



Units 1 & 2 Roselands, Middleton Road Manchester

Initial Sustainability Review Report

REV 0

project number: 3583

date: 09.10.19

revision: 0

BREEAM 2014 New Construction, Multi Residential

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Disclaimer

This review is carried out in the spirit of the appropriate BREEAM scheme but is not endorsed by or affiliated with the BRE. The review is not equivalent to full BREEAM certification, Scott Hughes Design and its staff shall not be held liable for any damage or loss sustained as a result of using the information provided in this report.

Rev.	Date	Compiled / Approved by	Revision / Document Description
0	09.10.19	Lydia Perry / Wendy Broomhead	Initial Sustainability Review Report

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1.0 Introduction

Scott Hughes Design has been appointed to undertake an Uncertified Sustainability Review of the new construction at Roselands, Middleton Road, Manchester.

The purpose of this report is to detail the methodology behind the Sustainability Review, and the actions required moving forward. The team should take cognisance of the information and guidance provided within this report and associated appendices, to ensure that the project can be justified to be in line with the BREEAM criteria.

2.0 Meeting & Attendees

A meeting was held at the Scott Hughes Design offices on 01.10.19, with the following attendees –

- Wendy Broomhead, Lydia Perry (Scott Hughes Design, Sustainability)
- David Crowder (Architecture Ltd)

3.0 Project Description

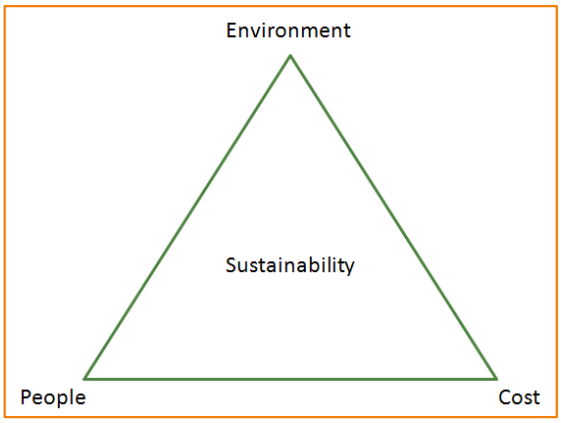
The development consists of 2 new units on the existing Roselands site. Unit 1 and 2 will provide sheltered accommodation and residential care to 8 residents and ancillary office use to site staff. These 2-3 storey units will be constructed to suit the domestic standard of the local area and will compromise of 8 ensuite bedrooms, communal kitchens and lounges on each floor, offices, meeting rooms and staff toilets, as well as circulation spaces throughout.

The M&E strategy consists of the mechanical ventilation and underfloor heating systems and heating and hot water provided by gas boilers.

Various external works will also be undertaken as part of the development including car park, cycle storage, footpath construction and landscaping. The site will be secure with gated pedestrian access at the front of the site and gated vehicular access at the back.

4.0 Background to Sustainability

Sustainability is defined as the ability to meet the needs of today, without compromising the ability of future generations to provide for the needs of tomorrow. It can be described as the equilibrium between environmental and financial considerations, and the needs of the community. A truly sustainable development will achieve a balance between fitness-for-purpose, value-for-money and environmental impact and will achieve this via integration as part of a larger, sustainable community.



BREEAM (Building Research Establishment's Environmental Assessment Method) is an example of a voluntary scheme that can be used to assess the environmental life cycle of new non-domestic buildings at the design and construction stages.

Buildings are assessed using a system of credits. The credits are grouped within the following categories:

Within each of the BREEAM categories outlined adjacent, there are a number of credit requirements that reflect the options available to designers and managers of buildings.

An environmental weighting is applied to the scores achieved under each category, as shown in the table above, in order to calculate the final BREEAM score. The weighting factors have been derived from consensus based research with various groups such as government, material suppliers and lobbyists. This research was carried out by BRE to establish the relative importance of each environmental issue.

When a full BREEAM assessment is undertaken, detailed evidence is collated to confirm compliance with each credit. Such evidence includes full construction records, evidence of contractual commitments, delivery notes, meeting minutes etc. The process then results in formal certification giving a rating on a scale of PASS, GOOD, VERY GOOD, EXCELLENT and OUTSTANDING.

BREEAM Section	% Weighting
Management	12%
Health and Wellbeing	15%
Energy	15%
Transport	9%
Water	7%
Materials	13.5%
Waste	8.5%
Land Use and Ecology	10%
Pollution	10%

5.0 Methodology for the Sustainability Review

The Roselands development does not require a full BREEAM assessment to be undertaken, but there is a requirement that the scheme demonstrates its sustainable credentials. In this case the BREEAM methodology has been used as a basis to identify the sustainability measures incorporated in the scheme. This report outlines a strategy which involves self-certification using the BREEAM methodology, with sensible relaxations where the more rigid BREEAM requirements aren't deemed appropriate (these relaxations will be clearly defined in Appendix A). The most appropriate BREEAM scheme for this project is deemed to be 'BREEAM New Construction 2014 Education', as the 2014 scheme the current scheme at the time of key design decisions and planning approval.

Going forward, the process will involve –

- the project team taking onboard the measures contained within this report, taking cognisance of the contents of the report and ensure they are incorporated into the project.

- a meeting with the Contractor will take place to brief the construction team on the requirements of the Sustainability Review

- a mid-construction review will be held on site with Scott Hughes Design and the team to confirm the measures are being implemented and production of the relevant validation information is taking place.

- the Sustainability Questionnaire (issued alongside this document) will need to be completed over the course of construction by the principle contractor and the design team, to demonstrate compliance with the sustainability measures through self-certification. In some instances, additional evidence & schedules will also be requested. Please see Appendix B for a full list of documents to be returned to the Assessor prior to the final site inspection.

- at completion a site inspection will be carried out by SHD to support the Sustainability Checklist completed by the team, alongside a final review meeting to review the targeted measures against the finished scheme

- a final report will be issued indicating how the development has performed against the targets set in this document.

Please note, unlike a full BREEAM Certification the Sustainability Assessor will only review the completed questionnaire and the other specific evidence requested in Appendix B. They will not audit the construction drawings, specification, testing etc as would be the case for a full BREEAM Certification.

6.0 Targeted Sustainability Measures

Following the initial sustainability workshop and subsequent review work by Scott Hughes, a series of measures have been identified from the BREEAM 2014 (New Construction) scheme. These measures would ensure sustainability performance broadly equivalent to a BREEAM Very Good score of 59% (note this would be based entirely on the evidence and validation provided by the team and does not equate to formal certification by the BRE). The measures have been listed in the tables below, organised by discipline.

Issues for Client – Standwalk Ltd			
Ref	**Credit**	**Risk**	**Summary of Risk**
Hea 05	Sound Insulation and Internal Indoor Ambient Noise Levels	High	Requires appointment of acoustician to confirm airborne sound insulation values at least 3db higher and impact sound insulation values at least 3db lower than performance standards.
Tra 04	Car Parking Capacity	Medium	Requires commitment to adopt maximum car parking requirements and visitor space designations.
Mat 05	Design for Durability	Medium	Requires appropriate protection to be specified on vulnerable internal and external areas and a study on durability & resilience of building fabric & structure.
Wst 03	Operational Waste	Medium	Requires adequately sized recycling storage, designated waste separation and a food waste collection system to be in place.
Man 05 (Innovation)	Aftercare	Medium	Requires infrastructure and resources in place to co-ordinate aftercare requirements for the first three years of occupation.

Issues for Architect – Architecture Ltd			
Ref	**Credit**	**Risk**	**Summary of Risk**
Hea 01 Req 1-2	Glare Control	Medium	Glare control is provided in either building layout e.g. low eaves or building design (incl rooflights in kitchen). Blinds to be installed with a transmittance of <0.1.
Hea 02 Req 1	Indoor Air Quality	Medium	Requires production of an Indoor Air Quality Plan.
Hea 02 Req 6-7	VOC Emission Levels (Products)	High	Requires VOC emissions from paints, varnishes and other key products to comply with testing & emissions requirements – see appendix A for further details.
Hea 06 Req 1-10	Safe Access	Medium	Requires that safe access will be provided for cyclists and pedestrians to and from the site.
Hea 06 Req 11-13	Security of Site and Building	Medium	Requires appointment of a Suitably Qualified Security Specialist (SQSS) to complete a Security Needs Assessment prior to the end of Stage 2 and the implementation of all their recommendations.

Issues for Architect – Architecture Ltd			
Ref	**Credit**	**Risk**	**Summary of Risk**
Tra 03 Req 1	Cyclist Storage	Medium	Requires covered cycle storage and an electric wheelchair/buggy charging point to be provided for the predicted occupancy.
Tra 03 Req 2-3	Cyclist Facilities	Low	Requires BREEAM compliant lockers & drying space to be provided for cyclists use.
Tra 04	Car Parking Capacity	Medium	Requires maximum of 4 standard car parking spaces available to staff and designation of 1 or 2 visitor parking spaces where necessary to comply.
Wat 01	Water Consumption	Medium	Requires careful sanitary ware specification in order to demonstrate a 25% reduction in water consumption over baseline levels.
Wat 04	Water Efficient Equipment	Low	Requires compliant method for irrigation or specification of plants which will not need irrigation.
Mat 01	Life Cycle Impacts	Medium	Requires materials to be selected which achieve A / A+ ratings on the BRE green guide.
Mat 02	Hard Landscaping & Boundary Protection	High	Requires hard landscaping materials to be selected which achieve A / A+ ratings on the BRE green guide.
Mat 05	Designing for Durability and Resilience	Medium	Requires appropriate protection to be specified on vulnerable internal and external areas and a study on durability & resilience of building fabric & structure.

