Potato Wharf
Environmental Standards Statement
and
Code for Sustainable Homes
Pre-Assessment Report

April 2015

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1.0 Introduction

This report has been prepared by Jonathan McMillan for Hulley Eco, a sustainable building design and simulation division within Hulley & Kirkwood Ltd.

In line with Manchester City Council Policy this report provides a clear and reasoned statement that the development proposals will be designed to meet the sustainable building criteria as set out in Manchester City Council Guide to Development SPD and the adopted Core Strategy and will meet Code Level 4.

Code is an environmental assessment method for rating and certifying the performance of new homes with a view to encouraging continuous improvement in sustainable home building.

The purpose of this initial report is to evaluate the Environmental Performance and potential Code rating achievable for the proposed Potato Wharf residential development under a formal Code for Sustainable Homes (Code) assessment and demonstrate a commitment to the principles of good construction, design and sustainability.

2.0 Development Overview

The proposed development is supported by illustrative architectural plans which demonstrate how two seven storey residential buildings would be accommodated within the site.

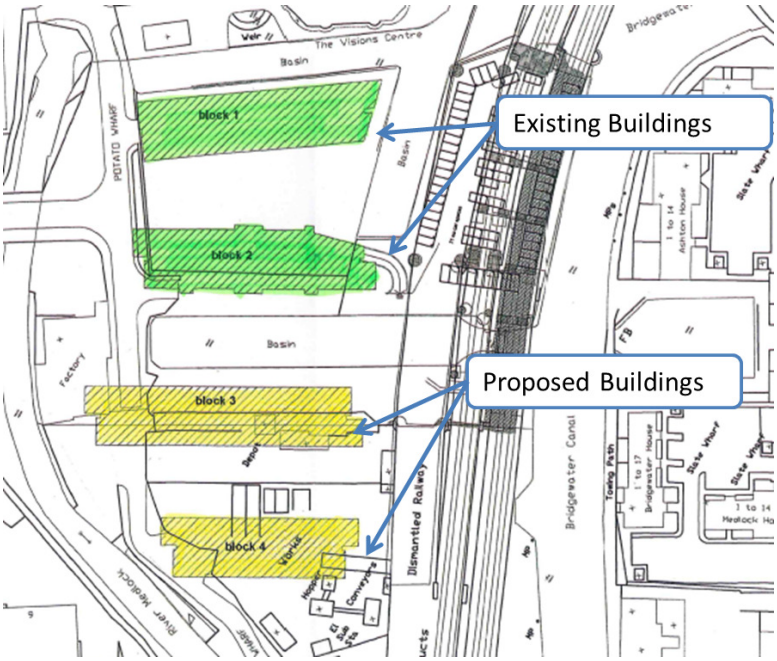


Figure 1 - Site Plan – Architect

These development proposals along with site details have been considered relative to criteria set out in Manchester City Council Guide to Development SPD and have been entered into the BRE's Pre-Assessment calculator tool to provide an initial estimation of the development's performance under the Code. The pre-assessment report, which demonstrates how the requisite Code Level 4 target may be achieved, is presented in the Appendix A and B of this report.

The development will be assessed under the 'Code for Sustainable Homes' scheme. At this stage the Code pre-assessment is generic since dwelling types and designs are not finalised and can therefore be similarly applied to all proposed dwellings.

A team of sub-consultants will work in collaboration to ensure the targeted environmental standards stated in this report and those required to achieve a Code Level 4 are satisfied

The team is as follows;

Developer / Contractor	Lend Lease
Architect	Weedon Architects
Planning Consultant	Deloitte
Structural / Civil Consultant	Shepherd Gilmore
M&E Consultant	Hulley & Kirkwood
Acoustics, Noise and Vibration	TBC
Energy and Sustainability Consultant	Hulley & Kirkwood

3.0 Local Planning Policy

Local Planning Policy is outlined in the Manchester City Council Guide to Development SPD and the adopted Core Strategy.

