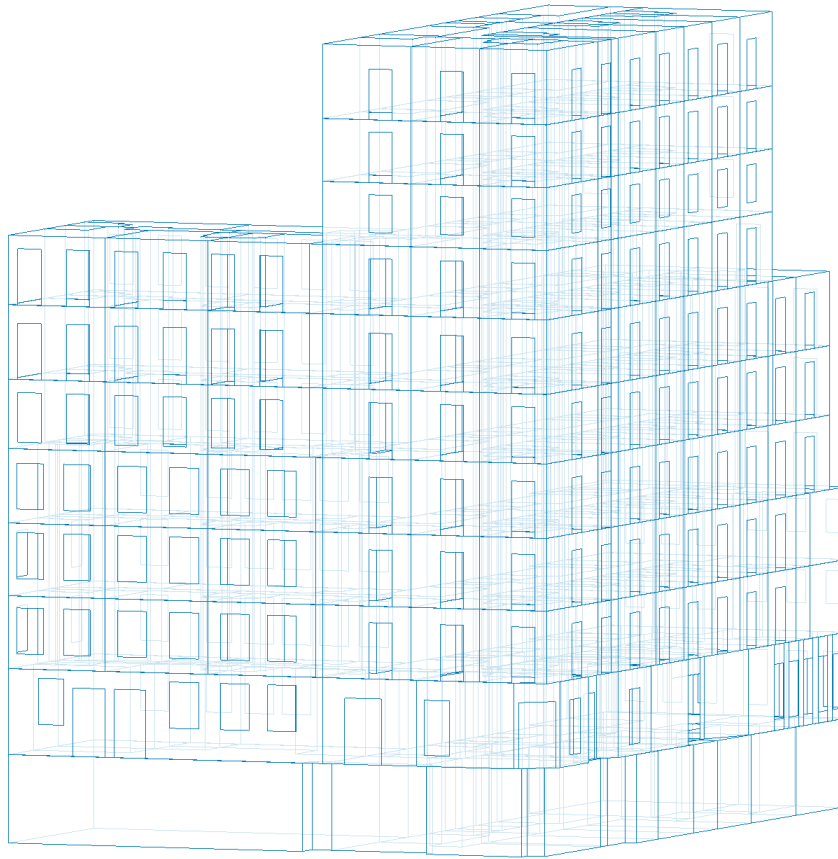


Caldwell



B0989 Oldham Street, Manchester

B0989 BREEAM Pre-Assessment

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Version	Date	Reason for issue	Prepared By
1.0	September 22	For Planning	Amanda Dalzell

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1 Introduction

This BREEAM Scoring Statement has been prepared on behalf of Jadebricks Manchester Limited in support of their full planning application for 68-70 Oldham Street and 61 Spear Street, Manchester.

Description of development is as follows:

‘Partial demolition of existing buildings, conversion of existing warehouse building, rooftop extension and new building of 10 storeys to create aparthotel and flexible commercial uses (Use Class E)’