Issues for Landscape Architect			
Ref	**Credit**	**Risk**	**Summary of Risk**
Wst 03	Operational Waste	Medium	Requires adequately sized recycling storage, designated waste separation and a food waste collection system to be in place.
LE 04	Enhancing Site Ecology	High	Requires early stage ecologist report and all ecologist's recommendations to be included.

Issues for Civil Engineers			
Ref	**Credit**	**Risk**	**Summary of Risk**
Pol 03 Req 1	Flood Risk Assessment	Medium	Requires a FRA to be undertaken, taking all current and future sources of flooding into consideration and this report to show that the site is LOW risk for all sources.
Pol 03 Req 4-7	Surface Water Run-Off 1	Medium	Requires drainage measures specified to ensure that the peak rate of run-off from the site to the watercourses (natural or municipal) is 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.
Pol 03 Req 9-14	Surface Water Run-Off 2	Low	Requires confirmation that the property will not flood in the event of a local drainage system failure and calculations to show that drainage measures are designed to ensure post development run-off volume is no greater than pre site development in the 100 year 6 hour event.

Pol 03 Req 15-22	Minimising Water Course Pollution	Medium	Requires that there will be no discharge from the site for up to 5mm of rainfall and appropriate SuDs techniques are employed to ensure pollution prevention.

Issues for M&E			
Ref	**Credit**	**Risk**	**Summary of Risk**
Man 04 Req 1-6	Commissioning Building and Design	Medium / Low	Requires commissioning schedule to be produced and appointment for a specialist commissioning manager for any complex systems, commissioning of all relevant building services and review of the design & management input. Also requires appointment of a Commissioning Monitor to verse commissioning on behalf of the client.
Man 05 Req 3	Seasonal Commissioning	Medium	Requires seasonal commissioning over the first 12 months of occupation.
Hea 01 Req 3-4	Daylighting	Medium	Requires all kitchens, lounges, offices and meeting rooms to meet 2% daylighting factor over 80% of area. Plus: Uniformity ratios, minimum point daylight factors, view of the sky or room depth criterion.
Hea 01 Req 7-11	Internal & External Lighting Levels	Low	Requires SLL & CIBSE compliant lighting design, and BREEAM compliant control & zones (manual switching).
Ene 01	Energy Performance	Medium	Requires an Energy Performance Ratio of 0.15 or greater.
Ene 02 Req 1-4	Sub Metering	Medium	Require provision of sub-meters to cover at least 90% of the energy consumption of each fuel type by end use.
Ene 03 Req 2-3	External Lighting	Low	Requires all external lighting to be controlled via time clock/daylight sensors and have less than 60 luminaire lumens per circuit Watt.
Ene 08	Energy Efficient Equipment	High	Requires each building's unregulated energy consuming loads to be identified and significant unregulated energy demands to be demonstrably reduced. (e.g. installation of low energy rated equipment).
Wat 02 Req 2-4	Water Monitoring	Low	Requires a pulsed meter to the water supply of each building, able to connect to future BMS.
Wat 03 Req 2	Flow Control Devices	Low	Requires PIR on toilet areas connected to solenoid value to enable sanitary supply shut off.
Mat 04	Embodied Impact of Insulation	Low	Requires specification of A+ / A rated building services insulation materials.
Wst 03	Operational Waste	Medium	Requires provision of a facility for storage of compostable waste, including a tap and an appropriately sized recycling storage area.
Pol 01 Req 2-6	Impact of refrigerants	Low	Requires there are no cold storage/refrigerants in cold storage.
Pol 02	NOx Emissions	Low	Requires space heating and hot water to deliver less than 40mg/kWh.
Pol 04	Reduction of Night-time Light Pollution	Low	Requires that all external areas are designed in accordance with ILP guidance notes.

Issues for Main Contractor			
Ref	**Credit**	**Risk**	**Summary of Risk**
Man 02 Req 6	Capital Cost Reporting	Low	Requires reporting the capital cost of the development.
Man 03 Req 1	Responsible Construction Practices – Pre-requisite	Low	All timber needs to be legally & responsibly sourced i.e. FSC or PEFC.
Man 03 Req 2-3	Environmental Management	Medium	Requires the main contractor to have ISO 14001 certification.
Man 03 Req 7	Responsible Construction Practices – Considerate Construction	High	Requires a Considerate Constructors Scheme score of 35 or above and a min section score of 7 to be achieved in the final site monitor's report.
Man 03 Req 8-17	Monitoring of Construction Site Impacts	Low / Medium	Requires the monitoring and reporting of water & energy use on-site against a target. Requires the monitoring and reporting of transportation of construction materials & waste.
Man 04 Req 1-6	Commissioning Building and Design	Medium	Requires the main construction programme and budget to show adequate allowance for commissioning.
Man 04 Req 7-9	Testing and inspecting building fabric	High	Requires a thermographic survey and air tightness testing to be carried out by a suitably qualified professional. Any defects found will need to be rectified.
Man 04 Req 10-11	Handover	Medium	Requires production of simple building user guide & training for the relevant building users.
Man 05 Req 1-2	Aftercare Support	Low	Requires facilities management training and aftercare support for the first 12 months from occupation.
Man 05 Req 3	Seasonal Commissioning	Medium	Requires seasonal commissioning over the first 12 months of occupation.
Hea 02 Req 1	Indoor Air Quality	Medium	Requires production of an Indoor Air Quality Plan.
Hea 02 Req 6-7	VOC Emission Levels (Products)	High	Requires VOC emissions from paints, varnishes and other key products to comply with testing & emissions requirements – see appendix A for further details.
Hea 02 Req 8-12	VOC Emission Levels (Post Construction)	Medium	Requires post construction, pre-occupancy testing of formaldehyde concentrations & VOC emissions and results must be below the limits detailed within the BREEAM guidance.
Hea 06 Req 11-13	Security of Site and Building	Medium	Requires appointment of a Suitably Qualified Security Specialist (SQSS) to complete a Security Needs Assessment prior to the end of Stage 2 and the implementation of all their recommendations.
Ene 08	Energy Efficient Equipment	High	Requires each building's unregulated energy consuming loads to be identified and significant unregulated energy demands to be demonstrably reduced. (e.g. installation of low energy rated equipment).
Mat 02	Hard Landscaping & Boundary Protection	Medium	Requires a recycled sub-base under hard landscaped areas.

Issues for Main Contractor			
Ref	**Credit**	**Risk**	**Summary of Risk**
Mat 03 Req 1	Timber – pre-requisite	Low	Requires that all timber used within the project will be legally harvested and traded timber.
Mat 03 Req 3	Sustainable Procurement Plan	Medium	Materials are sourced in accordance with a documented BREEAM compliant Sustainable Procurement Plan.
Mat 03 Req 4	Responsible Sourcing	Medium	Requires sourcing of materials within major elements from suppliers with appropriate certification, at least ISO14001 and some BES6001.
Mat 04	Embodied Impact of Insulation	Low	Requires installation of A+ / A rated building fabric insulation materials.
Wst 01 Req 1-3	Construction Site Waste Management	Medium	A resource management plan needs to be produced to include waste produced both on & off-site and a maximum of 11.1 tonnes of waste to be produced per 100m2. A pre-demolition audit, of existing buildings and hard surfaces to be demolished, will be carried out.
Wst 01 Req 4	Diversion of waste from landfill	Medium	Requires 70% by volume (80% by weight) of non-hazardous construction waste and 80% by volume (90% by weight) of demolition waste to be diverted from landfill.
LE 01 Req 2-3	Contaminated Land	Medium	Requires installation and testing of a gas membrane and treatment of Japanese knotweed.
LE 04	Enhancing Site Ecology	High	Requires implementation of the ecologist's recommendations.
LE 05	Long term impact on Biodiversity	High	Requires various actions such as appointment of Biodiversity Champion, maintaining biodiversity records, timing works appropriately, biodiversity training and the production of a 5 year habitat management plan.

Issues for Acoustician			
Ref	**Credit**	**Risk**	**Summary of Risk**
Hea 05	Sound Insulation and Internal Indoor Ambient Noise Levels	High	Requires acoustician to confirm airborne sound insulation values at least 3db higher and impact sound insulation values at least 3db lower than performance standards.

7.0 Summary & Recommendations

A set of measures have been outlined in Appendix A which, if achieved would indicate that the development has met the sustainability standard roughly equivalent to that of a BREEAM 2014 NC VERY GOOD rating. All the measures should be reviewed by the team and implemented into the scheme.

A Sustainability Checklist, along with a number of project specific evidence requirements will be provided alongside this document (and are listed in Appendix B), which the team should begin to complete and provide at handover to validate the presence of the relevant sustainability measures.

Please note, there are certain studies/calculations that should have been completed during specified RIBA stages as well as some mandatory credits and prerequisites for the VERY GOOD standard. These are highlighted in Appendix A.

It is recommended that:

- The proposed measures in this report and Appendix A are reviewed by the team and are implemented in the scheme
- An appropriate date for a mid-construction meeting is identified
- The team prepare for the self-validation process through a review of the current design requirements
- The team start to complete the questionnaires and evidence templates as listed in Appendix B for review at the interim meeting.