The Manchester City Council Guide to Development SPD sets out the following in relation to Environmental Standards

A summary of requirements is detailed in the following sections;

3.1 Energy Efficiency

Manchester City Council Guide to Development SPD quotes the following in relation to Energy Efficiency;

"*Part 1 Policy E1.5 encourages high standards of energy efficiency in new development. In the Environmental Standards Statement, developers should show how they have considered the steps necessary to reduce energy demand at the earliest stages of design."*

The following design principles are recommended and will positively contribute to energy efficiency targets:

- Minimise reliance on energy-using equipment for heating, cooling, lighting and natural ventilation
- Position trees and soft landscaping on and around the development and within buildings to provide natural shading, insulation and air conditioning
- Integrate energy efficient micro-generation and community heating schemes, such as combined heat and power (CHP)
- Site layout and building design principles should maximise the capture and use of daylight and passive solar energy, whilst avoiding excessive solar gain in summer
- Specify energy and water efficient appliances and systems.

3.2 Renewable Energy

Manchester City Council Guide to Development SPD quotes the following in relation to Renewable Energy provision;

"*To reduce energy demand and the harmful impact of using energy from non-renewables, in line with UDP Part 1 Policy E1.5, developers should aim for at least 20% of final site energy demand to be met by on-site renewable energy technologies. Renewable energy targets can be achieved more readily by undertaking the measures suggested above to reduce the total energy demand of the building*."

The following design principles are recommended and will positively contribute to renewable energy targets:

- Assess opportunities for integrating small and large scale renewable energy generation systems to improve the energy security of occupants and the neighbourhood, including siting of energy generation businesses on-site and export of surplus energy

- Use a mix of technologies to help generation patterns match demand

- Investigate energy generation opportunities before designing building envelopes or fixing their location, to optimise utilisation of wind, solar and geothermal resources
- Consider final energy demand rather than building energy consumption in the selection and sizing of generation equipment

- Explore opportunities to tackle waste and energy issues collectively through use of anaerobic digesters linked to CHPs (Combined Heat and Power devices)

- Consider private wire networks as an alternative to grid connection and availability charges on larger developments.

3.3 Environmental Design

Manchester City Council Guide to Development SPD quotes the following in relation to Environmental Design for residential developments;

Developers must demonstrate energy efficiency in line with UDP Part 1 Policy E1.5. For residential developments, this should be through the use of the Department for Communities and Local Government's 'Code for Sustainable Homes'

3.4 Water Management and Weather Resilience

Manchester City Council Guide to Development SPD quotes the following in relation to Water Management and Weather Resilience;

"UDP Part 1 Policy E1.3 states that the Council will promote measures to decrease the level of pollution in the City's watercourses, and groundwater sources. UDP Development Control Policy DC21.1 refers to development not normally being permitted where it would be at risk from flooding or increase the risk of flooding elsewhere. The environmental standards statement should therefore show how water is to be managed in the most environmentally effective way."

The following design principles are recommended and will positively contribute to water management and weather resilience:

- Sustainable drainage systems (SUDS) should be included, and the amount of hard surfacing minimised, for example by providing on site capture and soakaway of all rainwater on site.

- Examples of SUDS options would include, rainwater harvesting systems, pervious surfaces, green roofs, filter drains, filter strips, swales, infiltration devices, bio-retention areas, basins, ponds and wetland. The use of gardens as a surface water management resource should not be under estimated

- Localised flooding incidents are becoming increasingly frequent and problematic as we see the effects of climate change taking hold across the UK. Developers will be expected to prepare a Flood Risk Assessment for proposals in an area of identified flood risk

- New developments should seek to use water efficiently, through specification of water efficient devices and through the use of rainwater harvesting and grey water recycling.

3.5 Waste Management

Manchester City Council Guide to Development SPD quotes the following in relation to Waste Management;

"UDP Development Control Policy DC27.1 sets out how the City Council will deal with applications for development involving the disposal or recycling of waste materials. All development is likely to involve the production of waste to a greater or lesser extent. Greater emphasis is now being placed on the importance of the reduction and recycling of waste at source (PPS10). Developers will be increasingly required to consider how this issue will be tackled on-site."

