

**ROCHDALE ROAD
MANCHESTER**

MECHANICAL AND ELECTRICAL ENGINEERING SERVICES

ENVIRONMENTAL STANDARDS STATEMENT

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AMENDMENTS MADE

Revision	Date	Section	Description
D1	22/11/2022	All	Incomplete draft issue.
A	14/04/2023	All	First full issue
B	19/04/2023	All	Minor amendment

MECHANICAL AND ELECTRICAL ENGINEERING SERVICES ENVIRONMENTAL STANDARDS STATEMENT

1.0 INTRODUCTION

1.1 Brief

This report has been produced to provide a post-completion Environmental Standards Statement in accordance with the requirements of Manchester City Council's Core Strategy. The following key areas are addressed:

1. Energy Efficiency
2. Renewable Energy
3. Environmental Standards
4. Water Management
5. Weather Resilience
6. Waste Management
7. Construction Management
8. Biodiversity

The report seeks to confirm that the environmental standards set out as part of the planning application for the scheme have been adhered to.

1.2 Proposed Development

The proposed development comprises:

- Basement car park, plant and utility space
- Ground floor commercial units and residents' gym
- First to 14th floor residential accommodation

The residential accommodation comprises 155 No 2-bed and 3-bed apartments.

2.0 ENERGY EFFICIENCY

2.1 Policy Requirements

Manchester City Council's Core Strategy provides the following requirements relating to energy efficiency and sustainability:

Policy EN4

The Council will seek to reduce fuel poverty and decouple growth in the economy, growth in CO₂ emissions, and rising fossil fuel prices, through the following actions:

1. All development must follow the principle of the Energy Hierarchy, being designed:
 - a. to reduce the need for energy through design features that provide passive heating, natural lighting and cooling
 - b. to reduce the need for energy through energy efficient features such as improved insulation and glazing
 - c. to meet residual energy requirements through the use of low or zero carbon energy generating technologies
2. 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.
3. 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.
4. 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.
5. The use of building materials with low embodied carbon in new development and refurbishment schemes.

Policy EN5

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

Applications for residential development of 10 or more units and all other development over 1,000 m² will be expected as a minimum to meet the target shown in Tables 12.1 or 12.2, unless this can be shown not to be viable. This should be demonstrated through an energy statement, submitted as part of the Design and Access Statement.

Such a statement will be expected to set out the projected regulated energy demand and associated CO₂ emissions for all phases of the development.

Developments smaller than the above threshold, but involving the erection of a building or substantial improvement to an existing building will also be expected to meet the minimum target, where viable, but will not be expected to submit an energy statement.

The target framework relates to three broad development locations and their potential for low and zero carbon, decentralised energy. The areas are defined as follows:

Target 1 Network development areas: Locations where the proximity of new and existing buildings, the mix of uses and density of development provide the right conditions to support district heating (and cooling).

Target 2 Electricity intense areas: Locations where the predominant building type has an all electric fit-out such as retail units and leisure complexes.

Target 3 Micro-generation areas: Locations where lower densities and a fragmented mix of uses tend to mean that only building scale solutions are practical.

Table 12.1

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

Non-domestic CO₂ emissions reduction targets

Table 12.2

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 (Applies to commercial uses with a high proportion of emissions from electricity use (>45 kg CO ₂ /m ²))	+10% increase on Part L 2010
Target 3: Micro generation area	+15% increase on Part L 2010

2.2 Completed Works

Government guidance for carbon performance suggests a hierarchy of good practice in low carbon design. *Figure 2.2* illustrates this hierarchy.