Appendix A – Sustainability Review Detailed Target Report





Initial Sustainability Review

scott hughes

3583 - Unit 1 & 2 Roselands, Middleton Rd, Manchester

PASS	**30**
GOOD	**45**
VERY GOOD	**55**
EXCELLENT	**70**
OUTSTANDING	**85**

Report Prepared by: Lydia Perry & Wendy Broomhead
Checked by: Wendy Broomhead
Date: 09.10.19

Results Summary			
Sector	**Total Available**	**Weighting**	**Target**
Management	21	12.0%	6.86%
Health & Wellbeing	18	15.0%	7.50%
Energy	19	15.0%	4.74%
Transport	9	9.0%	7.00%
Water	9	7.0%	3.89%
Materials	14	13.5%	10.61%
Waste	8	8.5%	3.19%
Land Use & Ecology	10	10.0%	5.00%
Pollution	13	10.0%	9.23%
Total Predicted Score			**58.01%**
Innovation	10	10.0%	**1.00%**
Total Score			**59.01%**
BREEAM Rating			**VERY GOOD**

Key to Responsibilities		
Role	Company	Ref
Client	Standwalk Ltd	**Client**
QS	TBC	**QS**
Architect	Architecture Ltd	**Arch**
M&E Consultant/Contractor	TBC	**M&E**
Structural & Civil Eng	TBC	**Eng**
Acoustician	TBC	**Acoustician**
Ecologist	TBC	**Ecologist**
BREEAM Assessor	SHD	**SHD**
Main Contractor	TBC	**Contractor**

Notes:

1) **Shading Denotes Mandatory Credit**

2) **Additional Evidence Beyond Questionnaire Required**

This document is to be read in conjunction with the current BREEAM Manual available online, which gives full details of credit requirements - https://www.breeam.com/BREEAMUK2014SchemeDocument/

* Sustainable review requirements differ slighlty from full BREEAM NC 2014 standards

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Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target	Risk	Responsibility
MANAGEMENT							
Man01	**Project Brief and Design**			**Minimum standard: None**			
Req 1-3	Stakeholder Consultation (Project Delivery)	1	0.57	Credit not sought (RIBA Stage 2 requirement)	0		
Req 4-6	Stakeholder Consultation (Third Party)	1	0.57	Not applicable for Uncertified Sustainability Review	0		
Req 8-12	Sustainability Champion (Design)	2	0.57	Credits not sought (RIBA Stage 1 requirement)	0		
Man02	**Life Cycle Cost and Service Life Planning**			**Minimum standard: None**			
Req 1-3	Elemental Life Cost	2	0.57	Credit not sought (RIBA Stage 2 requirement)	0		
Req 4-5	Component Level LCC Plan	1	0.57	It is assumed that a Component Level LCC option appraisal **WILL NOT** be developed by the end of RIBA Stage 4 (technical design) in line with PD 156865:2008 and **DOES NOT** include: a. envelope (cladding, windows, roofing) b. services (heat source cooling and/or controls) c. finishes (walls, floors, ceilings) d. external spaces (alternative hard landscaping, boundary protection)	0	Possible	Contractor
Req 6	Capital Cost Reporting	1	0.57	Report the capital cost for the building to the assessor in £k/m2	1	Low	
Man03	**Responsible Construction Practices**			**Minimum standard: One Credit of Excellent, Two for Outstanding**			
Req 1	Pre-requisite: Timber			It is assumed that all timber and timber based products used on the project is 'Legally harvested and traded timber'.		Low	Contracto
Req 2-3	Environmental Management	1	0.57	It is assumed that the main contractor will have ISO14001 certification	1	Medium	Contractor
Req 4-6	Sustainability Champion (Construction)	1	0.57	Not applicable for Uncertified Sustainability Review	0		
Req 7	Considerate Construction	2	0.57	It is assumed that the contractor will comply with Considerate Constructors Scheme and will achieve a score of at least 35 under formal certification, with no section scoring under 7. Note if a score of 40 can be achieved an additional Innovation Credit could be awarded worth 1%.	2	High	Contractor
Req 8	Monitoring of Construction- Site Impacts- Pre-requisite			It is assumed that responsibility has been assigned to an individual(s) for monitoring, recording and reporting energy use, water consumption and transport data throughout the build programme.		Low	Contractor
Req 9-14	Monitoring of Construction- Site Impacts (Energy and Water)	1	0.57	It is assumed that the contractor's nominated individual will monitor and report data on energy & water consumption on site.	1	Low	Contractor
Req 15-17	Monitoring of Construction- Site Impacts (Transport)	1	0.57	It is assumed that the contractor will monitor and report data on transport of construction materials and waste	1	Medium	Contractor
Man04	**Commissioning and Handover**			**Minimum Standard: BUG for Excellent and Outstanding**			
Req 1-4	Commissioning and Testing Schedule and Responsibilities	1	0.57	It is assumed that : -there is a 'Schedule of commissioning' which identifies systems and standards to which all elements should be commissioned -The client appoints a '**Commissioning Monitor**' to ensure systems are planned & commissioned appropriately. -The contractor allows sufficient and appropriate time and funds for all systems to be commissioned.	1	Medium	M&E /Contractor

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target	Risk	Responsibility
Req 5-6	Commissioning Building Services	1	0.57	It is assumed that: For buildings with complex building services and systems, a **specialist commissioning manager** will be appointed during the design stage with responsibility for: a. Undertaking design reviews and giving advice on suitability for ease of commissioning. b. Providing commissioning management input to construction programming and during installation stages. c. Management of commissioning, performance testing and handover/post-handover stages. Where there are simple building services, this role can be carried out by an appropriate project team member, provided they are not involved in the general installation works for the building services system(s).	1	Low	M&E /Contractor
Req 7-9	Testing and Inspecting Building Fabric	1	0.57	It is assumed that thermographic survey and air tightness testing will be carried out by a suitably qualified professional, plus site inspection to prove adequate construction of the building fabric. In addition rectification of any defects found is required, with supporting evidence to show the remediation.	1	High	Contractor
Req 10-11	Handover	1	0.57	It is assumed that: - A simple, standalone Building User Guide covering all aspects described within the BREEAM 2014 Manual will be produced that is suitable for general building users as well as the facilities management team. - A schedule of training will be identified for the occupiers at handover to cover all points set out within the BREEAM manual	1	Medium	Contractor
Man05	**Aftercare**		**Minimum Standard: One Credit Seasonal Commissioning for Excellent and Above**				
Req 1-2	Aftercare Support	1	0.57	It is assumed that: -There will be a meeting programmed to occur with the building occupier/management (prior to initial occupation) to explain the aftercare support, including the Building User Guide, the training schedule and to present key building information. - There will be On-site facilities management training, including building walkabout and familiarisation with the building systems, controls and operation. - Initial aftercare frequent support will be provided for at least the first month of building occupation, followed by longer term support for at least the first 12 months from occupation. - There will be collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is occupied and systems adjusted accordingly.	1	Low	Contractor
Req 3	Seasonal Commissioning	1	0.57	It is assumed that seasonal commissioning will: - Be completed over a minimum 12-month period, once the building becomes substantially occupied. - Includes complex and simple systems. - Take place under full and part load conditions (spring/autumn) and during periods of extreme (high or low) occupancy. - Include occupant feedback and recommissioning and revisions to Operations & Maintenance Manuals.	1	Low	Contractor/ M&E
Req 4-5	Post Occupancy Evaluation	1	0.57	It is assumed that a Post Occupancy Evaluation will **NOT** be undertaken by an independent third party one year after building occupation, to gain building performance feedback and to disseminate this information via a case study in order to share good practice and lessons learned.	0	Possible	Client
HEALTH & WELLBEING							
Hea01	**Visual Comfort**		**Minimum Standard: None**				
Req 1-2	Glare Control	1	0.83	It is assumed that glare control is provided to: - kitchens (including skylights) - lounge/living rooms - offices and meeting room allowing for a transmittance value of <0.1 with blinds.	1	Medium	Arch
Req 3-4	Daylighting	1	0.83	It is assumed that all: - kitchens - living rooms/lounges - offices and meeting room have average daylighting factors of 2% over 80% of room area. Plus: Uniformity ratios, minimum point daylight factors, view of the sky or room depth criterion.	1	Medium	M&E
Req 4-6	View Out	1	0.83	It is **NOT** assumed that an adequate view out is provided for all relevant areas. **AND THAT** >20% of the external wall is window. Unit 2 kitchen does not provide standing eye level view out.	0		