The site location is highlighted in the below image:-

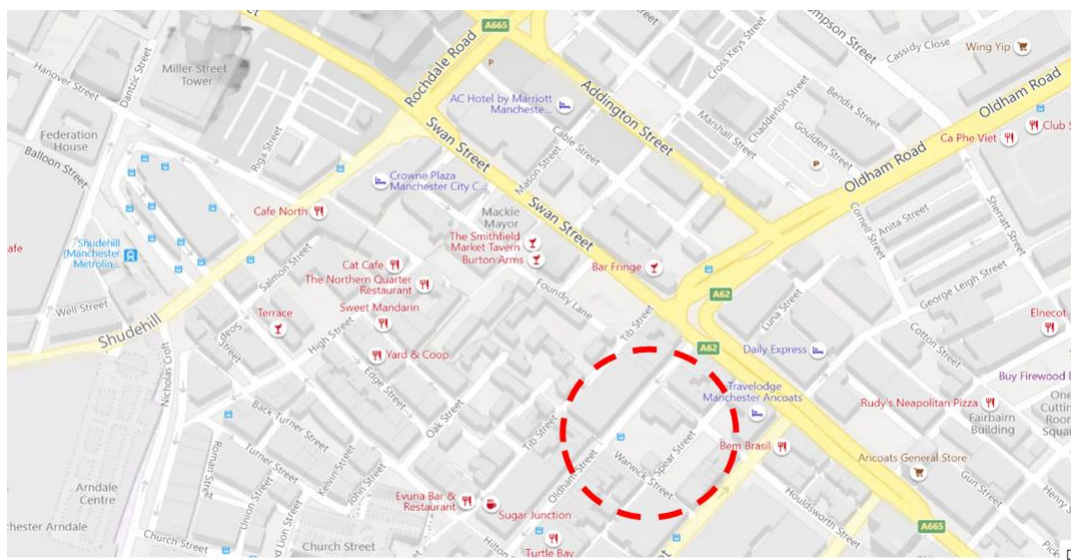


FIGURE 1 - GENERAL SITE LOCATION

The identified credits, if achieved, indicate that the proposed development could achieve a targeted credit score of Excellent.

2 Introduction to BREEAM

2.1 *What is BREEAM*

BREEAM (Building Research Establishment's Environmental Assessment Method) is marketed as the world's leading and most widely used environmental assessment method for buildings. At the time of writing, BREEAM state they have certified over 200,000 buildings since first launch in 1990.

2.2 *Aims of BREEAM*

- To mitigate the life cycle impacts of buildings on the environment
- To enable buildings to be recognised according to their environmental benefits
- To provide a credible, environmental label for buildings
- To stimulate demand for sustainable buildings

2.3 *Objectives of BREEAM*

- To provide market recognition of buildings with a low environmental impact
- To ensure best environmental practice is incorporated in building planning, design, construction and operation.
- To define a robust, cost-effective performance standard surpassing that required by regulations.
- To challenge the market to provide innovative, cost-effective solutions that minimise the environmental impact of buildings.
- To raise the awareness amongst owners, occupants, designers and operators of the benefits of buildings with a reduced life cycle impact on the environment.
- To allow organisations to demonstrate progress towards corporate environmental objectives.

BREEAM has been developed to meet the following underlying principles:

- Ensure environmental quality through an accessible, holistic and balanced measure of environmental impacts.
- Use quantified measures for determining environmental quality.
- Adopt a flexible approach, avoiding prescriptive specification and design solutions.

- Use best available science and best practice as the basis for quantifying and calibrating a cost-effective performance standard for defining environmental quality.
- Reflect the social and economic benefits of meeting the environmental objectives covered.
- Provide a common framework of assessment that is tailored to meet the 'local' context including regulation, climate and sector.
- Integrate construction professionals in the development and operational processes to ensure wide understanding and accessibility.
- Adopts third party certification to ensure independence, credibility and consistency of the label.
- Adopts existing industry tools, practices and other standards wherever possible to support developments in policy and technology, build on existing skills and understanding and minimise costs.
- Stakeholder consultation to inform ongoing development in accordance with the underlying principles and the pace of change in performance standards (accounting for policy, regulation and market capability).

Table 2.1 BREEAM UK New Construction 2018 environmental sections and assessment issues

Management	Health and Wellbeing
– Man 01 Project brief and design – Man 02 Life cycle cost and service life planning – Man 03 Responsible construction practices – Man 04 Commissioning and handover – Man 05 Aftercare	– Hea 01 Visual comfort – Hea 02 Indoor air quality – Hea 04 Thermal comfort – Hea 05 Acoustic performance – Hea 06 Security – Hea 07 Safe and healthy surroundings
Energy	Transport
– Ene 01 Reduction of energy use and carbon emissions – Ene 02 Energy monitoring – Ene 03 External lighting – Ene 04 Low carbon design – Ene 05 Energy efficient cold storage – Ene 06 Energy efficient transportation systems – Ene 07 Energy efficient laboratory systems – Ene 08 Energy efficient equipment	– Tra 01 Transport assessment and travel plan – Tra 02 Sustainable transport measures
Water	Materials
– Wat 01 Water consumption – Wat 02 Water monitoring – Wat 03 Water leak detection – Wat 04 Water efficient equipment	– Mat 01 Environmental impacts from construction products - Building life cycle assessment (LCA) – Mat 02 Environmental impacts from construction products - Environmental Product Declarations (EPD) – Mat 03 Responsible sourcing of construction products – Mat 05 Designing for durability and resilience – Mat 06 Material efficiency
Waste	Land Use and Ecology
– Wst 01 Construction waste management – Wst 02 Use of recycled and sustainably sourced aggregates – Wst 03 Operational waste – Wst 04 Speculative finishes (Offices only) – Wst 05 Adaptation to climate change – Wst 06 Design for disassembly and adaptability	– LE 01 Site selection – LE 02 Identifying and understanding the risks and opportunities for the project – LE 03 Managing negative impacts on ecology – LE 04 Change and enhancement of ecological value – LE 05 Long term ecology management and maintenance
Pollution	Innovation
– Pol 01 Impact of refrigerants – Pol 02 Local air quality – Pol 03 Flood and surface water management – Pol 04 Reduction of night time light pollution – Pol 05 Reduction of noise pollution	– Inn 01 Innovation

