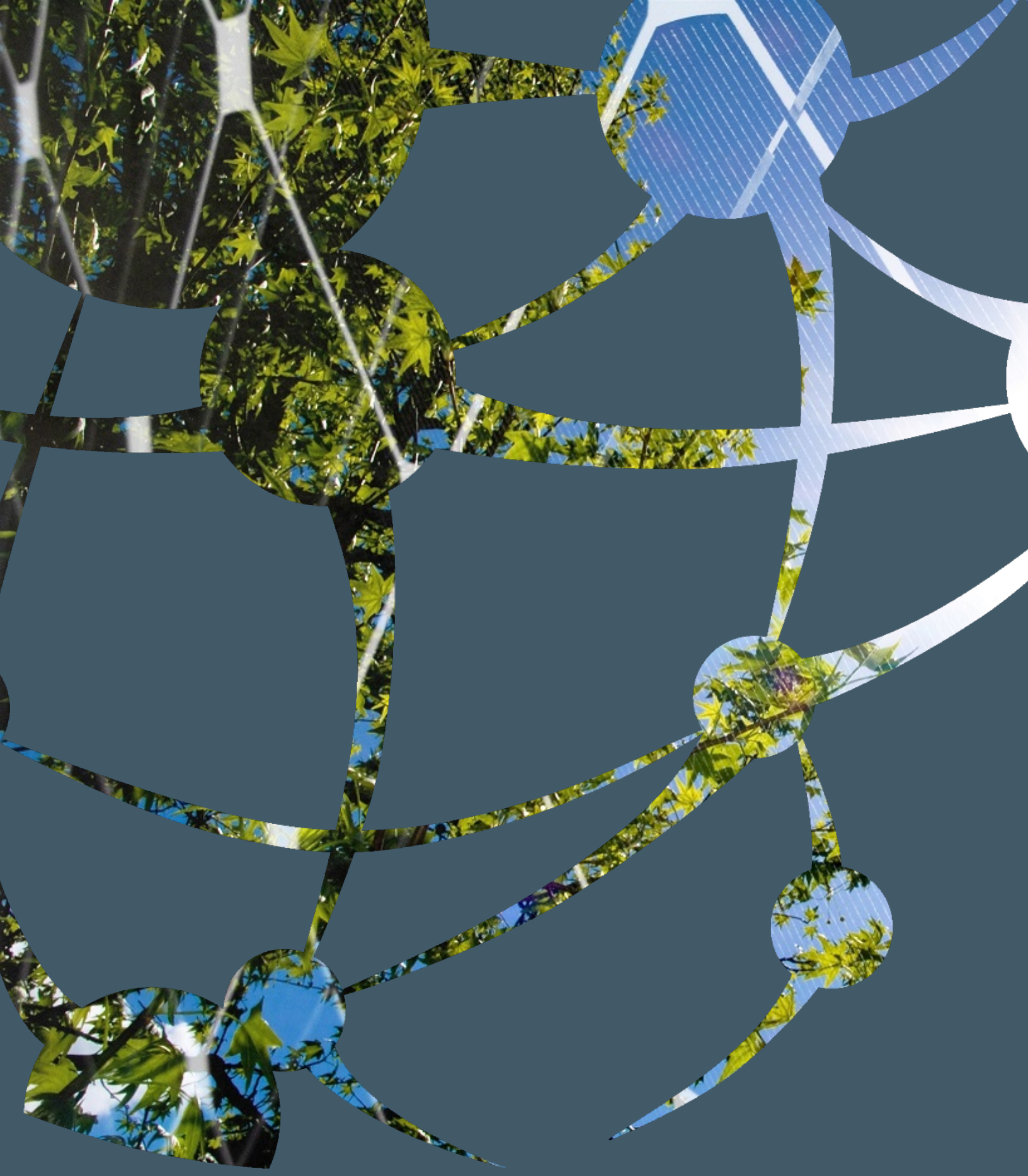

48 CHURCHWAY
BREEAM PRE-ASSESSMENT
JULY 2018

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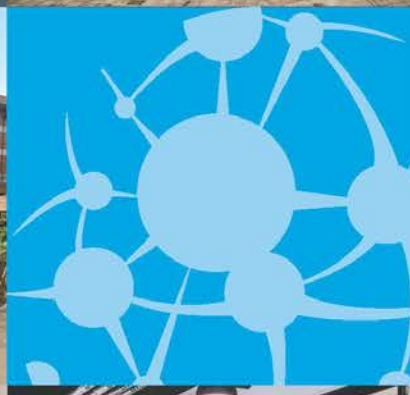
BRUNSWICK





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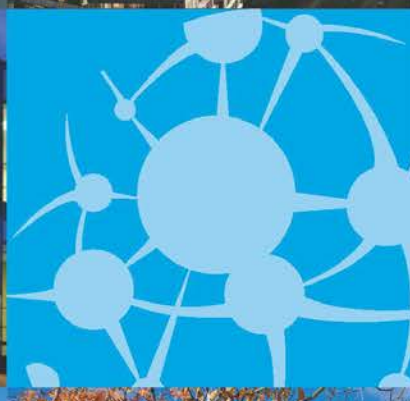



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DOCUMENT CONTROL

Issue	Description	Date	Prepared By	Signed Off
1.0	Draft for Review	19/07/2018	Ben Pratt	Brian Goldsmith

1 EXECUTIVE SUMMARY

Elementa consulting have been appointed to undertake a pre-assessment of the feasibility of achieving a BREEAM Certification for the redevelopment of 48 Churchway, Euston, London. The project proposes the demolition of the existing single storey building, and the construction of a new office building at ground, first, second and partial third floor within the 'gap site' on Churchway.
The project has a BREEAM reference number of BREEAM-0073-5431.

BREEAM is an environmental assessment method, certified by the Building Research Establishment. It sets a standard for sustainable building design that takes into account a variety of environmental factors including 'Health and Well Being', 'Energy' and 'Transport', amongst others.

- The pre-assessment has drawn upon early stage design information. As a new build, the appropriate method of assessment would be via the BREEAM UK New Construction 2014 system, which is the current system for this type of development.
- It should be noted that under BREEAM, there are certain mandatory requirements that have to be met to achieve a desired rating, a table within section 3.2 of this report identifies the minimum standards that are applicable to the desired rating.

The BREEAM scorecard produced at pre-assessment and at planning submittal demonstrates that an overall BREEAM rating of 74.9% is being targeted, with all the mandatory requirements met. This thus meets and exceeds the BREEAM: Excellent threshold of 70% with a buffer of 4.9% currently in place.

Next Steps:

- The decision on whether to pursue formal BREEAM Certification should be made prior to the end of RIBA Stage 1. This will ensure that any 'time critical' credits (i.e. credits that must completed before the end of a set RIBA stage) are available too the project, maximising the projects potential to obtain a rating.
- In addition, the design team will have to consider any additional costs of meeting BREEAM requirements, including consultancy fees, additional capital expenditure and certification costs.
- If a BREEAM rating is desired post-planning, a number of activities will be triggered; this will include design stage workshop(s), formal registration of the project with the Building Research Establishment (BRE), and the creation of a tracker document, to ease the team through the process. BREEAM requirements will need to be incorporated within the contractor prelims with support provided to ensure that those tendering for the project are full aware of additional commitments.

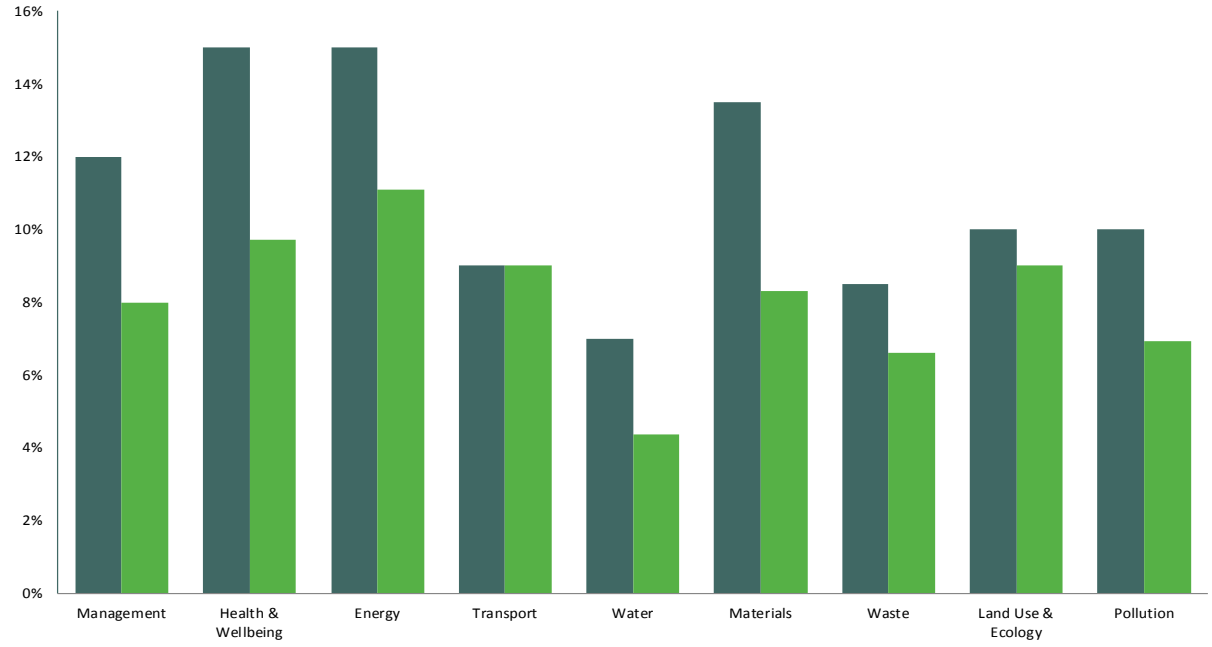
2 BREEAM SUMMARY SCORECARD

The scorecard below provides a summary score of the BREEAM rating, and highlights the various BREEAM concepts. An overall BREEAM rating of 74.9% has been calculated using the BRE online pre-assessment tool. In producing the report, Elementa has presumed that all of the 'mandatory requirements' are, and will be achieved. The score of 74.9% with the mandatory requirements met gives BREEAM: Excellent rating.

Overall Building Performance

Building name	Churchway Offices
Indicative BREEAM rating	Excellent
Indicative Total Score	74.9%
Min. standards level achieved	Excellent level

Building Performance by Environment Section



Environmental Section	No. credits available	Indicative no. credits Achieved	% credits achieved	Section Weighting	Indicative Section Score
Management	21	14	66.67%	12.00%	8.00%
Health & Wellbeing	17	11	64.71%	15.00%	9.70%
Energy	23	17	73.91%	15.00%	11.08%
Transport	9	9	100.00%	9.00%	9.00%
Water	8	5	62.50%	7.00%	4.37%
Materials	13	8	61.54%	13.50%	8.30%
Waste	9	7	77.78%	8.50%	6.61%
Land Use & Ecology	10	9	90.00%	10.00%	9.00%
Pollution	13	9	69.23%	10.00%	6.92%
Innovation	10	2	20.00%	N/A	2

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2.1 BASIS OF PRE-ASSESSMENT

- **The pre-assessment is not a guarantee of a rating under BREEAM.** Final ratings are provided by the Building Research Establishment (BRE). Evidence of compliance with BREEAM requirements is required. This must be provided too a licensed assessor, who will produce and submit their report too the BRE. The report and associated evidence is then subject to the BRE's Quality Assurance process.
- **The pre-assessment has been undertaken against v.SD5076: 5.0 of BREEAM UK New Construction 2014**. This is the current version of the standard. If a new version is released prior to assessment of the project. This version would be used, along with any adaptions that feature within it.
- **Pre-assessment is subject to review.** Elementa has based the pre-assessment on credits that they believe to be achievable. A pre-assessment meeting will be scheduled with the design team to confirm these assumptions.
- **The scoring algorithm used by BREEAM automatically caps the BREEAM rating at the lowest of the 'Mandatory Requirements'** (i.e. if a building had a score of 90%, but only achieved the mandatory's for Good, it would get a rating of 50%).
- **The pre-assessment is not a guarantee of a rating under BREEAM**. Final ratings are provided by the Building Research Establishment (BRE). Evidence of compliance with BREEAM requirements is required. This must be provided to a licensed assessor, who will produce and submit their report to the BRE. The report and associated evidence is then subject to the BRE's Quality Assurance process

2.2 COSTS OF CERTIFICATION

At the time of writing, the costs of registration for a project of 3,000m^2 under this scheme are as follows:

Registration:	£250
Design Interim Certification:	£1450
Post Construction Final Certification:	£550
Total:	**£2,250**

The above costs do not include for consultancy and assessor services required to manage BREEAM documentation and support the team throughout the process.

Furthermore, the costs are based on a project that is certified within 3 years of project registration, where this is not the case, the £550 Post Construction figure could increase. It does not allow for other fees the BRE may charge due to excessive technical queries, re-submission of QA reports, fast-tracking the QA report, or any other additional BRE service.

2.3 ACHIEVABLE BREEAM RATING

This BREEAM pre-assessment signifies the team's intention to target a BREEAM rating of Excellent (70%), and the team are committed to developing the BREEAM strategy as the project develops in order to achieve this rating upon completion of the project.

The current score that is being targeted is 74.9%. We would normally recommend that a 'buffer' of 5% is included above the threshold score, in order to provide a degree of safety if credits become unavailable as the project develops. This buffer is to be established by the project team when a more in depth BREEAM review can be carried out, to identify further achievable credits.

3 BREEAM SECTIONS

There are a variety of different issues that are assessed by BREEAM, that span over **10 sections - Management , Health & Wellbeing, Energy, Transport, Water, Materials, Waste. Land Use & Ecology, Pollution and Innovation.**

3.1 SECTION OVERVIEW

The BREEAM Standard is structured into 10 sections:

Management – This category encourages the adoption of sustainable management practices throughout all phases of the projects duration. Issues in this section focus on the integrating sustainable design through key stages from project conception to completion.

Health and Wellbeing – This category encourages designers to incorporate comfort, health and safety of the occupants and users of the building. The issues within the section aim to improve life quality within the building.

Energy – Within the energy section, BREEAM encourages energy efficient building solutions, systems and equipment. This is to support the sustainable use of energy, and associated management of energy during the buildings operation.

Transport – Encouraging access to sustainable transport for occupants influences the wider environment. There is a focus on accessibility of public transport and encouraging transport options that reduce car journeys, and hence congestion and emissions.

Water – The aim of this section is to encourage sustainable water use during the buildings operation. There is a focus on reducing water consumption through the specification of efficient features, as well minimising loss through leakage.

Materials – Reducing the impact of construction materials ensures they have a low embodied impact over their life cycle. The section also focuses on ensuring the materials are responsibly sourced.

Waste – Sustainable management of construction and operational waste encourages good design can optimise material reuse. Where materials cannot be re used, diverting them from landfill benefits the wider environment.

Land Use & Ecology – This section aims to encourage habitat protection and development. Improving the long term biodiversity of the site.