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target	Risk	Responsibility
Req 7-11	Internal and External Lighting Levels, Zoning and Control	1	0.83	For Internal lighting: - It is assumed that it will be specified in accordance with the appropriate maintained Illuminance levels (in LUX) recommended by SLL Code for Lighting 2012. - Areas with computer screens complies with CIBSE G7 sections 2.4, 2.20, 6.10 - 6.20.. - Areas are zoned and controlled appropriate for their use and location i.e. office areas require separately zoned / controlled areas for each 40m2 (see credit criteria). For External lighting: - It is assumed that areas within the construction zone comply with BS5489-1:2013+BS12464-2:2014 PT 2	1	Low	M&E
Hea02	**Indoor Air Quality**			**Minimum Standard: None**			
Req 1	Indoor Air Quality	1	0.83	An Indoor Air Quality Plan will be produced, detailing actions that minimise indoor air pollution during occupation of the building. The plan must consider: removal of containment sources; dilution & control of containment sources; procedures for pre-occupancy flush out; third party testing & analysis and maintaining indoor air quality in-use	1	Medium	Arch/Contractor
Req 2-5	Ventilation	1	0.83	It is **NOT** assumed the building has been designed to minimise the concentration and recirculation of pollutants as follows due to the proximity of roads and car parks.	0	High	Arch
Req 6-7	VOC Emission Levels (Products)	1	0.83	It is assumed that emissions of VOCs from paints and varnishes and at least 5 of 7 other key internal finishes and fittings, as listed below, and will comply with testing & emission requirements as outlined in the BREEAM 2014 Manual. Key internal finishes and fittings: 1. wood panels (e.g. Formaldehyde E1 class) 2. timber based structures (e.g. Formaldehyde E1 class) 3. wood flooring (e.g. Formaldehyde E1 class) 4. resilient textile and laminated floor coverings (e.g. Formaldehyde E1 class) 5. suspended ceiling tiles (e.g. Formaldehyde E1 class) 6. flooring adhesives (e.g. BS END 13999-1: 2013 Adhesives) 7. wall coverings (e.g. BS EN 233:1999, BS EN 234:1997, BS EN 259:2001) This requires careful specification at the design stage, plus formal confirmation from manufacturers at the post construction stage, which can be onerous.	1	High	Arch/Contractor
Req 8-12	VOC Emission Levels (Post Construction)	1	0.83	Post construction, pre occupation testing of formaldehyde concentration and VOC emissions is undertaken and results are below the limits detailed within the BREEAM guidance. Where levels are exceeded the Indoor Air Quality Plan must be implemented.	1	Medium	Contractor
Req 13-14	Adaptability- Potential for Natural Ventilation	1	0.83	It is **NOT** assumed that the building ventilation strategy is designed to be flexible and adaptable to potential building occupant needs and climatic scenarios as internal rooms such as laundries cannot be naturally ventilated.	0		
Hea04	**Thermal Comfort**			**Minimum standard: None**			
Req 1-4	Thermal Modelling	1	0.83	It is **NOT** assumed that full dynamic thermal modelling will be carried out in accordance with CIBSE AM11. The study will **NOT** demonstrate that the building design and services strategy can deliver thermal comfort levels in accordance with the criteria set out in CIBSE Guide A Table 1.5. In addition, for naturally ventilated areas, overheating **DOES NOT** meets the recommendations of Tm52.	0	Possible	M&E
Req 5-8	Adaptability- for a Projected Climate Change	1	0.83	It is assumed that the following will **NOT** be achieved: - The thermal modelling above also demonstrated compliance when run for a projected climate change environment (see relevant definitions in the BREEAM NC 2014 manual). - Where thermal comfort criteria are not met, demonstrates how the building can be easily adapted in the future, using passive design solutions to meet the requirements. - For air conditioned buildings, the PMV and PPD indices are based on the above modelling and must be reported via the BREEAM assessment scoring and reporting tool.	0	Possible	M&E

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target	Risk	Responsibility
Req 9-11	Thermal Zoning and Controls	1	0.83	It is **NOT** assumed that the thermal modelling analysis has informed the temperature control strategy for the building and its users, **NOT** addressing all of the issues below: 1. Demonstrate that zones efficiently and appropriately heat or cool these areas. e.g. consider the different requirements for the central core vs. the external perimeter adjacent to the windows. 2. The degree of occupant control required for these zones, based on discussions with the end user (or specific design guidance, case studies, feedback) considers: i. User knowledge of building services ii. Occupancy type, patterns and room functions iii. How the user is likely to operate or interact with the system(s), iv. The user expectations and degree of individual control 3. If there are multiple systems, how they will interact with each other and how this will affect the thermal comfort of occupants. 4. The need for an accessible building user actuated manual override for any automatic systems	0	Possible	M&E
Hea05	**Acoustic Performance**			**Minimum standard: None**			
	Sound insulation and internal indoor ambient noise levels	4	0.83	It is Assumed that Airborne sound insulation values are at least **3dB** higher and impact sound insulation values are at least **3dB** lower than the performance standards in the relevant Building Regulations or Standards or that acoustically sensitive rooms meet sound insulation requirements in section 7.5 of BS8233:2014.	1	High	Client / Acoustician
Hea06	**Safety and Security**			**Minimum standard: None**			
Req 1-10	Safe Access	1	0.83	It is assumed that external site areas comply with the following: - Footpaths on-site provide direct access from the site entrance(s) to the building entrance(s) and connect to public footpaths off-site - Raised kerb separating car park from Unit 2 exterior - Cycle storage is accessible from secure perimeter entrance making dismount and remount impractical (Reference: KBCN0188) - The site is not expected to receive deliveries or require manoeuvring space	1	Medium	Arch
Req 11-13	Security of Site and Building	1	0.83	It is assumed that Secure by Design requirements will beachieved and implemented. Note: Secure by Design certification is a requirement of planning.	1	Medium	Arch/Contractor
ENERGY							
Ene01	**Reduction of Energy Use and Carbon Emissions**			**Minimum standard: 5 Credits for Excellent, 8 for Outstanding**			
	Energy Performance	12	0.79	It is assumed that the final BRUKL outputs will demonstrate an EPR of $\geq$ 0.15 for worst performing unit, enabling 2 credits to be achieved. Note: Unit 1 scores 2 credits, Unit 2 scores 4 credits based on As-Design BRUKL.	2	Medium	M&E
Ene02	**Energy Monitoring**			**Minimum standard: First Sub-metering Credit for Very Good and Above**			
*Req 1-4	Sub-metering of Major Energy Consuming Systems	1	0.79	It is assumed that: - Unit 1 and Unit 2 each has 3 separate meters for: gas, small power and lighting. - The end energy consuming uses are identifiable to the building users, for example through labelling or data outputs - Meters are pulsed and enable future connection to an energy monitoring and management system.	1	Medium	M&E
Ene03	**External lighting**			**Minimum standard: None**			
	External lighting	1	0.79	It is assumed that for the external lighting - The average initial luminous efficacy of the external light fittings within the construction zone is not less than 60 luminaire lumens per circuit Watt. - All external lights have daylight sensors and timeclocks (No PIRs required as no areas of intermittent pedestrian traffic)	1	Low	M&E
Ene04	**Low Carbon Design**			**Minimum standard: None**			
Req 1-3	Passive Design Analysis	1	0.79	Credit not sought (RIBA Stage 2 requirement)	0		
Req 4-6	Free Cooling	1	0.79	Credit not sought (RIBA Stage 2 requirement)	0		
Req 7-8	Low Zero Carbon Feasibility Study	1	0.79	Credit not sought (RIBA Stage 2 requirement)	0		

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target	Risk	Responsibility
Ene08	**Energy Efficient Equipment**			**Minimum Standard: None**			
*	Energy Efficient Equipment	2	0.79	It is assumed that the building's unregulated energy consuming loads and their contribution to total annual unregulated energy consumption is established. The systems/processes that consume a significant proportion of total annual unregulated energy are identified. These systems/processes can then be demonstrated to have reduced their total annual energy consumption. Areas to be considered and examples of compliant energy reductions: - small power, plug in equipment (e.g. office equipment with an Energy Star rating) - communal laundry with commercial sized appliances - domestic appliances in residential kitchens (e.g. fridges, freezers, washing machines with A or A+ rating) - Of the above it is likely that the communal laundry and domestic scale appliances in kitchens would fall within the BREEAM limits and would require energy saving measures in line with the BREEAM Manual such as: A or A+ rated domestic appliances and low energy commercial laundry alternatives.	2	High	Contractor / M&E
TRANSPORT							
Tra01	**Provision of Public Transport**			**Minimum Standard: None**			
	Accessibility Index	3	1.00	Based on an evaluation of the available local transport of the bus & tram services, a transport accessibility index of 9.08 has been calculated to award 3 credits.	3	Low	SHD
Tra02	**Proximity to Amenities**			**Minimum Standard: None**			
	Proximity to Amenities	2	1.00	It is assumed that the building will be within 500m of at least 3 of the following core services and a further 4 non-core services: Core services: - A food outlet; (140m - State Fayre) - Access to Cash (130m Post office); - Outdoor space (Site Garden) Non core services - Public postal facility (130m); Leisure facility(MJCC Swimming pool 650m); - Communal facility ; Pharmacy(Formans Chemist 950m); Childcare facility(200m Nicky Alliance Day Centre)	2	Low	SHD
Tra03	**Cyclist Facilities**			**Minimum Standard: None**			
Req 1	Cycle Storage	1	1.00	It is assumed: - A minimum of 4 covered and lit cycle storage spaces will be provided for staff. - 1 wheelchair or electric buggy storage and charging space will be provided for use of Unit 1 & 2 residents.	1	Medium	Arch
Req 2-3	Cyclist Facilities			It is assumed that at least two of the following compliant facilities will be provided in addition to the cycle storage for staff above: - Lockers - targeted - Drying Space - targeted - Shower - not targeted - Changing Facilities - not targeted		Low	Arch
Tra04	**Maximum car parking capacity**			**Minimum Standard: None**			
	Car parking capacity	2	1.00	It is assumed that 1 credit can be awarded if 1 of the 5 standard car parking spaces is designated as a visitors parking space. It is possible to achieve 2 credits if 2 car parking spaces were designated as visitors parking. This is based on the assumption of 22 site users and an AI index of 9.	1	Medium	Client/Arch
Tra05	**Travel Plan**			**Minimum Standard: None**			
	Travel Plan	1	1.00	It is **NOT** assumed that a BREEAM compliant travel plan, based on a transport assessment and travel survey has been prepared as part of the feasibility & design stages and that the recommendations within this will be incorporated into the design.	0	possible	Arch