2.4 *Stages of BREEAM Assessment*

Design Stage (DS)

The DS assessment and interim BREEAM rating is optional and can be used to demonstrate the proposed new building's performance at the design stage of the life cycle. It is strongly recommended that assessment and certification should occur prior to the beginning of operations on site. The BREEAM rating at this stage is labelled as 'interim' because it does not represent the building's final, new construction BREEAM performance.

To complete an assessment at this stage the design must be advanced to a point where the relevant design information is available to enable the BREEAM Assessor to evaluate and verify the building's performance against the criteria defined in this Scheme Document. The interim DS assessment will therefore be completed and certified at the scheme design or detailed design stages.

Post-construction Stage (PCS)

The PCS assessment and BREEAM rating is a mandatory certification stage that can be used to demonstrate the final 'as-built' performance of the building at the new construction stage of the life cycle. A final PCS assessment is completed and certified after practical completion of the building works.

There are two approaches to assessment at the PCS:

1. A post-construction review (PCR) based on a completed interim design stage assessment.
2. A standalone post-construction assessment (PCA)

A PCR serves to confirm the assessment of the building's 'as-built' performance and rating and where appropriate that it is in accordance with the assessment certified at the interim design stage. Where an interim DS assessment has not been carried out and a BREEAM assessment and rating is required, a full post-construction stage assessment can be conducted.

Two accreditation BREEAM Excellent Certificates will be required the first for the Interim - Design Stage (DS) and the second for the final - Post Construction Review (PCR). The contractor should be aware that this places greater emphasis on the items claimed for the BREEAM credits as the post construction stage requires verification that these elements have been carried out or installed.

2.5 *BREEAM rating benchmarks*

There are a number of elements that determine the overall performance of a new construction project assessed using BREEAM. They are:

1. The BREEAM rating level benchmarks
2. The minimum BREEAM standards
3. The environmental section weightings
4. The BREEAM assessment issues and credits

The next sections summarise how these elements combine to produce a BREEAM rating for a new building and are followed by a description and example calculation of a rating.

BREEAM rating benchmarks for projects assessed using the 2018 version of BREEAM UK New Construction are:

Table 2.3 BREEAM rating benchmarks

BREEAM Rating	% score
Outstanding	≥ 85
Excellent	≥ 70
Very good	≥ 55
Good	≥ 45
Pass	≥ 30
Unclassified	< 30

A BREEAM 2018 pre-assessment for the development was carried out to show an Excellent award level of 75.41% for the proposed development.

To achieve a BREEAM rating, the minimum percentage score must be achieved (as outlined above) and the minimum standards (i.e. number of credits achieved) applicable to that rating level (below) complied with.

2.6 Minimum BREEAM standards

To ensure performance against fundamental environmental issues is not overlooked in pursuit of a particular rating, BREEAM sets minimum standards of performance in key areas, e.g. energy, water, waste etc. The majority of BREEAM credits can, however, be traded, so non-compliance in one area can be offset through compliance in another to achieve the target BREEAM rating. The minimum acceptable levels of performance for each rating are summaries in Table 2.5 below. To achieve a particular BREEAM rating, the minimum overall percentage score must be achieved as well as the minimum standards detailed in Table 2.5 below.