Pollution – Addressing the prevention and control of pollution and surface water run-off. These factors are influenced by reducing impacts on surrounding communities and environments from light pollution, noise, flooding and emissions.

Innovation – Bonus credits can be obtained under innovation where exemplary performance is demonstrated. The category supports innovation with sustainability related benefits which are not rewarded elsewhere.

3.2 BREEAM SCORING

The BREEAM rating benchmarks for projects assessed using the 2014 version of BREEAM UK New Construction are as follows:

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

3.3 MINIMUM STANDARDS

Within these sections, there are certain pre-requisites that need to be met – these are mandatory requirements for various BREEAM ratings. The mandatory requirements for each rating can be seen below:

Minimum Standard by BREEAM rating level					
BREEAM Issue	**Pass**	**Good**	**Very Good**	**Excellent**	**Outstanding**
MAN 03: Responsible Construction Practices				One Credit (Considerate Construction)	Two Credits (Considerate Construction)
MAN 04: Commissioning and Handover	None	None	None	Building User Guide	Building User Guide
MAN 05: Aftercare	None	None	None	Seasonal Commissioning	Seasonal Commissioning
ENE 01: Reduction of energy use and carbon emissions	None	None	None	Five Credits (out of 12)	Eight Credits (out of 12)
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 (out of 5)	One Credit (out of 5)	One Credit (out of 5)	Two Credits (out of 5)
WAT 02: Water Monitoring	None	Mains Water Meter (Pulsed)	Mains Water Meter (Pulsed)	Mains Water Meter (Pulsed)	Mains Water Meter (Pulsed)
MAT 03: Responsible Sourcing of Materials	Legally Sourced Timber	Legally Sourced Timber	Legally Sourced Timber	Legally Sourced Timber	Legally Sourced Timber
WST 01: Construction Waste Management	None	None	None	None	One Credit (out of 4)
WST 03: Operational Waste	None	None	None	One Credit (out of 1)	One Credit (out of 1)
LE 03: Minimising Impact on existing site ecology	None	None	One Credit (out of 2)	One Credit (out of 2)	One Credit (out of 2)

4 CONCLUSION

This pre-assessment illustrates the score and rating that is believed to be feasible under the BREEAM UK New Construction 2014 method of assessment. A score of 74.9% has been established as possible given the site and current design concept.

Formal assessment and certification of the ratings requires submission of design stage and post construction reports to the BRE. The aim would be too submit the interim design report at the end of RIBA Stage 4, and for the final construction report to be submitted during RIBA Stage 6.

- We would normally recommend that a 5% buffer is included within the target score, giving protection against any credits that may become unachievable as the design develops. This allows the project to maximise chances of certification at both the interim design, and final construction stages of assessment.
- With that in mind, discussion with the design team has identified additional credits that are feasible, so a buffer of 7.3% over the target rating has been established.

The BREEAM scorecard produced at pre-assessment and at planning submittal demonstrates that an overall BREEAM rating of 74.9% is being targeted, with all the mandatory requirements met. This thus meets and exceeds the BREEAM: Excellent threshold of 70% with a buffer of 4.9% currently in place.

Disclaimer:
To provide an overview of BREEAM requirements this report extensively references and paraphrases content from the BREEAM® UK Refurbishment and Fit-Out 2014 Copyright© by BRE Global Ltd 2014. BREEAM® is a registered trademark of BRE Global Ltd 2014.

All images and BREEAM text are the property of their respective rights holders.

This BREEAM pre-assessment in no way forms a guarantee of a final BREEAM rating, that is subject to assessment by a licensed assessor, and the BRE's quality assurance processes.

5 APPENDIX

5.1 APPENDIX A – BREEAM SUMMARY PRE-ASSESSMENT

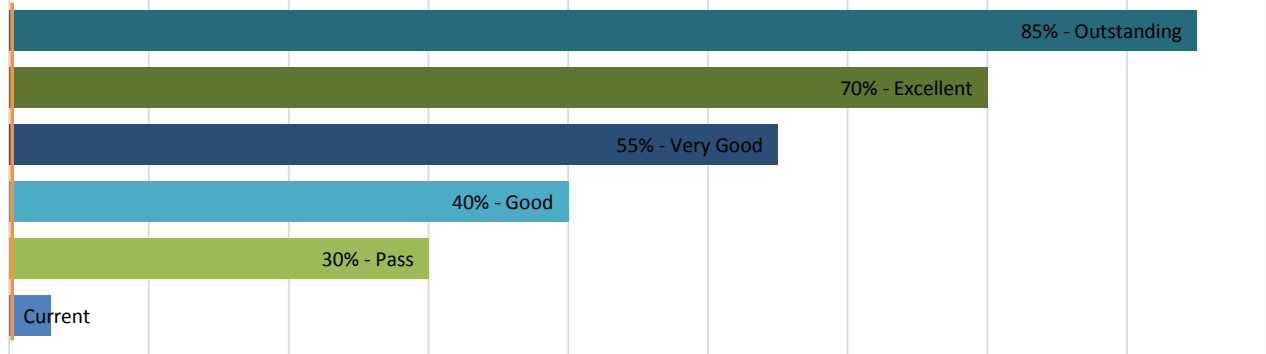
48 CHURCHWAY (OFFICE)
BREEAM 2 PAGE SUMMARY

Project Name	48 Churchway
Date	30/08/2018
Achieved Score	3.00%
Current Rating	No Rating
Required Score	70%
Target Score	75.01%
Target Rating	Excellent
Current Stage	Pre Assessment
Service	ASSESS
Version	BREEAM 2014 NC 5.0

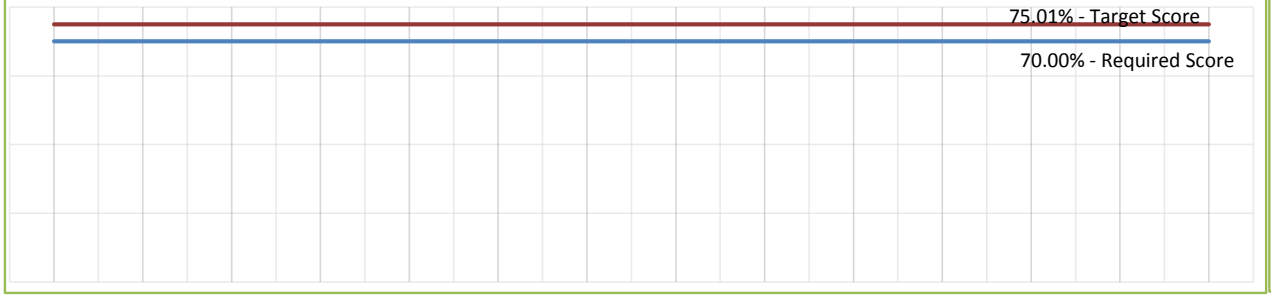
Summary Update:
This 2 page summary will be used through the duration of the project in order to keep the team informed of their responsibilities, and how the BREEAM assessment of the project is progressing.

As we are only at the initial pre-assessment stage, there is very little to report with regard to progression. However, this summary (Along with the corresponding credit tracker) provides the basis of the pre-assessment, and the credits that are targeted within this.

Where aiming for Excellent, we would recommend targetting a score of at least 75% in order to provide a buffer against any credits that may become unavailable as the process and design develops



Upcoming Deadlines:
Evidence Deadline -
Design Stage Submission -
PC Evidence Deadline - unknown.
PCSA Submission - unknown.



Your Assessor:
Ben Pratt
ben.pratt@
dar.com
T: 0203 697 3000
74 Wigmore Street
London
W1U 2SQ

Remaining Actions:
- Architect
- Project Manager
- Planners
- Client
- Structural Eng
- Elementa
- Cost Consultant

Minimum Standards

Credit	Pass	Good	V.Good	Excellent	O'Stding	Achieved	Credits
MAN 03: Responsible Construction Practices	-	-	-	1	1	no	-
MAN 04: Commissioning and Handover	-	-	-	1	1	no	-
MAN 05: Aftercare	-	-	-	1	1	no	-
ENE 01: Reduction of Carbon and Energy Emissions	-	-	-	5	8	no	-
ENE 02: Energy Monitoring	-	-	1	1	1	no	-
WAT 01: Water Consumption	-	1	1	1	2	no	-
WAT 02: Water Monitoring	-	req.	req.	req.	req.	no	-
MAT 03: Responsible Sourcing of Materials	-	req.	req.	req.	req.	no	-
WST 01: Construction Waste Management	-	-	-	-	1	-	-
WST 03: Operational Waste	-	-	-	1	1	no	-
LE 03: Minimising Impact on Existing Site Ecology	-	-	1	1	1	no	-

If the minimum standards are not met, the project WILL NOT achieve the desired rating.
With current mininmum standards, the building would NOT achieve a rating.

Key Issues At This Time

Credit	Issue Summary	%	Summary Potential Action	Responsibility
1	MAN 01 – Project Brief and Design		Undertake stakeholder consultations before end of RIBA Stage 2	Client / PM
2	MAN 01 – Project Brief and Design		Appoint BREEAM AP before end of RIBA Stage 2?	Client / PM
3	MAN 02 – Life Cycle Cost and service life planning		Confirm LCC analysis will not be undertaken	PM/ QS
4	HEA 06 – Safety and Security		Engage with SBD consultant before end of RIBA Stage 2	PM / Architect
5	ENE 04 – Low Carbon Design		Complete LCZ & Passive Design Study before end of RIBA Stage 2	Elementa
6	WAT 04 - Water Efficient Equipment		Irrigation system to be installed for external landscaping?	Architect
7	WST 05 – Adaption to Climate Change		Complete climate change analysis before end of RIBA Stage 2	Elementa
8	WST 06 – Functional Adaptability		Complete functional adaptability study before end of RIBA Stage 2	Elementa
9	LE02-05 - Ecology Credits		Confirm Ecologist will provide BREEAM evidence for these credits	Architect
10	LE 04 – Enhancing Site Ecology		Appoint Ecologist before end of RIBA Stage 1/2	PM / Architect
11	POL01 - Impact of Refrigerants		Confirm performance level of refrigerants	Elementa

Total % Loss if Key Issues Are Not Resolved: 0.00%
Target Score Minus Key Issues: 75.01%
Target Rating Minus Key Issues: Good

The above is not an exhaustive list and focuses on actions that are critical during this phase of the project. For a full list of actions, please refer to the action tracker that has been provided alongside this summary.

The ratings stated are predicted, not guaranteed, and are subject to the provision of required evidence by the responsible party and also the BRE's quality assurance process.

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48 CHURCHWAY
BREEAM 2014 NEW CONSTRUCTION: OFFICE

P18-XX8
48 Churchway
Pre Assessment / Strategy
30/08/2018

MANDATORY CREDIT FOR TARGET SCORE
POTENTIAL CREDIT
DESIGN STAGE EVIDENCE SUFFICIENT TO AWARD CREDIT
CREDIT NOT APPLICABLE TO PROJECT DESIGN SCHEME