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target	Risk	Responsibility
WATER							
Wat01	**Water Consumption**			**Minimum standard: 1 credit for Good and Above; 2 credits for Outstanding**			
	Water Consumption	5	0.78	It is assumed that a **25**% improvement in water consumption over the notional baseline will be achieved. An example of a specification to achieve this could be: ◦6/3litre dual flush WCs or 4.5litre single flush WCs ◦ wash hand basin taps flow rate≤ 7.5 l/min ◦ kitchen taps flow rate ≤ 7.5l/min ◦ baths ≤ 160L ◦ shower flow rate ≤ 8 l/min ◦ Domestic sized dishwashers ≤ 13L cycle ◦ Commercial sized washing machines ≤ 10 ltrs/kg ◦ No urinals /Commercial sized dishwashers/ domestic sized washing machines/commercial kitchen taps or waste disposal ◦ no grey water / rainwater system	2	Medium	Arch
Wat02	**Water Monitoring**			**Minimum standard: Criterion One Only for Good and Above**			
Req 1	Water Meter			Minimum Standard: The mains supply to each building will be fitted with a pulsed water meter.		Low	M&E
Req 2-4	Water Sub Meters	1	0.78	It is assumed that: - 1 pulsed sub meter per Unit will be installed - sub meters will be able to connect to a future BMS or automated communications system.	1	Low	M&E
Wat03	**Water Leak Detection and Prevention**			**Minimum Standard: None**			
Req 1	Leak Detection System	1	0.78	It is **NOT** assumed that a BREEAM compliant leak detection system will be specified or installed on the buildings water supply.	0	Possible	M&E
Req 2	Flow Control Devices	1	0.78	It is assumed that a solenoid valve and connected PIR control to automatically detect occupancy will be installed to each **staff** WC area to ensure water is supplied only when needed. Note: Residential ensuite facilities are excluded from this requirement	1	Low	M&E
Wat04	**Water Efficient Equipment**			**Minimum Standard: None**			
	Water Efficient Equipment	1	0.78	It is assumed that unregulated water demands will be mediated through design or specification such as landscaping pant species relying on precipitation alone, not irrigation.as no irrigation system is required as landscaping will rely on precipitation only.	1	Low	Arch
MATERIALS							
Mat01	**Life Cycle Impacts**			**Minimum Standard: None**			
	Life Cycle Impacts	6	0.96	It is assumed that materials will be selected so as to achieve at least 6 credits, through the use of A or A+ rated materials with EPDs where possible (according to the Green Guide to Specification: www.bre.co.uk/greenguide) Applicable elements are: - External Walls - Windows - Roof - Upper floor slab - Internal walls - Floor finishes/covering	6	Medium	Arch
Mat02	**Hard Landscaping and Boundary Protection**			**Minimum Standard: None**			
	Hard Landscaping and Boundary Protection	1	0.96	It is assumed that at least 80% of hard landscaping and boundary protection will be A+ or A rated (according to the Green Guide to Specification: www.bre.co.uk/greenguide). A recycled sub-base will be implemented for all hard landscaping.	1	High	Arch/Contractor
Mat03	**Responsible Sourcing**			**Minimum standard: Criterion One Only for Pass and Above**			
Req 1	Pre Requisite			It is assumed that all timber used within the project will be legally harvested and traded timber.			Contrac
Req 3	Sustainable Procurement Plan	1	0.96	It is assumed that: The principal contractor sources materials for the project in accordance with a documented Sustainable Procurement Plan which sets out a clear framework for the responsible sourcing of materials for both procurement and specification of construction materials. The following should be covered: 1. Risks and opportunities are identified (BS 8903:2010 can be used as a guide). 2. Aims, objectives and targets to guide sustainable procurement activities. 3. The strategic assessment of sustainably sourced materials available locally and nationally. 4. Procedures to check and verify that the plan is being implemented/adhered to	1	Medium	Contractor

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target	Risk	Responsibility
*Req 4	Responsible Sourcing	3	0.96	It is assumed that there will be at least ISO 14001 responsible sourcing accreditation available for the manufacturers of key materials & products with some having BES 6001.	1	Medium	Contracto
Mat04	**Insulation**			**Minimum Standard: None**			
	Embodied Impact of Insulation	1	0.96	It is assumed that all insulation products used in the external walls; ground floor; roof and building services will have a low embodied impact when compared to their thermal properties. To ensure that this credit is achieved, A+ or A rated insulation types, according to the BRE's Green Guide Online, will be selected.	1	Low	Contractor/ M&E
Mat05	**Designing for Durability and Resilience**			**Minimum Standard: None**			
	Designing for Durability and Resilience	1	0.96	It is assumed that the building incorporates suitable durability and protection measures to prevent damage to vulnerable parts of the internal and external building elements, considering: - protection of internal walls and doors: movements from electric buggy in ground floor Unit 1 - protection from high pedestrian traffic: entrances, corridors, communal areas - protection from vehicular collision where parking and manoeuvring occurs within 1 m of the external facade: kerb separating car park from Unit 2 - building elements material degradation is limited through appropriate design and specification Achieved with considerations such as: hard wearing floor finishes, load bearing walls (high rated plaster board)	1	Medium	Client/Arch
Mat06	**Material Efficiency**			**Minimum Standard: None**			
	Material Efficiency	1	0.96	Credit not sought (RIBA Stage 1 requirement)	0		
WASTE							
Wst01	**Construction Site Waste Management**			**Minimum standard: One Credit for Outstanding**			
Req 1-3	Construction Resource Efficiency	3	1.06	It is assumed that: - Resource Management Plan (RMP) has been developed covering the non-hazardous waste related to on-site construction and dedicated off-site manufacture or fabrication (including excavation waste) generated by the building's design and construction. - Non hazardous construction waste will be less than 13.3m3 or 11.1 tonnes per 100m2 GIFA - Carry out a pre-demolition audit of any existing buildings, structures or hard surfaces to be demolished to determine if, in the case of demolition, refurbishment or reuse of materials is feasible.	1	Medium	Contractor
Req 4	Diversion of waste from Landfill	1	1.06	It is assumed that the following percentages of non-hazardous construction (on-site and off-site manufacture / fabrication in a dedicated facility), generated by the project have been diverted from landfill: - Non Demolition - 70% by Volume or 80% by tonnage - Demolition - 80% by Volume or 90% by tonnage	1	Medium	Contractor
Wst02	**Recycled Aggregates**			**Minimum Standard: None**			
	Recycled Aggregates	1	1.06	Credit not sought as insufficient external hard standing.	0		
Wst03	**Operational Waste**			**Minimum standard: 1 credit for Excellent and Outstanding**			
	Dedicated space for recyclables	1	1.06	It is assumed that a dedicated recycling area, adequately sized to serve the development will be provided. This space will be 4m2 per 1000m2 floor area of internal space. Each residential kitchenette will require a 30ltr dedicated recycle bin for recycle waste in addition to a general waste bin and a 10ltr food waste bin. These will need to be in a dedicated cupboard not freestanding on the floor.	1	Medium	Arch/Client
	Compactor / Baler / Composting			It is assumed that a static compactor / baler will **NOT** be required to be provided but a compliant vessel for composting organic waste and a food waste disposal contract will be in place for collection and off-site disposal. The bin storage area will be provided with a tap to wash out bins.		Low	Client
Wst05	**Adaptation to Climate Change**			**Minimum standard: None**			
	Adaptation to Climate Change	1	1.06	Credit not sought (RIBA Stage 2 requirement)	0		
Wst06	**Functional Adaptability**						
	Functional Adaptability	1	1.06	Credit not sought (RIBA Stage 2 requirement)	0		

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target	Risk	Responsibility
LAND USE & ECOLOGY							
LE01	**Site Selection**			**Minimum standard: None**			
Req 1	Previously Developed land	1	1.00	It is **NOT** assumed that at **>75%** of the development's footprint (including building, hard landscaping, and temporary works) is on previously developed land.	0		
Req 2-3	Contaminated land	1	1.00	It is assumed that the development implements a gas membrane and Japanese knotweed treatment and will confirm that these measures remediate the contaminated area.	1	Medium	Contractor
LE02	**Ecological Value of Site and Protection of Ecological Features**						
Req 1	Ecological Value of Site and Protection of Ecological Features	1	1.00	It is assumed that land within the construction zone **CANNOT** be defined as being of low ecological value by a suitably qualified ecologist.	0		
Req 2-3	Protection of Ecological Features	1	1.00	It is assumed that some features of ecological value within and surrounding the construction zone (e.g. trees and hedges) will be lost so credit **CANNOT** be achieved.	0		
LE03	**Minimising Impact on Existing Site Ecology**			**Minimum standard: One Credit for Very Good and Above**			
	Change in Ecological Value	2	1.00	It is assumed that as a result of the development a loss of no more than 9 species per hectare will be recorded. There is potential to achieve 2 credits with enhanced planting schedule to increase species count.	1	Possible extra	Ecologist/Arch/Contractor
LE04	**Enhancing Site Ecology**			**Minimum standard: None**			
Req 1-3	Ecologist's Report and Recommendations	1	1.00	It is assumed an early stage ecology report has been completed with recommendations to be implemented throughout construction.	1	High	Ecologist/Arch/Contractor
Req 4-6	Increase in ecological value	1	1.00	It is unlikely that the final design and build and will result in an increase in ecological value of $\geq$ 6 plant species.	0		
LE05	**Long Term Impact on Biodiversity**			**Minimum standard: None**			
	Long Term Impact on Biodiversity	2	1.00	It is assumed that the Ecologist confirms adherence to all relevant EU & UK legislation & will confirm that an appropriate 5 year management plan for site biodiversity has been completed. Ecologist will confirm that 4 of the appropriate additional measures have been adopted accordingly as listed: 1. The contractor appoints a Biodiversity Champion 2. The contractor provides training of on site ecological protection practices 3. The contractor records actions taken to protect biodiversity throughout construction 4. The programme of works is scheduled to minimise disturbance of existing flora and fauna habitats on site 5. New ecologically valuable habitats are created	2	High	Ecologist/Contractor
POLLUTION							
Pol01	**Impact of Refrigerants**			**Minimum standard: None**			
Req 2	Buildings With Refrigerants Prerequisite			It is assumed no cold storage/refrigerants installed.		Low	M&E
Req 3-5	Impact of Refrigerant	2	0.77	It is assumed no cold storage/refrigerants installed.	2	Low	M&E
Req 6	Leak Detection System	1	0.77	It is assumed no cold storage/refrigerants installed.	1	Low	M&E
Pol02	**NOx Emissions**			**Minimum standard: None**			
	NOx Emissions	3	0.77	It is assumed that, the space heating and hot water will deliver less than 40mg/kWh.	3	Low	M&E
Pol03	**Surface Water Run-Off**			**Minimum standard: None**			
*Req 1	Flood Risk	2	0.77	It is assumed that a site specific Flood Risk Assessment will be produced which confirms that the building is situated in a low flood risk area for all of the following: - Fluvial (river); - Tidal; - Surface Water: sheet run-off from adjacent land; - Groundwater: most common in low-lying areas underlain by permeable rock aquifers; - Sewers. - Reservoirs, canals or other artificial sources.	2	Low	Civil eng

