watkins payne
designed engineered focused

24 – 32 Stephenson Way, London

BREEAM (NC) 2014 Offices – 'Fully Fitted'

Pre-Assessment Report – Issue 1

Prepared for:
O&C Management

October 2017

BREEAM®

Prepared on behalf of Watkins Payne Partnership by

Name Jamie Daniel 

Position Senior Sustainability Engineer [BREEAM Accredited Professional]

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Issue and Date	Reason for Issue
Issue 1 – 11/10/2017 [undertaken @ RIBA Stage 2]	For Project Team comment & review

Executive Summary

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

Watkins Payne Partnership have been commissioned by O&C Management to carry out a BREEAM (New Construction) 2014 Offices Pre-Assessment of the proposed development of 24-32 Stephenson Way in London.

This report details the performance of the office areas of the development against the BREEAM (New Construction) 2014 Offices criteria. The development's performance is in accordance with specification documentation and verbal expressions of credit conformity/non-conformity established with members of the design team prior to issue of this pre-assessment report.

A BREEAM pre-assessment workshop was held on Tuesday 10th October [RIBA Stage 2] at the office of Watkins Payne Partnership, 5th Floor, 7-8 Conduit St, W1S 2XF.

The office development is to be fitted out to a Cat A standard, therefore a *'Fully Fitted'* BREEAM (New Construction) 2014 Offices assessment is applicable.

The proposed servicing strategy will be as follows:

- Comfort Cooling & Heating to the offices areas: Variable Refrigerant Flow (VRF) Air Source Heat Pumps
- Domestic hot water: Point of Use water heaters
- Low Zero Carbon / Renewable energy technologies: Most likely Photovoltaics panels (PVs) providing electrical energy

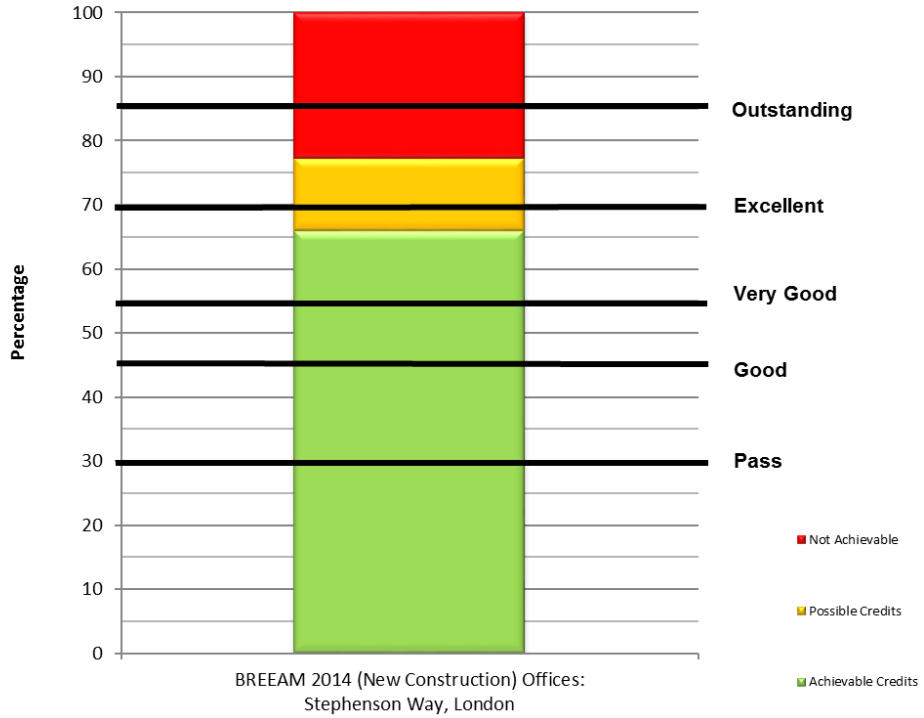
Pre-Assessment Score Results

This report details the **BREEAM 'ACHIEVABLE'** scheme and how this equates to the attainment of specific BREEAM (New Construction) 2014 Offices credits. The **BREEAM 'ACHIEVABLE'** scheme is defined as what the Baseline project could most likely achieve under the current design proposals taking into account minor further modifications to the design / specification. The credits detailed within this report as **'ACHIEVABLE'** need to be included within the current design proposals with the need to **moderately** improve the building's performance or increase the current specifications / project cost.

The **BREEAM 'ACHIEVABLE'** development scheme could currently attain a score of **65.96%,** which translates into a **VERY GOOD** BREEAM (New Construction) 2014 Offices rating, with a safe % buffer margin over the VERY GOOD threshold (55%) of at least 5%.

This report further details the **BREEAM 'POSSIBLE'** scheme and how this equates to the attainment of specific BREEAM (New Construction) 2014 Offices credits. The **BREEAM 'POSSIBLE'** scheme is defined as what the project could achieve under the further revised design proposals taking into account further major modifications to the design / specification. The credits detailed within this report as **'POSSIBLE'** could be included within revised design proposals with the need to **significantly** improve the building's performance or increase the current specifications / project cost.

The **BREEAM 'POSSIBLE'** development scheme could currently attain a score of **77.36%,** which translates into an **EXCELLENT** BREEAM (New Construction) 2014 Offices rating, with a safe % buffer margin over the EXCELLENT threshold (70%) of at least 5%.



Pre-Assessment Score Calculation - The tables below illustrate how the BREEAM score has been calculated.

Mandatory credits are to be achieved to reach the **Various BREEAM Ratings** - these credits with mandatory requirements are detailed in the far-left column in **Bold BLUE**