Target Rating		Excellent		70%							
BREEAM 2014 ASSESSED ISSUES	Sub- issues	Title	Available Credits	Credits Targeted	%/Credit	Score	Issue Summary	Role	Design Stage Evidence	Due Date	Notes
MAN 01 – Project Brief and Design	1	Stakeholder Consultation (project delivery)	1	1	0.57%	0.57%	Developer/Architect to provide minutes of RIBA Stage 2 meeting minutes or otherwise) where all roles engaged discussed their role in delivering a BREEAM rating. Schedule of roles and responsibilities for each party required as evidence.	PM /ARCHITECT	1. Client Brief / Basis of Design 2. Project Execution Plan 3. Meeting Minutes 4. Organisation Chart	End RIBA Stage 2	
MAN 01 – Project Brief and Design	2	Stakeholder Consultation (third party)	1	1	0.57%	0.57%	Relevant third party stakeholders have been consulted by the design team with the minimum consultation content by end of RIBA Stage 2, and the team must demonstrate how their contributions have influenced the initial project brief and design. Consultation feedback must be given to, and received by all relevant third parties.	PM / ARCHITECT	1. Consultation plan setting out the process and scope of the consultation 2. List of consultees 3. Evidence of incorporation of feedback into design	End RIBA Stage 4	
MAN 01 – Project Brief and Design	3	Sustainability Champion (design)	1	0	0.57%	0.00%	Appointment of Sustainability Champion by RIBA Stage 1/2 to attend key meetings at every stage of design construction and handover. Target score set today must be achieved both at the Design (interim) and Construction (final) stage Assessments.	PM / BREEAM AP	1. Letter of Appointment 2. Meeting Minutes 3. BREEAM AP reports	End RIBA Stage 2	BREEAM AP could be appointed - needs to be done by RIBA Stage 2
MAN 01 – Project Brief and Design	4	Sustainability Champion (Monitoring Progress)	1	0	0.57%	0.00%	Sustainability Champion is appointed by RIBA Stage 1/2 to monitor progress during design against the agreed BREEAM performance targets, and formally report progress to the design and client team.	PM / BREEAM AP	1. Letter of Appointment 2. Meeting Minutes 3. BREEAM Targets 4. BREEAM AP reports	End RIBA Stage 2	BREEAM AP could be appointed - needs to be done by RIBA Stage 3
MAN 02 – Life Cycle Cost and service life planning	1	Elemental Life Cycle Cost (LCC)	2	0	0.57%	0.00%	An elemental life cycle cost analysis has been carried out at Process stage 2 (RIBA Stage 2) in line with 'Standardised method for life cycle costing for construction procurement PD 156865:2008)	COST CONSULTANT	1. Letter of Appointment 2. Elemental LCC Report	End RIBA Stage 2	PM advsied too costly and credit discounted
MAN 02 – Life Cycle Cost and service life planning	2	Component Level LCC plan	1	0	0.57%	0.00%	Component level LCC plan developed by Process stage 4 (RIBA Stage 4) in line with PD 156865:2008 and includes envelope, services, finishes and external spaces. This must be used to influence building systems design/sepcification and examples of this must be provided	COST CONSULTANT	1. Letter of Appointment 2. Component LCC Report	End RIBA Stage 4	PM advsied too costly and credit discounted
MAN 02 – Life Cycle Cost and service life planning	3	Capital Cost Reporting	1	1	0.57%	0.57%	Report the capital cost for the building in pounds per square metre (£/m^2)	COST CONSULTANT	1. Letter from Client/PM confirming that cost will be reported at PCR Stage	End RIBA Stage 4	PM to get letter from client confirming commitment to share costs
MAN 03 – Responsible Construction Practices	0	Timber Pre-Req.	-	1	-	-	All timber products to be 'legally harvested and traded timber'.	ARCHITECT	1. A specification or letter of intent from the design team confirming that all timber will be procured in accordance with the policy.	End RIBA Stage 4	
MAN 03 – Responsible Construction Practices	1	Environmental Management	1	1	0.57%	0.57%	Principal contractor to hold ISO14001 or equivalent EMS and PPG6 compliant procedures on dust and spills.	CONTRACTOR	1. Copy of contractor EMS certificate 2. Copy of contractor site environmental procedures (CEMP)	End RIBA Stage 4	
MAN 03 – Responsible Construction Practices	2	Sustainability Champion (Construction)	1	0	0.57%	0.00%	Appointment of a 'Sustainability Champion' to monitor the project to ensure ongoing compliance with the BREEAM targets during construction, handover and close out. Monitoring must be done sufficently to ensure risks of non compliance are minimised.	PM / CONTRACTOR	1. Letter of Appointment	End RIBA Stage 4	BREEAM AP/SSM to be appointed by Contractor
MAN 03 – Responsible Construction Practices	3	Considerate Construction	2	2	0.57%	1.14%	Prelims to confirm requirement for main contractor to register site with CCS and commit to score. - One credit: a CCS score between 25 and 34 - Two credits: a CCS score between 35 and 39 - Exemplary level performance: a CCS score of 40	CONTRACTOR	1. Letter from PM confirming contractor will register with CCS and target a score of 36+	End RIBA Stage 4	1 credit is mandatory for BREEAM: Excellent
MAN 03 – Responsible Construction Practices	4	Monitoring of construction site impacts - Utility consumption	1	1	0.57%	0.57%	Confirm requirement for main contractor to set KPI targets for energy and water use for all on-site construction processes. Responsibility assigned to an individual for monitoring, recording and reporting this data	CONTRACTOR	1. Letter from PM confirming contractor will set KPI targets & assign person to record	End RIBA Stage 4	
MAN 03 – Responsible Construction Practices	5	Monitoring of construction site impacts - Transport of construction materials and waste	1	1	0.57%	0.57%	Monitoring and recording of data on all site transport movements. Particularly, deliveries to the site, and waste removal from the site. Total fuel consumption (litres) and total CO2 emissions (kgCO2 eq.) must be reported	CONTRACTOR	1. Letter from PM confirming contractor will set KPI tragets & assign person to record	End RIBA Stage 4	
MAN 04 – Commissioning and Handover	1	Commissioning schedule and responsibilities	1	1	0.57%	0.57%	Schedule of commissioning and testing to be provided, and that appropriate standards will be followed (Building regs, CIBSE, BSRIA, and/or other appropriate standards. An appropriate team member is to monitor and programme, pre commissioning, commissioning and re-commissioning if necessary.	PM/CONTRACTOR	1. Schedule of commissioning & testing 2. Letter from PM confirming appropriate standards will be followed	End RIBA Stage 4	
MAN 04 – Commissioning and Handover	2	Comissioning Building Services	1	1	0.57%	0.57%	Specialist Commissioning Manager Appointment for complex building systems and services, is appointed during the design stage.	CONTRACTOR/ Elementa	1. Letter of Appointment 2. Commissioning manager CV 3. Reports	End RIBA Stage 4	
MAN 04 – Commissioning and Handover	3	Comissioning Building Fabric	1	0	0.57%	0.00%	Conduction of a thermographic survey, with defects rectified accordingly.	CONTRACTOR / ARCHITECT	1. Letter from PM confirming thermographic survey & air tightness tests will be undertaken	End RIBA Stage 4	Cost associated with work
MAN 04 – Commissioning and Handover	4	Handover	1	1	0.57%	0.57%	Provision of non-technical Building User Guide and an additional schedule of training which includes; the buildings design intent, availble aftercare provision, introduction.demonstration of installed systems and key features, introduction to BUG and other relevant documentation, maintenance requirements.	CONTRACTOR	1. Letter from PM confirming contractor to provide BUG and trainining to Client FM staff	End RIBA Stage 4	
MAN 05 - Aftercare	1	Aftercare Support	1	1	0.57%	0.57%	Post Occupancy Evaluation (programmed aftercare and quarterly analysis of operational energy and water consumption).	PM/ Contractor	1. Letter from PM confirming there is (or will be) operational infrastructure and resources in place to provide aftercare support to the building occupier	End RIBA Stage 4	ensure 'soft landing' period within contract from contractor. Client to provide confirmation letter
MAN 05 - Aftercare	2	Seasonal Comissioning	1	1	0.57%	0.57%	Seasonal Commissioning over 12 months from occupation,	PM/ Elementa	1. Letter from PM confirming Seasonal Commisioning will be carried out over a 12 month period once building is occupied	End RIBA Stage 4	Elementa agreed to undertake?
MAN 05 - Aftercare	3	Post Occupancy Evaluation	1	1	0.57%	0.57%	Post Occupancy Evaluation one year after occupation - a review of design intent and construction process. Information dissemination of the buildings performance post-occupancy	PM/CLIENT	1. Letter from PM confirming POE 1-year after occupation will be carried out	End RIBA Stage 4	Client to provide confirmation letter
HEA 01 – Visual Comfort	1	Glare Control	1	1	0.88%	0.88%	Potential for disabling glare has been designed out of all relevant building areas using a glare control strategy (e.g. the specification of blinds on all glazed areas within the building) that also avoids increasing lighting energy consumption	ARCHITECT	1. Specification showing that the building occupant controlled blinds (if chosen route) will have a transmittance value of <0.1 (10%) 2. Solar analysis to show where needed 3. Site plans/Design drawings	End RIBA Stage 4	Blinds to be provided throughout
HEA 01 – Visual Comfort	2	Daylighting	2	1	0.88%	0.88%	The relevant building areas meet good practice daylight factor(s) of: Average daylight factor required being 2%, Minimum area (m2) to comply being 80%, A uniformity ratio of at least 0.3, room depth criterion d/w +d/HW < 2/(1-RB), OR The relevant building areas meet good practice average and minimum point daylight illuminance criteria of: 80% of space achieves Average daylight illuminance (averaged over entire space)of at least 200 lux for 2650 hours per year or more, and Minimum daylight illuminance at worst lit point ofaAt least 60 lux for 2650 hours per year or more	ARCHITECT / ELEMENTA	1. Design drawings 2. Daylight calculations	End RIBA Stage 4	Daylight analysis being undertaken - does not mean that credits can be achieved, though..
HEA 01 – Visual Comfort	3	View Out	1	1	0.88%	0.88%	95% of floor area to be within 7m of area with window, where the window is at least 20% of the surrounding wall area. Where the room is > 7m in depth, refer to table 1.0 in BS 8206.	ARCHITECT	1. Design drawings 2. Relevant section/clauses of the building specification 3. Window schedule	End RIBA Stage 4	Analyse floor plates to see if achievable
HEA 01 – Visual Comfort	4	Internal and External lighting levels, zoning and control	1	1	0.88%	0.88%	Zoning control - Internal lighting should be zoned for the relevant areas present in the building. External lighting - All lighting should be designed in accordance with BS 5489-1:2013 and BS EN 12464-2:201 Internal Lighting - All fluorescent and compact fluorescent lamps are fitted with high frequency ballasts. Designed in accordance with CIBSE lighting guide	ELEMENTA	1. Relevant section/clauses of the building specification 2. Evidence of zoning 3. Drawings showing the lighting controls and lighting zones that meet criteria	End RIBA Stage 4	
HEA 02 – Indoor Air Quality	1	Indoor Air Quality Plan	1	0	0.88%	0.00%	Indoor Air Quality plan to be produced to influence design/installation actions that minimised indoor air pollution during occupation. It must include; 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.	ARCHITECT / ELEMENTA	1. Indoor Air Quality Plan 2. Relevant section/clauses of the building specification	End RIBA Stage 4	Elementa to advise on costs
HEA 02 – Indoor Air Quality	2	Ventilation	1	0	0.88%	0.00%	For a mechanically ventilated building, Buildings are intakes and exhausts to be at least 10m apart, and all intakes to be at least 20m from sources of external pollution. For a naturally ventilated building, intakes must be 10m from sources of external pollution.	ELEMENTA	1. Maps to prove distance from pollution sources	End RIBA Stage 4	Unlikely to be achieved in central London as roads are so close to building intakes
HEA 02 – Indoor Air Quality	3	Volatile Organic Compound emission levels (products)	1	1	0.88%	0.88%	All decorative paints and varnishes to meet the criteria of BREEAM 2014 Table-18, and at least five of the seven remaining product categories listed in Table - 18 meet the testing requirements and emission levels criteria for VOC emissions	ARCHITECT	1. Paint/varnish Specificationss 2. Filled in HEA02 Proforma 3. Site plans showing where items to be applied 4. Letter from PM confirming that contractor will choose items that meet specs	End RIBA Stage 4	Within product / material specification?
HEA 02 – Indoor Air Quality	4	Volatile Organic Compound emission levels (post construction)	1	0	0.88%	0.00%	VOC levels (formaldehyde, total volatile organic compound) tested post construction (and pre-occupancy) and shown to meet BREEAM criteria	CONTRACTOR	1. Letter from PM confirming that post construction VOC testing to meet BREEAM criteria will take place	End RIBA Stage 4	Requirement for contractor to target at post-construction stage?
HEA 02 – Indoor Air Quality	5	Potential for Natural Ventilation	1	0	0.88%	0.00%	Room depths to be designed in accordance with CIBSE AM10. The openable window area = 5% of the gross internal floor area of that room/floor plate. The natural vent strategy should enable sufficent cross flow to maintain thermal comfort and ventilation. Windows are to provided two forms of opening that are user controlled.	ARCHITECT / ELEMENTA	1. Drawings / calculations	End RIBA Stage 4	to be achieved room windows to be openable with cross flow
HEA 04 – Thermal Comfort	1	Thermal Modelling	1	1	0.88%	0.88%	Thermal model to be conducted with CIBSE AM11 compliant software, which demonstrates that: - For air conditioned buildings, summer and winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design - For naturally ventilated/free running buildings Winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A	ELEMENTA	1. Relevant section/clauses of the building specification or correspondence (e.g. letter, email or meeting minutes) from design team 2. Thermal modelling results 3. TOR data from the design team 4. Confirmation compliant with CIBSE 11	End RIBA Stage 4	Outside of Elementa SOW, but can be done at additional cost.
HEA 04 – Thermal Comfort	2	Adaptability for a project climate change scenario	1	0	0.88%	0.00%	Thermal modelling demonstrates that the relevant requirements are achieved for a projected climate change environment. Where thermal comfort criteria are not met for the projected climate change environment, the project team demonstrates how the building has been adapted, or designed to be easily adapted in future using passive design solutions	ELEMENTA	1. Thermal model showing adapatability for climate change scenarios	End RIBA Stage 4	Outside of Elementa SOW, but can be done at additional cost.
HEA 04 – Thermal Comfort	3	Thermal Zoning and Controls	1	1	0.88%	0.88%	Heating strategy to have acceptable zones within the building, that can efficently heat and cool individual areas. The heating strategy should address both the above, and the levels of user control, based on discussions with the end user.	ELEMENTA	1. Thermal comfort strategy highlighting the points that have been considered and decisions taken accordingly 2. Design drawings that show the thermal zoning in the building with documentation showing that the Client / End User has been consulted on control.	End RIBA Stage 4	
HEA 05 – Acoustic Performance	1	Acoustic Performance	3	2	0.88%	1.76%	The building meets appropriate acoustic standards and testing requirements with regards to sound insulation, indoor ambient noise level, reverberation times set out in Section 7 of BS 8233:2014. (See Table 21 of HEA05)	ARCHITECT / ACOUSTIC CONSULTANT	1. Professional report / study and calculations from the acoustician. 2. Letter of appointment or other confirmation demonstrating when the acoustician was appointed. 3. Relevant section/clauses of the building specification or contract and/or formal letter from the project team regarding commitments	End RIBA Stage 4	Acoustic consultant to confirm scope of spec - can we get 3rd credit

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48 CHURCHWAY
BREEAM 2014 NEW CONSTRUCTION: OFFICE

P18-XX8
48 Churchway
Pre Assessment / Strategy
30/08/2018

MANDATORY CREDIT FOR TARGET SCORE
POTENTIAL CREDIT
DESIGN STAGE EVIDENCE SUFFICIENT TO AWARD CREDIT
CREDIT NOT APPLICABLE TO PROJECT DESIGN SCHEME