3.6 Construction Management

Manchester City Council Guide to Development SPD quotes the following in relation to Construction Management;

"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, which is also energy efficient. 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"

3.7 Biodiversity

Manchester City Council Guide to Development SPD quotes the following in relation to Biodiversity;

"UDP Part 1 Policies E2.3 and E2.4 require the protection of wildlife, wildlife habitats, and where possible, the creation of new nature reserves and features which will sustain wildlife. Part 1 Policy E2.6 states that the City Council wishes to prevent the loss of existing trees. Developers will need to contribute to Manchester's Biodiversity Strategy by demonstrating in their Environment Standards Statement how they have taken full account of the effect of their proposed development on biodiversity. This should highlight how existing species and habitats would be protected and how the proposed development would enhance the ecological value of the site. Mature trees and hedges should be retained on site wherever possible. Where this is not possible, developers will be expected to agree an appropriate scheme for replanting with the Development Control case officers. Developments should result in no net loss in overall biodiversity value and maximise opportunities to meet and exceed our target to achieve a 10% net increase in tree cover across new developments. In exceptional cases, where planting is unachievable on site, permission may be granted to plant elsewhere in the City to ensure no overall net loss in tree resources. Existing green links across the site should be maintained and the opportunity taken to create new links as appropriate. Landscaping and new planting should include species appropriate for the proposed development that will encourage wildlife.

Full plans should be included in the report showing retained, enhanced and new ecological features, the number of on-site trees pre and post development, and a 5 year management plan. Wood and wood products should come from Forest Stewardship Council sources. Tropical hardwoods should be avoided. "

3.8 Waterways

Manchester City Council Guide to Development SPD quotes the following in relation to Waterways;

"The waterways are a major asset for the City and provide significant opportunities to raise perceptions and economic values through links to regeneration, the environment and transportation. This is recognised in UDP Part 1 Policies E1.3 which seeks to promote measures to reduce pollution in the City's watercourses and E3.4 which sees the waterways as an important part of a recreational network where measures will be taken to improve access and protect and enhance wildlife. Developers working in close proximity to the City's waterways should demonstrate, in line with the above mentioned UDP Policies and Manchester's Waterways Strategy, how public access, environment and management will be enhanced. Developers should landscape to ensure that site run-off and blown waste does not enter watercourses, even during extreme weather conditions."

4.0 Review of Proposals against Environmental Standards

4.1 Energy Efficiency and Renewable Energy

The energy strategy for the proposed Potato Wharf Blocks 3 & 4 has been developed in line with the Energy Hierarchy set out in Manchester City Council Guidance Appendix A: Energy Target Explanation. The design will focus primarily on maximising energy efficiency by addressing the following key aspects to minimise energy demand and maximise central plant efficiency;

- Minimise Energy Demand – This first tier in the energy hierarchy aims to reduce the amount of energy required on site by, for example, minimising the building fabric u-values, optimising building air tightness or installing low energy light fittings.

- Minimise Fuel Consumption – The second tier in the energy hierarchy aims to reduce the fuel consumed by the development by optimising central plant efficiencies and installing intelligent controls to optimise the efficiency of the relevant systems.

Further to this an appraisal of Low Zero Carbon Generating Technologies has been carried out to identify the most suitable on-site technology to further reduce CO_2 emissions once all practical energy efficiency improvements have been incorporated.

The outcome of this has been to include a gas fired combined heat and power (CHP) engine to provide a proportion of the building base heating and hot water demand through use of a communal heating system.

A 'Whole Building' SAP analysis has been prepared to determine the proportion of the annual heat load that would be required to meet the requirements of;

- Appendix A of the Manchester Core Strategy, a 15% reduction in CO2 emissions relative to Part L2 2010,
- Code for Sustainable Homes Level 4, a 25% reduction in CO2 emissions relative to Part L2 2010,

The development proposals will deliver dwellings which significantly exceed Building Regulation compliance in terms of energy performance and associated CO_2 emissions. The dwellings will incorporate high levels of material specification and designed attributes including:

- Good levels of thermal insulation within;
  - Cavity wall construction
  - Floor plates
  - Roof voids
- Highly efficient glazing units
- Dedicated low energy light fixtures
- Detailing to limit air leakage heat losses through air permeability
- Highly effiecint extract fans and ventialtion systems
- Controls to efficiently manage the heating system

A preliminary Energy Feasibility Study has suggested that the incorporation of the following technologies could deliver the required level of CO2 emission reduction

- Decentralised Exhaust Air Source Heat Pumps (EASHP) units located in each apartment
- Centralised Gas fired Combined Heat and Power (CHP) operating as lead device in conjunction with gas fired boiler plant

4.2 Environmental Design

Following an initial review of the development proposals a Code for Sustainable Homes Pre-Assessment demonstrates that the dwellings are able, in principle, to meet the mandatory credit requirements of the Code and achieve Level 4 under the assessment.