Management Credit Value 0.57%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Man 01 Project Brief & Design	4	**3**	**3**	Route One Building Consultancy Ltd / Full Design Team / O&C Management / BREEAM AP	Evidence will be provided demonstrating that: ***First Credit: (ACHIEVABLE)*** 1. **Prior to the end of RIBA Stage 2**, the project delivery stakeholders (full design team, client etc) meet to identify and define their roles, responsibilities and contributions for each of the key phases of project delivery 2. In defining the roles and responsibilities for each key phase of the project, the following will be considered: a. End user requirements b. Aims of the design and design strategy c. Particular installation and construction requirements/limitations d. Occupiers budget and technical expertise in maintaining any proposed systems e. Maintainability and adaptability of the proposals f. Requirements for the production of project and end user documentation g. Requirements for commissioning, training and aftercare support 3. The project team will demonstrate how the project delivery stakeholder contributions and the outcomes of the consultation process have influenced or changed the Initial Project Brief, including if appropriate, the Project Execution Plan, Communication Strategy, and the Concept Design. ***Second Credit: (NOT SOUGHT)*** 1. **Prior to the end of RIBA Stage 2**, all relevant third-party stakeholders will **NOT** be consulted by the consultation / design team and this covers the minimum consultation content in line with the credit requirements 2. The project will demonstrate how the stakeholder contributions and outcomes of the consultation exercise have influenced or changed the Initial Project Brief and Concept Design. 3. **Prior to end of RIBA Stage 4**, consultation feedback will **NOT** be given to, and received by, all relevant consultee parties. ***Third Credit: (ACHIEVABLE)*** 1. That a BREEAM AP is appointed **no later than RIBA Stage 1** to facilitate the setting and achievement of the desired BREEAM rating for the project 2. The BREEAM rating for the project is formally agreed between the client and the design team ***Fourth Credit: (ACHIEVABLE)*** That the BREEAM AP is appointed to monitor progress against the targeted rating throughout **RIBA Stages 2 – 4** by: a. Producing formal progress reports for the client/design team b. Attend key project/design team meetings throughout **RIBA Stages 2 – 4**

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Man 02 Life Cycle Costing & Service Life Planning	4	**1**	**1**	Vincent and Partners	Evidence will be provided demonstrating that: ***First – Second Credits: (NOT SOUGHT)*** 1. An outline, entire asset elemental Life Cycle Cost (LCC) plan will **NOT** be carried out, **at RIBA Stage 2** in line with 'Standardised method of life cycle costing for construction procurement' PD 156865:2008 (supplement of BS ISO 15686-5:2008). 2. The elemental LCC plan must: a. Provides an indication of future replacement costs over a period of analysis as required by the client (e.g. 20, 30, 50 or 60 years); b. Includes service life, maintenance and operation cost estimates. 3. **In addition to the above**, the design team are **NOT** to demonstrate using appropriate examples, how the elemental LCC plan has been used to influence building and systems design/specification to minimise life cycle costs and maximise critical value. ***Third Credit: (NOT SOUGHT)*** **In addition to the above**, A component level LCC option appraisal will **NOT** be developed by **the end of RIBA Stage 4** in line with PD 156865:2008 and includes the following component types (where present): a. Envelope, e.g. cladding, windows, and/or roofing b. Services, e.g. heat source cooling source, and/or controls c. Finishes, e.g. walls, floors and/or ceilings d. External spaces, e.g. alternative hard landscaping, boundary protection. 3. **In addition to the above**, the design team are **NOT** to demonstrate using appropriate examples, how the component level LCC option appraisal has been used to influence building and systems design/specification to minimise life cycle costs and maximise critical value. ***Fourth Credit: (ACHIEVABLE)*** The capital cost for the building in pounds per square metre (£k/m2), is reported and included within the main BREEAM Assessment Reporting tool. **Predicted Capital Cost:** The capital cost for the building includes the expenses related to the initial construction of the building: • Construction, including preparatory works, materials, equipment and labour • Site management • Construction financing • Insurance and taxes during construction • Inspection and testing *Costs relating to land procurement, clearance, design, statutory approvals and post occupancy aftercare should not be included*

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Man 03 Responsible Construction Practices **MANDATORY PRE-REQUISITE / 3rd CREDIT FOR EXCELLENT**	6	**6**	**6**	Route One Building Consultancy Ltd / Vincent and Partners / BREEAM AP / Main Contractor	Evidence will be provided demonstrating that: ***Mandatory Pre-requisite: (ACHIEVABLE)*** All timber and timber based products used on the project is 'Legally harvested and traded timber as outlined in the Central Point of Expertise on Timber (CPET) 5th Edition report on the UK Government Timber Procurement Policy ***First Credit: (ACHIEVABLE)*** 1. The Main Contractor operates an environmental management system (EMS), the EMS must be third party certified to ISO 14001 2. The Main Contractor implements best practice pollution prevention policies and procedures on-site in accordance with Pollution Prevention Guidelines, Working at construction and demolition-sites: PPG6 ***Second Credit: (ACHIEVABLE)*** The BREEAM AP is appointed to monitor progress against the targeted rating throughout **RIBA Stages 5 – 6** by: a. Carrying out site visits regularly to carry out spot checks, with the relevant authority to do so and require action to address shortcomings in compliance a. Producing formal progress reports for the client/design team c. Attend key site progress meetings ***Third – Fourth Credits: (ACHIEVABLE)*** Main Contractor is to be registered and certified under the Considerate Constructor's Scheme – Code of Considerate Practice; the contractor is to achieve a score of **35 out of 50** or more, with a score of at least **7** in of the 5 sections ***Fifth Credit: (ACHIEVABLE)*** Main Contractor is to implement the following construction site management principles (in line with the specific BREEAM requirements); 1. Monitor, record & report Energy consumption (kWh) from the use of construction plant, equipment & site accommodation necessary for project completion. 2. Monitor, record & report Water consumption (m3) from the use of construction plant, equipment & site accommodation necessary for project completion.

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Man 03 Responsible Construction Practices **MANDATORY PRE-REQUISITE / 3rd CREDIT FOR EXCELLENT**	6	**Continued**	**Continued**	Route One Building Consultancy Ltd / Vincent and Partners / BREEAM AP / Main Contractor	Evidence will be provided demonstrating that: ***Sixth Credit: (ACHIEVABLE)*** Main Contractor is to implement the following construction site management principles (in line with the specific BREEAM requirements); 1. Monitor, record & report data on transport resulting from delivery of the majority of construction materials to site and construction waste from site. As a minimum, this must cover: a. Transport of materials from the factory gate to the building site, including any transport, intermediate storage and distribution. The scope of this monitoring must cover the following as a minimum: i. Materials used in major building elements (i.e. those defined in BREEAM issue Mat 01), including insulation materials, ii. Ground works and landscaping materials
Man 04 Commissioning & Handover **MANDATORY 4th Credit for EXCELLENT**	4	**3**	**4**	WPP / Route One Building Consultancy Ltd / Vincent and Partners / Main Contractor	Evidence will be provided demonstrating that: ***First Credit: (ACHIEVABLE)*** 1. A schedule of commissioning and testing is produced identifying a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems and testing and inspecting building fabric. 2. All commissioning is carried out in accordance with current Building Regulations, BSRIA/CIBSE guidelines. BMS is commissioned in line with credit requirements. 2. An appropriate project team member(s) is appointed to monitor and programme pre-commissioning, commissioning, testing and, where necessary, re-commissioning activities on behalf of the client. 3. The principal contractor accounts for the commissioning and testing programme, responsibilities and criteria within their budget and main programme of works. ***Second Credit: (ACHIEVABLE)*** 1. For complex building services and systems, a specialist commissioning manager is appointed during the design stage (by either the client or the principal contractor) with responsibility for: a. Undertaking design reviews and giving advice on suitability for ease of commissioning. b. Providing commissioning management input to construction programming and during installation stages. c. Management of commissioning, performance testing and handover/post-handover stages. ***Third Credit: (ACHIEVABLE)*** 1. The integrity of the building fabric, including continuity of insulation, avoidance of thermal bridging and air leakage paths is quality assured through completion of post construction testing and inspection. This is to be demonstrated through the completion of a Thermographic survey **AND** airtightness test & inspection. 2. Any defects identified in the thermographic survey **AND** the airtightness testing reports are rectified by the main contractor prior to building handover and close out. Any remedial work must meet the required performance characteristics for the building/element.

