

Sustainability Verification Statement
Planning Condition 17
Ref: Z27362

**56No. Bed Extra Care with
Communal Facilities**

Burnage Lane
Manchester
M19 1FL

For

Rowlinson Constructions Ltd



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1.0 Introduction

This sustainability report has been produced to support the discharge of planning condition 17 of Manchester City Council application 110496/FO/2015/S2. The Burnage Lane development consists of 56No. self-contained dwellings within an Extra Care Facility. Manchester City Council's planning condition 17 as extract below:

"17) The development hereby approved shall be implemented in accordance with the measures as set out within the Sustainability Statement prepared by Redloft and dated November 2015. Within six months of the completion of the construction of the authorised development a verification statement shall be submitted to and approved in writing by the City Council as local planning authority confirming the incorporation of the specified measures at each phase of the construction of the development, including dated photographic documentary evidence of the implementation and completion of required works."

It is noted that Code for Sustainable Homes was withdrawn from government policy* however this does not preclude the development from meeting these planning targets. The wording of the planning condition suggests that an informal Code assessment will be required to meet Redloft's original sustainability statement. For clarity, Manchester City Council's requirement is for Code fSH level 4 but with some flexibility with this if it can be proven that viability is problematic. Redloft's conditioned sustainability statement achieved a Code score of 66.41%, which was just short of a Code 4 target of 68.

**Following the government's technical housing standards review the Code fSH was withdrawn from government policy on 27th March 2015.*

The Code for Sustainable Homes seeks to minimise the adverse effects of new buildings on the environment at global and local scales, whilst promoting healthy indoor conditions for the occupants. The Code assessment is specifically targeted at assessing new build residential developments. A comprehensive list of the proposals and sustainable techniques, which have been included within the building are detailed herein.

The Burnage Lane development is located in Burnage, Manchester M19 1FL. It comprises a roughly rectangular plot of land bounded Burnage Lane to the East and existing residential terraced housing to the West.



The residential accommodation mix is as follows:

Description	No. of Type
1 Bed Apartment	34
2 Bed Apartment	22
Total	56

There is also some communal facilities present within the development.

1.1 Executive Summary

The development has been Code fSH assessed to maximize its sustainability and environmental credentials. A code score of 68.54% has been achieved upon completion. A Code level 3 is a score of 57+ and a level 4 is 68+, so this project score informally meets level 4. This strategy considers many aspects of the design and construction of the development and the following issues have been identified:

1. Energy Efficiency
2. Transport
3. Pollution
4. Construction Materials and Waste
5. Water Consumption
6. Ecological Aspects incl. Land use and Ecology
7. Health and Wellbeing
8. Sustainable Management of the Construction process

Sustainable developments arise as a result of user interaction (or management operation) with the environment, buildings and their associated building services.

Achieving sustainable development requires action on four main fronts:

1. Promotion and encouragement of sustainable lifestyles.
2. Design and construction of quality buildings and building services and its surroundings.
3. Use, operation and maintenance of buildings, building services and its surroundings.
4. Selection and use of other sustainable equipment and surroundings incl. adoption of lifestyle changes, new methods and embracing the challenges ahead.

In addition by adopting the philosophies below the development can be developed sustainably:

- Designing buildings and the surrounding environments that are easy to operate and maintain.
- Pre-installing sustainable and energy efficient equipment and/or advising on such.
- Providing guidance on the efficient and sustainable use of the buildings and surroundings.

An energy hierarchy for Burnage Lane will consider the need to reduce energy use first, then use clean, efficient non-renewable systems and finally use renewable energy for the remaining energy requirements. This is the **BE LEAN, BE CLEAN, BE GREEN** approach. The Contractor will be responsible for providing this to meet Code 4 emission standards.



2.0 Code for Sustainable Homes Standards

The Contractor has installed a number of components that gives the scheme a head-start in relation to the Code for Sustainable Homes (CSFH). The list below is not exhaustive but confirms the main elements the Contractor has included to achieve an informal Code level 4, as part of their proposals:

Energy

- **Ene 1 Emissions –**

Dwellings will be designed and constructed to achieve low energy and carbon dioxide emissions to exceed current Building Regulations Part L using thermally efficient/airtight construction and energy efficient ground source heat pumps arranged in an ambient heat loop. Dwellings achieve low carbon emissions on all types. Based on the completed SAP calculations the development achieves a 43.89% improvement on ADL1A 2013. This equates to a Code score of 4.7 within Ene1 section.