Code Level 4 strandard developments must achieve mandatory minimum levels of performance, in excess of Building Regulation requirements, across key issues including;

- Energy efficiency/CO_2;
- Water efficiency;

The Code assessment appraises residential developments in a number of additional catagories of sustainable construction, thereby ensuring the provision of developments which perform well across a range of holistic sustainability performance issues including;

- Pollution;
- Health and Wellbeing;
- Management;
- Ecology
- Surface water management;
- Site waste management;
- Household waste amangement;
- Use of low environmental impact materials

The proposed development at Potato Wharf will incorporate good levels of sustainable building practice in achieveing the Code Level 4 target.

Specific details of sustainability performance are provided in the pre-assessment summary and results appended to this document.

This pre-assessment demonstrates that the dwellings proposed for the Potato Wharf development achieve the Code for Sustainable Homes Level 4 target, scoring **71.81%** in the assessment. (N.B. Code level 4 minimum score = 68%).

This pre-assessment demonstrates a potential solution to achieving the requisite Code Level 4 rating for the residential development proposals at Potato Wharf, Manchester which encompasses local and national planning policy requirements.

A number of assumptions have been necessary in order to complete the appraisal. These assumptions relate to material, design and construction specifications (detailed in Appendix A – Points Summary).

4.3 Water Management and Weather Resilience

The development sits within MCC Conurbation Core Critical Drainage Area and is located immediately adjacent to the Bridgewater Canal Basin and in close proximity to the River Irwell. As such the site could be deemed to have a high risk of flooding.

As the development is located in a Manchester Critical Drainage Area the design will incorporate Sustainable Urban Drainage Systems (SUDS) to limit the run-off form the site by providing the necessary levels of rainwater attenuation.

In accordance with the Code requirements, the drainage design will be developed to ensure flooding of the building will not occur in the event of local drainage system failure and the post run-off volume over the development lifetime is no greater than the predevelopment rate using the Code drainage hierarchy.

The following is required to be demonstrated for Code;

- Where there is an increase in impermeable area, the design will ensure that the peak rate of run-off over the development lifetime, allowing for climate change, will be no greater for the developed site than it was for the pre-development site. This should comply at the 1 year and 100 year return period events

- Any additional predicted volume of run-off for the 100 year 6 hour event must be prevented from leaving the site by using infiltration or other SUDS techniques.

A site specific 'Flood Risk and Drainage Statement' accompanies the planning application and sets out how drainage infrastructure will be designed to attenuate surface water run-off from the site and sets out how the above design criteria will be met.

With regard to water consumption the proposed design will aim to achieve Code for Sustainable Homes Level 4. In order to achieve Code Level 4 the building water consumption must be less than 105 litres per person per day. This could be achieved by fitting such items as:

- 4/2.6 dual flush WCs;
- 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); and
- Water efficient dishwashers and washing machines.

It is anticipated that any additional external landscaping areas will rely solely on precipitation or manual watering in order to limit external potable water usage.

4.4 Waste Management

Operational waste proposals will be developed in line with the Code for Sustainable Homes (BS 5906) and Manchester City Council's Waste Collection schedule and facilities.

The storage of the external bin storage will be sized in line with the requirements of BS 5906 and will have inclusive access and usability to ensure all residents including those of wheelchair use can make use of the facilities.

More specifically, the development will incorporate waste segregation and storage facilities for occupants as follows:

- Accessible to disabled people
- Utilise a Local Authority collection scheme
- Internal storage with 3 separate 30 litre bins
- Communal composting facilities (managed by Local Authority collection)

4.5 Construction Management

The scheme will be registered against the Considerate Constructors Scheme (CCS). CCS is a nationally recognised resource which utilises regular site visits to ensure compliance. CCS provides a mechanism for the principle contractor to demonstrate that through their site activities they are;

- Being organised, clean and tidy
- Ensuring that the external appearance of the site enhances the image of the industry
- Enhancing the appearance of facilities, stored material, vehicles and plant
- Raising the image of workforce by the appearance
- Identifying, managing and promoting environmental issues
- Seeking sustainable solutions, and misaiming waste, the carbon footprint and resources
- Minimising impact of vibration, and air/ light / noise pollution
- Protecting the ecology, the landscape, wildlife, vegetation and water courses

The principle contractor will aim to achieve a CCS score of 32 to 40, addressing the following core scoring sections equally;

- Enhancing the Appearance
- Failure
- Major non compliance
- Minor non compliance
- Compliance
- Good
- Very Good
- Excellent
- Exceptional
- Innovative

The principle contractor will implement a site operational strategy which will monitor, report and set KPI targets for

- Energy use from site activities,
- Energy use from site related transport,
- Water consumption from site activities.