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Man 04 Commissioning & Handover **MANDATORY 4th Credit for EXCELLENT**	4	**Continued**	**Continued**	WPP / Route One Building Consultancy Ltd / Vincent and Partners / Main Contractor	Evidence will be provided demonstrating that: ***Fourth Credit: (ACHIEVABLE)*** 1. A Building User Guide is to be developed by the main contractor to the required BREEAM standard. 2. A training schedule is to be prepared by the main contractor for building occupiers/premises managers, timed appropriately around handover and proposed occupation plans, which includes the following content as a minimum: a. The building's design intent b. The available aftercare provision and aftercare team main contact(s), including any scheduled seasonal commissioning and post occupancy evaluation c. Introduction to, and demonstration of, installed systems and key features, particularly building management systems, controls and their interfaces d. Introduction to the Building User Guide and other relevant building documentation, e.g. design data, technical guides, maintenance strategy, operations and maintenance (O&M) manual, commissioning records, log book etc. e. Maintenance requirements, including any maintenance contracts and regimes in place
Man 05 Aftercare **MANDATORY 2nd Credit for EXCELLENT**	3	**1**	**2**	O&C Management / Facilities Management / Route One Building Consultancy Ltd / WPP / Main Contractor	Evidence will be provided demonstrating that: ***First Credit: (ACHIEVABLE)*** 1. There is (or will be) operational infrastructure and resources in place to provide aftercare support to the building occupier(s), which includes the following as a minimum: a. A meeting programmed to occur between the aftercare team/individual and the building occupier/management (prior to initial occupation, or as soon as possible thereafter) to: i. Introduce the aftercare team or individual to the aftercare support available, including the Building User Guide and training schedule/content. ii. Present key information about the building including the design intent and how to use the building to ensure it operates as efficiently and effectively as possible. b. On-site facilities management training, to include a walkabout of the building and introduction to and familiarisation with the building systems, their controls and how to operate them in accordance with the design intent and operational demands. c. Initial aftercare support provision for at least the first month of building occupation, e.g. on-site attendance on a weekly basis to support building users and management (this could be more or less frequent depending on the complexity of the building and building operations). d. Longer term aftercare support provision for occupants for at least the first 12 months from occupation, e.g. a helpline, nominated individual or other appropriate system to support building users/management. 2. There is (or will be) operational infrastructure and resources in place to co-ordinate the collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is occupied. This is done to facilitate analysis of discrepancies between actual and predicted performance, with a view to adjusting systems and/or user behaviours accordingly.

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Man 05 Aftercare **MANDATORY 2nd Credit for EXCELLENT**	3	**Continued**	**Continued**	O&C Management / Facilities Management / Route One Building Consultancy Ltd / WPP / Main Contractor	Evidence will be provided demonstrating that: ***Second Credit: (ACHIEVABLE)*** The following seasonal commissioning activities will be completed over a minimum 12-month period by the main Contractor, once the building becomes substantially occupied: a. Complex systems - Specialist Commissioning Manager: i. Testing of all building services under full load conditions, i.e. heating equipment in mid-winter, cooling/ventilation equipment in mid-summer, and under part load conditions (spring/autumn). ii. Where applicable, testing should also be carried out during periods of extreme (high or low) occupancy. iii. Interviews with building occupants (where they are affected by the complex services) to identify problems or concerns regarding the effectiveness of the systems. iv. Re-commissioning of systems (following any work needed to serve revised loads), and incorporating any revisions in operating procedures into the operations and maintenance (O&M) manuals ***Third Credit: (NOT SOUGHT)*** 1. The client is **NOT** to make a commitment to carry out a post-occupancy evaluation (POE) exercise one year after initial building occupation. The POE is carried out by an independent party and needs to cover the following in line with the credit requirements: a. A review of the design intent and construction process (review of design, procurement, construction and handover processes). b. Feedback from a wide range of building users including facilities management on the design and environmental conditions of the building c. Sustainability performance (energy/water consumption, performance of any sustainable features or technologies e.g. materials, renewable energy, rain- water harvesting etc.). 2. The client or building occupier makes a commitment to carry out the appropriate dissemination of information on the building's post-occupancy performance in line with the credit requirements
Section Credit Total	**21**	**16**	**16**		
Section Weighted Total	**12.00%**	**9.14%**	**9.14%**		

<table>
<tr><th>Health & Wellbeing

Credit Value 0.88%</th><th>Max No. of Credits Available</th><th>ACHIEVABLE Credits</th><th>POSSIBLE Credits</th><th>Responsible Party</th><th><u>BREEAM (New Construction) 2014 Offices 'Fully Fitted'</u> Credit Requirements</th></tr>
<tr><td><u>Hea 01</u>

Visual Comfort</td><td>4</td><td>2</td><td>4</td><td>Robin Lee Architecture / Daylight Consultant / Route One Building Consultancy Ltd / Vincent and Partners / WPP / Main Contractor</td><td>
Evidence will be provided demonstrating that:

<u>First Credit: (POSSIBLE)</u>
1. The potential for disabling glare is to be designed out of all relevant building areas using a glare control strategy, either through building form and layout and/or building design measures which could include:
• Building integrated measures (e.g. low eaves)
• Occupant controlled devices such as blinds (where transmittance value is <0.1 (10%)
• Bioclimatic design
• External shading or brise soleil
2.The glare control strategy avoids increasing lighting energy consumption, by ensuring that:
a. The glare control system is designed to maximise daylight levels under all conditions while avoiding disabling glare in the workplace or other sensitive areas. The system should not inhibit daylight from entering the space under cloudy conditions, or when sunlight is not on the facade.
AND
b. The use or location of shading does not conflict with the operation of lighting control systems.