- **Ene 2 Fabric Energy Efficiency –**

FEE is determined by the SAP calculations. The Average FEE for the development is 30.62kWh/m²/yr which meets a Code score of 9 credits (maximum). This reflects the good quality fabric on the development and air tightness.

- **Ene 3 Energy Display Meters –**

There is no mains gas to the apartments. The development uses shoebox ground source heat pump units in each apartment. These are supplied from consumer units within each apartment. The shoebox units have energy display devices so that all occupants can view their electricity consumption data, where practicable. 2 credits achieved.

- **Ene 4 Drying Space –**

Drying spaces will be installed in each dwelling. A mix of rotary dryers and internal drying lines are installed to meet the Code standards. 1 credit achieved.

- **Ene 5 Energy Efficient White Goods –**

A DEFRA energy efficient white goods leaflet will be provided. In addition, if white goods are provided these would need to be: A+ rated fridge / freezers, A rated dishwashers and B rated washer dryers. EU Leaflet is contained in the Home User Guide (HUG). 1 credit achieved.

- **Ene 6 Energy Efficient Lighting –**

Energy efficient lighting is installed internally and externally. Movement and daylight controlled lighting is introduced. All external space and security lighting will be specified with low energy lamps, daylight controls and designed to reduce light pollution. All lighting has an efficacy of 45 lumens/circuit watt or better in the dwellings and 80+ lumens/W in communal areas. 2 credits achieved.

- **Ene 07 Low/Zero Carbon Technology –**

LZCT technology has been implemented on the site in the form of GSHP for the heating and HW. The heat pump is contributing significantly more than 15% of CO2 emission reduction as required under Code standards. 2 credits awarded.

- **Ene 8 Cycle Storage –**

Cycle storage will be provided to meet Manchester CC's planning policies. The Code requirements require 41No. cycle storage spaces to meet the criteria and therefore credits are not achieved.

- **Ene 9 Home Office –**

The scheme includes small power and telephone facilities (broadband connections or similar) for room to be used as a home office, where practicable. All apartments, will utilize the home office in a non-obstructive location in the open plan living area (for 1 beds) or within bed 2 or 3 for the larger apartments. The home office is be located in the smallest bedroom.

Water

- **Wat 1 Water Consumption –**

Water consumption will be reduced to meet less than 90l/person/day. The Contractor schedule of all appliances is listed below with type, flow rates all specified and how the flow rate is achieved (flow regulators, limiters etc). 4 code credits awarded.

Sanitary fittings	Flow rate or capacity		Consumption (L/person/day)
WC (Full Flush)	4	L/flush	13.53
WC (Half Flush)	2.6	L/flush	
Hand Basin Tap	3	L/min	6.32
Shower	6	L/min	26.22
Bath	140	L/capacity	15.40
Kitchen Tap	4	L/min	12.12
Washing Machine	8.17	L/kg dry load	17.16
Dishwasher	1.25	L/place setting	4.50
Total	Incl. normalization factor 0.91		86.7

- **Wat 2 External Water Use –**

Communal garden area is provided; water butts are included via 5No. 400l water butts connected to the rainwater downpipes to serve the communal garden areas. 1 credit awarded.

Materials

- **Mat 1 Environmental Impact Of Materials –**

The scheme will use Green Guide “A/A+” Rated materials wherever practicable. A score of 11 credits (out of 15) has been achieved using good quality specification of A rated products.

- **Mat 2 and 3 Responsible Sourcing Of Materials –**

All building and construction materials used on the schemes will aim to be sought from environmentally managed accreditation schemes, wherever practicable (such as EMAS/ ISO 140001 accreditation). All timber has been sourced from a certified chain of custody. A total of 6 credits are achieved out of a total of 9 credits available.

Surface Water

- **Sur 1 Reduction Of Surface Runoff –**

Attenuation of hard surface and roof runoff water has been considered in the drainage strategy. This limits the amount of water being discharged into the existing drainage network and reduce the impact of the development on the local infrastructure and flood risk. The peak and volume run off post development must achieve less than the pre-developed site. The design follows the Code November 2010 Guidance to ensure compliance. Mandatory code requirements met but nil code credits are achieved for attenuation of surface water run-off.