The principle contractor will also implement best practice policies in respect of dust pollution and ground/surface water pollution.

The Contractor will develop a Site Waste Management Plan (SWMP) for the project. The SWMP will identify:

- Set procedures and commitments to minimise non-hazardous waste at the design stage
- Procedures to minimise hazardous waste
- Set bench marks for resource efficiency
- Monitor, measure and report non-hazardous and hazardous waste produced on site.
- Implement key procedures and commitments to sort and divert waste from landfill.

4.6 Biodiversity

The site proposed for the Potato Wharf development is currently developed, and located in a densely populated urban environment. It is therefore assumed that the site, in its current pre-developed state, has been defined as land of low ecological value.

It is assumed that once an Ecological Assessment has been carried out that any recommendations made will be included. This assumes that the SQE will not place any onerous commitments on the development given the nature of the development.

It is assumed that any change in ecological value will be neutral, including for a minor negative change for the loss of existing trees.

4.7 Waterways

The development is located immediately adjacent to the Bridgewater Canal Basin and in close proximity to the River Irwell.

The surface water run-off from the site will be managed to ensure that it is no greater for the developed site than it was for the pre-development site, and allowances will be made to safely manage future increases in run-off due to changing climates. This shall ensure that the proposed development does not adversely impact this waterway.

5.0 Conclusions

This Environmental Standards Statement provides a summary of how the proposed Potato Wharf development aligns with the principles of the Environmental Standards set out within Manchester City Councils' Guide to Development SPD (2007). It has been demonstrated that the development will align with the Environmental Standards, as summarised below:

Energy Efficiency and Renewable Energy

The design of Potato Wharf will maximise energy efficiency and will incorporate Low Zero Carbon Generating Technologies to minimise energy use and associated CO2 emissions. The development will aim to achieve a DER which is 25% less than the 2010 Part L1A TER

Environmental Design

The design will aim to achieve Code for Sustainable Homes Level 4, addressing

- Pollution;
- Health and Wellbeing;
- Management;
- Ecology
- Surface water management;
- Site waste management;
- Household waste amangement;
- Use of low environmental impact materials

Water Management and Weather Resilience

The design of surface water drainage will be such that the development does not place any further burden of the local drainage system, and will aim to satisfy the surface water and floor risk criteria to achieve a Code Level 4.

Waste Management

The building will incorporate waste management facilities to facilitate segregation of waste streams.

Construction Management

Construction will be managed to ensure that the impact to adjacent properties is minimised through adoption of the Considerate Constructors Scheme.

Site waste will be minimised, and waste generated will be diverted from landfill where materials can be re-used or recycled. Site water and energy consumption will be monitored and controlled.

Biodiversity
The development will aim to minimise the impact to local ecology.

Waterways
The development will aim to minimise the impact to local waterways through use of SUDS and pollution control measures

Appendix A - Code for Sustainable Homes Points Summary

Energy

Point Reference	Points Available	Points Anticipated	Assumptions Made
Ene 1	10	3	This assumes that the development will achieve a DER which is 25% below the 2010 TER. This is achieved by applying the Manchester Core Strategy of maximising passive design elements and minimising operational energy consumption prior to applying a centralised whole building Combined Heat and Power (CHP) plant or by utilising decentralised Exhaust Air Source Heat Pumps (EASHP). The configuration and location of the building would preclude the use of building mounted LZCGTs
Ene 2	9	7	The Zero Carbon hub state that the typical value achieved for multi-story apartment blocks is in the 0rder of 39 kWh/m2/year. This figure will be treated as a minimum target, and the design team will aim to improve on this. The FEE will be demonstrated on a building average basis.
Ene 3	2	2	The use of simple energy smart meter for both electricity (and heat where a centralised heating strategy is adopted) will ensure that dwelling owners can monitor and manage energy consumption. This will require the use of metering within each dwelling.
Ene 4	1	1	1 Credit is anticipated further to architects comments on internal layouts and the provision of drying space.
Ene 5	2	2	The team have confirmed that any fitted appliances provided as part of the final design will be A or A+ rated, in line with the appropriate energy labelling scheme.
Ene 6	2	2	In order to achieve two credits, all light fitting specified will be dedicated energy efficient fittings with an appropriate control system. Additionally security lighting, where required, will incorporate a maximum wattage of 150 W, will incorporate motion detection and will incorporate daylight cut-off OR a time switch.
Ene 7	2	2	It is anticipated that the use of centralised CHP plant, or decentralised EASHP will result in a reduction in CO2 emissions of 15% or greater.
Ene 8	2	0	1 credit is anticipated. The number of cycle spaces will be 1 cycle storage space per dwelling.
Ene 9	1	0	It is assumed that no home office space will be provided in individual dwellings.

