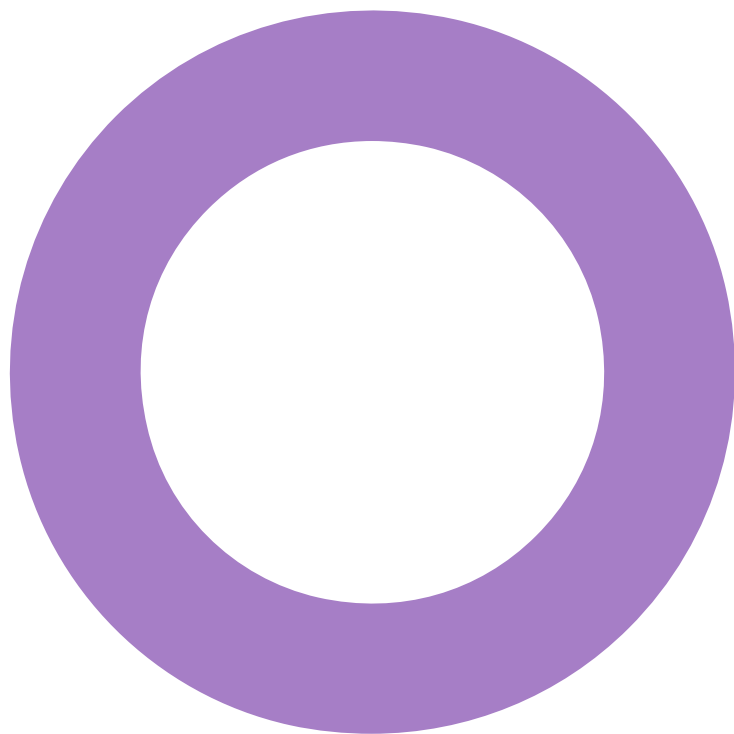


Arundel Street. Manchester. Logik Developments.

SUSTAINABILITY
ENERGY AND ENVIRONMENTAL STANDARDS STATEMENT

REVISION 02 – 01.04.2022



Audit sheet.

Rev.	Date	Description of change / purpose of issue	Prepared	Reviewed	Authorised
01	16.03.2022	Initial Issue for Comment	LR	JN	JRF
02	01.04.2022	Updated in response to Comments	LR	RM	JRF

This document has been prepared for Logik Developments only and solely for the purposes expressly defined herein. We owe no duty of care to any third parties in respect of its content. Therefore, unless expressly agreed by us in signed writing, we hereby exclude all liability to third parties, including liability for negligence, save only for liabilities that cannot be so excluded by operation of applicable law. The consequences of climate change and the effects of future changes in climatic conditions cannot be accurately predicted. This report has been based solely on the specific design assumptions and criteria stated herein.

Project number: 2323250
Document reference: REP-2323250-05-LR-20220316-Energy and Environmental Standards Statement -Rev02.DOCX

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Executive Summary

This Energy and Environmental Standards Statement has been prepared on behalf of Logik Developments in support of the development proposals for Arundel Street, Manchester and hereafter referred to as the Proposed Development.

This strategy summarises the relevant regulatory and planning policies applicable to the new scheme and sets out how it will address and achieve the relevant policy targets. The strategy responds to the UK planning and regulatory framework, and specifically to the Manchester Core Strategy policy documentation.

In 2019 consent was obtained for the scheme and Logik Developments is now seeking alterations via a non-material amendment.

Approach to Sustainability

Energy

The Energy Strategy has been developed in accordance with the Energy Hierarchy 'Be Lean – Be Clean – Be Green', and demonstrates the anticipated performance against the requirements of the Building Regulations Part L 2013 'baseline'. The Energy Hierarchy approach follows guidance from the Manchester Core Strategy.

Through passive design and energy efficiency measures, the Proposed Development achieves a site wide ~6.3% reduction in annual regulated carbon emissions over the Part L 2013 target, which also meets the requirements of the Manchester planning policy.

Further details can be found in the Energy Strategy for the Proposed Development.

Water

The Proposed Development will reduce the demand for mains water, through measures such as low flow taps and dual flush toilets. The Proposed Development will achieve low levels of water consumption in accordance with the Building Regulations Part G at the time of construction. Water monitoring and leak detection equipment will also be provided to effectively monitor water consumption and any leaks on the system.

EOC Engineers have been appointed to assess the surface water drainage at the site and will aim to limit surface water runoff.

Flooding Risk

Details can be found in the Floor Risk assessment report for the site, undertaken by Curtins.

Waste

The Proposed Development will limit the quantity of waste arising during any demolition and construction works, ambitious targets will be set for limiting the amount of waste produced, as well as to maximise the waste diverted from landfill. Dedicated waste storage facilities will also be provided to cater for the segregation and storage of operational waste volumes, for both recyclable and non-recyclable waste streams in order to divert waste from landfill. Due to the site constraints, further processing of waste at the site is not likely to be possible, however with careful selection of the site's waste management contractor (through operation), the waste produced at the site, will be effectively diverted.

The contractor will be required to prepare a Site Waste Management Plan (SWMP) to minimise waste through site good practice by limiting their production of waste through construction. Between 95% - 100% by weight of non-hazardous demolition and construction waste is to be diverted from landfill.

Refer to the Curtins Waste Management Strategy Report for further information.

Materials

The materials used at the Proposed Development will be specified to minimise the impact on the environment and on building users. Major building elements will be recycled and therefore contribute to minimisation of materials used, with a resultant reduction in embodied impact.

Where feasible, new materials will be locally sourced materials and include maximised recycled content. Materials will be reviewed using the BRE 'Green Guide to Specification' aiming to maximise the proportion of A-rated materials and ensure the majority of materials A-C rated in the overall construction. Assessment through the Green Guide to Specification will identify the material profile extraction, processing and recyclability impacts and thus selection of a highly rated material profile offers a lifecycle assessment for the material element.

All timber used at the Proposed Development for both construction and site timber will comply with the UK Government (CEPT) Timber procurement policy. As a minimum, this requires all timber is FSC certified as well as being legally sourced.

Materials efficiency reviews will be undertaken at key stages in the design to determine if impact reductions can be achieved through design choices.