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target	Risk	Responsibility
Req 4	Pre-requisite			An Appropriate Consultant is appointed to carry out, demonstrate and/or confirm the development's compliance with the following criteria:		Low	Civil eng
Req 5-7	Surface Water Run-Off 1	1	0.77	It is assumed that drainage measures are specified to ensure that peak rate of run-off from the site to the water courses is no greater for the developed site than the pre developed site. Calculations include allowance for climate change in accordance with current best practice. Relevant maintenance agreements for the ownership, operation and maintenance of the developments soakaways are secured and in place.	1	Medium	Civil eng
Req 9-14	Surface Water Run-Off - 2	1	0.77	It is assumed that flooding of the property will not occur in the event of local drainage system failure. The drainage design measures ill be specified to ensure that post development run-off volume, over the development lifetime, is no greater than pre development run-off volume for the 100 year 6 hour event, also including an allowance for climate change. Any additional predicted volume of run-off for this event is prevented from leaving the site by using infiltration or SuDs techiques.	1	Low	Civil eng
Req 15-22	Minimising water course pollution	1	0.77	It is assumed that: - there will be no discharge from the site for rainfall up to 5mm - appropriate SuDs are used to achieve a level of pollution prevention - pollution prevention systems are designed and installed in accordance with PPG3 - a up to date drainage plan is provided to building/site occupiers - relevant maintenance agreements for ownership, long term operation and maintenance of all SuDs are secured	1	Medium	Civil eng
Pol04	**Reduction of Night Time Light Pollution**			**Minimum standard: None**			
	Reduction of Night Time Light Pollution	1	0.77	It is assumed that: - The external lighting strategy has been designed in compliance with Table 2 of the ILP Guidance notes for the reduction of obtrusive light, 2011 - All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00. - Any safety or security lighting which is used between 23:00 & 07:00, complies with the lower levels of lighting recommended in Table 2 of the ILP's Guidance notes. - Illuminated advertisements must be designed in compliance with ILP PLG05.	1	Low	M&E
Pol05	**Reduction of Noise Pollution**			**Minimum standard: None**			
	Reduction of Noise Pollution	1	0.77	It is **NOT** assumed that there are no noise-sensitive areas or buildings within 800m radius of the assessed site. - A noise impact assessment in compliance with BS 7445 will **NOT** be carried out and the following noise levels measured/determined: i. Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed development or at a location where background conditions can be argued to be similar. ii. The rating noise level resulting from the new noise source. - The noise impact assessment will **NOT** be carried out by a suitably qualified acoustic consultant holding a recognised acoustic qualification and membership of an appropriate professional body - The noise level from the proposed site/building, will **NOT** ne measured in the locality of the nearest or most exposed noise-sensitive development, is a difference no greater than +5dB during the day (07:00 to 23:00) and +3dB at night (23:00 to 07:00) compared to the background noise level. - Where the noise source(s) from the proposed site/building is greater than above, measures have **NOT** been installed to attenuate the noise at its source to a level where it will comply with the above.	0	Possible	Acoustician
INNOVATION CREDITS							
Man03	Responsible Construction Practices	1	1.00	The contractor does **NOT** achieve a score of at least 40 in the Considerate Construction Scheme with no section scoring less than 7.	0		
Man05	Aftercare	1	1.00	It is assumed that there is (or will be) operational infrastructure and resources in place to co-ordinate the following activities at quarterly intervals for the first three years of building occupation: a. Collection of occupant satisfaction, energy consumption and water consumption data. b. Analysis of the data to check the building is performing as expected and make any necessary adjustments to systems controls or to inform building user behaviours. c. Setting targets for reducing water and energy consumption and monitor progress towards these. d. Feedback any 'lessons learned' to the design team and developer for use in future projects. e. Provision of the actual annual building energy, water consumption and occupant satisfaction data to BRE.	1	Medium	Client

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target	Risk	Responsibility
Hea01	Visual Comfort	1	1.00	It is NOT assumed that a daylight factor of 4% will not be achieved in 80% of the occupied areas.	0		
Hea02	Indoor Air Quality	2	1.00	It is assumed that this innovation credit will not be met	0		
Ene01	Reduction of Energy Use and Carbon Emissions	5	1.00	It is assumed that this innovation credit will not be met	0		
Wat01	Water Consumption	1	1.00	It is NOT assumed that the building will not achieve a reduction in water consumption by 65% over the notional baseline.	0		
Mat01	Life Cycle Impacts	1	1.00	It is NOT assumed that the materials specification will not achieve two or more points over the total required to achieve maximum credits under the standard criteria.	0		
Mat03	Responsible Sourcing of Materials	1	1.00	It is NOT assumed that 70% of the available responsible sourcing points will not be achieved.	0		
Wst01	Construction Waste Management	2	1.00	It is NOT assumed that the waste generated by the development will not achieve the exemplary level requirements.	0		
Wst02	Recycled Aggregates	1	1.00	It is NOT assumed that the percentage of high grade aggregate specified per application will not meet the exemplary level requirements.	0		
Wst05	Adaptation to Climate Change	1	1.00	It is assumed that this innovation credit will not be met	0		
Unlisted, BRE Approved Innovations		10	1.00	It is assumed that this innovation credit will not be met	0		

Appendix B – Template Schedules & Calculators

- Sustainability Questionaire
- Hea 01 Daylighting Schedule
- Hea 02 VOC Emissions Schedule
- Ene 03 External Lighting schedule
- Wat 01 Schedule
- Mat 01 & Mat 02 Materials Schedule
- Mat 03 Responsible Sourcing Schedule
- Mat 04 Building Insulation Standard Schedule
- LE 03 / LE 04 Calculator
- GN13 LE 04-05 BREEAM Relating ecologists report
- GN15 Pol 03 BREEAM Relating drainage reports





Sustainability Review Questionnaire
(based on BREEAM 2014NC)

scott hughes
design engineers innovative solutions

3583 - Units 1 & 2 Roselands, Middleton Road, Manchester

Project Team Details			
Role	Company	Individual	Initials
End User	Standwalk Ltd	Jaymin Parekh	**JP**
Architect	Architecture Ltd	David Crowder	**DC**
Sustainability Consultant	Scott Hughes Design	Wendy Broomhead	**WB**

This Sustainability Questionnaire needs to be completed over the course of construction by the principle contractor and the design team, to demonstrate compliance with the sustainability measures through self-certification. In some instances, additional evidence & schedules area also required, these are highlighted in blue below.

The Criteria Verification listed below provides an overview of the requirements for each credit, the BREEAM NC 2014 Manual (5.0) should be used to inform the site team comments. Final verification will be based on compliance against the full BREEAM criteria in the manual unless noted otherwise

	Separate Template Schedule / Calculator Requires Completion

I can confirm that the following checklist has been completed by the site team on the Roselands site, Middleton Road in Manchester. This is a self-certification route broadly in line with the principles of BREEAM and the below reflects the actual as built development.	
Signed by:	*Please include signature, name and company*