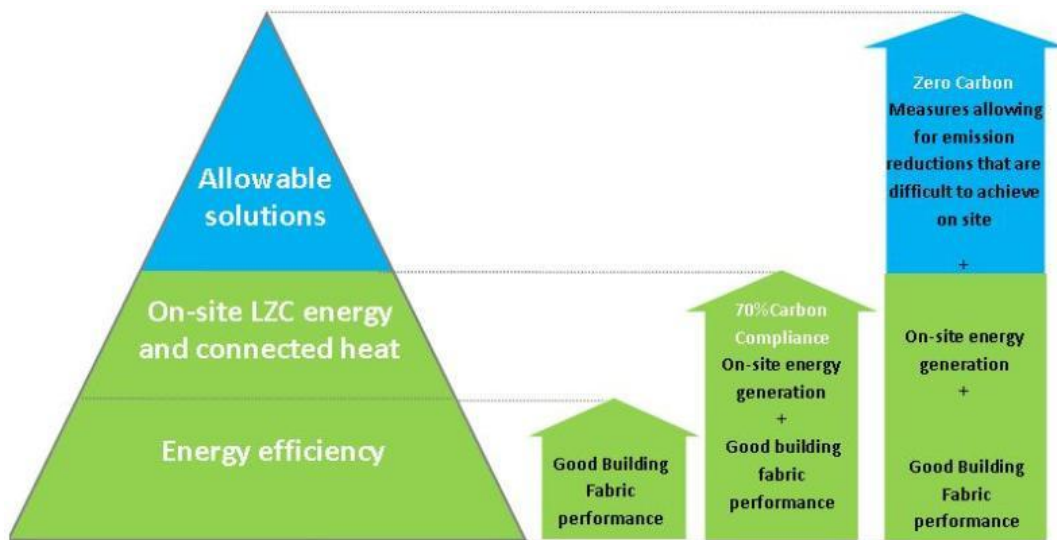


Figure 2.2: Low Carbon Design Hierarchy

Energy efficiency is achieved through the use of high performance building materials to ensure thermal efficiency of the building envelope. This, along with the implementation of efficient fixed services design and low and zero carbon technologies, should allow designers to meet most carbon compliance requirements.

The last element of the hierarchy is the use of renewable energy solutions to generate the energy used on site. Ideally, these renewable energy sources should be installed locally. However, if this is not possible then 'Allowable Solutions' can be used to provide off-site renewable energy sources to offset carbon emissions from the site.

The development has been designed in line with the hierarchy illustrated above. Thermal envelope efficiency has been maximised, and the following measures have been implemented to reduce energy consumption on site:

- High efficiency gas fired boilers serving a building-wide heat network. This includes space planning for equipment necessary for future connection to a wider district heating network
- Mechanical ventilation with heat recovery throughout the apartments and commercial units.
- LED lighting throughout.
- VRF heating and cooling to the commercial units.

On site generation via a photovoltaic panel array has been utilised to further offset carbon emissions.

The energy and carbon performance of the apartments has been assessed and the associated SAP and EPC reports have been completed.

3.0 RENEWABLE ENERGY

3.1 Policy Requirement

In order to meet Core Strategy policies EN4, EN5 and EN6 and in accordance with the Government's low carbon design hierarchy, renewable technologies shall be incorporated into the design to meet, and where possible exceed, the 15% carbon emissions saving target over Part L 2010.

3.2 Completed Works

A 24.75kWp Bauder SOLAR PV array has been installed on the roof. This comprises 90No PV modules and is forecast to generate 18.43MWh in it's first year. This will save approximately 9.75 tonnes of CO₂ per year.

Other renewable technologies were discounted at feasibility stage.

4.0 ENVIRONMENTAL DESIGN

4.1 Policy Requirements

The commercial element of the scheme is below the 1,000m² threshold at which a BREEAM assessment is required and the Guide to Development in Manchester Supplementary Planning Document and Planning Guidance makes reference to assessment of domestic units under the now defunct Code for Sustainable Homes.

Despite not falling within statutory requirements for formal environmental assessment the Developer is committed to achieving high levels of energy efficiency in line with the principles of the aforementioned assessment programmes.