- **Sur 2 Flood Risk –**

A Flood Risk Assessment has been carried out for the site in compliance with Code guidance. The FRA confirms the site is situated in Zone 1 (low flood risk area) as listed in PPS 25. 2 Code credits are awarded for low flood risk zone 1.

Waste

- **Was 1 & 3 Recycling Facilities –**

Separate and dedicated colour coded bins (3x10l) for recycling are provided internally within the kitchens’ of each dwelling to provide all residents with a waste stream recycling facility. This brings the development into line with Manchester recycling strategy.

External bin storage complies with Code Guidance incl. Code checklist Was 1 supplementary and the inclusive design principles (IDP) checklist. The external communal bins are compliant in terms of location, size, specification etc. and disabled level access is provided to all general and recyclable refuse bins. 4 code credits awarded. Furthermore, Composting of food waste facilities are collected by MCC to meet the composting criteria.

- **Was 2 Construction Waste –**

The Contractor operated a Code compliant SWMP. This helps to reduce construction waste and recycle waste wherever possible. The Contractor ensured that at least 85% of weight or by volume of non-hazardous construction waste generated by the project will be diverted from landfill where practicable. 2 out of the 3 code credits achieved.

Pollution

- **Pol 1 Insulant GWP –**

Insulation used has low environmental impact in use and during manufacture. All products used meet the Global Warming Potential GWP<5. Contractor to review as part of their submission and detailed design.

- **Pol 2 NOx emissions**

The heating is provided by a low carbon emission source – ground source heat pumps. These are mains electric fed which doesn't score under the principles of Code (now defunct) which penalised mains electric heating as being high NOx emission. However, in practical terms and as a matter of note this scheme under BREEAM would score maximum points and would be regarded as low NOx as the transition to low emission electric systems is decarbonising the grid. No code credits awarded.

Health

- **Hea 1 Day lighting –**

Daylight and view of sky calculations were not undertaken however these could be undertaken should the score be lower than expected. Nil code credits achieved.

- **Hea 2 Sound Testing**

Sound insulation criteria was met using Robust Details. The party walls were E-WM-17 which achieved a 5dB uplift on building regs ADE based on the RSD website. However, the party floor was E-FC-5 which only achieved 3dB uplift. Therefore 1 credit scored under this section.

- **Hea 3 Private Space**

A communal private garden is provided for the residents which meets the principles of Code fSH guidance. Therefore 1 credit scored under this section.

- **Hea 4 Lifetime Homes Standard**

These elements were incorporated into the design from an early stage and LTH compliance was signed off. 4 credits awarded.

Management

- **Man 1 Home User Guide –**

A comprehensive Code compliant Home User Guides (HUG) has been issued to occupants to meet 3 credits within Code (maximum). This details how to effectively and efficiently operate their home in a non-technical manner, explain what sustainability measures have been introduced and why, and provide emergency and local information about the area. Comprehensive consumer guidance on the management and maintenance of the property which explains the main features of the proposals to ensure the longevity of the elements will be provided and will comply with the Code HUG.

- **Man 2 Considerate Constructors –**

Considerate Constructors Scheme and aim for an exemplar standard, and 2 Code credits, where practical. The information relating to the management of this issue was limited and therefore the credits have been withheld for this issue.

- **Man 3 Construction Site Impacts –**

The Contractor has managed and monitor environmental issues during construction process wherever practicable. This will include the monthly monitoring and management of energy and water consumption of site activities, separation, streaming and recycling of waste, the reduction of air, dust and ground pollution and aim for using 80% FSC/PEFC etc. certified timber for all site timber. The information relating to the management of this issue was limited and therefore the credits have been withheld for this issue.

- **Man 4 Security –**

External doors and windows are secure and site achieved part 4 Secure by Design Certification. 2 credits achieved.