Assessment Issue		Criteria Verification	Site Team Comments	Confirmed By (initials & company)
MANAGEMENT				
Man02	**Life Cycle Cost and Service Life Planning**			
Req 6	Capital Cost Reporting	What is the capital cost for the building in £/m^2?		
Man03	**Responsible Construction Practices**			
Req 1	Pre-requisite: Timber	Are all timber and timber based products used on the project classed as 'Legally harvested and traded timber'? Please outline the suppliers and confirm accreditation (e.g. FSC / PEFC).		
Req 2-3	Environmental Management	Does the Main Contractor operate a certified Environmental Management System (ISO14001)? Please supply the certificate number and expiry date. Please outline the best practice pollution prevention policies and procedures which have been implemented on site.		
Req 7	Considerate Construction	Please confirm the overall and sectional scores achieved under the Considerate Constructors Scheme (min 35 targeted, with no section scoring under 7.) Has the final certificate been provided?		
Req 8	Monitoring of Construction-Site Impacts - Pre-requisite	Who is the individual assigned the responsibility for monitoring, recording and reporting energy use and water consumption throughout construction?		
Req 9-14	Monitoring of Construction-Site Impacts (Energy and Water)	Please confirm the targeted and actual energy consumption for the site in kWh, kgCO_2eq & litres of fuel. Please confirm the targeted and actual water consumption on site (in m^3). All of the above should include usage from construction plant, equipment and site accommodation.		
Req 15-17	Monitoring of Construction-Site Impacts (Transport)	Please confirm the targeted and actual transport emissions (in kgCO2) and total distance travelled (km) resulting from delivery of the majority of construction materials to site and construction waste from site as detailed in the Site Waste management Plan. Please confirm that these figures cover: a. Transport of all materials from the factory gate to the building site. b. All materials used in major building elements, ground works and landscaping. c. Transport of all construction waste from the site to the waste disposal processing/recovery centre.		
Man04	**Commissioning and Handover**			
Req 1-4	Commissioning and Testing Schedule and Responsibilities	Is there a 'Schedule of commissioning' for the project, and have the relevant commissioning standards been identified for all systems? Who is the client-side 'Commissioning Monitor'? Please confirm that the main contractor allowed for sufficient and appropriate time and funds for all systems to be commissioned, and all systems have been commissioned and have passed inspection.		
Req 5-6	Commissioning Building and Design	Who are the 'Specialist Commissioning Manager(s)' for the project? Please confirm their role included - a. Undertaking design reviews and giving advice on suitability for ease of commissioning. b. Providing commissioning management input to construction programming and during installation stages. c. Management of commissioning, performance testing and handover/post-handover stages.		
Req 7-9	Testing & Inspecting of building fabric	Please confirm the air tightness test results? Has post construction Thermographic testing been commissioned on **ALL** the heated spaces for the project? Please detail who carried this out & that they hold at least a level 2 certificate in thermography. Please confirm that the above testing proved adequacy of the following: - integrity of building fabric - continuity of insulation - avoidance of thermal bridging - air leakage paths Please detail any defects and confirm what has been done to rectify them.		

Assessment Issue		Criteria Verification	Site Team Comments	Confirmed By (initials & company)
Req 10-11	Handover	Has a simple, standalone building user guide been produced for the project? Please outline the contents of the BUG, and that it is suitable for general building users as well as the facilities management team. Please outline the schedule of training which has been identified for the occupiers at handover to cover the following: - the building design intent - the available aftercare provision & main contact (incl seasonal commissioning detail) - an introduction to all systems and key features (incl BMS & controls) - an introduction to the BUG and other documentation (e.g. O&M's, commissioning records) - any maintenance requirements (including any relevant contracts / regimes)		
Man05	**Aftercare**			
Req 1-2	Aftercare Support	Has a meeting been programmed to occur with the building occupier/management (prior to initial occupation) to explain the aftercare support, including the Building User Guide, training schedule and key building information? Please confirm whether there will be the following: - on-site facilities management training, including building walkabout and familiarisation with the building systems, controls and operation. - frequent support provided for at least the first month of building occupation, followed by longer term support for at least the first 12 months from occupation. - collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is occupied and systems adjusted accordingly		
Req 4	Aftercare Innovation	Please confirm that the following has been agreed for the development - There is (or will be) operational infrastructure and resources in place to co-ordinate the following activities at quarterly intervals for the first three years of building occupation: a. Collection of occupant satisfaction, energy consumption and water consumption data. b. Analysis of the data to check the building is performing as expected and make any necessary adjustments to systems controls or to inform building user behaviours. c. Setting targets for reducing water and energy consumption and monitor progress towards these. d. Feedback any 'lessons learned' to the design team and developer for use in future projects. e. Provision of the actual annual building energy, water consumption and occupant satisfaction data to BRE.		
Req 3	Seasonal Commissioning	Please confirm whether seasonal commissioning has been agreed to, and whether it contains the following: - minimum 12-month period, once the building becomes substantially occupied. - includes complex and simple systems (please outline which) - take place under full and part load conditions (spring/autumn) and during periods of extreme (high or low) occupancy (please outline a rough programme) - include occupant feedback and recommissioning and revisions to O&M Manuals		
HEALTH & WELLBEING				
Hea01	**Visual Comfort**			
Req 1-2	Glare control	Please list the relevant building areas in this development that have external windows, glazed doors or rooflights and that are occupied for >30 mins? Please detail the glare control (Blinds, low eaves, brie soliel etc) provided to each of the rooms listed above.		
Req 3-4	Daylighting	Please complete Hea 01 Daylighting schedule which lists all rooms which are occupied for >30 mins and provides for each room: 1. the floor area 2. the daylight factor (2% required) 3. the uniformity ratio (0.3 required) Please confirm from the results that the rooms passing the required levels constitute >80% of the total area of rooms listed above.		
Req 7-11	Internal and External Lighting Levels, Zoning and Control	Please confirm that all fluorescent / compact fluorescent lighting has high frequency ballasts (or is LED). Has internal lighting been specified in accordance with the appropriate maintained Illuminance levels (in LUX) recommended by SLL Code for Lighting 2012? Do areas with computer screens comply with CIBSE G7 sections 2.4, 2.20, 6.10 - 6.20? Confirm the zoning and control strategy for the following - - Office areas (zones of no more than 4 workplaces, separate controls expected for each 40m2) - Workstations adjacent to windows (separate zoning & controls). Does the external lighting within the construction zone comply with BS5489-1:2013+BS12464-2:2014 PT 2?		
Hea02	**Indoor Air Quality**			
Req 1	Indoor Air Quality	Please confirm whether an Indoor Air Quality Plan has been produced, and that it includes the following (please elaborate) - - removal of contaminant sources - dilution and control of contaminant sources - procedures for pre-occupancy flush out - third party testing and analysis - maintaining indoor air quality in-use.		
Req 6-7	VOC Emission Levels (Products)	Has the Hea 02 VOC Emissions schedule been completed to show that 5 of 7 of the key components comply with the relevant standards for VOC / formaldehyde emissions? Please supply completed Hea 02 VOC Emissions schedule as supporting evidence to the questionnaire.		
red 8-12	VOC Emission Levels (Post Construction Testing)	Please confirm that formaldehyde testing was undertaken post-construction (but pre-occupancy) to all rooms necessary to check the institute specification levels. Please state the formaldehyde concentration levels measured, in µg/m3, averaged over 30 minutes for all areas tested. Please see Appendix A – Sustainability Review Detailed Target Report for requirements. Please confirm who undertook the testing. Please detail any necessary remediation and confirm when this will be carried out where levels were exceeded.		
Hea05	**Acoustic Performance**			

Assessment Issue		Criteria Verification	Site Team Comments	Confirmed By (initials & company)
	Sound Insulation and Internal Indoor Ambient Noise Levels	Please confirm that a programme of pre-completion testing was carried out by a compliant testing body based on the relevant Building Regulations or standards for all relevant rooms. What value was airborne sound insulation higher than the performance standards in Building regulations. What value was impact sound insulation lower than the performance standards in Building Regulations.		
Hea 06	**Safety and Security**			
Req 1*10	Safe Access	Please confirm that each of the following has been complied with and provide details of how - -Footpaths on-site provide direct access from site entrances to building entrances and connect to public footpaths off-site - raised kerbs or bollards separate car parking from external building facades - cycle storage is easily accessible from the site entrance - deliveries are not necessary at this development and therefore vehicle manoeuvring space is not required		
Req 11-13	Security of Site and Building	Please confirm that Secure by Design Certification has been achieved. Outline how the recommendations and requirements have been incorporated into the design of the building and external areas.		
ENERGY				
Ene01	**Reduction of Energy Use and Carbon Emissions**			
	Energy Performance	Please report six separate figures from the '*Energy & CO_2 Emissions Summary*' table in the BRUKL document, including both actual and notional performance. Please supply as built BRUKL document as supporting evidence to the questionnaire. Note - the score can be checked using the Ene 01 (2014) Calculator available on the following link - https://tools.breeam.com/projects/ (note that registration is required to access, select Documents & Tools -> NC 2011/2014 Ene 01 Compliance Checker)	Notional heating + cooling demand [MJ/m^2] - Actual heating + cooling demand [MJ/m^2] - Notional Primary Energy [kWh/m^2] - Actual Primary Energy [kWh/m^2] - Target Emission Rate [kg/m^2] - Building Emission Rate [kg/m^2] -	
Ene02	**Energy Monitoring**			
Req 1-4	Sub-metering of Major Energy Consuming Systems	Please outline the different fuel types in use across the services strategy (e.g. gas, electricity). Please confirm that Unit 1 has 3 separate labelled pulsed sub-meters for gas, small power and lighting? Please confirm that Unit 2 has 3 separate labelled pulsed sub-meters for gas, small power and lighting? Please confirm that a Building Management System (BMS) has not been included in the development? Please outline where meters are located and accessible to building users.		
Ene03	**External Lighting**			
	External Lighting	Has the Ene 03 External Lighting schedule been completed to confirm the efficacies of all external lighting in the construction zone? Please supply the completed Ene 03 schedule as supporting evidence to the questionnaire. Please confirm that all external lights have time clocks and daylight sensors.		
Ene08	**Energy Efficient Equipment**			
	Energy Efficient Equipment	Please confirm that the energy consumption of small power, plug in equipment (e.g. office equipment) is not a significant contributor to total unregulated energy consumption? Please outline how laundry equipment has been specified to reduce total energy consumption (e.g. EU energy efficiency labelling or alternative methodology). Please confirm that installed domestic scale appliances comply with the following EU Energy Efficiency Labelling: - fridge, fridge-freezers A+ rating - washing machines A++ rating - dishwashers A + rating - washer-dryers, tumble dryers A rating		
TRANSPORT				
Tra03	**Cyclist Facilities**			
	Cycle Storage	Covered, BREEAM compliant cycle storage spaces and BREEAM compliant electric wheelchair/buggy charging points need to be provided for the building (please see BREEAM 2014 NC manual Tra 03 for details of compliance in terms of cycle rack type, cycle shelter type, secure charging point, spacing, lighting and location). Please confirm the anticipated number of site staff. Please confirm the number of compliant cycle racks included Are the cycle racks well lit in line with BS 5489-1:2013 & BS EN 12464-2:2014? Please confirm the location and number of electric wheelchair/buggy charging points that have been provided for Unit 1 and Unit 2 residents. Is the electric wheelchair/buggy charging point secure, well lit and provides space for manoeuvring?		
	Cyclist Facilities	Please confirm the location, size and number of lockers provided. Please confirm the location and size of the drying space provided.		
Tra04	**Maximum Car Parking Capacity**			
	Car Parking Capacity	Please confirm the number of site wide building users. How many standard car parking spaces are available to building users? Please note this does not include visitor or disabled parking which must be clearly demarked on site.		