4.2 Completed Works

The following Low and Zero Carbon technologies have been included in the build:

1. VRF heating and cooling to the commercial units
2. Heat recovery ventilation to the commercial units
3. High efficiency gas fired heating and hot water generation to the apartments
4. Heat recovery ventilation to the apartments
5. LED lighting throughout
6. Photovoltaic panels (refer to section 3.2 for details)

5.0 WATER MANAGEMENT & WEATHER RESILIENCE

5.1 Policy Requirements

To satisfy UPD Part 1 Policy E1.3 and Control Policy DC21.1 the development proposals are required to demonstrate the following:

1. The provision of SUDS and limiting of hard standing is sufficient should mitigate the risk of increased localised flooding.
2. Provision of a flood risk assessment (FRA) for areas of known flood risk.
3. Efficient use of water within the development.

5.2 Completed Works

Separate drainage systems have been installed, with the surface water and foul water combining prior to discharging to the United Utilities combined sewer, located in Bendix Road to the south-east corner of the site.

To account for the peak surface water discharge limit of 9.9l/s we need to provide 37.3m³ of storage to accommodate a 100yr + 30% rainfall event. This has been provided by the 22.8m³ attenuation tank installed, with the remaining 14.5m³ stored within the drainage network itself.

5.2.1 Flood Risk

The main types of flooding that may apply to the proposed development site are as follows:

- groundwater flooding
- surface water flooding from the site
- surface water flooding to the site

The basement has been designed to accommodate high groundwater levels as it provides parking only. It is also of suitably sealed construction to mitigate groundwater flood risk.

To address the risk of surface water flooding from the site the development has been constructed to provide adequate capacity not to flood for the critical 1 in 30-year storm event. Any flood water 19 103 Rochdale Road, Manchester Flood Risk Assessment & Detailed Drainage Strategy generated from the critical 1 in 100-year plus climate change storm event will be contained within designated areas on site so not to cause damage to buildings, essential services or adjoining developments & services.

To minimise localised flood risk within the site, the drainage system includes gullies, drainage channels and drains are all suitably sized to accommodate peak storm flows.

With regard to surface water flooding to the site, the Flood Warning Information Service surface water flood maps indicate that the entirety of the site is at very low risk of surface water flooding. South of the site, there is a localised area classified as being at low risk of flooding from surface water within the highway. The site's drainage network has been designed and constructed to accommodate the necessary flows generated from the site and therefore limit future surface water flood risk to the site.

5.2.2 Foul Drainage

The site's foul water discharge is via a combined connection to the public combined sewer located in Bendix Street to the south-east corner of the site. The connection has been agreed with United Utilities as appropriate for the discharge from the development.

5.2.3 Water Efficiency

Equipment has been installed to meet the following performance criteria:

- 4/2.6 dual flush WC cisterns
- 6 litre showers
- 140l to overflow baths
- 3 litre WHB taps (consider push taps or sensor taps)
- 4 litre kitchen taps (consider push taps or sensor taps)
- water efficient dishwashers and washing machines.

Part G calculations have been completed to confirm an overall water consumption of less than 125litres/person/day.

Water metering has been provided within each apartment to enable measurement and control of water consumption.

The external landscaping areas rely solely on precipitation or manual watering in order to limit external potable water usage.

6.0 WASTE MANAGEMENT

6.1 Policy Requirements

Satisfaction of UDP Development Control Policy DC27.1 requires that all developments have a waste management strategy demonstrating the following:

1. The development will include adequately sized bin storage
2. Suitable access will be provided for refuse collection
3. The design includes effective planning for waste storage and transport within the development.

6.2 Completed Works

Operational waste management proposals have been developed in line with BS5906:2005 and Manchester City Council's Waste Collection schedule and facilities. Bin storage has been sized accordingly and has inclusive access to ensure all building users, including wheelchair users, can access these facilities.