Ecology

- **Ecology issues Eco 1 – 4**

The Contractor used Envtech, a specialist ecological consultant and suitably qualified ecologist to recommend appropriate ecological features that will positively enhance the ecology of the site in line with CfSH Guidance. Significant ecological improvement was undertaken to enhance the ecological value of the site. The team undertook ecological improvement of the site based on suitably qualified ecologist's guidance and site plan dwgs; utilising good practice planting, use of native species, under the direction of the ecologist to achieve an ecological score of between +6. Protection and mitigation measures will be introduced as and when necessary to reduce the impact of the development on the existing site and to enhance the development where appropriate. 6 out of the 7 code credits were achieved.

- **Eco 5 Building Footprint**

The development was 4 story, staggered parts were 3 story which optimizes the building footprint. 1 out of the 2 code credits were achieved.

3.0 Conclusion

The Contractor has provided a high quality sustainable new development. This offers residents and the whole community added benefits in terms of quality of living standards and life, lower energy and water bills, enhanced/improved surroundings and facilities.

Planning condition 17 states:

“17) The development hereby approved shall be implemented in accordance with the measures as set out within the Sustainability Statement prepared by Redloft and dated November 2015. Within six months of the completion of the construction of the authorised development a verification statement shall be submitted to and approved in writing by the City Council as local planning authority confirming the incorporation of the specified measures at each phase of the construction of the development, including dated photographic documentary evidence of the implementation and completion of required works.”

Energy Counsel has reviewed the project and provided guidance throughout. A Code for Sustainable Homes Level 4 rating is 68+ and this development achieved a score of 68.54%. Planning condition 17 requires adherence to the Red Loft Sustainability Statement which set a Code level of 66.41. The Contractor has achieved a Code 4 standard by following our suggested route and including a number of the additional items indicated in the Code pre-assessment.

Burnage Lane

Code 4 - A final informal score of 68.54 has been achieved

Refer to 4.0 Appendix 1 Code Assessment for further details.