Ecology and Biodiversity

There is very limited scope in order to increase the ecological value of the site given the site area constraints, however, a provisional rooftop community garden space and ecological features on the pavement and the development of a green wall will be considered in order to provide some increase in ecology. These features will increase the ecological value of the site and will encourage ecology in what is generally a highly developed central urban area.

Transport

The development has excellent access to a range of public transport systems as well as including the provision of substantial secure cycle storage and cyclist facilities (~1No. cycle space per 2No. dwellings, or ~1No. per dwelling if spaces are double stacked). Further features such as the implementation of a transport monitoring plan and issuance of building user transport information as part of welcome/resident's packs will also positively influence building users and encourage occupants to use sustainable modes of transport.

Refer to the Curtains Traffic Strategy and Travel Plan for further information.

Health and Wellbeing

The health and wellbeing of the future occupants of the Proposed Development will be protected by ensuring that, amongst other things, people will not be exposed to excessive noise, flickering lights or overheating rooms. The design will target good levels of daylight and thermal comfort levels in line with best practice. There will be acoustic testing and performance design in line with best practice requirements.

Pollution

The Proposed Development will minimise the risk of pollution both during construction and occupation of the building. The contractor will be obliged to implement best practice pollution prevention procedures throughout construction to ensure that the development does not introduce pollution, or significantly impact receptors. Internal finishing materials with little or no volatile organic compounds (VOC) or formaldehyde will be used, in line with BREEAM requirements in order to reduce the negative impacts of these carcinogens on the building occupants.

Emissions of Nitrous Oxide and Particulate Matter will be assessed and reduced by ensuring the selection of efficient building services. Luminaires will be provided with suitable output and polar cure in order to direct lighting appropriately to minimise light pollution and loss of light to the sky. Noise impacts will be mitigated following acoustic testing of the building services plant for the proposed development. There will be low levels of noise resultant from the proposed plant.

Community

The Proposed Development will contribute to the local community through various means such as sourcing materials and labour locally (where possible), by building on an existing site in need of regeneration and by registering with the Considerate Constructors Scheme to ensure that the construction project does not negatively impact on the local neighbours and community.

1. Introduction

1.1 The Application

This strategy has been prepared on behalf Logik Developments in support of the proposed Arundel Street development in central Manchester. This strategy summarises the relevant regulatory and planning policies applicable to the Proposed Development and sets out how the Proposed Development will address and achieve the relevant policy targets.

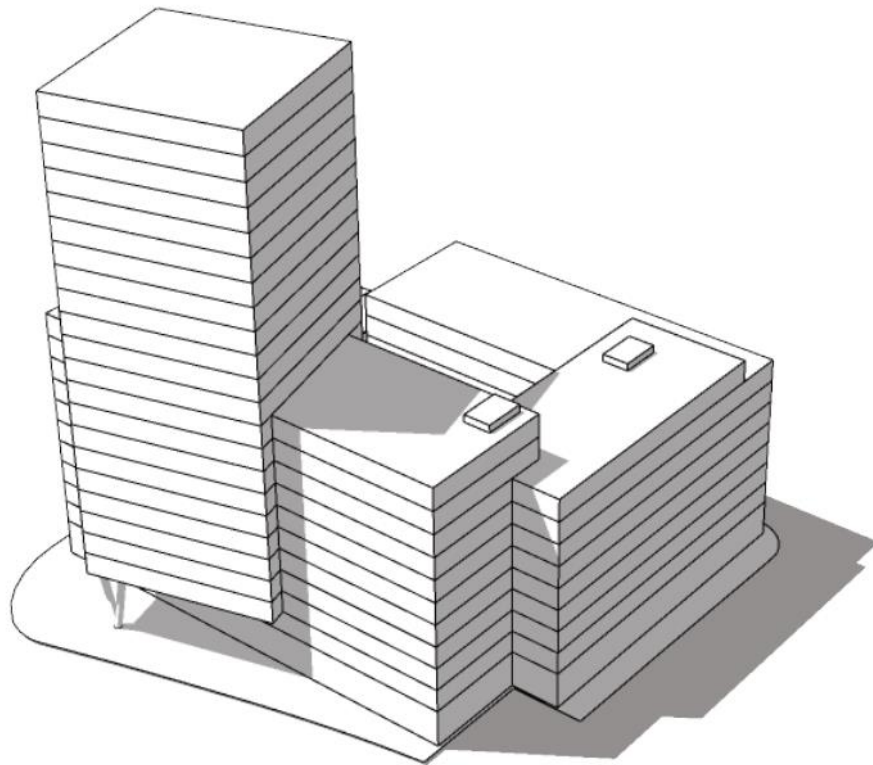


Figure 1 Proposed Development

2. Planning and Regulatory

The following section outlines the national and local policies and drivers.

2.1.1 Building Regulations Part L (2013)



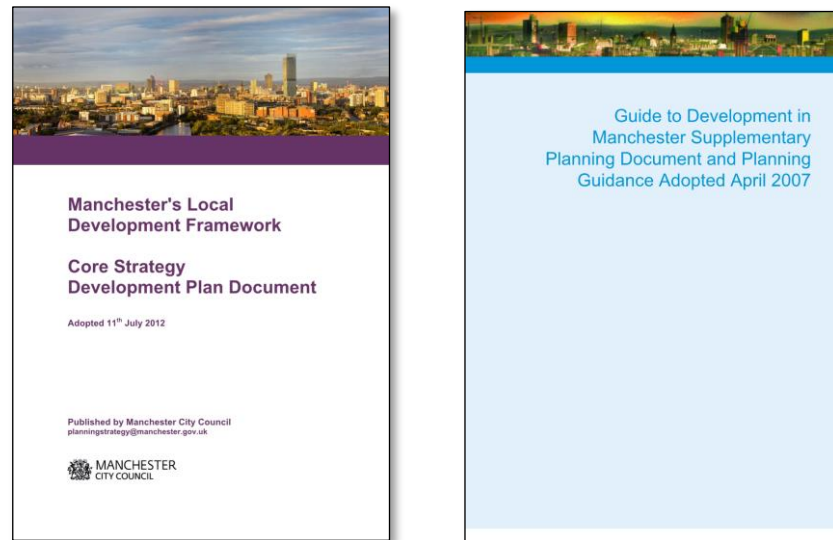
Part L of the Building Regulations is the mechanism by which government is driving reductions in the regulated CO₂ emissions from new buildings. The dwellings will be assessed against Building Regulations Part L1A 2013 and the commercial aspects will be assessed against Building Regulations Part L2A 2013.