Target Rating	Excellent			70%							
BREEAM 2014 ASSESSED ISSUES	Sub- issues	Title	Available Credits	Credits Targeted	%/Credit	Score	Issue Summary	Role	Design Stage Evidence	Due Date	Notes
HEA 06 – Safety and Security	1	Safe Access	1	1	0.88%	0.88%	Providing 'safe' access to the entrance to the building within the sites boundary. i.e. walkway lighting, cycle lanes to storage, zebra crossings, lowered kerbs, etc.	ARCHITECT	1. Design drawings (including a scaled site plan). 2. Relevant sections of the specification highlighting all necessary compliant features and dimensions.	End RIBA Stage 4	
HEA 06 – Safety and Security	2	Security of Site and Building	1	1	0.88%	0.88%	Liaise with Secured by Design consultation prior to end of RIBA Stage 2. Adoption of recommendations regarding security from suitably qualified security consultant/ALO/CPDA	ARCHITECT	1. Correspondence from or a copy of the report/feedback from the SBD Consultant confirming: a.Scope of their advice/involvement b.The stage of design in which their advice was sought c.Summary of their recommendationst 2. Design drawings showing recommendations included	End RIBA Stage 2	could be a challenge
ENE 01 – Reduction of Energy Use and Carbon Emissions	1	Energy Performance	12	7	0.65%	4.57%	To obtain these credits, a copy of the submissions to Building Control (BRUKL) and an ENE 01 compliance checker is required. BREEAM Excellent requires 5-7 credits (EPRnc value of 0.375 - 0.525)	ELEMENTA	1. A copy of the Building Regulations Output Document from the approved software. 2.Confirmation that output documents based on the "As designed" stage of analysis. 3. A print-out of the results from the BREEAM New Construction 2014 Ene01 Compliance Checker website containing the ID number and EPRs generated by the Checker for the project.	End RIBA Stage 4	5 credits is mandatory for BREEAM: Excellent
ENE 02 – Energy Monitoring	1	Sub-Metering of major energy consuming systems	1	1	0.65%	0.65%	Energy monitoring systems must be in place that enable at least 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems. The system that is used for this, is dependant on the floor area of the building; Where floor area is >1000m^2 it should be monitored through a BEMS. For a smaller building, pulsed sub meters can be used. The end energy consuming uses are identifiable to the building users (labelling or data outputs)	ELEMENTA	1. Relevant section/clauses of the building specification. 2. Design drawings that show each monitored sub-system clearly highlighted with specification that shows compliance with the credits.	End RIBA Stage 4	
ENE 02 – Energy Monitoring	2	Sub-metering of high energy load and tenancy areas	1	1	0.65%	0.65%	Direct energy sub-metering by tenancy areas. (Not applicable to pre-schools, primary schools, courts, prisions, multi-resi)	ELEMENTA	1. Relevant section/clauses of the building specification. 2. Design drawings that show each monitored sub-system clearly highlighted with specification that shows compliance with the credits.	End RIBA Stage 4	
ENE 03 – External Lighting	1	External Lighting	1	1	0.65%	0.65%	The building has been designed to operate without the need for external lighting (which includes on the building, signs and at entrances).OR The average Initial luminous efficacy of external lighting >=60Lumens/Watt. All external light fittings are automatically controlled for prevention of use in daylight hours, and PIR systems are used in areas of intermittent pedestrian traffic	ARCHITECT/ELEMENTA	1. Drawings and Specification of External Lighting and control system used that either show No External Lighting (easiest), or light fitting efficacy, or Light Fittings and control system.	End RIBA Stage 4	Architect to confirm if external lighting meets luminous efficacy requirements and do not come on in daylight hours
ENE 04 – Low Carbon Design	1	Passive Design Analysis	1	1	0.65%	0.65%	Analysis (by end of RIBA Stage 2) conducted to identify opportunities to implement passive design solutions, and reduce demands for energy consuming building services. Passive design measures should be used to reduce the total mechanical and electrical energy consumption, and the analysis is to show a meaningful reduction. The first credit within issue Hea 04: Thermal Comfort has been achieved	ELEMENTA	1. The passive design study report. . 2. Design drawings or relevant section/clauses of the building specification showing passive design feature specified	End RIBA Stage 2	
ENE 04 – Low Carbon Design	2	Free Cooling	1	0	0.65%	0.00%	Passive Design Analysis to include an analysis of free cooling and identifies opportunities to implement it. The building must then use one of the BREEAM listed free cooling methods (e.g. night-time cooling, displacement ventilation, absorption cooling, etc)	ELEMENTA	1. Correspondence from the building services engineer summarising the 'purpose designed' free cooling strategy. 2.The results from a dynamic simulation model demonstrating the feasibility of the free cooling strategy.	End RIBA Stage 2	Unknown if any of these methods can be implemented
ENE 04 – Low Carbon Design	3	LZC Feasibility Study	1	1	0.65%	0.65%	LZC Feasibility Study (by end of RIBA Stage 2) which reccomends a suitable LZC technology for the site, the reccomended technology must then be specified for the building, which results in a meaningful reduction in CO2 emissions (ie the installation should contribute at least 5% of overall building energy demand and/or CO2 emissions.)	ELEMENTA	1. The feasibility study report. 2. CV of energy specialist who did report 3. Design drawings / specification showing LCZ design specified	End RIBA Stage 2	
ENE 06 - Energy Efficent Transportation Systems	1	Energy Consumption	1	1	0.65%	0.65%	Transportation analysis to determine optimum size and number of lifts, as a part of this, energy consumptions are estimated in accordance with BS EN ISO 25745, for at least two types of system, an arrangement of systems or a fit for purpose strategy. Transportation system with lowest consumption should be specified, as should regenerative drives where practicle.	VERTICAL TRANSPORT CONSULTANT	1. Lift Analysis Report which shows the transport demand and energy consumption compared to two types of systems 2. Energy calculations	End RIBA Stage 4	
ENE 06 - Energy Efficent Transportation Systems	2	Energy Efficient Features	2	2	0.65%	1.30%	Three energy efficient features, as listed in BREEAM to be specified as a part of the lift: - The lifts operate in a standby condition during off-peak periods. - Lift car/display lighting average lamp efficacyof > 55 lamp lumens/circuit Watt. - Lift uses a drive controller capable of variable speed, variable-voltage, and variable-frequency control of the drive motor. Where regenerative drives would provide an energy saving, they are specified.	VERTICAL TRANSPORT CONSULTANT	1. Manufacturer specifications of features 2. Drawings of locations	End RIBA Stage 4	
ENE 08 - Energy Efficent Equipment	1	Energy Efficent Equipment	2	2	0.65%	1.30%	Identify the systems and/or processes that use a significant proportion of the total annual unregulated energy consumption of the development and its operation. Demonstrate a meaningful reduction (a percentage justified by the design team) in the total annual unregulated energy consumption of the building (e.g. automatic covers for swimming pool & All small power/plug in equipment to be 'energy star' rated, OR procured in accordance with the Government Buying Standards)	ARCHITECT / CLIENT	1. Relevant section/clauses of the building specification or contract 2. Manufacturers product details 3. Design drawings and/or calculations 4. Life cycle analysis report/documentation and details of how this has informed the procurement 5. Documentation detailing the fit for purpose exercise and subsequent option selection.	End RIBA Stage 4	potential as may bring over old gear
TRA 01 - Public Tansport Accessibility	1	Public Transport Accessibility	3	3	1.00%	3.00%	Dependant on public transport facilities in local area, with compliant nodes including any bus service with a stop within 650m and any railway station within 1000m of the assessed building's main entrance, measured via a safe pedestrian route	ARCHITECT	1. Scale map highlighting the location of the building and all public transport nodes in proximity of the building. 2. Timetables for each service at each public transport node considered. 3. The calculated Accessibility Index for the building.	End RIBA Stage 4	PTAL out put of '6B' for site address (NW1 1LJ). This provides an Accessibility Index (AI) score of 85.27 - exceeding the minimum score (8) that the building type needs to achieve maximum points (3)
TRA 02 - Proximity to Amenities	1	Proximity to local amenities	1	1	1.00%	1.00%	Food Outlet/Cash Point/Sports facility (2 of) within 500m and an option of one other outdoor space/postal facility/community facility/pharmacy within 500m. Map to show this via. a safe walking route.	ARCHITECT	1. Marked-up site plan or map highlighting: a.Location of assessed building b.Location and type of amenities c.The route to the amenities d.Plan/map scale	End RIBA Stage 4	
TRA 03 - Cyclist Facilities	1	Cycle Storage	1	1	1.00%	1.00%	An office building with 300 users would be required to provide the following number of cycle storage spaces: 1-200 users @ 1 space per 10 users = 20 spaces 201-300 users @ 1 space per 15 users (standard unit of measure x 1.5) = 7 spaces Total compliant cycle storage spaces required = 27 spaces	ARCHITECT / TRANSPORT CONSULTANT	1. Design drawings and/or relevant section/clauses of the building specification 2. The location and size of the storage facilities 3. Assumptions and calculations used to determine number of public users.	End RIBA Stage 4	Requirement of London Plan to provide cycle storage and facilities for staff?
TRA 03 - Cyclist Facilities	2	Cyclist Facilities	1	1	1.00%	1.00%	At least 2 of the compliant cyclist facilities have been provided (Showers, Changing facilities, lockers, drying spaces). Showers - Provision of one shower for every 10 cycle storage spaces, subject to a minimum provision of one shower. Any building providing 8 showers or more will comply regardless of the number of cycle storage spaces. Lockers - The number of lockers is at least equal to the number of cycle spaces required. Changing areas - Appropriately sized for the likely/required number of users	ARCHITECT	1. Drawings showing the two of the types of cycle facilities (shower, changing facilities, lockers, drying spaces) 2. calculation of number of facilities based on occupants	End RIBA Stage 4	
TRA 04 - Maximum Car Parking Capacity	1	Maximum Car Parking Capacity	2	2	1.00%	2.00%	The building's car parking capacity is compared to the maximum car parking capacity benchmarks in Table 33 (which for office is a Max. parking capacity of 1 space per 6 building users)	TRANSPORT CONSULTANT	1. a completed copy of Tra 01 calculator confirming the building's Accessibility Index. 2. building's car parking capacity and maximum car parking capacity allowed under BREEAM. 3. Drawings / plans showing car parking	End RIBA Stage 4	Minimal if any parking so easy credit
TRA 05 - Travel Plan	1	Travel Plan	1	1	1.00%	1.00%	Travel plan developed as a part of the feasibility and design stages, structured to meet the needs of the particular site, and should cover the BREEAM list of requirements.	TRANSPORT CONSULTANT	1. A copy of the Travel Plan. 2. A copy of the site-specific transport survey/assessment.	End RIBA Stage 4	
WAT 01 – Water Consumption	1	Water Consumption	5	3	0.88%	2.63%	Efficency levels of WC's, Urinals, Taps, Showers, Baths, Dishwashers and Washing Machines required. - Improvement scores needed are 12.5% (1 credit); 25% (2 credits); 40% (3 credits); 50% (4 credits); 55% (5 credits)	ARCHITECT	1.Completed copy of the BREEAM Wat 01 calculator 2. Relevant section/clauses of the specification/ design drawings confirming technical details of; a.Sanitary components b.Rainwater and greywater collection system	End RIBA Stage 4	1 credit is mandatory for BREEAM: Excellent. If specify correct products, could score higher
WAT 02 – Water Monitoring	1	Water Monitoring	1	1	0.88%	0.88%	Pulsed output water meter on all incoming mains supplies. Areas that consume >10% of the developments water should be sub metered with a pulsed output.	ELEMENTA	1. Specification and drawings (schematic preferred) of water meter that shows that main meter and sub-meters	End RIBA Stage 4	
WAT 03 – Leak Detection	1	Leak Detection System	1	0	0.88%	0.00%	Major Leak Detection from mains water supply too internal meter (audible when activated to notify a member of the buildings management)	ELEMENTA	1. Relevant section/clauses of the building specification of leak detection system that meets the BREEAM criteria 2. Design drawings 3. Manufacturers product details	End RIBA Stage 4	Client to advise
WAT 03 – Leak Detection	2	Flow Control Devices	1	1	0.88%	0.88%	Specification of solenoids (or otherwise) to regulate water supply to WC areas according to demand	ELEMENTA	1. Specification and drawings (schematic preferred) that shows the flow control devices that will be installed	End RIBA Stage 4	
WAT 04 – Water Efficient Equipment	1	Water Efficient Equipment	1	0	0.88%	0.00%	Reduce unregulated water consumption (e.g. equipment used for irrigation and vehicle wash plant/equipment) by encouraging specification of water efficient equipment. Achieve a meaningful reduction in the total water demand of the building.	ARCHITECT / ELEMENTA	1. Documentation detailing the planting and irrigation strategy 2. Relevant section/clauses of the building specification or contract AND/OR design drawings (where necessary) 3. Manufacturers product details	End RIBA Stage 4	Credit not being targeted as no irrigation requirements as no landscaping?
MAT 01 - Life Cycle Impacts	1	Life cycle impact of main building elements	5	3	1.04%	3.12%	Credits awarded based on project life cycle assessment - 10% (1 point); 30% (2 points); 50% (3 points); 65% (4 points); 75% (5 point); 85% (6 points); OR Elemental assessment of environmental performance information - 10% (1 point); 40% (2 points); 60% (3 points); 75% (4 points); Elements to be assessed include: external walls, roof, structural frame, electrics, lifts, toilets, internal walls, doors, hard landscaping, etc	ARCHITECT / QS	1. Specification providing a detailed description of each applicable element and its constituent materials specification. 2. Design drawings or specification detailing the location and area (m2) of each applicable element. 3. A copy of the output from the BREEAM Mat 01 calculator, including Green Guide rating and element number for each specification assessed. 4. And if relevant: a.Copies of Environmental Product Declarations b.A link/reference to the EPD's Product Category Rules c.Online Green Guide calculator output d.Environmental Profile certificate(s) (or certificate number)	End RIBA Stage 4	Architect experience from previous projects suggested that 1 out of 6 credits was most feasible score at this stage

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48 CHURCHWAY
BREEAM 2014 NEW CONSTRUCTION: OFFICE

P18-XX8
48 Churchway
Pre Assessment / Strategy
30/08/2018

MANDATORY CREDIT FOR TARGET SCORE
POTENTIAL CREDIT
DESIGN STAGE EVIDENCE SUFFICIENT TO AWARD CREDIT
CREDIT NOT APPLICABLE TO PROJECT DESIGN SCHEME