Table 2.5 Minimum BREEAM standards by rating level

BREEAM issue	Minimum standards by BREEAM rating level				
	Pass	Good	Very Good	Excellent	Outstanding
Man 03 Responsible construction practices	None	None	None	One credit (responsible construction management)	Two credits (responsible construction management)
Man 04 Commissioning and handover	None	None	One credit (commissioning-test schedule and responsibilities)	One credit (commissioning-test schedule and responsibilities)	One credit (commissioning-test schedule and responsibilities)
Man 04 Commissioning and handover	None	None	Criterion 11 (Building User Guide)	Criterion 11 (Building User Guide)	Criterion 11 (Building User Guide)
Man 05 Aftercare	None	None	None	One credit (commissioning-implementation)	One credit (commissioning-implementation)
Ene 01 Reduction of energy use and carbon emissions	None	None	None	Four credits (Energy performance)	Six credits (Energy performance) and Four credits (Energy modelling and reporting)
Ene 02 Energy monitoring	None	None	One credit (First sub-metering credit)	One credit (First sub-metering credit)	One credit (First sub-metering credit)
Wat 01 Water consumption	None	One credit	One credit	One credit	Two credits
Wat 02 Water monitoring	None	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only
Mat 03 Responsible sourcing of construction products	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only
Wst 01 Construction waste management	None	None	None	None	One credit
Wst 03 Operational waste	None	None	None	One credit	One credit

3 Conclusion

A BREEAM Assessment shall be undertaken by Licenced BREEAM assessor from Building Performance Predictions (BPP) and submitted to the Building Research Establishment (BRE) for independent verification and certification at design stage and following practical completion for Post construction stage.

A targeted credit score summary showing an Excellent rating of 75.41% has been completed as scheduled within section 4.0 Appendix A.

4 Appendix A - BREEAM Pre-Assessment – Summary

Project:	B0989 - Oldham Street Hotel, Manchester
Report:	Pre-Assessment Stage
Design Target:	Excellent - 74.35%

Management	Available		Targeted	
	Credits	Percent	Credits	Percent
Man 01: Project brief and design > 1. Project delivery planning	1	0.52%	1	0.52%
Man 01: Project brief and design > 3. BREEAM Advisory Professional : BREEAM AP (Concept Design)	1	0.52%	1	0.52%
Man 01: Project brief and design > 3. BREEAM Advisory Professional : BREEAM AP (Developed Design)	1	0.52%	1	0.52%
Man 02: Life cycle cost and service life planning > 1. Elemental life cycle cost (LCC)	2	1.05%	2	1.05%
Man 02: Life cycle cost and service life planning > 2. Component level life options appraisal	1	0.52%	1	0.52%
Man 02: Life cycle cost and service life planning > 3. Capital cost reporting	1	0.52%	1	0.52%
Man 03: Responsible construction practices > 1. Pre-requisite - Legal and sustainable timber	0	0%	0	0%
Man 03: Responsible construction practices > 3. Environmental management	1	0.52%	1	0.52%
Man 03: Responsible construction practices > 4. BREEAM Advisory Professional (Site)	1	0.52%	1	0.52%
Man 03: Responsible construction practices > 5. Responsible construction management	2	1.05%	2	1.05%
Man 03: Responsible construction practices > 6. Monitoring of construction site impacts : Pre-requisite	0	0%	0	0%
Man 03: Responsible construction practices > 6. Monitoring of construction site impacts : Utility consumption	1	0.52%	1	0.52%
Man 03: Responsible construction practices > 6. Monitoring of construction site impacts : Transportation of construction materials and waste	1	0.52%	1	0.52%
Man 04: Commissioning and handover > 1. Commissioning - testing schedule and responsibilities	1	0.52%	1	0.52%
Man 04: Commissioning and handover > 2. Commissioning - design and preparation	1	0.52%	1	0.52%
Man 04: Commissioning and handover > 3. Testing and inspecting building fabric	1	0.52%	1	0.52%
Man 04: Commissioning and handover > 4. Handover	1	0.52%	1	0.52%
Man 05: Aftercare > 1. Aftercare support	1	0.52%	1	0.52%
Man 05: Aftercare > 2. Commissioning - implementation	1	0.52%	1	0.52%
Man 05: Aftercare > 3. Post Occupancy Evaluation (POE)	1	0.52%	1	0.52%
Management Totals	21	11.00%	20	10.48%