All new buildings must meet the requirements of Part L1A or Part L2A of the 2013 Building Regulations.

2.1.2 Local Planning Policy

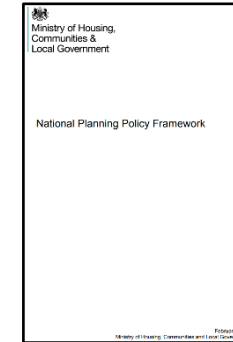
Manchester City Council (MCC) documentation:

- Core Strategy (CS) (July, 2012)
- Supplementary Planning Documentation and Planning Guidance (SPDPG) (April 2007)



This strategy summarises the response of the proposed development's design to the policy framework of the MCC Adopted Core Strategy, and SPDPG documentation that together form the city's policy landscape. The CS documentation supersedes the SPDPG and therefore the CS documentation will take precedence.

2.1.3 National Planning Policy Framework



The updated National Planning Policy Framework (NPPF) was published in July 2021 and has superseded all Planning Policy Statements (PPS) and Planning Policy Guidance (PPG) documents, with the exception of PPS10 (Waste). The NPPF sets out the Government's strategy on the delivery of sustainable development.

The NPPF places responsibility for policy making with the Local Planning Authority, who shall communicate their policies through Local Plans and facilitate the creation of Neighbourhood Plans. The NPPF states that there is a presumption in favour of sustainable development.

The following is extracted from paragraph 11 of the NPPF:

"Plans and decisions should apply a presumption in favour of sustainable development."

For plan-making this means that:

- plans should positively seek opportunities to meet the development needs of their area, and be sufficiently flexible to adapt to rapid change;
- strategic policies should, as a minimum, provide for objectively assessed needs for housing and other uses, as well as any needs that cannot be met within neighbouring areas⁵, unless:
 - the application of policies in this Framework that protect areas or assets of particular importance provides a strong reason for restricting the overall scale, type or distribution of development in the plan area⁶; or
 - any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.

For decision-taking this means:

- approving development proposals that accord with an up-to-date development plan without delay; or
- where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date⁷, granting permission unless:
 - the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed⁶; or
 - any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole."

In respect of energy policy contained within the NPPF, paragraph 155 sets out that:

"To help increase the use and supply of renewable and low carbon energy and heat, plans should:

- provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts);
- consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and
- identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers."

3. Sustainability Strategy

3.1 Overview

The following strategy is set out according to the Proposed Development's location and its relevant policies. The strategy covers various headline sustainability categories as highlighted in Figure 2 and those relevant to local policies. The strategy statement identifies how all applicable policies and Pebble Mill Investments Limited aspirations and measures of sustainability will be implemented at the Proposed Development.