<u>Second Credit: (POSSIBLE)</u>
Daylight calculations will be undertaken to demonstrate credit compliance as follows:
<table>
<tr><th>Building/Area Type</th><th>Average Daylight Factor required</th><th>Minimum Area (m2) to comply</th><th>Other Requirements</th></tr>
<tr><td>Internal association or atrium</td><td>3%</td><td>80%</td><td>EITHER a uniformity ratio of at least 0.7 OR a minimum point daylight factor of 2.1%</td></tr>
<tr><td>All occupied spaces (offices areas)</td><td>2%</td><td>80%</td><td>EITHER (a) OR (b) and (c) as per below</td></tr>
<tr><td colspan="4">(a) A uniformity ratio of at least 0.3 or a minimum point daylight factor of at least 0.3 times the relevant average daylight factor value of 2%.
Spaces with glazed roofs, such as atria, must achieve a uniformity ratio of at least 0.7 or a minimum point daylight factor of at least 0.7 times the relevant average daylight factor value of 2%</td></tr>
<tr><td colspan="4">(b) At least 80% of the room has a view of sky from desk or table top height of 0.7m</td></tr>
<tr><td colspan="4">(c) The room depth criterion d/w +d/HW < 2/(1-RB) is satisfied, where:
d = room depth,
w = room width,
HW = window head height from floor level,
RB = average reflectance of surfaces in the rear half of the room</td></tr>
</table>
</td></tr>
</table>

Health & Wellbeing Credit Value 0.88%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Hea 01 Visual Comfort	4	**Continued**	**Continued**	Robin Lee Architecture / Daylight Consultant / Route One Building Consultancy Ltd / Vincent and Partners / WPP / Main Contractor	Evidence will be provided demonstrating that: ***Third Credit: (ACHIEVABLE)*** 1. 95% of the floor area in relevant building areas will be within 7m of a wall which has a window or permanent opening that provides an adequate view out. 2. In addition to the above, the window/opening will be ≥ 20% of the surrounding wall area. Where the room depth is greater than 7m, compliance is only possible where the percentage of window/opening is the same as, or greater than, the values in table 1.0 of BS 8206 ***Fourth Credit: (ACHIEVABLE)*** 1. There will be the specification of high frequency ballasts on all fluorescent & compact fluorescent luminaries for the development. 2. There will be the specification of illuminance levels for lighting in all internal & external areas within the construction zone are to be in accordance with: a. SLL Code for Lighting 2012 for all internal relevant building areas b. CIBSE LG7 sections 3.3, 4.6, 4.7, 4.8 and 4.9 where computer screens are regularly used c. BS EN 5489-1:2013 'Lighting of roads and public amenity areas for all external areas' and where relevant BS EN 12464-2:2012 'Light & Lighting – Lighting in Workplaces – Part 2: Outdoor workplaces' 3. Furthermore, the lighting installation is be zoned, in all appropriate occupied areas, to allow separate control in line with the BREEAM requirements
Hea 02 Indoor Air Quality	5	**3**	**3**	Suitable Consultant / Route One Building Consultancy Ltd / Vincent and Partners / Robin Lee Architecture / Main Contractor	Evidence will be provided demonstrating that: ***First Credit: (ACHIEVABLE)*** An Indoor Air Quality Plan is produced, with the objective of facilitating a process that leads to design, specification and installation decisions and actions that minimise indoor air pollution during occupation of the building. The indoor air quality plan must consider the following: a. Removal of contaminant sources b. Dilution and control of contaminant sources c. Procedures for pre-occupancy flush out d. Third party testing and analysis e. Maintaining indoor air quality in-use ***Second Credit: (NOT SOUGHT)*** The building is **NOT** to be designed to minimise the concentration and recirculation of pollutants in the building as follows: 1. Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation. 2. Design ventilation pathways to minimise the build-up of air pollutants for air conditioned and mixed mode buildings/spaces via the building's air intakes and exhausts are **over 10m apart** to minimise re-circulation and intakes are **over 20m** from sources of external pollution.

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Hea 02 Indoor Air Quality	5	**Continued**	**Continued**	Suitable Consultant / Route One Building Consultancy Ltd / Vincent and Partners / Robin Lee Architecture / Main Contractor	Evidence will be provided demonstrating that: ***Third Credit: (ACHIEVABLE)*** 1. All decorative paints and varnishes specified meet the VOC content level as per EU Directive 2004/42/CE (Paints Directive) 2. At least five of the seven remaining product categories listed in Table-18 of the BREEAM 2014 Technical manual meet the testing requirements and emission levels criteria for volatile organic compound (VOC) emissions ***Fourth Credit: (ACHIEVABLE)*** 1. The formaldehyde concentration level is measured post construction (but pre-occupancy) and is found to be less than or equal to 100µg/m3 averaged over 30 minutes (WHO guidelines for indoor air quality: Selected pollutants, 2010). 2. The total volatile organic compound (TVOC) concentration level is measured post construction (but pre-occupancy) and found to be less than 300µg/m3 over 8 hours, in line with the building regulation requirements. 3. Where VOC and formaldehyde levels are found to exceed the limits detailed above, the project team confirms the measures that have, or will be taken, in accordance with the IAQ plan, to reduce the levels to within these limits. 4. The testing and measurement of the above pollutants are in accordance with the following standards where relevant: a. BS ISO 16000-4: 2011 Diffusive sampling of formaldehyde in air b. BS ISO 16000-6: 2011 VOCs in air by active sampling c. BS EN ISO 16017-2: 2003 VOCs - Indoor, ambient and workplace air by passive sampling d. BS ISO 16000-3: 2011 formaldehyde and other carbonyls in air by pumped sampling. ***Fifth Credit: (NOT SOUGHT)*** 1. That the building's ventilation strategy is **NOT** to be designed to be flexible and adaptable to potential building occupant needs and climatic scenarios. This can be demonstrated as follows: a. Occupied spaces of the building are **NOT** designed to be capable of providing fresh air entirely via a natural ventilation strategy. The following are methods deemed to satisfy this criterion dependent upon the complexity of the proposed system: Room depths are designed in accordance with CIBSE AM10 (section 2.4) to ensure effectiveness of any natural ventilation system. The openable window area in each occupied space is equivalent to **5%** of the gross internal floor area of that room/floor plate; 2. The natural ventilation strategy is capable of providing at least two levels of user-control on the supply of fresh air to the occupied space, the two levels of ventilation must be able to achieve the following: a. Higher level: higher rates of ventilation achievable to remove short term odours and/or prevent summertime overheating b. Lower level: adequate levels of draught-free fresh air to meet the need for good indoor air quality throughout the year, sufficient for the occupancy load and the internal pollution loads of the space.