Target Rating		Excellent		70%							
BREEAM 2014 ASSESSED ISSUES	Sub- issues	Title	Available Credits	Credits Targeted	%/Credit	Score	Issue Summary	Role	Design Stage Evidence	Due Date	Notes
MAT 02 – Hard Landscaping and Boundary Protection	1	Hard Landscaping and Boundary Protection	1	1	1.04%	1.04%	80% of all boundary protection and hard landscaping in the construction zone to have an A or A+ rating from the Green Guide	LANDSCAPE ARCHITECT	1. Relevant section/clauses of the building specification and/or design drawings and calculations confirming: a.A detailed description of each applicable element and its constituent materials. b.Location and area (m2) of each applicable element. 2. The Green Guide rating and element number for the assessed specifications	End RIBA Stage 4	
MAT 03 - Responsible Sourcing of Materials	0	Timber Pre-Req.	-	1	1.04%	-	All timber products to be 'legally harvested and traded timber'.	ARCHITECT	1. A specification or letter of intent from the design team confirming that all timber will be procured in accordance with the policy.	End RIBA Stage 4	
MAT 03 - Responsible Sourcing of Materials	1	Sustainable Procurement Plan	1	1	1.04%	1.04%	Principal contractor sources materials in accordance with a documented sustainable procurement plan, that sets out a clear framework for responsible sourcing.	CONTRACTOR	1. Provide Sustainable Procurement Plan with prelims that indicate that contractor will source material as documented	End RIBA Stage 4	
MAT 03 - Responsible Sourcing of Materials	2	Responsible Sourcing of Materials	3	1	1.04%	1.04%	Up to three credits can be awarded for responsible sourcing where applicable building materials are sourced in accordance with the BREEAM methodology (manufacturer/suppliers with EMS; Materials with BS certificates; FSC wood certificate, etc) - ≥ 54% (3 credits); ≥ 36% (2 credits); ≥ 18% (1 credit)	ARCHITECT	1. Design plan and/or specification confirming: a.The building elements. b.Details of the materials specification for each element. 2. A copy of the output from the BREEAM Mat 03 calculator 3.A letter of intent from the design team or other detailed documentary evidence confirming the product shall be sourced from suppliers capable of providing certification to the level required for the particular tier claimed	End RIBA Stage 4	
MAT 04 – Insulation	1	Embodied Impact	1	1	1.04%	1.04%	All new insulation specified (external walls, ground floor, roof, building servies) to be highly efficient, with an insulation index > 2.5 Total volume of insulation used (m3)/thermal conductivity (W/m.K) = insulation index	ARCHITECT / ELEMENTA	1. Design drawings & relevant section of the building specification confirming: a.The location of insulating materials. b.The area (m2) and thickness (m) or volume (m3) of insulation specified. 2. Manufacturer's technical details confirming thickness & thermal conductivity of the insulating materials specified. 3. A copy of the output from the BREEAM Mat 04 calculator. 4. The Green Guide rating and element number for the assessed insulation specifications.	End RIBA Stage 4	
MAT 05 – Designing for Durability and Resilience	1	Protecting vulnerable parts of the building from damage & protecting exposed parts of the building from material degradation	1	1	1.04%	1.04%	The building incorporates suitable durability and protection measures to prevent damage to vulnerable parts of the internal and external building and landscaping Environmental factors have been identified that are relevant to the site location and existing building elements have been surveyed to identify impacts of material degradation effects including an assessment to grade the severity of any degradation effects. Design and specification measures have been developed to repair and protect existing elements according to the severity of any degradation effects.	ARCHITECT	1. Design drawings illustrating vulnerable areas/parts of the building. 2. Design drawings and/or relevant section/clauses of the building specification or contract confirming the durability measures specified.	End RIBA Stage 4	Severe Duty Corridor walls/lobbies, easy-clean hard-wearing floors, kick plates, external protection to the building façade where required (within 1m of vehicular movement/2m for delivery areas).
MAT 06 - Material Efficiency	1	Material Efficacy	1	0	1.04%	0.00%	Optimisation of materials in building design, procurement, construction, maintenance and enf of life.This carried out at RIBA stages; preparation and brief, concept design, developed design, technical design, construction	ARCHITECT	Copies of reports undertaken at each RIBA Stage to highlight opportunities and measures taken to optimise the use of materials	End RIBA Stage 4	Needed to be started at RIBA Stage 0/1
WST 01 – Construction Waste Management	1	Construction Resource Efficiency	3	2	0.94%	1.89%	Undertake Pre-demolition Audit SWMP required with targets to reduce waste production and maximise recovery rates (1 credit) Amount of waste generated per 100m² (gross internal floor area) ≤ 13.3m² (1 credit); ≤ 7.5m² (2 credit); ≤ 3.4m² (3 credit)	CONTRACTOR	1. A copy of the compliant Site Waste Management Plan and where relevant, a copy of the pre-demolition audit 2. Relevant section/clauses of the building specification 3. A letter from the client/PM stating waste targets & requirement for contractor to have SWMP	End RIBA Stage 4	
WST 01 – Construction Waste Management	2	Diversion of Resources from Landfill	1	1	0.94%	0.94%	Diversion of Resources From Landfill - 70% of non demoliton, and 80 % demoltion (volume) to be diverted. (80%/90% respectively for tonnage)	CONTRACTOR	1. A letter from the client/PM stating waste targets & Commitment for contractor to adhere	End RIBA Stage 4	
WST 02 – Recycled Aggregates	1	Recycled Aggregates	1	0	0.94%	0.00%	Percentages of recycled aggregates. Structural Frame (15%), Bitumen etc (30%), Foundations (20%), Concrete Road (15%) - Pipe bedding (100%), Granular fill (100%).	ARCHITECT	N/A	End RIBA Stage 4	Not feasible for project?
WST 03 – Operational Waste	1	Operational Waste	1	1	0.94%	0.94%	2m^2 per 1000m^2 net floor area of space dedicated to the sepration and segregation of waste (this must be labelled, easily accessible for deposit and collection). Where organic waste is being stored, a water outlet is provided for cleaning.	ARCHITECT	1. Design drawings & relevant section/clauses of the building specification confirming provision and scope of dedicated facilities. 2. Project team meeting minutes / letter confirming likely building waste streams and indicative volumes.	End RIBA Stage 4	
WST 04 - Speculative Floor and Ceiling Finishes	1	Speculative Floor and Ceiling Finishes	1	1	0.94%	0.94%	1. For tenanted areas (where the future occupier is not known), prior to fit out, interior finishes have been installed in a show area (25%) only. Where the occupier is known, the occupant must have selected (or agreed to) the finishes.	ARCHITECT	1. Evidence (e.g. letter, owner specification) that occupant has selected (or agreed to) the specified interior finishes, OR that there have been no floor or ceiling finishes specified on this project. 2. Drawings showing location/type of speculative finishes	End RIBA Stage 4	Where the developer has not specified or installed any floor or ceiling finishes, the requirements are met (BRE Knowledge Base Reference KBCN00046)
WST 05 – Adaption to Climate Change	1	Adaption to climate change - structural and fabric resilience	1	1	0.94%	0.94%	Conduct a climate change adaption strategy appraisal for structural and fabric resilience by RIBA Stage 2, to identify and evaluate the impact from extreme weather due to climate change, that covers: hazard identification, hazard assessment, risk estimation, risk evaluation and risk management	ARCHITECT	1. The climate change adaptation strategy appraisal for structural and fabric resilience that shows measures taken to mitigate the impact of extreme weather conditions arising from climate change over the lifespan of the building.	End RIBA Stage 2	
WST 06 – Functional Adaptability	1	Functional Adaptability	1	1	0.94%	0.94%	A building-specific adaption strategy study has been undertaken by the client and DT by RIBA stage 2, which includes reccomendations for measures to be incorporated to facilitate future adaption.	ARCHITECT	1. A copy of the adaptation strategy report that shows study and recommendations 2. Drawings / specifications confirming incorporation of recommendations	End RIBA Stage 2	
LE 01 – Site Selection	1	Previously Occupied Land	1	1	1.00%	1.00%	Pre/Post Construction design drawings to show that 75% of the proposed developments footprint is on previously developed land	ARCHITECT	1. Design drawings (including existing site plan), report or site photographs confirming: a.Type and duration of previous land use. b.Area (m2) of previous land use. c.Proposed site plan showing Location and footprint (m2) of proposed development and temporary works.	End RIBA Stage 4	Project being built on greenfield site?
LE 01 – Site Selection	2	Contaminated Land	1	0	1.00%	0.00%	Contaminated land specialist deems the site to be affected by contamination. Specialist remediation plan is undertaken.	PM	N/A	End RIBA Stage 4	Credit not being targeted, unless ground surveys confirm contamination on site
LE 02 – Ecological Value of Site and Protection of Ecological Features	1	Ecological Value of site	1	1	1.00%	1.00%	Suitably Qualifed Ecologist determines that the land is of 'low ecological value'	ECOLOGIST	1. Ecologist's report highlighting information required in accordance with the Appendix F 'Relating Ecology Reports to BREEAM'. 2. Site photographs and specifications confirming presence, or otherwise, of features of ecological value.	End RIBA Stage 2	
LE 02 – Ecological Value of Site and Protection of Ecological Features	2	Protection of Ecological Features	1	1	1.00%	1.00%	All existing features of ecological value within the construction zone are to be protected in line with BS 42020:2013, and any other recommendations on protection from the ecologist	ARCHITECT / ECOLOGIST	1. Ecologist's report with Site photographs and specifications confirming presence, or otherwise, of features of ecological value and the protection measures specified.	End RIBA Stage 4	Ecological features may be nesting sites for bats/birds or trees in vicinity?
LE 03 – Minimising impact on existing site ecology	1	Change in Ecological Value	2	2	1.00%	2.00%	Ecologist to provide calculations that show the change in ecological value of the site is greater than or equal to 0 plant species.	ECOLOGIST	1. Design drawings including proposed and existing (pre-development) site plan/survey. 2.A completed copy of the BREEAM LE 03/LE 04 calculator 3.Ecologist's report highlighting information required in Appendix F 4. written confirmation from the client/design team detailing how the ecologist's recommendations will be implemented	End RIBA Stage 4	1 credit is mandatory for BREEAM: Excellent As minimal ecology on site, should be able to increase through bug boxes, planters, etc
LE 04 – Enhancing Site Ecology	1	Ecologists report and recommendations	1	1	1.00%	1.00%	Ecologist appointed to advise on ecology from RIBA stage 1, and their recommendations are for the enhancement of site ecology, have or will be implemented.	ARCHITECT / ECOLOGIST	1. Confirmation that ecologist meets SQE criteria 2. Letter of Appointment that SQE engaged at RIBA Stage 1 3.Ecologist's report highlighting information required in Appendix F 4. written confirmation from the client/design team detailing how the ecologist's recommendations will be implemented	End RIBA Stage 2	
LE 04 – Enhancing Site Ecology	2	Increase in Ecological Value	1	1	1.00%	1.00%	Increase in Ecological Value of 6 species	ARCHITECT / ECOLOGIST	1. Ecologist confirms that the increase in plant species has been calculated using the BREEAM LE 03/LE 04 calculator, using actual plant species numbers	End RIBA Stage 2	Unsure how much increase in ecological value is achievable until get feedback from landscape architect
LE 05 – Long Term Impact on Bio Diversity	1	Long Term Impact on Biodiversity	2	2	1.00%	2.00%	Suitably Qualified Ecologist is engaged prior to commencement of works on site A 5 year management plan is produced, to be handed over to the grounds maintenance staff, in accordance with BS 42020:2013, and 2 (1 point) or 4 (2 points) of the BREEAM additional measures are complied with. 1) contractor nominates a Biodiversity Champion with the authority to influence site activities 2) contractor trains the site workforce on how to protect site ecology 3) contractor records actions taken to protect biodiversity 4) A new ecologically valuable habitat appropriate to the local area is created 5) contractor programmes site works to minimise disturbance to wildlife	LANDSCAPE ARCHITECT	1. A letter from the client confirming a commitment to produce the management plan and its' scope. 2. Confirmation on which additional measures will be targeted and commitment to do so	End RIBA Stage 4	
POL 01 – Impact of Refrigerants	0	Refrigerant Pre-Req.	-	1	-	-	All systems (with electric compressors) must comply with requirements of BS EN 378:2008 (parts 2 and 3) and where refrigeration systems containing ammonia are installed, the Institute of Refrigeration Ammonia Refrigeration Systems Code of Practice	ELEMENTA	A copy of the specification clause or letter from the M&E engineer / system manufacturer confirming systems comply with the BS requirements	End RIBA Stage 4	
POL 01 – Impact of Refrigerants	1	Refrigerant Selection	2	1	0.77%	0.77%	Use of refrigerants: -Three credits would be awarded where the building does not require the use of refrigerants. - Two awarded where it has < 100 kgCO2/KW cooling/heating capacity. - One credit where <1000.	ELEMENTA	1. Documentary evidence confirming the absence of refrigerant in the development 2. A copy of the specification clause or letter from the M&E engineer / system manufacturer confirming relevant refrigeration type and system information. 3. A completed copy of the BREEAM Pol 01 Calculator.	End RIBA Stage 4	3 points for schools as nat vent
POL 01 – Impact of Refrigerants	2	Leak detection & pump down	1	0	0.77%	0.00%	Systems using refrigerants have a permanent automated refrigerant leak detection system installed that is capable of automatically isolating and containing the remaining refrigerant(s) charge in response to a leak detection incident	ELEMENTA	A copy of the specification clause or letter from the M&E engineer / system manufacturer confirming relevant leak detection sytem information.	End RIBA Stage 4	Not being installed on this project
POL 02 – NOx Emissions	1	NOx Emissions (heating)	3	3	0.77%	2.31%	Where the plant installed to meet the building's delivered heating and hot water demand has, under normal operating conditions, a NOx emission level of: ≤ 100 mg/kWh (1 credit); ≤ 70 mg/kWh (2 credit); ≤ 40 mg/kWh (3 credit);	ELEMENTA	1. Relevant section/clauses of the building specification stating boiler type 2. Manufacturer's product details. 3. Calculations from the project team	End RIBA Stage 4	Where the water heating can be demonstrated to be less than 10% of the building's total energy consumption, these credits can be awarded based solely on the NOx emissions from space heating.

48 CHURCHWAY
BREEAM 2014 NEW CONSTRUCTION: OFFICE

P18-XX8
48 Churchway
Pre Assessment / Strategy
30/08/2018

MANDATORY CREDIT FOR TARGET SCORE
POTENTIAL CREDIT
DESIGN STAGE EVIDENCE SUFFICIENT TO AWARD CREDIT
CREDIT NOT APPLICABLE TO PROJECT DESIGN SCHEME