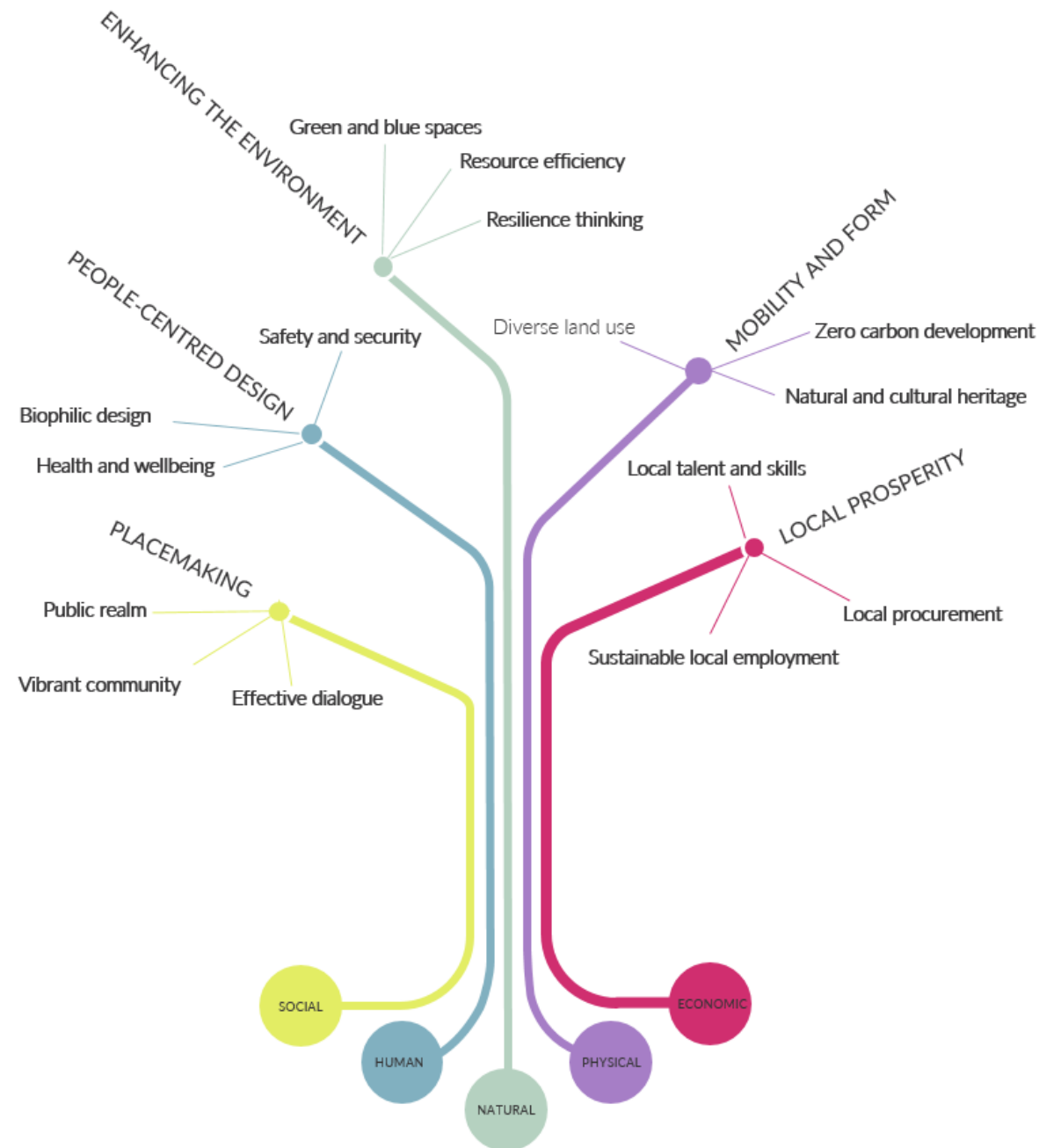


Figure 2 Sustainability Factors

3. Five Capitals Model

The Five Capitals Model is a framework to consider the five types of sustainable capital from where we derive the goods and services that are needed to improve the quality of our lives. The Proposed Development could adopt this framework which will allow for the wider consideration on how environmental and social issues can affect the long-term financial sustainability for its operations, products and services. Information on the "Five Capitals" is provided below:



Figure 3 Five Capitals Model

4.1 Natural Capital

Natural resources (energy and matter) and processes needed by organisations to produce their products and deliver their services. This includes:

- **Sinks:** absorb, neutralise or recycle wastes (e.g. forests, oceans);
- **Resources:** some of which are renewable (timber, grain, fish and water), whilst others are not (fossil fuels);
- **Processes:** such as climate regulation and the carbon cycle, that enable life to continue in a balanced way.

Some initiatives include:

- Substitute naturally scarce materials with those that are more abundant.
- Use renewable resources instead.
- Eliminate waste, re-use or recycle.
- Protect biodiversity and enhance eco-system functions.
- Use renewable resources only from well-managed and restorative eco-systems.

4.2 Human Capital

Human capital incorporates the following:

- health,
- knowledge,
- skills, intellectual outputs,
- motivation and;
- capacity for relationships of the individual.

Human capital also includes:

- joy,
- passion,
- empathy, and;
- spirituality.

Some Initiatives:

- Provision of adequate daylight and lighting controls.
- Provision of appropriate acoustic and thermal comfort levels
- Ensure adequate health and safety arrangements, incorporating physical and mental wellbeing.
- Design for interaction and social integration – whilst ensuring that the specific needs and views of all relevant stakeholder parties have been considered.

4.3 Social Capital

Social capital is any **value added** to the activities and economic outputs of an organisation by:

- human relationships,
- partnerships and co-operation.

For example:

- networks,
- communication channels,
- families,
- communities,
- businesses,

NATURAL

HUMAN

SOCIAL

- trade unions,
- schools,
- voluntary organisations,
- as well as social norms, values and trust.

Some Initiatives:

- Source materials ethically and treat suppliers fairly.
- Effective communication systems throughout the organisation, reflecting shared values and objectives.
- Support community development.
- Contribute to open, transparent and fair governance.

4.4 Physical Capital

Manufactured Capital is **material goods** and **infrastructure** that are owned, leased or controlled by an organisation which contribute to production or service provision, but do not become part of its output.

The main components include:

- buildings,
- transport networks,
- communications
- waste disposal systems, and;
- technological systems.

Some Initiatives:

- Modular manufacturing systems.
- Zero-waste and zero emissions production systems.
- Industrial ecology – synergistic production systems where one organisation's waste streams are another's resources.
- Bio-mimicry/biophilia.
- Eco-efficiency and eco-innovation.
- Sustainable construction techniques.

4.5 Economic Capital

Economic capital reflects the **production power** of the other types of capital.

It refers to those assets of an organisation that **exist in the form of currency** that can be owned or traded, including (but not limited to):

- shares,
- bonds, and
- banknotes.

Some Initiatives:

- Financial measures reflect the value of other capitals.
- Value intangible assets such as brand and reputation.
- Internalise environmental and social costs; and
- Assign an economic value to the environmental and social costs.
- Assess the wider economic impacts of the organisations activities, products and services on society e.g. in creating wealth in the community.

PHYSICAL

ECONOMIC

5. Environmental Assessment Methods

5.1 MCC Adopted Policy Summary

The following table summarises the adopted Manchester City Council (MCC) policies for environmental assessment methods:

Policy Reference	Target
CS Policy DM1	A BREEAM and/or Code for Sustainable Homes (CfSH) (revoked by ministerial statement) assessment is required for major developments (no rating required).
SPDPG 4.7 and 4.8 <i>Environmental Design</i>	A BREEAM and/or Code for Sustainable Homes (CfSH) (revoked by ministerial statement) assessment is required for major developments (Very Good Rating identified).

Table 5.1.1: Summary of MCC Current Policies for Environmental Assessment Methods.

5.2 Approach

Arundel Street does not include non-domestic features of sufficient scale to require a BREEAM assessment on the commercial aspects of the development. It is considered that there is also little benefit to be had by undertaking a BREEAM assessment on the units of the scale that they are, and best practice in terms of fit-out by the tenant will likely deliver many of the tangible benefits of BREEAM for the non-domestic elements.

Following the withdrawal of the Code for Sustainable Homes, no sections of the Proposed Development will be assessed against this standard.