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Hea 04 Thermal Comfort	3	**3**	**3**	WPP / Main Contractor	Evidence will be provided demonstrating that: ***First Credit: (ACHIEVABLE)*** 1. A thermal comfort assessment utilising software that is CIBSE AM11 compliant will be undertaken demonstrating that the services strategy can deliver thermal comfort levels in accordance CIBSE Guide A – Table 1.5 2. For air-conditioned buildings, the PMV (predicted mean vote) and PPD (predicted percentage of dissatisfied) indices based on the modelling are reported. ***Second Credit: (ACHIEVABLE)*** 1. The first credit is achieved and the thermal modelling demonstrates that the services strategy can deliver thermal comfort levels in accordance CIBSE Guide A – Table 1.5 are achieved for a projected climate change environment. 2. Where thermal comfort criteria are not met for the projected climate change environment, the project team demonstrate how the building has been adapted, or designed to be easily adapted in future using passive design solutions in order to subsequently meet the requirements in point 1. ***Third Credit: (ACHIEVABLE)*** The thermal modelling analysis will inform the temperature control strategy for the building and the heating/cooling strategy will be zoned and controlled to allow separate control in line with the BREEAM requirements
Hea 05 Acoustic Performance	3	**3**	**3**	Suitably Qualified Acoustician / Route One Building Consultancy Ltd / Vincent and Partners / Robin Lee Architecture / WPP / Main Contractor	Evidence will be provided demonstrating that: ***First Credit: (ACHIEVABLE)*** 1. A programme of pre-completion acoustic testing is undertaken to demonstrate that the sound insulation between acoustically sensitive rooms (where present) and other occupied spaces comply with the performance criteria given in Section 7 of BS8233:2014 2. If testing is to be carried out where the office is not yet furnished, then Section 7.5 of BS 8233:2014 should be referred to when determining the performance criteria. Where the office is to be furnished at the time testing is carried out, then Section 7.7.6 of BS 8233:2014 should be referred to for the relevant performance criteria. ***Second Credit: (ACHIEVABLE)*** A programme of pre-completion acoustic testing is undertaken to demonstrate that the indoor ambient noise levels comply with the design ranges given in Section 7 of BS 8233:2014 ***Third Credit: (ACHIEVABLE)*** A programme of pre-completion acoustic testing is undertaken to demonstrate that the acoustic environment used for 'speech' (where present) for the control of reverberation, sound absorption and speech transmission index achieve the requirements relating to sound absorption and reverberation times, where applicable, set out in Section 7 of BS 8233:2014

Health & Wellbeing Credit Value 0.88%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Hea 06 Safety & Security	2	**0**	**2**	Robin Lee Architecture	Evidence will be provided demonstrating that: ***First Credit: (POSSIBLE)*** 1. This credit will be achieved by default based on: • **The second credit being achieved** AND • The building having any no external areas and access to the building is direct from the public footpath ***Second Credit: (POSSIBLE)*** 1. Prior to the **end of RIBA Stage 2**, either a Suitably Qualified Security Specialist (SQSS) **OR** Designing Out Crime Officers (DOCO) **OR** will conduct an evidence-based Security Needs Assessment (SNA) and develop a set of recommendations or solutions aimed to ensure that the design of the development is planned, designed and specified to address the issue identified in the Security Needs Assessment. 2. The recommendations or solutions are to be implemented into the final scheme development. **Definition of a Security Needs Assessment (SNA)** The project and site specific assessment of security needs, including: 1. A visual audit of the site and surroundings, identifying environmental cues and features pertinent to the security of the proposed development. 2. Formal consultation with relevant stakeholders, including the local DOCO, ALO, CPDA & CTSA (as applicable), in order to obtain a summary of crime and disorder issues in the immediate vicinity of the proposed development. 3. Identify risks specific to the proposed, likely or potential use of the building(s). 4. Identify risks specific to the proposed, likely or potential user groups of the building(s). 5. Identify any detrimental effects the development may have on the existing community. The purpose of the assessment is to inform stakeholder decision-making and allow the identification and evaluation of security recommendations and solutions.
Section Credit Total	**17**	**11**	**15**		
Section Weighted Total	**15.00%**	**9.71%**	**13.24%**		

Energy Credit Value 0.65%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Ene 01 Reduction of Energy Use & Carbon Emissions **MANDATORY** **5 Credits for EXCELLENT /**	12	**6**	**8**	WPP	Evidence will be provided demonstrating that: ***Six Credits: (ACHIEVABLE)*** Subject to the building's fabric and M&E services design, a calculated Energy Performance Ratio for New Constructions (EPRNC) [calculated from the building's modelled heating & cooling energy demand, primary energy consumption and total resulting CO2 emissions] of 0.45 will be achieved; equal to 6 credits. ***Eight Credits: (POSSIBLE)*** Subject to the building's fabric and M&E services design, a calculated Energy Performance Ratio for New Constructions (EPRNC) [calculated from the building's modelled heating & cooling energy demand, primary energy consumption and total resulting CO2 emissions] of 0.60 will be achieved; equal to 8 credits.
Ene 02 Energy Monitoring **MANDATORY** **1st Credit for VERY GOOD**	2	**2**	**2**	WPP / Main Contractor	Evidence will be provided demonstrating that: ***First Credit: (ACHIEVABLE)*** 1. Energy metering systems are installed 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 (where present): • Space heating • Domestic hot water heating • Humidification • Cooling • Ventilation i.e. fans (major) • Pumps • Lighting • Small power • Renewable or low carbon systems • Controls • Lifts • Other major consuming items 2. The energy consuming systems in buildings with a total useful floor area greater than 1000m2 are metered using an appropriate energy monitoring and management system. 3. The end consuming uses are identifiable to the building users, for example through labelling or data outputs. ***Second Credit: (ACHIEVABLE)*** An accessible energy monitoring and management system or separate accessible energy sub-meters with pulsed or other open protocol communication outputs to enable future connection to an energy monitoring and management system are provided, covering a significant majority of the energy supply to tenanted areas or, in the case of single occupancy buildings, relevant function areas or departments within the building/unit.