Health and Wellbeing	Available		Targeted	
	Credits	Percent	Credits	Percent
Hea 01: Visual comfort > 1. Control of glare from sunlight control	1	0.78%	1	0.78%
Hea 01: Visual comfort > 2. Daylighting	1	0.78%	0	0%
Hea 01: Visual comfort > 3. View out	1	0.78%	0	0%
Hea 01: Visual comfort > 4. Internal and external lighting levels, zoning and control	1	0.78%	1	0.78%
Hea 02: Indoor air quality > 1. Pre-requisite	0	0%	0	0%
Hea 02: Indoor air quality > 2. Ventilation	1	0.78%	0	0%
Hea 02: Indoor air quality > 3. Emissions from construction products	2	1.56%	2	1.56%
Hea 02: Indoor air quality > 4. Post-construction indoor air quality measurement	1	0.78%	0	0%
Hea 04: Thermal comfort > 1. Thermal modelling	1	0.78%	1	0.78%
Hea 04: Thermal comfort > 2. Design for future thermal comfort	1	0.78%	1	0.78%
Hea 04: Thermal comfort > 3. Thermal zoning and controls	1	0.78%	1	0.78%
Hea 05: Acoustic performance > 1. Sound insulation	2	1.56%	1	0.78%
Hea 05: Acoustic performance > 2. Indoor ambient noise level	1	0.78%	1	0.78%
Hea 05: Acoustic performance > 3. Room acoustics	1	0.78%	1	0.78%
Hea 06: Security	1	0.78%	1	0.78%
Hea 07: Safe and healthy surroundings > 1. Safe access	1	0.78%	1	0.78%
Hea 07: Safe and healthy surroundings > 2. Outside space	1	0.78%	1	0.78%
Health and Wellbeing Totals	18	14.00%	13	10.11%

Energy	Available		Targeted	
	Credits	Percent	Credits	Percent
Ene 01: Reduction of energy use and carbon emissions > 1. Energy performance	9	5.54%	1	0.62%
Ene 01: Reduction of energy use and carbon emissions > 2. Prediction of operational energy consumption	4	2.46%	4	2.46%
Ene 02: Energy monitoring > 1. Sub-metering of end use categories	1	0.62%	1	0.62%
Ene 02: Energy monitoring > 2. Sub-metering of high energy load and tenancy areas	1	0.62%	1	0.62%
Ene 03: External lighting	1	0.62%	1	0.62%
Ene 04: Low carbon design > 1. Passive design : Passive design analysis	1	0.62%	1	0.62%
Ene 04: Low carbon design > 1. Passive design : Free cooling	1	0.62%	0	0%
Ene 04: Low carbon design > 2. Low and zero carbon technologies	1	0.62%	1	0.62%
Ene 05: Energy efficient cold storage > 1. Refrigeration energy consumption	1	0.62%	0	0%
Ene 05: Energy efficient cold storage > 2. Indirect greenhouse gas emissions	1	0.62%	0	0%
Ene 06: Energy Efficient transportation systems > 1. Energy consumption	1	0.62%	1	0.62%
Ene 06: Energy Efficient transportation systems > 2. Energy efficient features : Lifts	1	0.62%	1	0.62%
Ene 06: Energy Efficient transportation systems > 2. Energy efficient features : Escalators or moving walkways	1	0.62%	0	0%
Ene 08: Energy efficient equipment	2	1.23%	0	0%
Energy Totals	26	16.00%	12	7.38%



Transport	Available		Targeted	
	Credits	Percent	Credits	Percent
Tra 01: Transport assessment and travel plan	2	1.67%	2	1.67%
Tra 02: Sustainable transport measures	10	8.33%	9	7.5%
Transport Totals	12	10.00%	11	9.17%

Water	Available		Targeted	
	Credits	Percent	Credits	Percent
Wat 01: Water consumption	5	3.89%	2	1.56%
Wat 02: Water monitoring	1	0.78%	1	0.78%
Wat 03: Water leak detection > 1. Leak detection system	1	0.78%	1	0.78%
Wat 03: Water leak detection > 2. Flow control devices	1	0.78%	0	0%
Wat 04: Water efficient equipment	1	0.78%	1	0.78%
Water Totals	9	7.00%	5	3.89%

Materials	Available		Targeted	
	Credits	Percent	Credits	Percent
Mat 01: Environmental impacts from construction products - Building life cycle assessment (LCA) > 1. Superstructure	6	6.43%	6	6.43%
Mat 01: Environmental impacts from construction products - Building life cycle assessment (LCA) > 2. Substructure	1	1.07%	1	1.07%
Mat 02: Environmental impacts from construction products - Environmental Product Declarations (EPD)	1	1.07%	1	1.07%
Mat 03: Responsible sourcing of construction products > 1. Pre-requisite - Legal and sustainable timber	0	0%	0	0%
Mat 03: Responsible sourcing of construction products > 2. Enabling sustainable procurement	1	1.07%	1	1.07%
Mat 03: Responsible sourcing of construction products > 3. Measuring responsible sourcing	3	3.21%	1	1.07%
Mat 05: Designing for durability and resilience	1	1.07%	1	1.07%
Mat 06: Material efficiency	1	1.07%	1	1.07%
Materials Totals	14	15.00%	12	12.86%