6. Development Sustainability Proposals

6.1 Energy and CO₂ Emissions

6.1.1 MCC Adopted Policy Summary

The following table summarises the adopted MCC policies for energy and CO₂ emissions:

Policy Reference	Target
CS Policy EN4	All development must 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 In addition: – 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
CS PolicyEN5	Within Manchester it is considered that the following strategic areas, indicated on the key diagram, will have a major role to play in achieving an increase in the level of decentralised, low and zero carbon energy supplies available: – The Regional Centre, which also includes the Oxford Road Corridor and Eastlands – District Centres and associated major development sites – Airport Strategic Site – Strategic housing location – Strategic employment locations Within these areas 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 Reference	Target
CS Policy EN6	Developments to achieve the required carbon reduction levels identified by the Policy requirements confirmed by undertaking an Energy Statement. In addition, provision of an energy statement to identify compliance has been undertaken in line with the energy hierarchy.
CS Policy EN7	– Proposals must take account of potential opportunities to source heat from adjoining developments or nearby heating networks. – Heating and cooling systems will have capability of connecting to the decentralised heating network.
SPDPG Section 4.5 (Superseded)	Section 4.5 of the SPDPG 2007 document identifies that a 25% betterment of Part L will be required. This document has been superseded by the CS 2012 document and therefore the policy requirement of CS EN6 will be targeted.
SPDPG Section 4.6 (Superseded)	Section 4.6 of the SPDPG 2007 document identifies that a level of 20% of the final energy demand be provided on site by renewable energy systems.

Table 6.1.1: Summary of MCC Current Policies for Energy and CO2 Emissions.

6.1.2 Approach

Arundel Street will have a reduced impact on climate change by reducing CO₂ emissions associated with energy use.

The energy and CO₂ emissions appraisal has been based on the following approach.

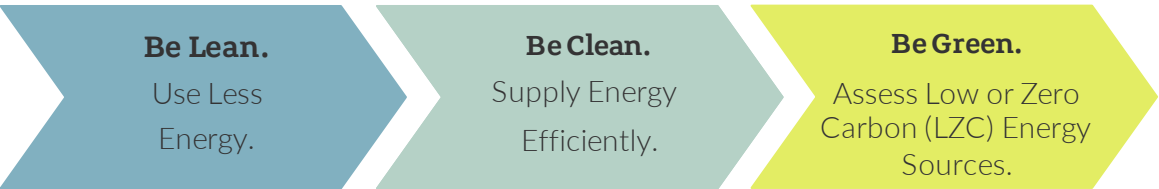


Figure 4 Energy Hierarchy

Manchester Core Policy EN6 states that a 15% improvement over Part L 2010 should be achieved where feasible. In order to demonstrate the 15.3% reduction in annual regulated CO₂ for the proposed scheme, triple glazing is required throughout.

Through passive design and energy efficiency measures the scheme achieves a 15.3% reduction in annual regulated carbon emissions over the Part L 2010 target.

There is potential scope for roof space available to mount a PV array and this will be investigated further at the next design stage. A primarily all-electric strategy does not lend itself to using technology such as Combined Heat and Power (CHP) which has in the past, generally the ‘go-to’ solution for developments which are predominantly residential.

However, considering grid decarbonisation, the use of technologies which burn gas to generate thermal and electrical energy will become redundant within the next 5 – 10 years and are not likely to offer performance in terms of carbon reduction.

6.2 Water

MCC Adopted Policy Summary

The following table summarises the adopted MCC policies for water:

Policy Reference	Target
CS Policy EN14	– Limit the risk and impact of flooding. – Limit increases in surface water runoff.
CS Policy EN17	– Ensure no decreases to water quality. – Minimise surface water runoff. – Open any culverted watercourses.
PDPG Section 4.9 (Superseded)	– Provide SUDS to management surface water runoff. – Minimise increases in impermeable surfaces. – Prepare FRA for areas at risk of flooding.

Table 6.2.1: Summary of MCC Current Policies for Water.

6.2.1 Approach

The main priorities of the MCC policies do not relate to water conservation issues, but instead encourage no increase in surface water runoff and relate to preventing pollution from entering watercourses. These sections are primarily commented upon in section 7.3, although in addition to this, the Proposed Development will aim to reduce the overall consumption of water within the building, in order to limit the resource requirements and ensure that any future impact of water scarcity is limited by the features within the scheme.

The proposed strategy will be water efficient, incorporating measures to reduce potable water consumption through efficient fixtures, and careful management strategies.

The following opportunities to reduce water use have been identified, and will be implemented:



Water Efficiency Measures

Consideration has been given to water efficiency in order to meet the requirements of the Building Regulations Part G (2013) as a minimum. The following water consumption levels will be achieved in order to reduce consumption:

- Dual flush WC cistern with an effective flush volume of 4.5 litres or less with appropriate guidance or symbols to instruct the user on the operation;
- Best practice flow rate taps in both kitchen and sanitary areas; and,
- Showers with flow rates: 9-12 litres/min



Major Leak Detection Systems (landlord)

A leak detection system capable of detecting a major water leak on the main water supply will be included within the building and between the building and the utilities water meter.



Sub-Metering

Water meters will be installed on the mains water supply for each dwelling with a pulsed output to enable connection to a 'Building Management System' (BMS) for the monitoring of water consumption. Each retail unit will have separate sub-meter.

6.3 Flood Risk

6.3.1 MCC Adopted Policy Summary

The following table summarises the adopted MCC policies for flood risk:

Policy Reference	Target
CS Policy EN14	– Limit the risk and impact of flooding. – Limit increases in surface water runoff
CS Policy EN17	– Ensure no decreases to water quality. – Minimise surface water runoff – Open any culverted watercourses
SPDPG Section 4.9 (Superseded)	– Provide SUDS to management surface water runoff. – Minimise increases in impermeable surfaces – Prepare FRA for areas at risk of flooding.

Table 6.3.1: Summary of MCC Current Policies for Flood Risk.

Refer to the flood risk assessment report by Curtins.

6.4 Waste

6.4.1 MCC Current Policy Summary

The following table summarises the adopted MCC policies for waste:

Policy Reference	Target
CS EN19	– Require all developers to identify consistency with the waste hierarchy. – Provide a project waste management plan. – Promote innovation in order to make progress towards a closed loop waste management system. – Provide accessible facilities.
CS EN20	– Encourage the efficient use of minerals and promote the use of secondary/recycled aggregates, wherever possible as an alternative to primary extraction and identify and safe guard sites for its storage, processing and transfer. (See also Waste Policy EN19.) – Encourage and safeguard the sustainable transport of minerals, including by use of rail, wherever possible. – Ensure that any adverse environmental impacts of storage, processing and transfer on neighbouring uses are minimised.
SPDPG Section 4.10, 4.11 and 4.12 (Superseded)	– Ensure waste management and recycling is provided. – Include for a waste management strategy for the development proposals.
SPDPG Section 4.13 (Superseded)	– Site Waste Management plans to identify resource efficiency though construction.
CS EN19	– Require all developers to identify consistency with the waste hierarchy. – Provide a project waste management plan. – Promote innovation in order to make progress towards a closed loop waste management system. – Provide accessible facilities.