Energy Credit Value 0.65%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Ene 03 External Lighting	1	**1**	**1**	WPP / Robin Lee Architecture / Main Contractor	Evidence will be provided demonstrating that: 1. The new build extension has no new external lighting **OR** 1. Where new external lighting is being provided; the average initial luminous efficacy of the external light fittings within the construction zone is not less than 60 luminaire lumens per circuit Watt. 3. All external light fittings are automatically controlled for prevention of operation during daylight hours and presence detection in areas of intermittent pedestrian traffic
Ene 04 Low Carbon Design	3	**2**	**2**	WPP / Main Contractor	Evidence will be provided demonstrating that: ***First Credit: (ACHIEVABLE)*** 1. The first credit within issue Hea 04 - Thermal comfort has been achieved to demonstrate the building design can deliver appropriate thermal comfort levels in occupied spaces. 2. The project team is to carry analysis of the proposed building design/development to influence decisions made during at **RIBA Stage 2** and identify opportunities for the implementation of passive design solutions that reduce demands for energy consuming building services. 3. The building is to use passive design measures to reduce the total heating, cooling, mechanical ventilation and lighting loads and energy consumption in line with the findings of the passive design analysis and the analysis demonstrates a meaningful reduction in the total energy demand **of at least 5% of overall building energy demand** ***Second Credit: (NOT SOUGHT)*** 1. The first credit is achieved 2. The passive design analysis is **NOT** to be carried out includes an analysis of free cooling and identifies opportunities for the implementation of free cooling solutions. 3. The building is **NOT** to use ANY of the free cooling strategies listed in the BREEAM technical manual to reduce the cooling energy demand, i.e. it does not use active cooling. ***Third Credit: (ACHIEVABLE)*** 1. A feasibility study has been carried out by the completion of **RIBA Stage 2** by an energy specialist to establish the most appropriate recognised local (on-site or near-site) low or zero carbon (LZC) energy source(s) for the building/development. 2. A local LZC technology/technologies has/have been specified for the building/development in line with the recommendations of this feasibility study and this method of supply results in a meaningful reduction in regulated carbon dioxide (CO2) emissions **of at least 5% of overall building CO2 emissions**

Energy Credit Value 0.65%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Ene 06 Energy Efficient Transportation Systems	3	**0**	**0**	N/A	Evidence will **NOT** be provided demonstrating that: ***First Credit: (ACHIEVABLE)*** 1. An analysis of the transportation demand and usage patterns for the building has been carried out to determine the optimum number and size of lifts, escalators and/or moving walks. 2. The energy consumption has been calculated in accordance with BS EN ISO 25745 Energy performance of lifts, escalators and moving walks, Part 2: Energy calculation and classification for lifts (elevators), for one of the following: i. At least two types of system (for each transportation type required); OR ii. An arrangement of systems (e.g. for lifts, hydraulic, traction, machine room-less lift (MRL)); OR iii. A system strategy which is 'fit for purpose'. 3. The use of regenerative drives should be considered. 4. The transportation system with the lowest energy consumption is specified. ***Second – Third Credits: (ACHIEVABLE)*** 1. For each lift, the following three energy efficient features are specified: a. The lifts operate in a standby condition during off-peak periods. For example the power side of the lift controller and other operating equipment such as lift car lighting, user displays and ventilation fans switch off when the lift has been idle for a prescribed length of time. b. The lift car lighting and display lighting provides an average lamp efficacy, (across all fittings in the car) of > 55 lamp lumens/circuit Watt. c. The lift uses a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor. 2. Where the use of regenerative drives is demonstrated to save energy, they are specified.

Energy Credit Value 0.65%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Ene 08 Low Carbon Design	2	**0**	**0**	N/A	Evidence will **NOT** be provided demonstrating the following **only applicable to the developer's scope of works / Cat A fit-out** ***First – Second Credits: (NOT SOUGHT)*** 1. An Identification of the building's unregulated energy consuming loads and estimation of their contribution to the total annual unregulated energy consumption of the building, assuming a typical/standard specification will **NOT** be undertaken. 2. Identification of the systems and/or processes that use a significant proportion of the total annual unregulated energy demand of the development and its operation will be undertaken. 3. A meaningful reduction in the total annual unregulated energy demand of the building will be demonstrated by: **For example:** Small Power, Plug in equipment: • Office equipment (Computer monitor, desktop monitors, scanners, photocopiers, printers, workstations etc) • Domestic scale white goods (washing machines, fridges & freezers) & other small powered equipment • Supplementary electric heating (air movement fans / heaters) The above needs to be procured in line with the following options where applicable: • Has been awarded an *Energy Star* rating • Has been procured in accordance with the *Government Buying Standards* • Has an A++/A+ rating under the EU Energy Efficiency Labelling Scheme
Section Credit Total	**23**	**11**	**13**		
Section Weighted Total	**15.00%**	**7.17%**	**8.48%**		

Transport Credit Value 1.00%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Tra 01 Public Transport Accessibility	3	**3**	**3**	BREEAM Assessor	***First – Third Credits: (ACHIEVABLE)*** Evidence will be provided demonstrating that the distance from the building entrance to multiple bus stops/train stations AND average no. of services per hour at each public transport node will achieve an Accessibility Index of ≥8; equal to 3 credits. The Accessibility Index is a BREEAM specific method of calculation which demonstrates the level of public transport available for the site.
Tra 02 Proximity to Amenities	1	**1**	**1**	Robin Lee Architecture	Evidence will be provided demonstrating that the building is located within **500m** (along safe pedestrian routes) of the following amenities: Core amenities: At least **two** of the following: • Appropriate food outlet • Cash machine • Access to a recreation/leisure facility for fitness/sports Amenities relevant to building type: At least **one** of the following: • Access to an outdoor open space (i.e. park) • Publicly available postal facility • Community facility (e.g. public house) • Over the counter services associated with a pharmacy • Child care facility or school

Transport Credit Value 1.00%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Tra 03 Cyclist Facilities	2	**0**	**2**	Robin Lee Architecture / WPP	Evidence will be provided demonstrating that: ***First Credit: (POSSIBLE)*** BREEAM compliant cycle storage spaces will be provided meeting the minimum levels set out in the BREEAM guidance as follows: For 1-200 users/occupancy @ 1 space per 10 users For 201-300 users/occupancy @ 1 space per 15 users (standard unit of measure x 1.5) For 301-400 users/occupancy @ 1 space per 20 users (standard unit of measure x 2) For 401+ users/occupancy @ 1 space per 25 users (standard unit of measure x 2.5) The number of compliant cycle spaces must be large enough to cater for the building occupants of the extension and the existing building, **Calculation of estimated total number of BREEAM compliant cycle spaces based on the total building default occupancy** Estimated NIA of the total building is **3,800m2**, therefore 3,800 X 0.111 = **422 (rounded up)** **Therefore, a total of 33 cycle spaces would need to be provided** **However, the total compliant cycle storage spaces required can be reduced by 50% where the project is a city centre location (and achieves >2 credits under Tra 01)** **Therefore 17 spaces are required to achieve the first credit.** ***Second Credit: (POSSIBLE)*** At least **two** of the following types of compliant cyclist facilities will be provided for all staff use: • Showers (1 shower per 10 cycle spaces and **not** located in Disabled/Doc M toilet areas) • Changing facilities (Toilet/shower cubicles cannot be counted as changing facilities) • Lockers (equal to number of cycle spaces) • Drying space