4.0 Appendix I – Code for Sustainable Homes Assessment

Section and brief description	Credits Available	Credits Achieved	Credits for Code 4	Possible Additional Credits	Criteria and Assumptions Made	Comments	Information required	Action/ Risk
Ene1 - Dwelling Emission Rate (CATEGORY 1 - ENERGY/CO2)					Credits are awarded based on the percentage improvement of the Dwelling Emission Rate (DER) over the Target Emission Rate (TER) which is calculated using SAP 2012. Minimum standards for each Code level apply.	As built SAP calcs carried out by EC to confirm 4.7 credits for ENE1 which equates to a 43.89% uplift on CO2 emissions		
"To minimise emissions of carbon dioxide (CO ₂) to the atmosphere arising from the operation of a home and its services"	10	4.7	0	0				
Ene2 - Fabric Energy Efficiency (FEE)					Credits are awarded based on the Fabric Energy Efficiency KWh/m ² /year which is derived from the SAP 2012 calculations.	SAP calcs carried out by EC to confirm 9 credits for ENE2 with average FEE of <30.62kWh/m2/yr		
"To future proof the energy efficiency performance thus future-proofing reductions on Comfort the life of the dwelling"	9	9	0	0				
Ene3 - Energy Display Devices					Credits awarded for installing a correctly specified energy display device to every dwelling. 1 credit for a device displaying electricity or primary heating fuel consumption. 2 credits for electricity and primary heating fuel consumption being displayed.	Energy Display Devices will be provided displaying energy consumption of electricity. No gas is used. 2 credits achieved for the electricity smart meters.		
"To promote the specification of equipment to display energy consumption data, thus empowering dwelling occupants to reduce energy use"	2	2	0	0				
Ene4 - Drying Space					Credits awarded for installing a rotary dryer or clothes line in the rear garden of every dwelling. Developer to allow for 4m+ drying space for 1 and 2 bed dwellings. Retractable tidy dryers over bath with part F compliant ventilation system required.	Rotary dryer and indoor line details provided		
"To minimise the amount of energy used to dry clothes"	1	1	0	0				
Ene5 - White Goods					Credits are awarded where information is provided relating to the provision of energy efficient white goods, or where energy efficient white goods are supplied in accordance with the criteria in the technical guide: Fridges and freezers or fridge-freezers must have an A+ rating under the EU Energy Efficiency Labelling Scheme. Washing machines and dishwashers must have an A rating and washer-dryers or tumble dryers must have a B rating.	1 credit will be achieved for providing all dwellings with EU Energy Leaflet. For 2 credits the following is required: - A+ rated fridge and freezer or fridge/freezer - Washer dryer B rated - Dishwashers A rated		
"To encourage the provision or purchase of energy efficient white goods thus reducing the CO2 emissions from the dwelling"	2	1	0	0				
Ene6 - External Lighting					All space lighting to be dedicated low energy lighting (LEL) with PIR or daylight controls and all security lighting to be <150W with PIR and daylight (photocell).	All lighting is low energy and complies with the requirements of Code.		
"The purpose of this credit is to encourage the provision of energy efficient external and security lighting"	2	2	0	0				
Ene7 - Low/zero carbon technologies					Credits are awarded based on the percentage reduction in total carbon emissions that result from using Low or Zero Carbon (LZC) Energy Technologies for each dwelling using the BRE's calculation method: 10 percent reduction 1 Credit awarded. 15 percent reduction 2 Credits awarded.	GSHP ambient heat loop has been installed and the Ene07 credits have been optimised.		
"To use energy from local renewable or low carbon energy sources"	2	2	0	0				
Ene8 - Cycle Storage					Credits are awarded where adequately sized, safe, secure, convenient and weatherproof cycle storage is provided for each dwelling in accordance with the technical guide. The cycle storage must have a permanent lock (BS 3621:2004) and have a steel fixing set in concrete which allows the frame and wheel to be locked to it. (i.e.. Sheffield type frame). For 1 credit 3m2 storage space should be provided to house 2 cycles. For 2 credits 5m2 storage space should be provided to house 4 cycles. In addition to the above requirement, where cycle storage is provided in a shed, a minimum of 1 m2 is required for garden tools.	Only 10no. Cycle storages spaces are allocated which would not be sufficient to meet the credit. 41No. required to meet the Code 1 credit target. This number of cycles is not viable on the site due to spatial constraints.		
"To encourage the wider use of bicycles as transport and thus reduce the need for short car journeys by providing adequate and secure cycle storage facilities"	2	0	0	0				
Ene9 - Home Office					Where sufficient space and services (as defined in the technical guide) have been provided which allow the occupants to set up a home office in a suitable quiet room. A home office - 2 double socket outlets and 1 tel point and possible broadband connection (or 2 tel. points) located in a cluster will be provided to each dwelling. 1.8m wall space for desk arrangement to be achieved.	Home office to be provided to all dwellings. Location in lounge noted as being best option.		
"To reduce the need to commute to work by providing residents with the necessary space and services to be able to work from home"	1	1	0	0				