Assessment Issue		Criteria Verification	Site Team Comments	Confirmed By (initials & company)
WATER				
Wat01	**Water Consumption**			
	Water Consumption	Please supply completed Wat 01 schedule as supporting evidence to demonstrate compliant sanitary fittings have been installed. Please see Appendix A – Sustainability Review Detailed Target Report for further requirement information.		
Wat02	**Water Monitoring**			
Req 1	Water Meter	Is there a pulsed water meter on the mains supply to each unit?		
Req 2-4	Water Sub Meters	Has each building unit been fitted with a water sub meter to allow for monitoring of water usage? Are all water meters able to connect to a BMS using a pulsed output?		
Wat03	**Water Leak Detection and Prevention**			
Req 2	Flow Control Devices	Are solenoid valves and PIR's present on the cold water supply to each of the staff sanitary areas?		
Wat04	**Water Efficient Equipment**			
	Water Efficient Equipment	Please confirm whether there are any automatic irrigation systems, or whether soft landscaping and planting will depend solely on precipitation.		
MATERIALS				
Mat01	**Life Cycle Impacts**			
	Life Cycle Impacts	Has the Mat 01&02 Materials Schedule been completed to confirm that sufficient A / A+ rated materials are included to meet the requirements? Please see www.bre.co.uk/greenguide for further information on the ratings. Please supply completed Mat 01&02 calculator as supporting evidence to the questionnaire.		
Mat02	**Hard Landscaping and Boundary Protection**			
	Hard Landscaping and Boundary Protection	Has the Mat 01&02 Materials schedule been completed to confirm that 80% of the hard landscaping and boundary protection is A or A+ rated according to the Green Guide? Is the aggregate underneath the hard landscaping recycled? Please supply completed Mat 01&02 calculator as supporting evidence to the questionnaire.		
Mat03	**Responsible Sourcing**			
Req 1	Pre Requisite	Are all timber and timber based products used on site legally harvested and traded? Please outline the suppliers and confirm accreditation (e.g. FSC / PEFC)		
Req 3	Sustainable Procurement Plan	Has a Sustainable Procurement Plan been used throughout construction to assist in responsible sourcing of construction materials? What are the aims of the Sustainable Procurement Plan, and what measures have been incorporated into the procurement process? Alternatively please supply a copy of the Sustainable Procurement Plan.		
Req 4	Responsible Sourcing	Has the Mat 03 Responsible Sourcing Schedule been completed to show one of the following - Low - most products have IS014001 with some BES6001 / FSC / CARES Medium - most products have BES6001 with remaining ISO14001 / FSC / CARES High - all have BES6001 / FSC / CARES Please submit the completed Mat 03 schedule as supporting evidence to the questionnaire.		
Mat04	**Insulation**			
	Embodied Impact of Insulation	Please outline the main insulation types used within the building fabric and building services and confirm they are A+ rated according to the BRE Green Guide (see Mat 01 & 02 above). Please submit the completed Mat 04 schedule as supporting evidence to the questionnaire.		
Mat05	**Designing for Durability and Resilience**			
	Designing for Durability and Resilience	What design measures have been used to provide protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares (corridors, lifts, stairs, doors etc.) - (impact resistant plasterboard, hard wearing floors etc.). Are there any internal areas which are expected to be subject to internal vehicular/trolley movement e.g. kitchen / delivery areas? If so, what measures have been incorporated to increase durability (trolley rails etc.). Are there any external areas of the building which are at risk of collision from vehicular parking and manoeuvring within 1m of the building? If so what durability measures have been introduced (e.g. bollards). Has a Material Degradation Study been produced to review the impact of environmental factors on the building? If so, what environmental factors were identified, and what measures have been incorporated to limit material degradation in these areas?		
WASTE				
Wst01	**Construction Site Waste Management**			
Req 1-3	Construction Resource Efficiency	Please confirm that a Resource Management Plan (RMP) / SWMP has been used for the project and has covered all non-hazardous waste related to on-site construction, dedicated off-site manufacture or fabrication generated by the buildings design and construction Please report the total figure for construction waste produced on site in tonnes per 100m^2 gross internal floor area (GIFA) - Did any demolition of either building or hardstanding take place on site, and if so was a pre-demolition audit completed at the time?		
Req 4	Diversion of waste from Landfill	Please confirm the percentage of waste diverted from landfill (including for both construction & demolition).		
Wst03	**Operational Waste**			

Assessment Issue		Criteria Verification	Site Team Comments	Confirmed By (initials & company)
	Dedicated space for recyclables	Is there a dedicated recycle store? How big is it in m2 and does it have vehicular access? Is there a requirement for a compactor / baler or composting on site? Is there a tap accessible from the bin store? Is there space to store recyclable waste in each kitchenette? How big is the recycle bin? Is there space to store food waste in each kitchenette? How big is the food waste vessel? Is there a contract in place to collect food waste?		
LAND USE & ECOLOGY				
LE01	**Site Selection**			
Req 2-3	Contaminated Land	Please confirm that a gas membrane was installed to each unit. Please confirm that each gas membrane was independently tested by a third party professional. Please outline the remediation strategy implemented to exterminate Japanese knotweed on site. Please comment on the extent of the contamination and the progress of the remediation strategy.		
LE03	**Minimising Impact on Existing Site Ecology**			
	Change in Ecological Value	Please complete the LE03 BRE spreadsheet to demonstrate the change in ecological value.		
LE04	**Enhancing Site Ecology**			
Req 1-3	Ecologist's Report and Recommendations	When was an ecologists report carried out? What were the recommendations provided by the ecologist? Please outline how these recommendations have been incorporated into the scheme. Optional: complete and provide GN13 as evidence to demonstrate compliance		
LE05	**Long Term Impact on Biodiversity**			
	Long Term Impact on Biodiversity	Has UK & EU legislation been complied with, relating to protection and enhancement of ecology? Has a Landscape & Habitat Management plan been produced for the site? Please expand on how the following was carried out during design & construction - - Biodiversity Champion on site - Training of site staff regarding ecology protection - Monitoring of ecological impacts on site - Timing of site works to minimise disturbance to wildlife - New habitats created Optional: complete and provide GN13 as evidence to demonstrate compliance		
POLLUTION				
Pol01	**Impact of Refrigerants**			
Req 2-6	Impact of Refrigerants	Are there any refrigerants present in either the building services or cold storage plant/equipment? If yes please outline where.		
Pol02	**Nox Emissions**			
	Nox Emissions	Please outline the NOx emissions for the buildings' heating and hot water in mg/kWh.		
Pol03	**Surface Water Run-Off**			
Req 1-3	Flood Risk	Please confirm what level of risk the site is classified as having for annual flooding from the following sources: - fluvial - tidal - surface water - groundwater - sewers - reservoirs		
	Pre-requisite	Please confirm an appropriate consultant was appointed to carry out and demonstrate the developments drainage strategy.		
Req 5-7	Surface Water Run-Off 1	Has the GN15 been completed to show the following - - drainage measures are specified to ensure that the peak rate of run-off from the site to the watercourses is no greater for the developed site that it was for the pre-developed site. This should comply at the 1 year and 100 year return period events. Please complete the GN15 document as supporting evidence.		
Req 8-14	Surface Water Run-Off 2	Has the GN15 been completed to show the following - - that flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance). - drainage design measures are specified to ensure that the post development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development for the 100 year 6 hour event including an allowance for climate change. Please complete the GN15 document as supporting evidence.		
Req 15-22	Minimising Water Course Pollution	Has the GN15 been completed to show the following - - that areas with a low risk of watercourse pollution, an appropriate level of pollution prevention treatment is provided, using appropriate SuDS techniques. Please complete the GN15 document as supporting evidence.		
Pol04	**Reduction of Night Time Light Pollution**			

Assessment Issue		Criteria Verification	Site Team Comments	Confirmed By (initials & company)
	Reduction of Night Time Light Pollution	Please confirm that the external lighting strategy has been designed in compliance with Table 2 of the ILP Guidance notes for the reduction of obtrusive light, 2011. Can all external lighting (except for safety and security lighting) be automatically switched off between 23:00 and 07:00? Does all of the safety or security lighting which is used between 23:00 & 07:00 comply with the lower levels of lighting recommended in Table 2 of the ILP's Guidance notes? Are there any illuminated advertisements, and if so do they comply with ILP PLG05?		