The project's operational waste management proposal will facilitate the development of good practice for recycling waste via the following measures:

- All communal wheelie/Euro bins are stored in the designated waste area and will be out of view to the public.
- Storage for recyclable materials and general waste requirements have been sized to meet waste management company frequency and collection requirements.
- Bi-annual meetings will be organised with the operating waste management company to ascertain percentages of recycling and to ensure the building occupiers are segregating maximum levels of mainstream wastes.

7.0 CONSTRUCTION MANAGEMENT

7.1 Policy Requirements

Manchester City Council UDP Part 1 Policy E1.6 requires the building materials used in new development and refurbishment schemes to be environmentally friendly wherever possible and encourages the use of recycled building materials. Site waste management plans should, therefore, be implemented to reduce the quantity of waste generated, and to increase re-use and recycling.

Opportunities for reuse of existing structures should be explored, and where this is not appropriate, materials should be reused on site and incorporated into the new design where practicable. Materials that are environmentally friendly, of low embodied energy, locally sourced, and can be recycled or reclaimed when the building comes to the end of its life should be prioritised. Materials that contain environmentally damaging chemicals should be avoided.

In addition, activities carried out during the construction of new developments have the potential to cause significant environmental impact. In order to avoid such impacts it is important that appropriate measures are put in place to manage and control the waste generated, the amount of water and energy used, and any potential releases to water, land and air. Use of the Considerate Constructor scheme is recommended.

7.2 Completed Works

The Institute Civil Engineers Pre demolition protocol 2008 was reviewed during the design to identify any potential savings that may be on offer throughout the site clearance/remediation. Existing structures on the site were not suitable for reuse and were demolished as part of the works. No material suitable for re-use was identified.

The site was monitored throughout construction to assess waste management performance. This included:

- Policies for waste management to segregate, recycle and reuse waste generated on site
- Energy and water management measures in place during the construction process
- Procurement of materials from local sources and certified responsible sources

The developer followed a Site Waste Management Plan (SWMP) for the project. The SWMP included:

- Procedures and commitments to minimise non-hazardous waste at the design stage
- Procedures to minimise hazardous waste
- Implement key procedures and commitments to sort and divert waste from landfill.

8.0 BIODIVERSITY

8.1 Policy Requirements

In 2017, TEP undertook, for Beech Design and Build, an Ecological Assessment at Rochdale Road Manchester (TEP Report Ref: 6490.01.002), and this information was input into the Environmental Standards Statement (3727-ESS-001-A) as part of the Planning Submission.

A requirement of the application, in order to obtain Planning Discharge of Conditions for the Environmental Standards Statement (3727-ESS-001-A), is the completion of an 'As Constructed Environmental Standards Statement' which requires input from ecology as per the section noted below and Page 23 of the attached Environmental Standards Statement (3727-ESS-001-A):

An ecology assessment has been completed by The Environmental Partnership to inform clearance of the site, including demolition of one property in accordance with the Manchester City Council Core Strategy Development plan (adopted 2012) Policy EN13 (Biodiversity and Geological Conservation).

The assessment found that the proposed development had no implications in relation to designated sites, priority habitats or protected species and that the buildings due to be demolished have negligible suitability for roosting bats. No evidence of roosting bats was found during the daytime bat inspection, and the condition and location of the buildings are considered to be unsuitable for bats.

The report recommends that green space be provided where possible within the scheme. The proposals include garden spaces on two of the three roof levels and within the common/public realm on the ground floor, which will significantly improve biodiversity and ecological value on the site. These areas will be designed with consideration for the recommendations provided in The Greater Manchester Green Roof Guidance (2009) and The University of Manchester Green Roof/Green Wall Policy and Guidance 2014.

If appropriate the scheme will incorporate a peregrine box on the uppermost roof level.

This technical note has been prepared by TEP to address the ecological requirements and recommendations of the scheme and input into the 'As Constructed Standards Statement'.