Section and brief description	Credits Available	Credits Achieved	Credits for Code 4	Possible Additional Credits	Criteria and Assumptions Made	Comments	Information required	Action/ Risk
Wat1 - Internal Potable Water Use (CATEGORY 2 - WATER)					Up to 5 credits are available for specifying sanitary fittings which reduces the amount of potable water used in the dwelling. There are minimum mandatory performance requirements for achieving each levels of the Code. Credits are awarded according to the predicted average water consumption calculated using the Wat 1 calculator. To achieve code 4 water consumption will be ≤105l/p/day. For 4 credits consumption to reach 90l/p/day.	Spec includes for 4l/min WHB, 5l/min kitchen taps, 6/4l dual flush WC and 10l/min shower, no baths. This achieves a consumption of 89.3 l/p/yr which meets 4 credits.		
"To reduce consumption of potable water in the home"	5	4	0	0				
Wat2 - External Water Use					One credit is awarded for providing each dwelling with a correctly specified and sufficient sized rainwater collection system for use in external/internal irrigation where a garden, patio or communal garden space is present (examples of such systems include rainwater butts and central rainwater collection systems).	Contractor installed 5No. 400l Water butts connected to the rainwater downpipes on the building to provide sufficient storage to achieve the credit.		
"To encourage the recycling of rainwater and reduce the amount of water taken from the mains for use in landscape/garden watering"	1	1	0	0				
Mat1 - Environmental Impact Of Materials (CATEGORY 3 MATERIALS)					There is a mandatory requirement to achieve a Green Guide rating of between A+ and D for at least three of the five elements of the building envelope: See technical guide for elements and further information. In addition, the Green Guide rating of each of the 5 elements is used to complete the Mat 1 calculator to gain credits within this section.	A minimum of 11 credits will be achieved. the following GG ratings were noted: - gnd/upper floors 3 credits - internal walls incl. party walls 3 credits - roof 3 credits - windows 2 credits - external walls 0 credits		
"To encourage the use of materials that have less impact on the environment taking account of the full life-cycle"	15	11	0	0				
Mat2 - Responsible Sourcing Of Materials: Basic Building Elements					Points are awarded where materials used in key building elements are responsibly sourced according to the criteria set out in the technical guide. Consideration should be given to specify materials for the basic building elements from sustainable sources.	A minimum of 4 credits achieved.		
"To recognise and encourage the specification of responsibly sourced materials for key building elements"	6	4	0	0				
Mat3 - Responsible Sourcing Of Materials: Finishing Elements					Credits are awarded: Where 80% of the assessed materials in the Finishing Elements are responsibly sourced. See technical guide for full details.	A minimum of 2 credits will be awarded.		
"To recognise and encourage the specification of responsibly sourced materials for secondary building & finishing elements"	3	2	0	0				
Swr1 - Reduction Of Surface Runoff - (CATEGORY 4 SURFACE WATER RUN-OFF)					Mandatory elements must be achieved to obtain a Code rating. 0 credits for the mandatory section. Up to 2 credits are available for further improving water quality criteria and management of rainfall runoff see technical guide for full details, summary below: 1. 1 credit for ensuring there is no discharge from the developed site for rainfall depths up to 5mm 2. 1 credit for ensuring the run off from all hard surfaces receives an appropriate level of treatment in accordance with the SUDs manual to minimise risk of pollution.	SUR 1 mandatory criteria achieved. This has been done through report stating impermeable area of site will decrease.		
"To reduce and delay water run-off from hard surfaces to public sewers or watercourses thus reducing the risk of flooding pollution and other environmental damage"	2	0	0	0				
Swr2 - Flood Risk					Up to 2 credits are awarded where the assessed dwelling is located either in an area of low annual probability of flooding, or where a Flood Risk Assessment (FRA) shows that appropriate measures have been taken to ensure safe access and escape routes and flood resilient and resistant construction. Refer to Code Guidance Sur 2 for further details.	The site is located zone 1 and at low risk of flooding from all sources in accordance with PPS25 and based on Clancy FRA.		
"To encourage developments in areas with low risk of flooding or if developments are to be situated in areas with a medium risk of flooding that appropriate measures are taken to reduce the impact in an eventual case of flooding"	2	2	0	0				
Waste1 - Recycling Facilities - (CATEGORY 5 -WASTE)					There is a mandatory requirement for household waste storage, thought it does not carry any credits, it must be met if a Code rating is to be achieved. Credits are awarded for the provision of storage space for household and recycling waste, in accordance with the criteria within the technical guide. Adequate internal space and adequate external space are elucidated in the definitions section.	the LA has a compliant waste and recycling service. 3 x 10L internal recycling bins to be provided within the kitchen cupboards of all dwellings. Level access provided to all external bins. design details confirm access and bin capacities meet Code guidance. . Internal dedicated recycling bins provided within kitchen units of each dwelling		
"To encourage developers to provide homeowners with the opportunity and facilities to recycle house hold waste"	4	4	0	0				