Table 6.4.1: Summary of MCC Current Policies for Waste.

6.4.2 Approach

Arundel Street will reduce the amount (volume and mass) of waste sent to landfill during construction and throughout the lifetime of the buildings by effective management and with regard to the waste management hierarchy.

The construction process will follow the waste hierarchy though it’s development. Any demolition will include reclamation of as much material as is possible which will reduce the requirement for virgin materials to be used for aggregates and other such applications. Waste that can be reused will be processed through an approved waste management contractor and reused and recycled where possible. A Resource Management Plan will be developed early on in the project development in order to identify the most appropriate way to reduce waste and encourage recycling through construction.

The development itself will be likely to produce moderate waste volumes through operation due to number of dwellings, although in order to encourage or move towards closed loop waste management, suitable waste storage and recycling facilities will be provided for the residents. Suitable waste storage will be provided within the dwellings themselves as well as within central stores to allow for segregation of recyclable and non-recyclable general waste.

The selection of materials will also consider end of life and recyclability. Materials that can be salvaged at the end of life will be incorporated wherever possible to reduce the instances of waste produced in the future. Through construction, the contractor will be encouraged to minimise waste produced and maximise waste reuse or recycling.

The following opportunities to reduce waste have been identified and will be implemented at the Proposed Development.



Re-Use of Materials

The material use strategy for the Proposed Development will minimise the environmental impact. A key component of this strategy is the re-use of existing materials. It is intended that material will be recovered during any demolition process and reused during construction. A pre-demolition element will identify those elements that are applicable for reuse or recycling.



Minimisation of Demolition & Construction Waste

The contractor will be required to produce a ‘Site Waste Management Plan’ (SWMP) to define measures for how to minimise the volume of waste arising from any demolition and all construction activities sent to landfill. Performance of the contractor waste reduction and their environmental impact in this regard will make up an element of tender process.



Off-site Construction

Off-site modular construction will be considered where possible, which would allow less waste to be produced on-site as the construction method takes on a form of an assembly of components. Features may include bathroom pods, stair-core components or upper floor elements although further opportunities will be sought through design and construction.



Operational Waste

The buildings will be provided with sufficient bin storage capacity to allow for storage of recyclable and non-recyclable waste streams.

The building users will manually transfer waste to a central waste storage area that is in an appropriate location for collection by MCC or another waste management contractor. The waste store will be designed in accordance with BS5906 (waste management in buildings), generally using 1,100 litre bins.

For further information on the approach to waste management, please refer to the updated Waste Strategy report which accompanies the s96A.

6.5 Materials

6.5.1 MCC Current Policy Summary

The following table summarises the adopted MCC policies for materials:

Policy Reference	Target
CS EN19	– Require all developers to identify consistency with the waste hierarchy. – Provide a project waste management plan. – Promote innovation in order to make progress towards a closed loop waste management system. – Provide accessible facilities.
CS EN20	– Encourage the efficient use of minerals and promote the use of secondary/recycled aggregates, wherever possible as an alternative to primary extraction and identify and safe guard sites for its storage, processing and transfer. (See also Waste Policy EN19.) – Encourage and safeguard the sustainable transport of minerals, including by use of rail, wherever possible. – Ensure that any adverse environmental impacts of storage, processing and transfer on neighbouring uses are minimised.
SPDPG Section 4.10, 4.11 and 4.12 (Superseded)	– Ensure waste management and recycling is provided. – Include for a waste management strategy for the development proposals.
SPDPG Section 4.13 (Superseded)	– Site Waste Management plans to identify resource efficiency though construction.

Table 6.5.1: Summary of MCC Current Policies for Materials.

6.5.2 Approach

The scheme will minimise the effect of material selection on the environment and on building users. Lightweight methods of construction will be used to minimise material quantities required and materials with low embodied energy content will be encouraged. Robust materials will also be specified to enable a long life with low maintenance.

The materials use and the related embodied impact will be reduced in this development from reclaimed and recycled, materials (where appropriate) from the existing buildings at the site. Materials with recycled content will be selected for this project in order to reduce the overall impact of materials. The development will feature materials with high recycled content where possible, with targets of 70% recycled content in glazing products, a target of 50% recycled content for steel and 50% Ground Granulated Blast Slag (GGBS) replacement of cement for new concrete.

All materials, where viable, will additionally be procured through sustainable sources and products will be preferred with environmental certification such as BES6001 and ISO14001 certified supply chains.

The Proposed Development will achieve the following:

- Timber to be sourced from sustainable sources accredited by the FSC
- Materials specified highly from the Green Guide to Specification and products certified with ISO14001 and BES6001.

The following opportunities to improve the sustainability of material selection have been identified and will be implemented:



Material Sourcing

Where feasible, the Proposed Development will endeavour to source materials locally. This will assist in reducing the embodied carbon of the materials by limiting transportation related emissions and would support the local economy.



Maximise Recycled Content of Materials

A number of materials used commercially in the UK construction industry are manufactured using materials recycled from post-consumer waste. A detailed analysis of the materials available in the UK is outlined on the WRAP website and the 'National Building Specification' (NBS) 'Greenspec' website. The design will endeavour to utilise materials with low embodied impacts.



The Green Guide to Specification

Materials used will be reviewed using the BRE's online 'Green Guide to Specification' (www.bre.co.uk/greenguide) in order to maximise the proportion of materials which are A rated, and minimise materials with the lowest ratings (E).



Responsibly Sourced, Certified Timber

The buildings will only use timber from a temperate, well managed source or manufactured from recycled timber waste. Timber certified by the 'Forest Stewardship Council' (FSC) contains a product-specific chain of custody number confirming that the timber used in the manufacture of the product originates from a sustainably managed source. 100% of the timber used to be FSC/PEFC certified.