Water

Point Reference	Points Available	Points Anticipated	Assumptions Made
Wat 1	5	3	In order to achieve Code Level 4 the building water consumption must be less than 105 litres per person per day. This will be achieved by specification of low flow showers, whb taps, and low volume flush WC cisterns.
Wat 2	1	1	The development does not include any communal outdoor space requiring mains fed irrigation.

Materials

Point Reference	Points Available	Points Anticipated	Assumptions Made
Mat 1	15	10	It is assumed that a number of building elements will be rated A for A+.
Mat 2	6	4	Basic building elements will be responsibly sourced. 4 Credits have be targeted as a minimum.
Mat 3	3	2	Finishing elements will be responsibly sourced. 2 credits will be targeted

Surface Water Runoff

Point Reference	Points Available	Points Anticipated	Assumptions Made
Sur 1	2	2	The development sits within MCC Conurbation Core Critical Drainage Area and is located immediately adjacent to the Bridgewater Canal Basin and in close proximity to the River Irwell. As such could be deemed to have a high risk of flooding due to the limitations of the local drainage infrastructure. As the development is located in Manchester Critical Drainage Area the design will incorporate Sustainable Urban Drainage Systems (SUDS) to limit the run-off form the site by providing the necessary levels of rainwater attenuation.
Sur 2	2	1	The development sits within MCC Conurbation Core Critical Drainage Area and is located immediately adjacent to the Bridgewater Canal Basin and in close proximity to the River Irwell. As such could be deemed to have a high risk of flooding due to the limitations of the local drainage infrastructure. The output from the site specific FRA is required to determine the local flood level relative to the ground floor access routes. Ground level would be taken as the lower level where the building can be accessed from different street levels.

Waste

Point Reference	Points Available	Points Anticipated	Assumptions Made
Was 1	4	4	The building will be designed with centralised waste storage sized to facilitate segregation of building waste streams.
Was 2	3	3	A SWMP will be developed to divert 85% of construction waste from landfill
Was 3	1	0	Communal composting facilities would need to be further considered before the credit could be claimed.

Pollution

Point Reference	Points Available	Points Anticipated	Assumptions Made
Pol 1	1	1	All insulant will be specified to have a GWP of less than 5.
Pol 2	3	3	The use of gas fired CHP will displace grid supplied electricity. The Nox emissions associated with grid supplied electricity can be deducted from the main building heating system Nox emissions. As such 3 credits are anticipated, however this will be subject to further calculation**. Use of Exhaust Air Source Heat Pumps will result in a loss of credits associated with NOx emissions.**

Health & Wellbeing

Point Reference	Points Available	Points Anticipated	Assumptions Made
Hea 1	3	0	Given the location of the development and the proximity of adjacent buildings and a railway bridge, it is not anticipated that daylight credit criteria will be achieved .This will however be tested as the design develops.
Hea 2	4	3	Sound insulation levels will aim to achieve a 5dB improvement on airborne and impact sound insulation levels.
Hea 3	1	1	The development is part of the wider Potato Wharf development which includes a number of landscaped private / semi-private outdoor spaces which can be accessed by residents.
Hea 4	4	4	The design will comply with all principles set out in Lifetime Homes.