Section and brief description	Credits Available	Credits Achieved	Credits for Code 4	Possible Additional Credits	Criteria and Assumptions Made	Comments	Information required	Action/ Risk
Waste 2 - Construction Waste					A credit is awarded where a compliant SWMP is introduced with targets and procedures to minimise construction waste. Credits are available where the SWMP include procedures and commitments to divert either 50% or 85% of waste generated away from landfill.	The Developerimplement a SWMP and committed to divert 85% of waste generate away from landfill.		
"To encourage developers to minimise waste or reuse and recycle construction waste through external contractor"	3	2	0	0				
Waste 3 - Composting					Credits are awarded where home composting facilities are provided at each dwelling. The composting facilities should be suitable for normal domestic, green/garden, food and other compostable household waste, with provisions for collection made internally and externally, as outlined within the technical guidance. All facilities should be accompanied by information explaining how they work.	credits achieved. Required a free standing/ worktop composting bin to be located within kitchens. Food waste forms part of the LA collection		
"Home composting provided in homes with gardens or communal service provided for other dwellings to cover compostable waste"	1	1	0	0				
Pol1 - Insulant GWP - (CATEGORY 6 POLLUTION)					Credits are awarded where all insulating materials in the following elements: roof, walls, floors, HW cylinders, cold water storage and external doors have a Global Warming Potential (GWP) < 5.	All insulants specified will achieve a GWP of less than 5.		
"To reduce the potential global warming from substances used in the manufacture or composition of insulating materials"	1	1	0	0		Services insulation confirmed in specification clause.		
Pol2 - NO_x Emissions					Credits are awarded based on NOX emissions arising from the operation of space heating and hot water systems. 1 credit for ≤100 mg/kWh, 2 credits ≤70 mg/kWh, 3 credits ≤40 mg/kWh.	Heating and hot water to be provided by GSHP fed from mains electricity with some contribution from the PV. Credits cannot be achieved as grid electricity figures need to be used.		
"To reduce the nitrous oxides (NOx) emitted into the atmosphere"	3	0	0	0				
Hea1 - Day lighting (CATEGORY 7 HEALTH & WELLBEING)					Credits are awarded for the dwelling meeting the daylighting factors (DF) listed in the technical guide. DF=1.5 for lounges, dining areas and home offices. DF=2.0 for all kitchen areas. 1 credit for View of Sky from all habitable rooms.	Requires daylight factor (DF) and view of sky calculations confirming the credits that can be awarded. The lounges/ dining areas and home office positions would need to achieve DF=1.5. kitchens DF=2.0. non undertken.		
"To improve the quality of life in homes through good day lighting and to reduce the need for energy to light a home"	3	0	0	0				
Hea2 - Sound Insulation					Credits are awarded for achieving higher standards of sound insulation than those given in Approved Document E of the Building Regulations and demonstrating it by either using pre-completion testing or Robust Details as set out in the technical guide. It is currently assumed that all party walls and floors will better Part E of building regs by at least +5dB. Normal program of testing to meet Part E applies (i.e. 1 set of every 10 dwellings in a group or subgroup). Alternatively if sound testing is not carried out Robust Details (RD) may be implemented. RD is deemed to be approved for Code credits only where the 90th percentile of results from the last 100 site tests indicate the required level is achieved. Refer to www.robustdetails.com for further info. In addition, the sound testing organisation must be UKAS (or ANC approved meeting Code requirements).	Robust Details being used. EWM17 achieves 3 credits (5dB uplift) but EFC5 achieves only 1 credit (3dB uplift)		
"To ensure the provision of sound insulation and reduce the likelihood of noise complaints"	4	1	0	0				
Hea3 - Private Space					Where outdoor space (private or semi-private) has been provided that is: • of a minimum size that allows all occupants to sit outside • allows easy access to all occupants, including wheelchair users • accessible only to occupants of designated dwellings	Communal secure garden area is provided to meet Code criteria.		
"To improve the occupiers' quality of life by providing an outdoor space for their use which is at least partially private"	1	1	0	0				
Hea4 - Lifetime Homes					It is assumed that dwellings will be designed/constructed in accordance with Lifetimes Homes criteria. See technical guide for full details.			
"To ensure the provision of accessibility and future adaptability"	4	4	0	0				
Man1 - Home User Guide - (CATEGORY 8 MANAGEMENT)					Credits are awarded for the provision of a simple home user guide which covers information relevant to the 'non-technical' tenant/owner on the operation and environmental performance of their home, see technical guide for full details.	A compliant Code Home User Guide will be provided to all dwellings.		
"To recognise and encourage the provision of guidance to enable home occupiers to understand & operate their home efficiently in line with current good practice & in the manner envisage by the developer & to make best use of local facilities"	3	3	0	0				