Zero ODP and GWP Insulation

Preference will be given to insulation materials such as rock wool and mineral wool, which are manufactured to have an 'Ozone Depletion Potential' (ODP) of zero, and low 'Global Warming Potential' (GWP), while still giving consideration to thermal performance and fitness for purpose.



Low solvent / low VOC paints

Paints and other materials with high levels of Volatile Organic Compounds (VOCs) can emit organic compounds long after the building has been completed. These chemicals which are inhaled by the building occupants are considered to be a contributing factor in sick building syndrome, leading to nausea and headaches. The scheme will, as far as possible, use internal materials that have a low solvent / low VOC content.



Zero Formaldehyde MDF

'Medium Density Fibreboard' (MDF) is a timber panel product that can be manufactured with new or recycled timber. Typically MDF is manufactured using Formaldehyde, which is hazardous to health. However, MDF can be manufactured without the use of Formaldehyde and the development will use zero Formaldehyde MDF as far as practically possible.

6.6 Ecology & Biodiversity

6.6.1 MCC Current Policy Summary

The following table summarises the adopted MCC policies for ecology and biodiversity:

Policy Reference	Target
CS EN9	– Encourage green infrastructure where possible.
CS EN10 / EN11 / EN12	– Maintain levels of open, sports and recreation spaces.
CS EN13	– No impact on the Green Belt.
CS EN15	– Encourage features to ensure no loss of biodiversity. – Maintain or enhance sites with specific designations or value. – Justify any adverse effects on ecology. – Provide suitable mitigation and compensation.
SPDPG Section 4.15 (Superseded)	– Protection of existing species, wildlife and habitats. Mitigate impact.

Table 6.6.1: Summary of MCC Policies for Ecology and Biodiversity.

6.6.2 Approach

Potential to introduce new features related to biodiversity is limited due to the site constraints, however there is potential to introduce some limited features at ground floor level within the adjacent pavement areas. Even these minor additions would represent an improvement in the site ecological value as there are currently no features of ecological value. Other non-flora features, such as bird or bat boxes might also be appropriate to the scheme at roof top level, but it is likely this part of the development will be predominantly allocated for building services plant and therefore will be unlikely to offer a suitable environment for wildlife.

The Arundel Street site is a constrained city centre site and therefore it is not considered to be feasible to incorporate new sports or recreation spaces, or substantial landscaping but may have potential to increase the biodiversity of the site through a rooftop garden if feasible.

The site is within close proximity to open spaces including public realm areas in the near surroundings of the development such as St. Georges Park and Hulme Park. Features such as green walls or other urban biophilia are under consideration. Incorporation of these features will increase the site’s ecological value.

Any appointed ecologist will provide further advice on site ecology and biodiversity including recommended planting species to encourage local wildlife. Given the nature of the site, there will be limited landscaping that can be accommodated. The ecologist will be required to also prepare a landscape and habitat management plan setting out procedures for managing new ecological habitats created on the site for at least a period of five years post completion.

The following measures relate to ecology and biodiversity which have been identified and will be implemented:



Native Planting
Native plants and species of benefit to local biodiversity will be selected to create and restore native ecosystems. This will also involve the selection of plants that don't require irrigation and that thrive on available rainwater.



Environmental Effects
The scheme will aim to record no environmental incidents on-site. Examples of environmental incidents include pollution or contamination of ground and water sources through paint, oil or cement powder spillage.



Tree Planting
The development will aim to introduce planting within the courtyards and pavement areas. If possible, green wall systems will be included within the design.



Consider Green Wall Systems
Incorporate Green Wall systems to introduce ecological value in what would otherwise be an extremely constrained site.

6.7 Transport

6.7.1 MCC Current Policy Summary

The following table summarises the adopted MCC policies for transport:

Policy Reference	Target
CS CC5	– Provide access to public transport and sustainable modes of accessing the proposed development. – Promote sustainable modes of transport including walking and cycling. – Provide storage and facilities for cyclists/walkers.
CS SP1	– Encourage sustainable transport and facilitate sustainable transport.
CS T1	– Provide suitable alternative to car transportation. – Promote regeneration and access to jobs. – Improve access to transportation services. – Improve pedestrian routes. – Improve access to cycle facilities. – Facilitate modes of transport that are low carbon.

Table 6.7.1: Summary of MCC Policies for Transport.

6.7.2 Approach

It should be considered that Arundel Street is highly likely to be resided in by those that work in close proximity to the development and will commute by walking or using public transport infrastructure. The transport impact of the development is likely to be mitigated through excellent local and national public transportation links close by.

Substantial secure cycle storage and cydist facilities (~1No. cycle space per 2No. dwellings, or ~1No. per dwelling if spaces are double stacked) is to be provided at ground level to encourage use. A cycle access point on to the canal network is available on the North of Egerton Street.

Accessibility is provided from a range of options, including the tram and bus links that provide access across the city and wider region. The development also includes access to rail services (e.g. Deansgate Rail Station within 10 minutes walk). providing a wide range of options to commute to and from the site.

The following measures for sustainable transport have been identified and will be implemented:



Public Transport

The Proposed Development benefits from excellent access to local bus, train and tramline routes. There is good access to local and national transport destinations that will allow sustainable transport for visitor and commuter transport, from and to the site. The Proposed Development does not include provision for car parking spaces and encourages the use of alternative transport modes.



Cyclist and pedestrian Facilities

The Proposed Development will be provided with secure cycle storage for residents and visitors.

6.8 Health & Wellbeing

6.8.1 MCC Current Policy Summary

The following table summarises the adopted MCC policies for health and wellbeing:

Policy Reference	Target
CS DM1	- Effects on amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation. This could also include proposals which would be sensitive to existing environmental conditions, such as noise.

Table 6.8.1: Summary of MCC Current Policies for Health and Wellbeing

6.8.2 Approach

To safeguard the health and wellbeing of the residents, the occupants will not be exposed to excessive noise, flickering lights, light pollution, or overheating rooms, and will have access to good levels of daylight.

Provision of glare control, good levels of daylight, best practice lighting levels, good levels of thermal comfort, ventilation and internal acoustic performance will be ensured through the developing design. Primarily, the designs will ensure that all dwellings will have access to daylight whilst complying with overheating criteria, whilst additionally meeting noise and air quality criteria.