Management

Point Reference	Points Available	Points Anticipated	Assumptions Made
Man 1	3	3	A simple building user guide will be provided for home occupiers. This will cover operational areas relating to the building operation, the wider site and surroundings and will be made available in alternative formats.
Man 2	2	2	The principle contractor will aim to achieve a CCS score of 32 to 40.
Man 3	2	2	The principle contractor will implement a site operational strategy which will monitor report and set KPI targets for energy use from site activities, energy use from site related transport, water consumption from site activities. The principle contractor will also implement best practice policies in respect of dust pollution and ground/surface water pollution.
Man 4	2	2	Secured by Design Section 2 compliance will be targeted

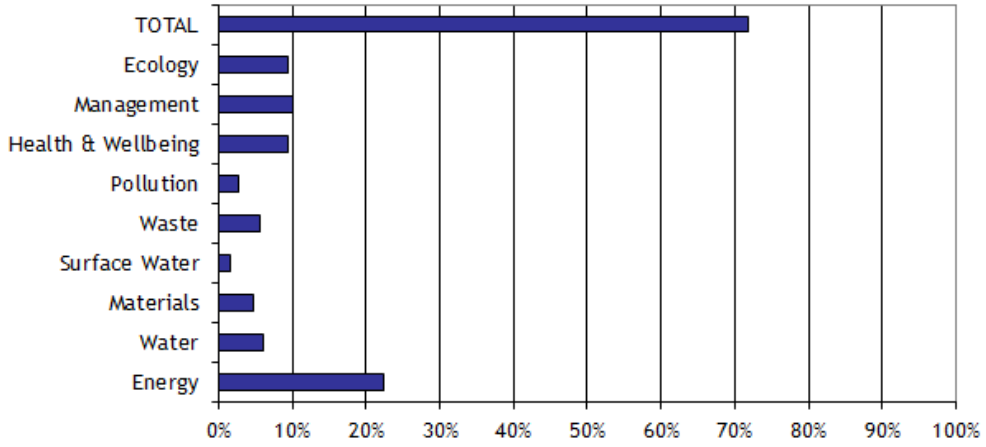
Ecology

Point Reference	Points Available	Points Anticipated	Assumptions Made
Eco 1	1	1	It is assumed that the site , in its current pre-developed state, has been defined as land of low ecological value.
Eco 2	1	1	It is assumed that once an Ecological Assessment has been carried out that any recommendations made will be included. This assumes that the SQE will not place any onerous commitments on the development given the nature of the existing site.
Eco 3	1	1	This assumes that there are no significant ecological features on-site
Eco 4	4	2	It is assumed that the change in ecological value will be neutral, including for a minor negative change for the loss of existing trees.
Eco 5	2	0	The scheme is 8 stories and, based on current plans, will achieve a ratio in excess of 4:1. 2 Credits anticipated.

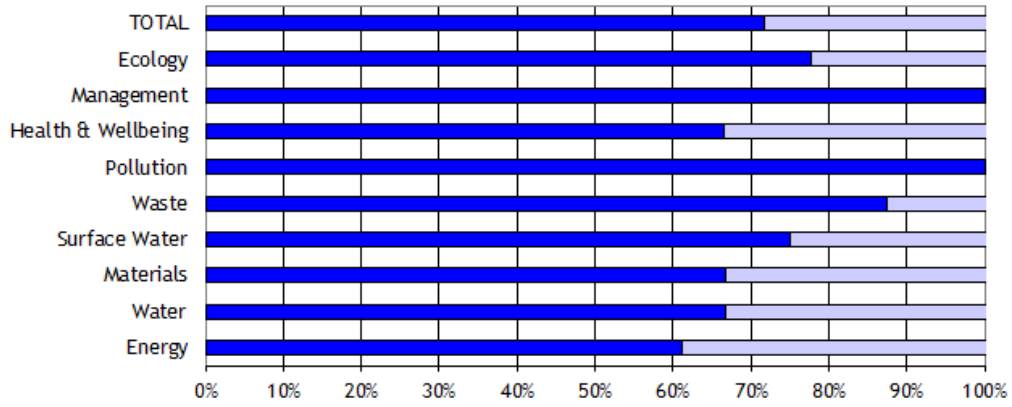
Appendix B – Pre-Assessment Results

% Points achieved = **71.18%** - Code Level 4 achieved

Graph 1: Predicted contribution of individual sections to the total score and percentage of total achievable score



Graph 2: Predicted percentage of credits achievable: Total and by Category



NOTE: The rating obtained by this Pre-Assessment is for guidance only. Predicted rating may differ from those obtained through a formal assessment, which must be carried out by a licensed Code assessor.