 4, EN 6 and EN8 as well as the Manchester Climate Change Framework.

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

The development proposes the re-use of an existing building, and therefore will save a significant amount of embodied carbon, compared to a new-build scheme. Consideration will be given to minimising the embodied carbon of new materials used within the scheme, including potentially the use of Ground Granulated Blast-furnace Slab (GGBS) cement replacement.

As part of a move towards net zero carbon and sustainability generally, Buttriss are currently undertaking a wider internal review and process of analysis to better understand the parameters in which the embodied carbon within a project can be monitored. Through the use of Building Information Modelling, Ancoats Dispensary has been chosen by the practice to trial a new plugin which will calculate the impact of the material and product specification to provide an overall carbon calculation for the completed design. The software works by measuring the volume of all materials tagged within the Revit model. It then applies embodied carbon data to that material, broken down into life cycle stages (product, construction, use stage and end of life) in line with BS EN 15978:2011. The tool aligns with the recent RICS and RIBA guidance and currently uses the University of Bath ICE database 2011. It is hoped that through the monitoring of this data in the setting of a refurbishment project a better understanding of the impact of specification choice and embodied carbon, can be obtained. It is hoped that this will serve as a base to inform design decisions and material choices as well as acting as a benchmark to develop a digital library with projects of a comparable type, size and value.

Eric Wright will seek to manage and reduce carbon emissions associated with the construction of the development wherever possible. For example, through monitoring and setting targets to minimise CO₂ emissions from site energy and transport and the use of locally sourced materials wherever possible.

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 (as per Policy EN 4):

- Lean - Use advanced building modelling and 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

Full details are provided in the Energy Strategy Report produced by Ridge, with a summary provided below.

Passive Measures – Lean

Due to the building having a listed status, there is limited scope for improving the passive measures beyond upgrading the existing insulation.

In the new element of the building, 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 minimum Building Regulation Standards as below

Element	Target U-Value (w/m ² K)	Limiting U-Value (w/m ² K)	G-Value
Wall	0.17		
Glazing	1.40		0.63
Exposed Floors	N/A		
Roof	0.15		

- Air leakage rates that exceed minimum Building Regulations:

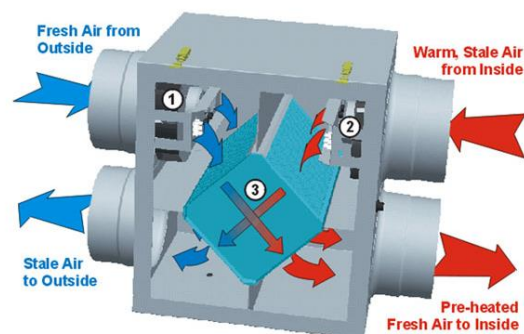
Air Permeability	Worst acceptable standard	This building
M ³ /(h.m ²) at 50 Pa	10	3

- Improved glazing specification (G Value 0.63) that limits the amount of unwanted solar gain to avoid overheating

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 on the apartment ventilation systems, as shown in the image to the right.
- Low specific fan power ratings to ventilation fans
- High efficiency LED lighting throughout
- Demand operated lighting with the use of PIRs in the corridors and the entrance.
- Lot 20 compliant direct electric heating panels with a fast response time, with both local and app control and occupancy sensing and set point temperature.



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 and full details are provided within the Energy Strategy Report. Following the appraisal of the building and site, rooftop photovoltaic panels will be provided to the new building to generate zero carbon electricity for the development.

Energy Related Carbon Emissions

Regulated CO₂ emissions are those associated with heating, lighting and ventilation. Given the building's status as a listed building, there is limited scope to improve the existing fabric beyond upgrading the existing ventilation. Initial SAP calculations have been completed which show regulated CO₂ emissions between 1.27 and 3.49 tonnes per year for the apartments within the existing building. For apartments within the new element of the building, the average regulated CO₂ emission rate is 21.39 kgCO₂/m². This represents an average 11% improvement over Part L1A of the Building Regulations 2013 which relates to an approximate 18% pass on SAP 2010. This is due to SAP 2013 having, on average, a 9% uplift on SAP 2010 included within the software.

Unregulated carbon emissions are much harder to determine as they depend upon the residents use of 'plug-in' equipment. 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. Transport

A Transport Statement has been prepared for the planning application, 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 in an area of high public transport accessibility with New Islington tram stop 300m away, plus bus stops within 100m. In addition, Manchester Piccadilly train station is approximately a 15-minute walk away. The site is also within walking distance of local amenities and services, including primary schools, a health centre and food shop within a 10-minute walk. Furthermore, the site has good access to cycle routes, including the Rochdale Canal towpath.