Target Rating		Excellent		70%							
BREEAM 2014 ASSESSED ISSUES	**Sub- issues**	**Title**	**Available Credits**	**Credits Targeted**	**%/Credit**	**Score**	**Issue Summary**	**Role**	**Design Stage Evidence**	**Due Date**	**Notes**
POL 03 – Surface Water Run Off	1	Flood Risk	2	2	0.77%	1.54%	FRA undertaken to confirm that the site is in an area with a 'low annual probability of flooding' (in accordance with current best planning guidance)[must consider flooding from: rivers, tide, surface water, ground water, sewers and artificial sources.]	ARCHITECT	1. Flood risk assessment 2. Design drawings 3. Where appropriate, correspondence from the appropriate statutory body confirming reduced annual probability of flooding due to existing flood defences.	End RIBA Stage 4	
POL 03 – Surface Water Run Off	2	Surface Water Run-Off	2	1	0.77%	0.77%	An appropriate consultant is appointed to confirm that peak run off from the site to watercourses is no greater than it was pre development (1 credit). This should comply at the 1 in 100 year return period events. Maintenance responsibilities assigned for any SuDs solutions to improve surface run-off (2 credits). Calculations should include an allowance for climate change	STRUCTURAL CONSULTANT	1. Evidence from consultant confirming that they are qualified in line with the BREEAM definition. 2. Consultants report containing all information necessary to demonstrate compliance including. a.Type and storage volume (l) of the drainage measures b.Total area of hard surfaces (m2) c.Peak/Volume flow rates (l/s) pre and post development for the return period events d.Additional allowance for climate change designed in to the system e.Impact on the building of flooding from local drainage system failure	End RIBA Stage 4	No change in surface area?
POL 03 – Surface Water Run Off	3	Minimising water course pollution	1	0	0.77%	0.00%	There is no discharge from the site from the developed site for rainfall up to 5mm (confirmed by the appropriate consultant). A comprehensive and up to date drainage plan is made available, along with maintenance responsibilities for SuDs as above.	STRUCTURAL CONSULTANT	1. The consultants report detailing the design specifications, calculations and drawings to support the 5mm rainfall discharge criteria 2. Design drawings and/or relevant section/clauses of the building specification or contract indicating a.High and low risk areas of the site b.Specs of SUDS, source control systems, oil/petrol separators and shut-off valves 3.A letter from Project Team: a.Confirming water pollution prevention systems are designed in accordance with PPG3 & SUDS manual b.Outlining indicative examples of compliance with PPG3 & SUDS manual c.Confirming a copy of the drainage plan will be produced and handed over to the building occupier. d.Confirming design of all external storage and delivery areas is in compliance with relevant Pollution Prevention Guidance e.Outlining indicative examples of compliance with the PPG.	End RIBA Stage 4	Potential credit - confirm with structural engineer. PM to check on scope agreed with structural engineer
POL 04 – Reduction of Night Time Light Pollution	1	Reduction of Light Pollution	1	1	0.77%	0.77%	External lighting to be designed and installed in line with the Tables 2.0 of the ILP Guidance on avoiding obtrusive light. Lighting should be on a timer to turn off between 2300 and 0700. (Security lighting can be dimmed during this time in line with table 2.0 of the ILP guidance)	ARCHITECT	1. Design drawings 2.Relevant section/clauses of the building specification or external lighting design data/calculations 3.In the case of the external lighting design, the M&E engineer or lighting designer must provide indicative examples of where and how the strategy complies with the assessment criteria.	End RIBA Stage 4	
POL 05 – Noise Attenuation	1	Reduction of noise pollution	1	1	0.77%	0.77%	A suitably qualified acoustician is appointed to conduct a noise impact assessment in line with BS 7445, and determines the background noise and noise from the development. Noise levels should not exceed +5dB (day) and +3dB (night) compared to background noise levels.	ACOUSTIC CONSULTANT	1. Design drawings highlighting: a.All existing and proposed noise-sensitive buildings local to, and within, the site boundary b.Proposed sources of noise from the new development c.Distance (m) from these buildings to the assessed development. 2.The acoustician's report, acoustician's qualifications and professional status	End RIBA Stage 4	
INN: AI Approved Innovation	1	Innovation Approved by BRE Global	1	0	1.00%	0.00%	Innovation that is not listed but would be considered innovative by BRE				Credit not being targeted
INN: ENE 01 – Reduction of energy and carbon emissions	1	Zero regulated carbon / carbon negative	5	0	1.00%	0.00%	Zero Regulated Carbon / Carbon Negative				Credit not being targeted
INN: HEA 01 – Visual Comfort	1	Exemplary Level	1	0	1.00%	0.00%	Exemplary Daylighting				Credit not being targeted
INN: HEA 02 – Indoor Air Quality	1	VOC emissions (post construction): exemplary levels	2	0	1.00%	0.00%	Exemplary VOC levels	CONTRACTOR		End RIBA Stage 4	Credit not being targeted
INN: MAN 03 – Responsible Construction Practices	1	Considerate Construction	1	1	1.00%	1.00%	Exemplary performance on a compliant considerate construction scheme. i.e. CCS >40 with 7 in each category	CONTRACTOR	1. A formal letter of commitment from the client/developer that contractor chosen will be specified to achieve CCS Target	End RIBA Stage 4	Could be feasible if appropriate contractor engaged
INN: MAN 05 – Aftercare	1	Aftercare/Monitoring: 3 years	1	1	1.00%	1.00%	Aftercare/Monitoring - 3 years at quarterly intervals, including energy and water data collection, setting targets to improve, feedback and provision of annual energy, water and occupier satisfaction to BRE.	CLIENT	1. Evidence as for standard criteria (for data collection and aftercare support credit), but from the end user.	End RIBA Stage 4	Would recommend targeting for owner-occupier
INN: MAT 01 – Life Cycle Impacts	1	Green Guide to Specification	1	0	1.00%	0.00%	Exemplary performance of materials as per the Green Guide to Specification - OR Compliant life cycle assessment software tools (Whole building approach)				Credit not being targeted
INN: MAT 03 – Responsbile Sourcing	1	Exemplary Responsible Sourcing	1	0	1.00%	0.00%	Where at least 70% of the Responsible Sourcing points are achieved				Credit not being targeted
INN: WAT 01 – Water Consumption	1	Exemplary Levels	1	0	1.00%	0.00%	Exemplary Water consumption levels				Credit not being targeted
INN: WST 01 – Construction Waste Management	1	Resource Efficiency/Diversion of waste from landfill: Exemplary Performance	1	0	1.00%	0.00%	<=1.6 m^3 of waster per 100m^2 of gross internal floor area (=<1.9 tonnes per 100m^2) - Diversion from landfill of (volume) 85% non demolition, 85% demolition and 95% excavation waster (90%, 95%, 95% tonnage)				Credit not being targeted
INN: WST 02 – Recycled Aggregates	1	Recycled Aggregates, Exemplary Performance	1	0	1.00%	0.00%	Percentage of high grade aggregate that is recycled or secondary aggregate must meet exemplary levels. Cannot have travelled more than 30km by road.				Credit not being targeted
INN: WST 05 – Adaption to Climate Change	1	Responding to adapation to climate change	1	0	1.00%	0.00%	A holistic approach to the design and construction of the current buildings life cycle, to mitigate against the impacts of climate change. Demonstrate following exemplary criteria being met: • Hea04 - Criterion 7 achieved • Ene01 – 8 credits achieved • Ene04 – passive design credit achieved • Wat01 – 3 credits achieved • Mat05 – Criterion 2 achieved • Pol03: Flood Risk – 1 credit achieved • Pol03: Surface water runoff – 2 credits achieved	ARCHITECT		End RIBA Stage 4	Credit not being targeted

TARGET	
75.01%	Excellent
	Actual

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5.2 APPENDIX B – BREEAM PRE-ASSESSMENT (OFFICIAL)

BREEAM UK New Construction 2014 Pre-Assessment Estimator

General information

BRE Assessment reference no.	BREEAM-0073-5431
Client name	Moorgarth Living
Building end user/occupier	TBC
Assessor name	Ben Pratt
Assessor organisation	Dar

Building details

Building name	48 Churchway
Country	England
Building type (main description)	Office
Building type (sub-group)	Office - General office building
Building floor area (GIA) m^2	615
Building floor area (NIFA) m^2	410
BREEAM scheme	New Construction
BREEAM version	2014 (SD5076)
BREEAM UK 2014 technical manual issue number	SD5076 Issue 5.0
Project type	New Construction (Fully fitted)
Assessment stage	Pre-Assessment
Location type	London Borough
If applicable, does this industrial building have a heated or cooled operational area?	Option not applicable to building type
Does water heating contribute less than 10% of the buildings total energy consumption?	No
Commercial/industrial refrigeration and storage systems	No
Building user transportation systems (lifts and/or escalators)	Yes
Laboratory function/area and size category	No laboratory
Laboratory containment level	No laboratory
Fume cupboard(s) and/or other containment devices	No
Unregulated water uses present? (e.g. vehicle wash system, irrigation)	No
If applicable, will this healthcare building house inpatients?	Option not applicable to building type
If applicable, does this industrial building have an office area?	Option not applicable to building type
If applicable, does this building contain areas requiring SAP assessment?	Option not applicable to building type
If SAP used, what proportion of the building's total floor area (GIA) does it apply to?	Option not applicable to building type

BREEAM UK New Construction 2014 Pre-Assessment Estimator: Assessment Issue Scoring

Building name	48 Churchway
Building score (%)	74.90%
Building rating	Excellent
Minimum standards level achieved	Excellent level

MANAGEMENT

Man 01 Project brief and design

No. of BREEAM credits available	4	Available contribution to overall score	2.29%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will stakeholder consultation (project delivery) take place?	Yes	1	1
Will stakeholder consultation (third party) take place?	Yes	1	1
Will a sustainability champion (design) be assigned?	No	1	0
Will a sustainability champion (monitoring progress) be assigned?	No	1	0

Total BREEAM credits achieved	2
Total contribution to overall building score	1.14%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	N/A

Comments/notes:

Man 02 Life cycle cost and service life planning

No. of BREEAM credits available	4	Available contribution to overall score	2.29%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will an elemental life cycle cost (LCC)analyses be carried out?	No	2	0
Will a component level LCC plan be developed?	No	1	0
Will the predicted capital cost be reported?	Yes	1	1
Expected capital cost of the project (if available)		£/m^2	

Total BREEAM credits achieved	1
Total contribution to overall building score	0.57%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Man 03 Responsible construction practices

No. of BREEAM credits available	6	Available contribution to overall score	3.43%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Is all site timber used in the project 'legally harvested and traded timber'?	Yes		
Will/does the principal contractor operate a compliant Environmental Management System?	Yes	1	1
Will a construction stage sustainability champion be assigned?	No	1	0
Will a considerate construction scheme be used by the principal contractor? (One credit where 'compliance' has been achieved. Two credits where 'compliance' is significantly exceeded.)	2	2	2
Will construction site impacts be metered/monitored?	Yes		
Will site utility consumption be metered/monitored?	Yes	1	1
Will transport of construction materials and waste be metered/monitored?	Yes	1	1
Will exemplary level criteria be met?	Yes	1	1

Key Performance Indicators: Construction site energy use

Energy consumption (total) - site processes		Information not available at design stage
Energy consumption (intensity) - site processes		Information not available at design stage
Distance (total) - materials transport to site		Information not available at design stage
Distance (total) -waste transport from site		Information not available at design stage
Energy consumption (total) - materials transport to site		Information not available at design stage
Energy consumption (total) - waste transport from site		Information not available at design stage
Energy consumption (intensity) - materials transport to site		Information not available at design stage
Energy consumption (intensity) - waste transport from site		Information not available at design stage

Key Performance Indicators: Construction site greenhouse gas emissions

Process greenhouse gas emissions (total) - site processes		Information not available at design stage
Greenhouse gas emissions (intensity) - site processes		Information not available at design stage
Greenhouse gas emissions (total) - materials transport to site		Information not available at design stage
Greenhouse gas emissions (total) - waste transport from site		Information not available at design stage
Greenhouse gas emissions (intensity) - materials transport to site		Information not available at design stage
Greenhouse gas emissions (intensity) - waste transport from site		Information not available at design stage

Key Performance Indicators: Construction site use of freshwater resources

Use of freshwater resource (total) - site processes		Information not available at design stage
Use of freshwater resource (intensity) - site processes		Information not available at design stage

Total BREEAM credits achieved	5
Total contribution to overall building score	2.86%
Total BREEAM innovation credits achieved	1
Minimum standard(s) level	Outstanding level

Comments/notes:

Man 04 Commisioning and handover

No. of BREEAM credits available	4	Available contribution to overall score	2.29%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will commissioning schedule and responsibilities be developed & accounted for?	Yes	1	1
Will a commissioning manager be appointed?	Yes	1	1
Will the building fabric be commissioned?	No	1	0
Will a building user guide be developed prior to handover?	Yes	1	1
Will a training schedule be prepared for building occupiers/managers?	Yes		

Total BREEAM credits achieved	3
Total contribution to overall building score	1.71%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Comments/notes:

Man 05 Aftercare

No. of BREEAM credits available	3	Available contribution to overall score	1.71%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will aftercare support be provided to building occupiers?	Yes	1	1
Will seasonal commissioning occur over 12months once substantially occupied?	Yes	1	1
Will a post occupancy evaluation be carried out 1 year after occupation?	Yes	1	1
Will exemplary level criteria be met?	Yes	1	1

Total BREEAM credits achieved	3
Total contribution to overall building score	1.71%

Total BREEAM innovation credits achieved	1
Minimum standard(s) level	Outstanding level

Comments/notes:

HEALTH & WELLBEING

Hea 01 Visual Comfort

No. of BREEAM credits available	4	Available contribution to overall score	3.53%
No. of BREEAM innovation credits available	1	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will the design provide adequate glare control for building users?	Yes	1	1
How many credits will be targeted for the daylighting criteria?	1	1	1
Will the design provide adequate view out for building users?	Yes	1	1
Will internal/external lighting levels, zoning and controls be specified in accordance with the relevant CIBSE Guides/British Standards?	Yes	1	1
Will exemplary level criteria be met?	No	1	0

Total BREEAM credits achieved	4
Total contribution to overall building score	3.53%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	N/A

Comments/notes:

Hea 02 Indoor Air Quality

No. of BREEAM credits available	5	Available contribution to overall score	4.41%
No. of BREEAM innovation credits available	2	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will an indoor air quality (IAQ) plan be produced and building designed to minimise air pollution?	No	1	0
Will the building be designed to minimise the concentration and recirculation of pollutants in the building?	No	1	0

Will the relevant products be specified to meet the VOC testing and emission levels required?	Yes	1	1
Will formaldehyde and total VOC levels be measured post construction?	No	1	0
Will the building be designed to, or have the potential to provide, natural ventilation?	No	1	0
Will exemplary level criteria be met?	0	2	0

Key Performance Indicators: Indoor air quality

Concentration levels of formaldehyde	INA	Information not available at design stage
Total volatile organic compound (TVOC) concentration	INA	Information not available at design stage

Total BREEAM credits achieved	1
Total contribution to overall building score	0.88%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	N/A

Comments/notes:

Hea 03 Safe containment in laboratories

Assessment issue not applicable

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will an objective risk assessment of proposed laboratory facilities' design be completed?			
Will the manufacture & installation of fume cupboards and containment devices meet best practice standards?			
Will containment level 2 & 3 labs meet best practice safety & performance criteria?			

Total BREEAM credits achieved	N/A
Total contribution to overall building score	N/A
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Hea 04 Thermal comfort

No. of BREEAM credits available	3	Available contribution to overall score	2.65%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will thermal modelling of the design be carried out?	Yes	1	1
Will the building services system be adapted for a projected climate change scenario?	No	1	0
Will the modelling inform the development of a thermal zoning and control strategy?	Yes	1	1

Key Performance Indicators: Thermal comfort

Predicted Mean Vote (PMV)	
Predicted Percentage Dissatisfied (PPD)	

Total BREEAM credits achieved	2
Total contribution to overall building score	1.76%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Hea 05 Acoustic Performance

No. of BREEAM credits available	3	Available contribution to overall score	2.65%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Credits	Credits available	Credits achieved
Will the building meet the appropriate acoustic performance standards and testing requirements for: a. Sound insulation b. Indoor ambient noise level c. Reverberation times?	2	3	2

Total BREEAM credits achieved	2
Total contribution to overall building score	1.76%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Hea 06 Safety and Security

No. of BREEAM credits available	2	Available contribution to overall score	1.76%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Where external site areas are present, will safe access be designed for pedestrians and cyclists?	Yes	1	1
Will a suitably qualified security consultant be appointed and security considerations accounted for?	Yes	1	1

Total BREEAM credits achieved	2
Total contribution to overall building score	1.76%
Total BREEAM innovation credits achieved	N/A

Minimum standard(s) level	N/A

Comments/notes:

ENERGY

Ene 01 Reduction of energy use and carbon emissions

No. of BREEAM credits available	12	Available contribution to overall score	7.83%
No. of BREEAM innovation credits available	5	Minimum standards applicable	Yes

How do you wish to assess the number of BREEAM credits achieved for this issue?	Define a target number of BREEAM credits achieved
Select the target number of BREEAM credits for the Ene01 issue:	7

Ene 01 Calculator

Country of the UK where the building is located		Confirm building regulation and version to be used:	

New Construction (Fully fitted)

Building floor area		m2
Notional building heating and cooling energy demand		MJ/m2yr
Actual building heating and cooling energy demand		MJ/m2yr
Notional building primary energy consumption		kWh/m2yr
Actual building primary energy consumption		kWh/m2yr
Target emission rate (TER)		kgCO2/m2yr
Building emission rate (BER)		kgCO2/m2yr
Building emission rate improvement over TER		
Heating & cooling demand energy performance ratio (EPR_{ED})		
Primary consumption energy performance ratio (EPR_{PC})		
CO_2 Energy performance ratio (EPR_{CO2})		
Overall building energy performance ratio (EPR_{NC})		

Where specified, please confirm the energy production from onsite or near site energy generation technologies	
Equivalent % of the building's 'regulated' energy consumption generated by carbon neutral sources and used to meet energy demand from 'unregulated' building systems or processes?	
Is the building designed to be 'carbon negative' ?	
If the building is defined as 'carbon negative' what is the total (modelled) renewable/carbon neutral energy generated and exported?	