The following measures for achieving good practice levels of health and wellbeing have been identified and will be implemented:



Secured by Design

In order to achieve a sustainable development, it will be vital to ensure that safety is considered to be high priority. The layout is configured to avoid unsighted dark corners or dead-ends, promoting a light and visible permeability. Consideration will be given to the principles of ‘Secured by Design’ during the detailed design phase to ensure security is at the heart of the Proposed Development. CCTV and other suitable security systems will be included in the development’s design.



Thermal Comfort

Thermal comfort contributes significantly to the perception of an individual to the quality of a space. Thermal comfort varies depending on the amount of clothing people wear in different situations, and the extent to which a person is active. Thermal comfort is therefore different in the residential context from the commercial contexts. Overheating calculations against Part L1A have been undertaken and will be developed through the design stage, to demonstrate that through passive design and other measures, the likelihood of high internal temperatures at the Proposed Development will be mitigated.



Lighting Quality

Good quality lighting installations can work in tandem with good architecture to define great spaces. The lighting strategy devised for the Proposed Development will be energy efficient and designed in line with best practice for visual performance and comfort. Energy efficient lighting will be used throughout to minimise the risk of health problems related to light flicker.



Noise

Any negative effect to the acoustic environment nearby as a result of the new build will be mitigated as far as practically possible. Noise levels will be assessed in line with best practice, for both internal and external noise levels.

6.9 Pollution Control

6.9.1 MCC Current Policy Summary

The following table summarises the adopted MCC policies for pollution control:

Policy Reference	Target
CS DM1	– Effects on amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation. This could also include proposals which would be sensitive to existing environmental conditions, such as noise.
CS Policy EN14	– Limit the risk and impact of flooding. – Limit increases in surface water runoff.
CS Policy EN17	– Ensure no decreases to water quality. – Minimise surface water runoff. – Open any culverted watercourses.
SPDPG Section 4.9 (Superseded)	– Provide SUDS to management surface water runoff. – Minimise increases in impermeable surfaces. – Prepare FRA for areas at risk of flooding.

Table 6.9.1: Summary of MCC Current Policies for Pollution Control.

6.9.2 Approach

The development aims to reduce pollution to prevent any negative effect on the local environment, the people coming into contact with the buildings during construction, and people using the buildings post construction. Where pollution is found to exist on-site, all reasonable efforts will be made to remedy conditions. It is identified that there is no contamination of the site at present and therefore no remediation of the site is considered necessary.

Internal air pollution will be minimised internally through careful selection of building and finishing products. The building services design will additionally be carefully considered to enable the indoor environment to be free of pollutants. All waste storage will be internal and therefore no effluent will be permitted to gain access to watercourses.

Building services plant will be selected based on efficient and ultra-low emissions of NOx SOx and COx (where applicable), and will not substantially contribute to local air pollution. If air source heat pumps are to be selected for the DOT Building, no gas combustion devices will be installed on site thereby contributing significantly towards the aims of the Greater Manchester Clean Air Plan.

Noise pollution from the fixed building services plant will be assessed by an acoustic consultant. Noise likely to cause complaint will be mitigated to ensure that the development does not increase the overall background noise levels.

The following measures to control pollution have been identified and will be implemented:



Light Pollution

Potential sources of light pollution as a result of the new build will be mitigated through measures such as night-time dimming of lights (where appropriate), and selection of luminaires to distribute light downwards.



NO_x Emissions & Air Quality

To minimise potential air quality effects, the scheme will utilise a strategy which mitigates the need for onsite combustion plant and will help to minimise emissions of Nitrous Oxide (NO_x) and Particulate Matter (PM).



Waste Storage

Adequate waste storage facilities will be provided with capacity to allow storage of non-recyclable and recyclable waste, preventing odour pollution from the site.



Noise impacts

Noise impacts will be assessed by a suitably qualified acoustician, noise levels likely to cause complaint will be mitigated through the incorporation of acoustic barriers or other insulation.

6.10 Community

6.10.1 MCC Current Policy Summary

The following table summarises the adopted MCC policies for community:

Policy Reference	Target
CS EN1	– Design facilities that will fit the local character of the development site.
CS EN10 / EN11 / EN12	– Maintain levels of open, sports and recreation space.
CS EN13	– No impact on the Green Belt.

Table 3.10.1: Summary of MCC Current Policies for Community.

6.10.2 Approach

The project team aims to engage with the local community throughout design, construction and operation to deliver a sustainable development, built for purpose. Arundel Street will develop and enhance the local area, with a currently poor-quality building removed and the existing DOT Building refurbished.

The site is situated within the city centre area. Development proposals will take account of the architectural vernacular in the refurbished of the DOT Motor Cycles building and surrounding areas, and the designs will be sympathetic to this.

Community and stakeholder input will be undertaken through the design development phase and consideration for how their input can be incorporated will be made.

The following measures for community engagement and facilities have been identified and will be implemented:



Local Employment
The scheme will seek to boost the local economy by using local business and suppliers wherever possible. The contractor will be encouraged to prepare a sustainable procurement plan for the development that will identify ways to sustainably, responsibly and locally procure.



Improving Existing Sites
The existing Site is an derelict building with some low value retail units. The development will re-vitalise the area and improve the quality of both townscape and public realm, making efficient use of land in this location. The development will provide new dwellings and this will improve the supply of housing stock in central Manchester.



Considerate Construction Scheme
The contractor will be required to operate under the Considerate Constructors Scheme to ensure good neighbourliness and environmental awareness during construction. The contractor will be required to achieve a best practice score under the assessment.

7. Conclusion

This Energy and Environmental Standards Statement has been prepared to demonstrate that the Applicant and design team have given due consideration to the principles of sustainability which will be implemented at Arundel Street.

A policy review has identified a number of targets that the Proposed Development would be required to achieve. This strategy has outlined considerations for the following issues:

- Community
- Health and wellbeing
- Management
- Materials
- Waste
- Energy
- Pollution control
- Water
- Flood Risk
- Ecology and Biodiversity
- Transport



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