The site will not provide car parking spaces but will provide secure, covered cycle storage for each apartment. It is therefore anticipated that future residents and visitor will be encouraged to use sustainable modes of transport. It is not anticipated that the scheme will result in a significant increase in vehicle use and therefore is unlikely to result in a significant increase in transport related carbon emissions.

A Travel Plan has been prepared for the site which includes measures proposed to further encourage the use of sustainable modes of transport.

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.

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

The thermal model being developed for the development will include an assessment of the performance of the building against a future climate change environment, with a target to ensure thermal comfort criteria are met as future temperatures continue to rise.

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.

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. By specifying sanitary fittings that reduce flow rates the development will optimise its water use. A target has been set for water use to be no more than 105 litres per person per day. Water meters will be installed so that occupiers are able to monitor their consumption. Where possible, leak detection systems and flow control devices will be installed to reduce the risk of water wastage as well as minimising damage and costs associated with water leaks.

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. As the scheme involves the re-use of the existing building, it is making excellent use of existing resources and reducing the need for the use of new virgin materials. 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. A whole life approach will be taken to building design, considering the need to reduce unnecessary material use and cost associated with future refurbishment or fit out works and ultimately demolition. This will help to ensure that the proposed development has been optimised for its whole lifetime. In terms of new materials being used for the development, Eric Wright Construction shall source materials responsibly, from suppliers with environmental credentials e.g. FSC timber, other materials with BES6001/ ISO14001 / CARES certification and from local sources wherever possible. The proposed development will seek to minimise waste as much as possible in line with best practice efficiency benchmarks and will ensure that at least 80% of waste volume is diverted from landfill. This will be delivered through the creation of a project specific Resource Management Plan (or Site Waste Management Plan) that covers on-site construction waste, off-site manufacturing waste and accurately records waste arisings and waste management practices.

The scheme will encourage residents to recycle through the provision of space for the storage of recyclable waste. Further details are provided within the Waste Management Strategy prepared and submitted with the application, which details internal bin storage and method / frequency of collection.

5.3. Construction Management

Eric Wright have an Environmental Management System (EMS) certified under ISO14001, and will where possible source local materials from suppliers with EMS certifications, prioritising those with BES 6001 and/or Cares certifications. Eric Wright will register with the Considerate Constructor's Scheme, minimise impact on local residents. Eric Wright will monitor construction impacts such as energy, water and transportation of materials / waste. On site construction monitoring encourages consumption reduction and ensures accountability of materials and emissions. A schedule of commissioning will be carried out on relevant building services, meeting building standards such as CIBSE and BSRIA.

5.4. Biodiversity

A Bat and Bird Survey has been undertaken of the existing site. This concluded that the restoration and redevelopment proposals at Ancoats Dispensary can be achieved with no adverse effect on designated sites for nature conservation, ecologically valuable habitats and roosting bats. The Survey Report includes a number of recommendations which will be taken forward as part of the scheme, including the provision of bird boxes.

5.5. Pollution

An Air Quality Assessment has been completed which addresses the potential air quality impacts during both the construction and operational stages of the Proposed Development. A qualitative assessment of construction phase impacts has been carried out. There is a medium risk of dust soiling and a low to negligible risk of fugitive PM10 emissions during the construction phase. Through good site practice, the implementation of suitable mitigation measures, the impact of dust and PM10 releases will be minimised. The residual effect of the construction phase on air quality is therefore not significant. A detailed assessment of operational road traffic has been undertaken to consider the potential impact on NO2, PM10 and PM2.5 concentrations at existing and proposed receptor locations. The findings of the assessment indicate compliance with the annual

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AQS objectives for NO₂, PM₁₀ and PM_{2.5} at all modelled receptors. Furthermore, no exceedances were predicted at any of the modelled receptors with regards to the 1-hour NO₂ and 24-hour PM₁₀ AQS objectives. A noise impact assessment has been undertaken to ensure that any noise associated with the development is kept to a minimum. Light pollution will also be minimised through the use of timeclocks to switch off lighting when not needed and through ensuring external lighting is designed in compliance with the ILP Guidance notes for the reduction of obtrusive light (2011).

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 2013 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 L1A of the Building Regulations. Key proposed energy efficient building services systems include LED lighting installations, heat recovery, photocell/ occupancy sensing controls and low energy mechanical ventilation systems.

The feasibility of connection to a decentralised energy and heating network has been explored. It has been determined that there is a lack of a developed decentralised network in the vicinity of the site, however there is scope for the scheme to connect to a new decentralised energy network should one develop in the vicinity in the future.

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.

Preliminary energy performance calculations have been undertaken utilising government approved SAP software to verify the Building Regulations Part L1A compliance of the proposed strategy and indicate the impact of the incorporation of the proposed PV panels. Wider sustainability aspects are also proposed for the scheme, these include a strategy for the key issues of material and waste efficiency.



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