Total BREEAM credits achieved	7
Total contribution to overall building score	4.57%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Excellent level

Comments/notes:

Ene 02 Energy monitoring

No. of BREEAM credits available	2	Available contribution to overall score	1.30%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment criteria	Compliant?	Credits available	Credits achieved
Will a BMS or sub-meters be specified to monitor energy use from major building services systems?	Yes	1	1
Will a BMS or sub-meters be specified to monitor energy use by tenant/building function areas?	Yes	1	1

Total BREEAM credits achieved	2
Total contribution to overall building score	1.30%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Comments/notes:

Ene 03 External lighting

No. of BREEAM credits available	1	Available contribution to overall score	0.65%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment criteria	Compliant?	Credits available	Credits achieved
Will external light fittings and controls be specified in accordance with the BREEAM criteria?	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	0.65%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Ene 04 Low carbon design

No. of BREEAM credits available	3	Available contribution to overall score	1.96%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment criteria	Compliant?	Credits available	Credits achieved
Will passive design measures be used in line with an analysis carried out during concept design stage (RIBA stage 2 or equivalent)?	Yes	1	1
Will free cooling measures be implemented in the whole building in line with the passive design analysis?	No	1	0
Will a LZC technology be specified in line with a feasibility study carried out by the completion of the Concept Design stage (RIBA Stage 2 or equivalent)?	Yes	1	1

KPI - Low and/or zero carbon energy generation

Total on-site and/or near-site LZC energy generation	INA	kWh/yr

Total BREEAM credits achieved	2
Total contribution to overall building score	1.30%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Ene 05 Energy efficient cold storage

Assessment issue not applicable

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Assessment criteria	Compliant?	Credits available	Credits achieved

Will the refrigeration system be designed, installed & commissioned in accrodance with BREEAM criteria?	No	N/A	N/A
Will the refrigeration system demonstrate a saving in indirect greenhouse gas emissions?	No	N/A	N/A

Total BREEAM credits achieved	N/A
Total contribution to overall building score	N/A
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Ene 06 Energy efficient transportation systems

No. of BREEAM credits available	3	Available contribution to overall score	1.96%
No. of BREEAM innovation credits available	0	Minimum standards applicable	N/A

Assessment criteria	Compliant?	Credits available	Credits achieved
Will a transportation system analysis be carried out to determine and specify the optimum number, size and type of lifts that is most energy efficient?	Yes	1	1
Will the relevant energy-efficient features criteria be met?	Yes	2	2

Total BREEAM credits achieved	3
Total contribution to overall building score	1.96%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Ene 07 Energy efficient laboratory systems

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Assessment criteria	Compliant?	Credits available	Credits achieved
Pre-requisite: Criterion 1 of Hea 03 - risk assessment of laboratory facilities			
Have the occupants' laboratory requirements & performance criteria been confirmed during the preparation of the initial project brief to minimise energy demand?			
Best Practice Energy Practices in Laboratories (table 27)			
Will the laboratory meet criteria item b) Fan power?			
Will the laboratory criteria item c) Fume cupboard volume flow rates?			
Will the lab meet item d) Grouping / isolation of high filtration/ventilation activities?			
Will the laboratory meet criteria item e) Energy recovery - heat?			
Will the laboratory meet criteria item f) Energy recovery - cooling?			

Will the laboratory meet criteria item g) Grouping of cooling loads?	
Will the laboratory meet criteria item h) Free cooling?	
Will the laboratory meet criteria item i) Load responsiveness?	
Will the laboratory meet criteria item j) Cleanrooms?	
Will the laboratory meet criteria item k) Diversity?	
Will the laboratory meet criteria item l) Room air-change rates?	

Total BREEAM credits achieved	N/A
Total contribution to overall building score	N/A
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Ene 08 Energy efficient equipment

No. of BREEAM credits available	2	Available contribution to overall score	1.30%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment criteria

Which of the following will be present and likely to be a/the major contributor to 'unregulated' energy use?	Present	Major impact
Ref A Small power and plug in equipment?	Yes	Yes
Ref B Swimming pool?	No	
Ref C Communal laundry?	No	
Ref D Data centre?	No	
Ref E IT-intensive operation areas?	No	
Ref F Residential areas?	No	
Ref G Healthcare?	No	
Ref H Kitchen and catering facilities?	No	

	Compliant	Credits available	Credits achieved
Will the significant majority contributor(s) to 'unregulated' energy use above meet the BREEAM criteria?	Yes	2	2

Total BREEAM credits achieved	2
Total contribution to overall building score	1.30%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Ene 09 Drying space

Assessment issue not applicable

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Assessment criteria	Compliant?	Credits available	Credits achieved
Is there a risk of ligature for residents?			
Will internal/external drying space and fixings be provided?			

Total BREEAM credits achieved	N/A
Total contribution to overall building score	N/A
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

TRANSPORT

Tra 01 Public Transport Accessibility

No. of BREEAM credits available	3	Available contribution to overall score	3.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Building type category (for purpose of Tra01 issue assessment)	Business (office/industrial)

Assessment Criteria	Compliant	Credits available	Credits achieved
Indicative public transport accessibility index (AI):	85.73	3	3
Will the building have a dedicated bus service?			N/A

AI	Indicative Accessibility Index for pre-assessment
0	Poor or no public transport provision
1	A single BREEAM compliant public transport node available
2	Some BREEAM compliant public transport nodes/services available
4	A selection of BREEAM compliant public transport nodes/services available
8	Good provision of public transport i.e. small urban centre / suburban area
10	Very Good provision of public transport i.e. small/medium urban centre
12	Excellent provision of public transport, i.e. medium urban centre
18	Excellent provision of public transport, i.e. large urban/metropolitan city centre

Total BREEAM credits achieved	3
Total contribution to overall building score	3.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Tra 02 Proximity to Amenities

No. of BREEAM credits available	1	Available contribution to overall score	1.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will the building be in close proximity of and accessible to applicable amenities?	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	1.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Tra 03 Cyclist facilities

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Building type category (for purpose of Tra03 issue assessment)	Business - (office/Industrial)
How many compliant cycle storage spaces will be provided?	40
What cyclist facilities will be provided?	Showers and changing facilities and lockers

Assessment Criteria	Compliant?	Credits available	Credits achieved
Cycle storage spaces	Yes	2	2
Cyclist facilities	Yes		

Total BREEAM credits achieved	2
Total contribution to overall building score	2.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Tra 04 Maximum Car Parking Capacity

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Building type category (for purpose of Tra04 issue)	Business - (office/Industrial)
Building's indicative Accessibility Index (sourced from issue Tra01)	85.73

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will BREEAM's maximum parking capacity criteria for the building type/Accessibility Index be met?	Yes	2	2

Total BREEAM credits achieved	2
Total contribution to overall building score	2.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Tra 05 Travel Plan

No. of BREEAM credits available	1	Available contribution to overall score	1.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will a transport plan based on site specific travel survey/assessment be developed?	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	1.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

WATER

Wat 01 Water Consumption

No. of BREEAM credits available	5	Available contribution to overall score	4.38%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

How do you wish to assess the BREEAM credits to be achieved for this issue?	Define a target % improvement over baseline sanitary fittings
What is the target for % reduction in potable water consumption for sanitary use in the building?	40% - three credits
Please select the calculation procedure used	

Standard approach data

Water Consumption from building micro-components	

Water demand met via greywater/rainwater sources	
Total net water consumption	
Improvement on baseline performance	

Key Performance Indicator - use of freshwater resource

Total net Water Consumption	
Default building occupancy	

Alternative approach data

Overall microcomponent performance level achieved	

Total BREEAM credits achieved	3
Total contribution to overall building score	2.63%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Outstanding level

Comments/notes:

Wat 02 Water Monitoring

No. of BREEAM credits available	1	Available contribution to overall score	0.88%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will there be a water meter on the mains water supply to the building(s)?	Yes	1	1
Will metering/monitoring equipment be specified on the water supply to any relevant plant/building areas?	Yes		
Will all specified water meters have a pulsed output?	Yes		
If the site/building has an existing BMS connection, will all pulsed meters be connected to the BMS?	Yes		

Total BREEAM credits achieved	1
Total contribution to overall building score	0.88%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Comments/notes:

Wat 03 Water Leak Detection and Prevention

No. of BREEAM credits available	2	Available contribution to overall score	1.75%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will a mains water leak detection system be installed on the building's mains water supply?	No	1	0
Will flow control devices be installed in each sanitary area/facility?	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	0.88%
Total BREEAM innovation credits achieved	N/A

Minimum standard(s) level	N/A

Comments/notes:

Wat 04 Water Efficient Equipment

Assessment issue not applicable

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
Has a meaningful reduction in unregulated water demand been achieved?			

Total BREEAM credits achieved	N/A
Total contribution to overall building score	N/A
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

MATERIALS

Mat 01 Life Cycle Impacts

No. of BREEAM credits available	5	Available contribution to overall score	5.19%
No. of BREEAM innovation credits available	3	Minimum standards applicable	No

How do you wish to assess the number of BREEAM credits to be achieved for this issue?	Define the number of Mat 01 credits achieved

Assessment Criteria

Predicted total Mat01 credits achieved	3
Predicted total Mat01 points achieved	
Number of building elements assessed	
Green Guide exemplary level compliant?	
Has IMPACT compliant software been used?	

Key Performance Indicator - embodied green house gas emissions by element	Total area of element m^2	Total impact $kgCO_2$ eq.	Area of element impact data relevant to m^2
External walls			

Windows			
Roof			
Upper floor construction			
Internal wall			
Floor finishes/coverings			

Key Performance Indicator - embodied green house gas emissions for building (assessed elements only)

Total embodied green house gas emissions for building (by assessed elements)	Missing data	$kgCO_2$ eq.		$kgCO_2$ eq./m^2
Proportion of applicable building elements that data reported covers				

Total BREEAM credits achieved	3
Total contribution to overall building score	3.12%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	N/A

Comments/notes:

Mat 02 Hard Landscaping and Boundary Protection

No. of BREEAM credits available	1	Available contribution to overall score	1.04%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will ≥80% of all external hard landscaping and boundary protection achieve a Green Guide A or A+ rating?	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	1.04%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Mat 03 Responsible Sourcing

No. of BREEAM credits available	4	Available contribution to overall score	4.15%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria	Compliant	Credits available	Credits achieved
All timber and timber based products are 'Legally harvested and trader timber'	Yes		
Is there a documented sustainable procurement plan?	Yes	1	1
Percentage of available responsible sourcing of materials points achieved	25.00%	3	1

Please confirm the route used to assess Mat03	Route 3: Combination of routes

Total BREEAM credits achieved	2
Total contribution to overall building score	2.08%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Outstanding level

Comments/notes:

Mat 04 Insulation

No. of BREEAM credits available	1	Available contribution to overall score	1.04%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria		Credits available	Credits achieved	
What is the building's targeted insulating index?	2.50	1	1	Note: An insulatio

Total BREEAM credits achieved	1
Total contribution to overall building score	1.04%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Mat 05 Designing for durability and resilience

No. of BREEAM credits available	1	Available contribution to overall score	1.04%
No. of BREEAM innovation credits available	0	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will suitable durability/protection measures be specified and installed to vulnerable areas of the building?	Yes	1	1
Will suitable durability/protection measures be specified and installed to exposed parts of the building?	Yes		

Total BREEAM credits achieved	1
Total contribution to overall building score	1.04%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Mat 06 Material efficiency

No. of BREEAM credits available	1	Available contribution to overall score	1.04%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will material efficiency measures be identified & implemented during all RIBA stages?	No	1	0

Total BREEAM credits achieved	0
Total contribution to overall building score	0.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

WASTE

Wst 01 Construction Waste Management

No. of BREEAM credits available	4	Available contribution to overall score	3.78%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

How do you wish to assess the number of BREEAM credits to be achieved for this issue?	Define a target number of BREEAM credits		
Select the number of BREEAM credits being targeted for issue Wst 01:	3	BREEAM Wst01 Innovation credits:	

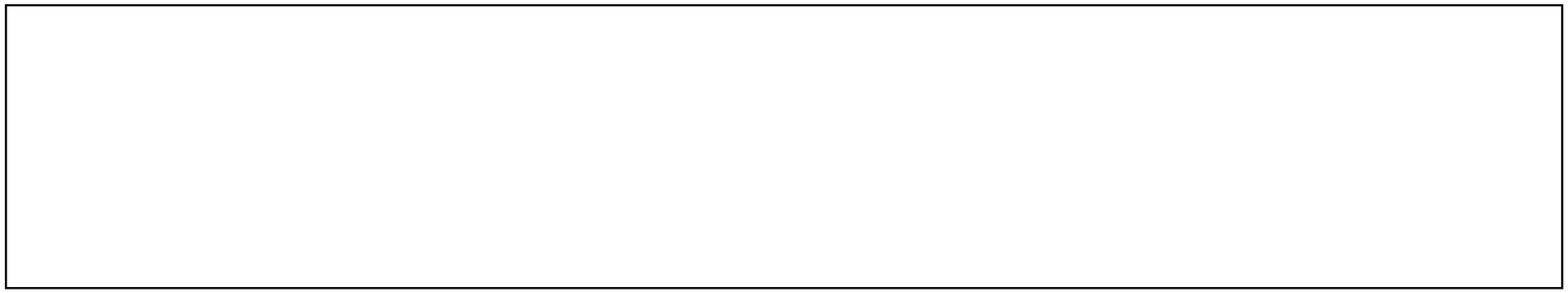
Assessment Criteria	Compliant?
Construction resource management plan	
Demolition Taking Place on Site?	
Compliant Pre-demolition audit	
Does the excavation waste meet the exemplary level requirements?	