Section and brief description	Credits Available	Credits Achieved	Credits for Code 4	Possible Additional Credits	Criteria and Assumptions Made	Comments	Information required	Action/ Risk
Man2 - Considerate Constructors					Credits are awarded where there is a commitment to comply with best practice site management principles as set out in the technical guide. For 2 credits a CCS exemplary is required	no info provided		
"To recognise and encourage sites managed in an environmentally and socially considerate and accountable manner"	2	0	0	0				
Man3 - Construction Site Impacts					Credits are awarded where there is a commitment and strategy to operate site management procedures as detailed in the technical guide.	no info provided		
"To recognise and encourage construction sites managed in an environmentally sound manner in terms of resource use energy consumption waste management & pollution"	2	0	0	0				
Man4 - Security					Credits are achieved by complying with Section 2 – Physical Security from ‘Secured by Design New Homes’, as follows: where an Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor (CPDA) from the local police force is consulted at the design stage and their recommendations are incorporated into the design of the dwelling (actual Secured by Design Certificate is not required).	the principles of Secured by Design were achieved.		
"To encourage the design of developments where people feel safe and secure; where crime and disorder or the fear of crime does not undermine the quality of life or community cohesion"	2	2	0	0				
Eco1 - Ecological Value Of Site (CATEGORY 9 - ECOLOGY)					Credits are awarded where the site is defined as land of inherently low ecological value in accordance with the information set out in the technical guide.	Report says low ecological value		
"To encourage development on land that already has a limited value to wildlife and discourage the development of ecologically valuable sites"	1	1	0	0				
Eco2 - Ecological Enhancement					Where there is a commitment to enhance the ecological value of the development site in accordance with the following criteria: where a Suitably Qualified Ecologist has been appointed to recommend appropriate ecological features that will positively enhance the ecology of the site and where the developer adopts all key recommendations and 30% of additional recommendations.	Contractor appointed Envtech to teview these credits and 1 credit was scored.		
To enhance the ecological value of the site"	1	1	0	0				
Eco3 - Protection Of Ecological Features					Where there is a commitment to maintain and adequately protect features of ecological value during site preparation and construction works in accordance with the criteria detailed in the technical guide.	Contractor appointed Envtech to teview these credits and 1 credits was scored.		
"To protect existing ecological features from substantial damage during the clearing of the site and the completion of construction works"	1	1	0	0				
Eco4 - Change Of Ecological Value Of Site					The ecological value before and after development is measured, and the overall change in species per hectare is: • between –9 and less than or equal to –3: 1 Credit • greater than –3 and less than or equal to +3: 2 Credits • greater than 3 and less than or equal to 9: 3 Credits • greater than +9 : 4 Credits.	Contractor appointed Envtech to teview these credits and 3 credits were scored.		
"The aim of this credit is to reward steps taken to minimise reductions in ecological value and to encourage an improvement"	4	3	0	0				
Eco5 - Building Footprint					This issue is assessed on a site wide basis. Credits are awarded where the ratio of combined net internal floor area to footprint area meets the Code criteria.	The block is 4 storeys high with reduced footprint at 3rd floor level. 1 credit achieved.		
"To promote the most efficient use of a building's footprint by ensuring that land and material use is optimised across the development"	2	1	0	0				
TOTAL	107	72.70	0.00	0.00				

Section and brief description	Credits Available	Credits Achieved	Credits for Code 4	Possible Additional Credits	Criteria and Assumptions Made	Comments	Information required	Action/ Risk
Credit Summary Categories: Category 1 - Energy Category 2 - Water Category 3 - Materials Category 4 - Surface Run-off Category 5 - Waste Category 6 - Pollution Category 7 - Health and Wellbeing Category 8 - Management Category 9 - Ecology TOTALS	Total available credits	(A) Credits required for Code Level 3	(B) Credits required for Code Level 4	(C) Possible Further Credits	Code Level 3 = 57+ Code Level 4 = 68+			
	31	22.7	0.0	0		Risk Register		
	6	5.0	0.0	0		No risk		
	24	17.0	0.0	0		Low Risk		
	4	2.0	0.0	0		Medium Risk		
	8	7.0	0.0	0		High Risk		
	4	1.0	0.0	0				
	12	6.0	0.0	0		Score Achieved 68.54 Code 4 requires a score of 68+		
	9	5.0	0.0	0				
	9	7.0	0.0	0				
		72.7	0.0	0				
		(A)	(B)	(C)				
	WEIGHTED SCORE	68.54	68.54	68.54				