8.2 Completed Works

TEP Ecologist Cameron Campbell visited the site on 15th February 2023 to confirm that green spaces had been included as part of the finished design. The landscaping had not been fully completed at the time of the survey on the ground floor and floor 9. The 15th Floor Roof is built up of stone ballast which will ultimately have PV panels installed over the entirety of the roof as indicated on drawing numbered '103-10_017-C2_Roof Level.

Once landscaping works are fully completed Manchester Design and Build Ltd will submit photographs of the site as a schedule of evidence that the final landscape design plans, 'BDB Comments 220707', have been fully adhered to.



Figure 1: Ground floor not yet completed



Figure 2: Floor 7 completed green space



Figure 3: Aerial view of Floor 9 and 7 from Floor 15



Figure 4: Floor 15 Stone ballast area for solar panel installation

Peregrines and their nests are protected under the Wildlife and Countryside Act 1981. The following are criminal offences:

- Killing, injuring or taking any wild bird;
- Taking, damaging or destroying the nest of any wild bird whilst that nest is in use or being built;
- Taking or destroying the egg of any wild bird;
- Possessing any live or dead wild bird, or any part, or anything derived from such a bird;
- Possessing an egg of a wild bird or any part of such an egg.

The following are criminal offences in relation to “Schedule 1” birds:

- Disturbing any Schedule 1 wild bird whilst it is building a nest or is in, on or near a nest containing eggs or young
- Disturbing dependent young of such a bird.

Records of peregrine falcons have been returned within Manchester City Centre and there are known roosting sites on various buildings around the city. Recommendations suggested that a peregrine falcon nest box should be placed on the roof of the Ancoats Gardens building, however, this is now deemed inappropriate.

Firstly, the 15th floor of the building will be populated with Solar PV Panels and the Life Safety Smoke Vent system for the building meaning there is limited space available to accommodate a peregrine box. These solar PV panels require regular maintenance, and the smoke vent system requires monthly testing. As it is a criminal offence to disturb a

nesting peregrine falcon, and it is likely that someone would need to access the roof during peregrine breeding season (February-July), it is inappropriate to site a nest box here, so as to avoid committing an offence.

Additionally, upon review of the peregrine falcon artificial nest site advice note and discussions with the Manchester Raptor Group the building has been further deemed an unsuitable location for a peregrine nest box. The area in Manchester has known peregrine territory for at least two pairs of peregrines whose known nesting sites all lie within 1.5km of Ancoats Gardens. A previous nest box on the Manchester CIS Tower, 430m from the site, was closed by the Manchester Raptor Group in recent years due to peregrine chick fatalities, thought to be due to the surrounding high rise, glass mirror fronted buildings and the lack of ledges for them to reach during flight training. The Ancoats Gardens surrounding area is similarly occupied by apartment buildings and sky scrapers and as stated within the peregrine advice note “it is inadvisable to locate artificial nests on buildings with smooth, vertical facades without ledges or other niches which young birds can reach if they fail to return to the nest site’.

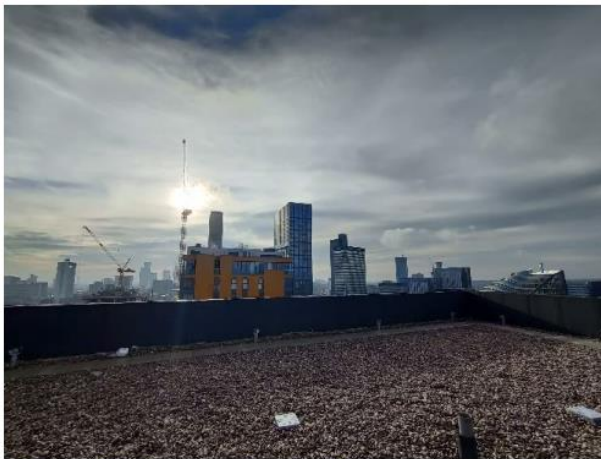


Figure 5: Surrounding buildings



Figure 6: Rooftop view of surrounding area