Transport Credit Value 1.00%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Tra 04 Maximum Car Parking Capacity	2	**2**	**2**	Robin Lee Architecture	***First – Second Credits: (ACHIEVABLE)*** Evidence will be provided demonstrating that the credits will be achieved by default as no car parking is provided and therefore **no more than 1 car parking space is provided for 6 building users** (staff who work in the building) Parking spaces set aside for the following building users can be excluded provided these spaces are dedicated for that use, i.e. sized accordingly with the appropriate signage/markings: • Disabled • Parent and baby • Motorbike • Car share In the case of excluding car share spaces, the future building occupier will need to confirm they have an enforceable car share policy
Tra 05 Travel Plan	1	**1**	**1**	Suitable Consultant / Route One Building Consultancy Ltd / Robin Lee Architecture	Evidence will be provided demonstrating that a Travel Consultant is to be appointed to develop a Travel Plan to the BREEAM requirements and the development is to implement the recommendations of the Travel Plan AND a copy of the Travel Plan is to be handed over to the building end occupiers so that it may inform their own travel plan/strategy.
Section Credit Total	**9**	**7**	**9**		
Section Weighted Total	**9.00%**	**7.00%**	**9.00%**		

<table>
<tr><th>Water

Credit Value
0.78%</th><th>Max No. of Credits Available</th><th>ACHIEVABLE Credits</th><th>POSSIBLE Credits</th><th>Responsible Party</th><th>BREEAM (New Construction) 2014 Offices 'Fully Fitted' Credit Requirements</th></tr>
<tr><td>Wat 01

Water Consumption
MANDATORY
One Credit for GOOD /
Two Credits for OUTSTANDING</td><td>5</td><td>4</td><td>4</td><td>Robin Lee Architecture / WPP / Main Contractor</td><td>Evidence will be provided demonstrating that:

Four Credits: (ACHIEVABLE)
That the efficiency of the building's domestic water consuming items and the off-set from any rainwater/grey water systems will result in a calculated water consumption (litres/person/day) of at least 50% improvement over the notional baseline performance, which is equal to 4 credits

<table><tr><th colspan="2">Example Sanitary-ware Specification to achieve four credits</th></tr><tr><th>Item</th><th>Max Flush Volume / Flow Rate</th></tr><tr><td>All WC cisterns (excluding Doc M / Disabled / Ambulant WCs)</td><td>4 / 2 dual litre dual flush</td></tr><tr><td>All WC Doc M / Disabled / Ambulant cisterns</td><td>4.5 single litre dual flush</td></tr><tr><td>Urinals (if present) operated by push button or infra-red detection</td><td>0.5 litres per flush</td></tr><tr><td>All Wash Hand Basin Taps (including within Disabled WC areas)</td><td>3 litres/min flow regulated</td></tr><tr><td>All showers</td><td>9 litres/min flow regulated</td></tr><tr><td>If provided (including the facility for future provision) for all kitchenette taps</td><td>4 litres/min flow regulated</td></tr></table></td></tr>
<tr><td>Wat 02

Water Monitoring
MANDATORY
One Credit for GOOD</td><td>1</td><td>1</td><td>1</td><td>WPP / Main Contractor</td><td>Evidence will be provided demonstrating that:

1. The specification of a water meter on the mains water supply to each building; this includes instances where water is supplied via a borehole or other private source.
2. Water-consuming plant or building areas, consuming 10% or more of the building's total water demand, are either fitted with easily accessible sub-meters or have water monitoring equipment integral to the plant or area.
3. Each meter (main and sub) has a pulsed or other open protocol communication output to enable connection to an appropriate utility monitoring and management system, e.g. a building management system (BMS), for the monitoring of water consumption</td></tr>
</table>

Water Credit Value 0.78%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Wat 03 Major Leak Detection & Prevention	2	**1**	**2**	WPP / Main Contractor	Evidence will be provided demonstrating that: ***First Credit: (POSSIBLE)*** A compliant leak detection system which is capable of detecting a major leak water leak on the mains water supply within the building and utilities water meter is installed. ***Second Credit: (ACHIEVABLE)*** Flow control devices that regulate the supply of water to each WC area/facility according to demand are installed (and therefore minimise water leaks and wastage from sanitary fittings).
Wat 04 Water Efficient Equipment	1	**1**	**1**	Suitably Qualified Ecologist / Robin Lee Architecture / Main Contractor	Evidence will be provided demonstrating that: 1. The design team has identified all unregulated water demands that could be realistically mitigated or reduced. 2. System(s) or processes have been identified to reduce the unregulated water demand, and demonstrate, through either good practice design or specification, a meaningful reduction in the total water demand of the building. For example, **one** of the following could be used for compliance: • Drip-fed subsurface irrigation incorporating soil moisture sensors. The irrigation control should be zoned to permit variable irrigation to different planting assemblages. • Reclaimed/recovered water from a rainwater collection or waste water recovery system, with appropriate storage • External landscaping and planting that relies solely on precipitation, during all seasons of the year. • All planting specified is restricted to contextually appropriate species that thrive without irrigation and will continue to do so in those conditions likely as a result of climate change, i.e. typically warmer and drier conditions. ***Please Note*** Temporary watering arrangements set up purely to allow plant species or a green roof to establish are acceptable for plants relying on natural precipitation during all seasons of the year. Where this is the case, information is required to confirm the plant species and the expected time for recommended plant species to establish themselves i.e. time period for temporary watering arrangements.
Section Credit Total	**9**	**7**	**8**		
Section Weighted Total	**7.00%**	**5.44%**	**6.22%**		

Materials Credit Value 1.04%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Mat 01 Life Cycle Impacts	5	**2**	**3**	Robin Lee Architecture / Main Contractor	Evidence will be provided demonstrating that: ***First – Second Credits: (ACHIEVABLE)*** That the *Green Guide to Specification* ratings of the external walls, windows, roof, upper floor slabs and floor finishes will result in the attainment of two credits. ***Three Credits: (POSSIBLE)*** That the *Green Guide to Specification* ratings of the external walls, windows, roof, upper floor slabs and floor finishes will result in the attainment of three or more credits. ***In order to maximise credits consideration should be made to specify as many of the building elements as possible with A+ or A green guide ratings*** Please refer to http://www.bre.co.uk/greenguide/podpage.jsp?id=2126 in order to ascertain the applicable Green Guide ratings
Mat 02 Hard Landscaping & Boundary Protection	1	**1**	**1**	Robin Lee Architecture	Evidence will be provided demonstrating that **EITHER**: 1. At least 80% of all external hard landscaping and 80% of all boundary protection (by area) in the construction zone achieve an A or A+ rating, as defined in the *Green Guide to Specification* **OR** 2. If one of the elements is not present, e.g. boundary protection, then the credit must be assessed on the basis of the specification of the single element, e.g. hard landscaping. Where the development has neither element, the credit can be awarded by default.