Key Performance Indicators - Construction Waste

Measure/units for the data being reported		Please Select Unit	
Non-hazardous construction waste (excluding demolition/excavation)		Please Select Unit	
Total non-hazardous construction waste generated	INA	Please Select Unit	Note: At the pre-assessment stage this
Non-hazardous non-demolition const. waste diverted from landfill		%	Note: At this stage this will be a target b
Total non-hazardous non-demolition const. waste diverted from landfill	INA	Please Select Unit	Note: At the pre-assessment stage this
Total non-hazardous demolition waste generated		Please Select Unit	Note: At this stage this will be a target b
Non-hazardous demolition waste diverted from landfill		%	Note: At this stage this will be a target b
Total non-hazardous demolition waste to disposal	INA	Please Select Unit	Note: At the pre-assessment stage this
Material for reuse		Please Select Unit	Note: At this stage this will be a target b
Material for recycling		Please Select Unit	Note: At this stage this will be a target b
Material for energy recovery		Please Select Unit	Note: At this stage this will be a target b
Hazardous waste to disposal		Please Select Unit	Note: At this stage this will be a target b

Total BREEAM credits achieved	3
Total contribution to overall building score	2.83%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Outstanding level

Comments/notes:



Wst 02 Recycled Aggregates

No. of BREEAM credits available	1	Available contribution to overall score	0.94%
No. of BREEAM innovation credits available	1	Minimum standards applicable	No

Assessment Criteria	Total
What is the target total % of high-grade aggregate that will be recycled/secondary aggregate?	0%

% of high-grade aggregate that is recycled/secondary aggregate - by application

Structural frame	
Bitumen/hydraulically bound base, binder and surface courses	
Building foundations	
Concrete road surfaces	
Pipe bedding	
Granular fill and capping	

Total BREEAM credits achieved	0
Total contribution to overall building score	0.00%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	N/A

Comments/notes:

Wst 03 Operational Waste

No. of BREEAM credits available	1	Available contribution to overall score	0.94%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will operational recyclable waste volumes be segregated and stored?	Yes	1	1
Will static waste compactor(s) or baler(s) be specified where appropriate?	N/A		
Will vessel(s) for composting suitable organic waste where appropriate?	N/A		

Total BREEAM credits achieved	1
Total contribution to overall building score	0.94%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Comments/notes:

Wst 04 Speculative Floor and Ceiling Finishes

No. of BREEAM credits available	1	Available contribution to overall score	0.94%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
No speculative floor or ceiling finishes will be specified in the building	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	0.94%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Wst 05 Adaption to climate change

No. of BREEAM credits available	1	Available contribution to overall score	0.94%
No. of BREEAM innovation credits available	1	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will a climate change adaptation strategy appraisal for structural and fabric resilience be conducted by the end of Concept Design (RIBA Stage 2 or equivalent)?	Yes	1	1
Will exemplary level criteria – Responding to adaptation to climate change be met?	No	1	0

Total BREEAM credits achieved	1
Total contribution to overall building score	0.94%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	N/A

Comments/notes:

Wst 06 Functional adaptability

No. of BREEAM credits available	1	Available contribution to overall score	0.94%
No. of BREEAM innovation credits available	0	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will a building specific functional adaptation strategy appraisal be conducted by Concept Design (RIBA Stage 2 or equivalent) and will functional adaptation measures be implemented?	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	0.94%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

LAND USE & ECOLOGY

LE 01 Site Selection

No. of BREEAM credits available	2	Available contribution to overall score	2.00%

No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will at least 75% of the proposed development's footprint be located on previously occupied land?	Yes	1	1
Is the site deemed to be significantly contaminated?	No	1	0

Total BREEAM credits achieved	1
Total contribution to overall building score	1.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

LE 02 Ecological Value of Site and Protection of Ecological Features

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Ecological value of the land defined using	Please select

Assessment Criteria	Compliant?	Credits available	Credits achieved
Can the land within the construction zone be defined as 'land of low ecological value'?	Yes	1	1
Will all features of ecological value surrounding the construction zone/site boundary be protected?	Yes	1	1

Total BREEAM credits achieved	2
Total contribution to overall building score	2.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

LE 03 Mitigating Ecological Impact

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Data sourced for calculating the change in ecological value from	Suitably Qualified Ecologist site survey of plant species

Assessment Criteria

What is the likely change in ecological value as a result of the sites development?	≥0 species (i.e. no negative change)	Plant species richn

Total BREEAM credits achieved	2
Total contribution to overall building score	2.00%

Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Comments/notes:

LE 04 Enhancing Site Ecology

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved	
Will a suitably qualified ecologist be appointed to report on enhancing and protecting site ecology?	Yes	2	2	
Will the suitably qualified ecologist's general recommendations be implemented?	Yes			
What is the targeted/intended improvement in ecological value as a result of enhancement actions?	≥6 species (large positive change)			Plant species richr

Total BREEAM credits achieved	2
Total contribution to overall building score	2.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

LE 05 Long Term Impact on Biodiversity

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will a Suitably Qualified Ecologist be appointed to monitor/minimise impacts of site activities on biodiversity?	Yes	2	2
Will a landscape and habitat management plan be produced covering at least the first five years after project completion in accordance with British Standards?	Yes		
Number of applicable measures to improve biodiversity confirmed by SQE:	4		
Number of applicable measures implemented:	4		

Total BREEAM credits achieved	2

Total contribution to overall building score	2.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

POLLUTION

Pol 01 Impact of Refrigerants

No. of BREEAM credits available	3	Available contribution to overall score	2.31%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria		Credits available	Credits achieved
Refrigerant containing systems installed in the assessed building?	Yes	2	1
Do all systems (with electric compressors) comply with the requirements of BS EN 378:2008 (parts 2 & 3) & where refrigeration systems containing ammonia are installed, the IoR Ammonia Refrigeration Systems Code of Practice?	Yes		
Global Warming Potential of the specified refrigerant(s) 10 or less?	No		
What is the target range Direct Effect Life Cycle CO2eq. emissions for the system?	150	kgCO2eq/kW coolth capacity	
Cooling/Heating capacity of the system		kW	
Will a refrigerant leak detection and containment system be specified/installed?	No	1	0

Total BREEAM credits achieved	1
Total contribution to overall building score	0.77%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Pol 02 NO_x Emissions

No. of BREEAM credits available	3	Available contribution to overall score	2.31%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

NOx emission level - space heating	40.00	mg/kWh
NOx emission level - cooling	40.00	mg/kWh

NOx emission level - water heating	40.00	mg/kWh
Does this building meet BREEAM's definition of a highly insulated building?	Yes	
Energy consumption: heating and hot water		kWh/m2 yr

Total BREEAM credits achieved	3
Total contribution to overall building score	2.31%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Pol 03 Surface Water Run off

No. of BREEAM credits available	5	Available contribution to overall score	3.85%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
What is the actual/likely annual probability of flooding for the assessed site?	Low	2	2
Will a Flood Risk Assessment be undertaken?	Yes		
Will the site meet the BREEAM criteria for peak rate surface water run off?	Yes	1	1
Will the site meet the criteria for surface water run off volume, attenuation and/or limiting discharge?	No	1	0
Will the site be designed to minimise watercourse pollution in accordance with the BREEAM criteria?	No	1	0

Total BREEAM credits achieved	3
Total contribution to overall building score	2.31%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Pol 04 Reduction of Night Time Light Pollution

No. of BREEAM credits available	1	Available contribution to overall score	0.77%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Will the external lighting specification be designed to reduce light pollution?	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	0.77%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

Pol 05 Noise Attenuation

No. of BREEAM credits available	1	Available contribution to overall score	0.77%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant	Credits available	Credits achieved
Will there be noise-sensitive areas/buildings within 800m radius of the development?	Yes	1	1
Will a noise impact assessment be carried out and, if applicable, noise attenuation measures specified?	Yes		

Total BREEAM credits achieved	1
Total contribution to overall building score	0.77%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Comments/notes:

INNOVATION

Inn 01 Innovation

No. of BREEAM innovation credits available	10	Available contribution to overall score	10.00%
		Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Man 03 Responsible construction practices	Yes	1	1
Man 05 Aftercare	Yes	1	1
Hea 01 Visual Comfort	No	1	0
Hea 02 Indoor Air Quality	No	2	0
Ene 01 Reduction of energy use and carbon emissions	No	5	0
Wat 01 Water Consumption	No	1	0
Mat01 Life Cycle Impacts	No	3	0
Mat03 Responsible Sourcing of Materials	No	1	0

Wst01 Construction Waste Management	No	1	0
Wst02 Recycled Aggregates	No	1	0
Wst 05 Adaption to climate change	No	1	0

Number of 'approved' innovation credits achieved?	

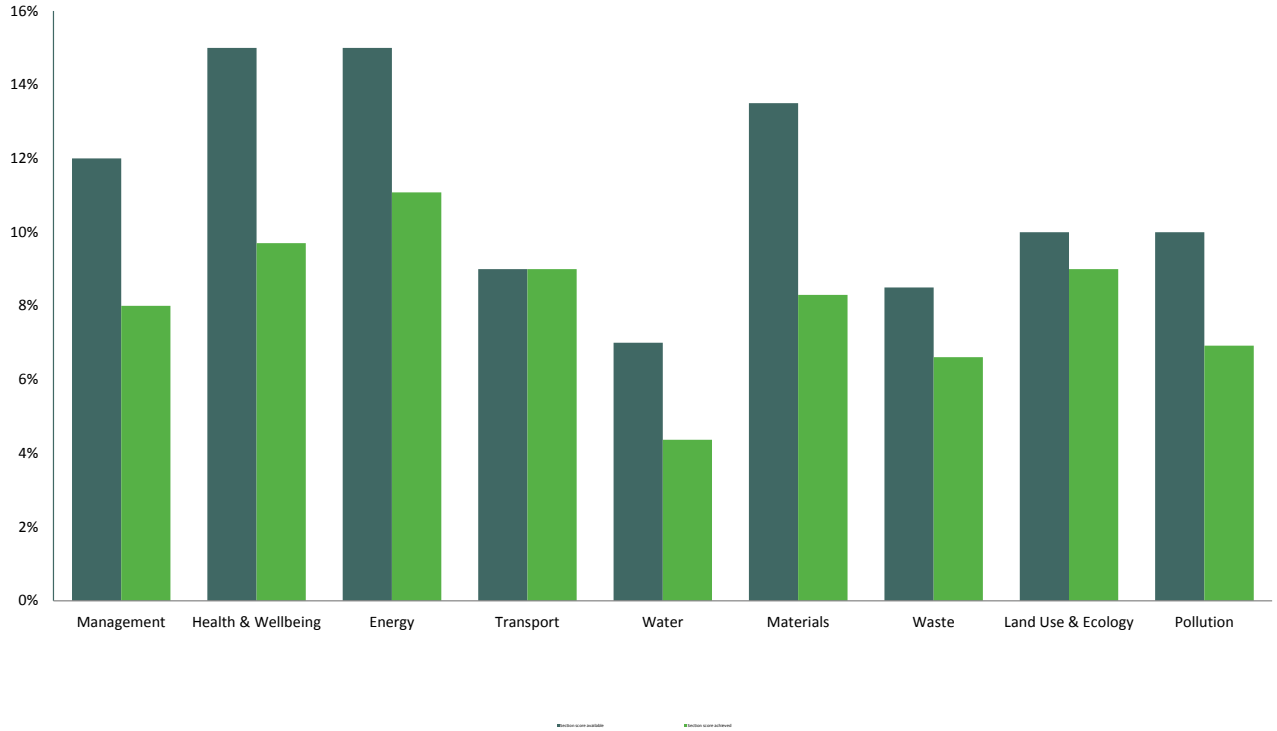
Total BREEAM innovation credits achieved	2
Total contribution to overall building score	2.00%
Minimum standard(s) level	N/A

Comments/notes:

Overall Building Performance

Building name	48 Churchway
Indicative BREEAM rating	Excellent
Indicative Total Score	74.9%
Min. standards level achieved	Excellent level

Building Performance by Environment Section



Environmental Section	No. credits available	Indicative no. credits Achieved	% credits achieved	Section Weighting	Indicative Section Score
Management	21	14	66.67%	12.00%	8.00%
Health & Wellbeing	17	11	64.71%	15.00%	9.70%
Energy	23	17	73.91%	15.00%	11.08%
Transport	9	9	100.00%	9.00%	9.00%
Water	8	5	62.50%	7.00%	4.37%
Materials	13	8	61.54%	13.50%	8.30%
Waste	9	7	77.78%	8.50%	6.61%
Land Use & Ecology	10	9	90.00%	10.00%	9.00%
Pollution	13	9	69.23%	10.00%	6.92%
Innovation	10	2	20.00%	N/A	2

BUILDING SERVICES & ENVIRONMENTAL ENGINEERS

DEEP GREEN ENGINEERING

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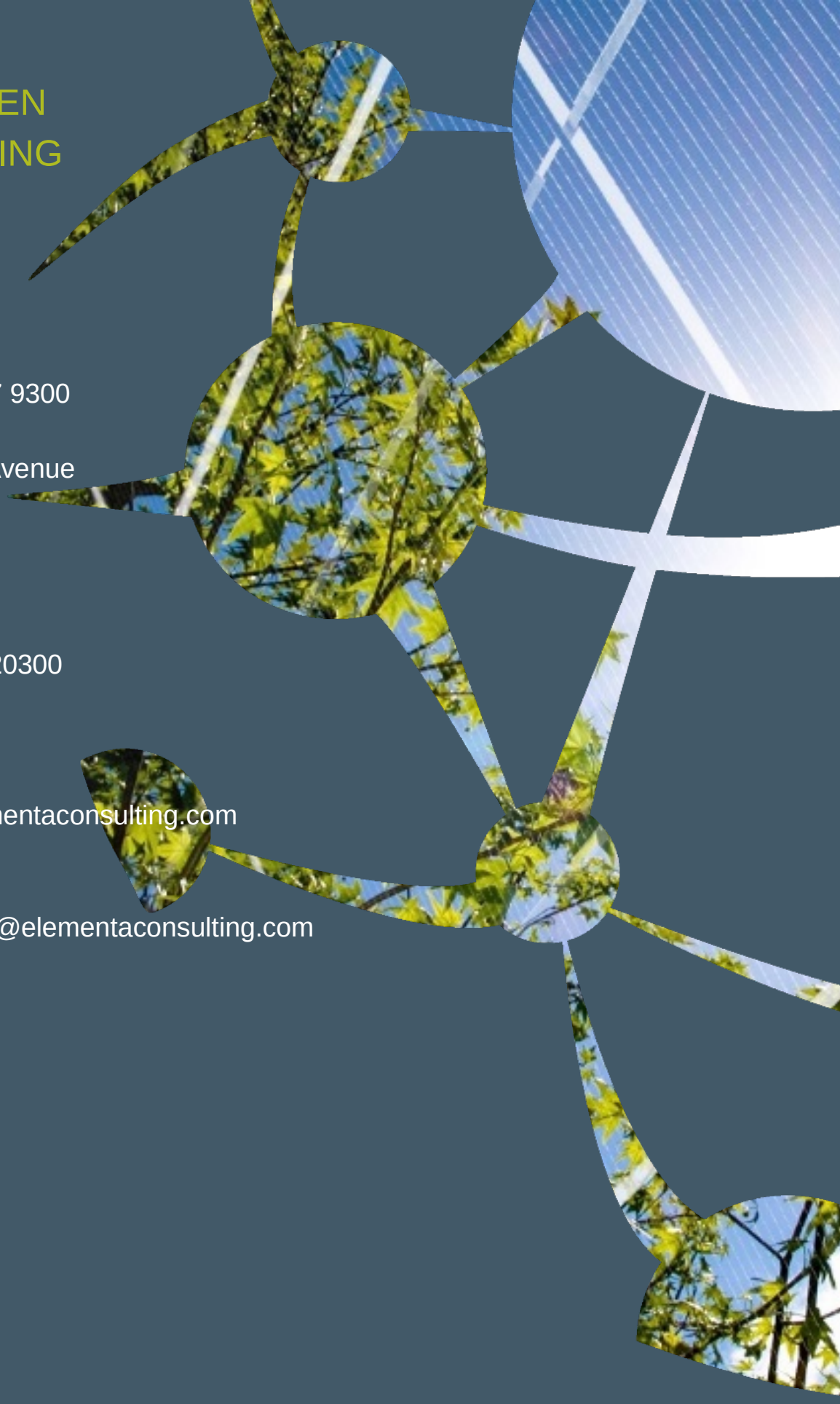

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