Waste	Available		Targeted	
	Credits	Percent	Credits	Percent
Wst 01: Construction waste management > 1. Pre-demolition audit	1	0.6%	1	0.6%
Wst 01: Construction waste management > 2. Construction resource efficiency	3	1.8%	2	1.2%
Wst 01: Construction waste management > 4. Diversion of resources from landfill	1	0.6%	1	0.6%
Wst 02: Use of recycled and sustainably sourced aggregates	1	0.6%	0	0%
Wst 03: Operational waste	1	0.6%	1	0.6%
Wst 05: Adaptation to climate change	1	0.6%	1	0.6%
Wst 06: Design for disassembly and adaptability > 1. Recommendations	1	0.6%	1	0.6%
Wst 06: Design for disassembly and adaptability > 2. Implementation	1	0.6%	1	0.6%
Waste Totals	10	6.00%	8	4.80%

Land Use and Ecology	Available		Targeted	
	Credits	Percent	Credits	Percent
LE 01: Site selection > 1. Previously occupied land	1	1%	1	1%
LE 01: Site selection > 2. Contaminated land	1	1%	0	0%
LE 02: Ecological risks and opportunities > 1. Statutory obligations	0	0%	0	0%
LE 02: Ecological risks and opportunities > 2. Survey and evaluation	1	1%	1	1%
LE 02: Ecological risks and opportunities > 3. Determining ecological outcomes	1	1%	1	1%
LE 03: Managing impacts on ecology > 1. Ecological risks and opportunities	0	0%	0	0%
LE 03: Managing impacts on ecology > 2. Planning and measures on-site	1	1%	1	1%
LE 03: Managing impacts on ecology > 3. Managing negative impacts of the project	2	2%	2	2%
LE 04: Ecological change and enhancement > 1. Managing negative impacts on ecology	0	0%	0	0%
LE 04: Ecological change and enhancement > 2. Change and enhancement of ecology	3	3%	2	2%
LE 04: Ecological change and enhancement > 3. Ecological enhancement	1	1%	1	1%
LE 05: Long term ecological management and maintenance > 1. Statutory obligations, planning and site implementation	0	0%	0	0%
LE 05: Long term ecological management and maintenance > 2. Management and maintenance throughout the project	1	1%	1	1%
LE 05: Long term ecological management and maintenance > 3. Landscape and ecology management plan	1	1%	1	1%
Land Use and Ecology Totals	13	13.00%	11	11.00%



Pollution	Available		Targeted	
	Credits	Percent	Credits	Percent
Pol 01: Impact of refrigerants > 1. No refrigerant use	3	1.6%	0	0%
Pol 01: Impact of refrigerants > 2. Refrigerant use : Pre-requisite	0	0%	0	0%
Pol 01: Impact of refrigerants > 2. Refrigerant use : Impact of refrigerant	2	1.07%	0	0%
Pol 01: Impact of refrigerants > 2. Refrigerant use : Leak detection	1	0.53%	0	0%
Pol 02: Local air quality	2	1.07%	2	1.07%
Pol 03: Flood and surface water management > 1. Pre-requisite	0	0%	0	0%
Pol 03: Flood and surface water management > 2. Flood resilience	2	1.07%	2	1.07%
Pol 03: Flood and surface water management > 3. Surface water run-off : Pre-requisite	0	0%	0	0%
Pol 03: Flood and surface water management > 3. Surface water run-off : Rate	1	0.53%	1	0.53%
Pol 03: Flood and surface water management > 3. Surface water run-off : Volume	1	0.53%	0	0%
Pol 03: Flood and surface water management > 5. Minimising watercourse pollution	1	0.53%	0	0%
Pol 04: Reduction of night time light pollution	1	0.53%	1	0.53%
Pol 05: Reduction of noise pollution	1	0.53%	1	0.53%
Pollution Totals	15	8.00%	5	2.67%

Innovation	Available		Targeted	
	Credits	Percent	Credits	Percent
Man 03: Responsible construction practices > 1. Responsible construction management	1	1%	1	1%
Mat 01: Environmental impacts from construction products - Building life cycle assessment (LCA) > 2. LCA and LCC alignment	1	1%	1	1%
Innovation Totals (Up to a maximum of 10 credits)	10	10.00%	2	2.00%
Overall Totals	148	110.00%	101	75.42%