Materials Credit Value 1.04%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Mat 03 Responsible Sourcing of Materials **MANDATORY Pre-requisite for any Certification**	4	**2**	**3**	Route One Building Consultancy Ltd / Vincent and Partners / Robin Lee Architecture / Structural Engineer / Main Contractor	***Mandatory Pre-requisite: (ACHIEVABLE)*** All timber and timber based products used on the project is 'Legally harvested and traded timber as outlined in the Central Point of Expertise on Timber (CPET) 5th Edition report on the UK Government Timber Procurement Policy ***First Credit: (ACHIEVABLE)*** Evidence will be provided demonstrating that the main contractor sources materials for the project in accordance with a documented Sustainable Procurement Plan as follows: A plan that sets out a clear framework for the responsible sourcing of materials to guide procurement throughout a project and by all involved in the specification and procurement of construction materials. The plan may be prepared and adopted at an organisational level or be site/project specific and for the purposes of BREEAM compliance, will cover the following as a minimum: 1. Risks and opportunities are identified against a broad range of social, environmental and economic issues. BS 8902:2009 Responsible sourcing sector certification schemes for construction products- Specification can be used as a guide to identify these issues. 2. Aims, objectives and targets to guide sustainable procurement activities. 3. The strategic assessment of sustainably sourced materials available locally and nationally. There should be a policy to procure materials locally where possible. 4. Procedures are in place to check and verify that the sustainable procurement plan is being implemented/adhered to on individual projects. These could include setting out measurement criteria, methodology and performance indicators to assess progress and demonstrate success. ***Second Credit: (ACHIEVABLE)*** Evidence will be provided demonstrating that careful consideration is required to ensure the specification and sourcing materials from certified Manufacturers/Suppliers (i.e. BES 6001 – Excellent or Very Good /ISO 14001 etc). A programme of responsible sourcing will be undertaken for the majority of materials making up the relevant building elements listed below in order to achieve one credit: 1. Ceiling (including ceiling finishes) 2. Door/window 3. Floor (including floor finishes) 4. Insulation (fabric & services) 5. Internal partition/internal walls (including finishes) 6. Roof (including roof finishes) 7. Structure, primary and secondary 8. External wall (e.g. cladding, lining, render, including finishes) 9. Building services 10. Hard landscaping ***Third Credit (POSSIBLE):*** A programme of responsible sourcing will be undertaken for the majority of materials making up the relevant building elements listed below in order to achieve two credits:

Materials Credit Value 1.04%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Mat 04 Insulation	1	**1**	**1**	Robin Lee Architecture / WPP / Main Contractor	Evidence will be provided demonstrating that thermal insulation products used in the external walls, ground floor, roof and building services are to be specified with a low embodied impact relative to their thermal properties in order that an Insulation Index greater than 2.5 as defined by the BREEAM calculation methodology is achieved
Mat 05 Designing for Durability and Resilience	1	**1**	**1**	Robin Lee Architecture / Structural Engineer / Main Contractor	Evidence will be provided demonstrating that: **Part 1 – Protecting vulnerable parts of the building from damage** The building incorporates suitable durability and protection measures or designed features/solutions to prevent damage to vulnerable parts of the internal and external building and landscaping elements. This must include, but is not necessarily limited to: a. Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares (corridors, lifts, stairs, doors etc.). b. Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. c. Protection against, or prevention from, any potential vehicular collision where vehicular parking and manoeuvring occurs within 1m of the external building façade for all car parking areas and within 2m for all delivery areas **Part 2 – Protecting exposed parts of the building from material degradation** The **relevant building elements** (listed below) incorporate appropriate design and specification measures to limit **material degradation** (listed below) due to **environmental factors** (listed below) 1. Foundation/substructure/lowest floor/retaining walls 2. External walls 3. Roof/balconies 4. Glazing: windows, skylight 5. External doors 6. Railings/balusters (where exposed to external environment) 7. Cladding (where exposed to external environment) 8. Staircase/ramps (where exposed to external environment) 9. Hard landscaping

Materials Credit Value 1.04%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Mat 05 Designing for Durability and Resilience	1	**Continued**	**Continued**	Robin Lee Architecture / Structural Engineer / Main Contractor	**CONTINUED** **Environmental factors:** 1. Environmental agents, including: a. Solar radiation b. Temperature variation c. Water/moisture d. Wind e. Precipitation, e.g. rain and snow f. Extreme weather conditions: high wind speeds, flooding, driving rain, snow 2. Biological agents, including: a. Vegetation b. Pests, insects c. Pollutants, including: d. Air contaminants e. Ground contaminants **Material degradation effects (includes, but not necessarily limited to the following):** 1. Corrosion 2. Dimensional change, e.g. swelling or shrinkage 3. Fading/discolouration 4. Rotting 5. Leaching 6. Blistering 7. Melting 8. Salt crystallisation 9. Abrasion

Materials Credit Value 1.04%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Mat 06 Materials Efficiency	1	**0**	**0**	N/A	Evidence will **NOT** be provided demonstrating that: 1. Opportunities have been identified, and appropriate measures investigated and implemented, to optimise the use of materials in building design, procurement, construction, maintenance and end of life 2. The above is carried out by the design/construction team in consultation with the relevant parties (listed below) at **each of the following RIBA stages**: a. Preparation and Brief – Stage 1 b. Concept Design – Stage 2 c. Developed Design – Stage 3 d. Technical Design – Stage 4 e. Construction – Stage 5 All parties (as relevant to the project stage) involved in the design, specification and/or construction of the building should be consulted. This includes but is not limited to the following: • Client/developer • Cost consultant • Architect • Structural/civil engineers • Building services engineers - mechanical, electrical • Principal contractor • Project management consultant • Materials/component manufacturers/suppliers. The evidence required to demonstrate compliance will vary according to RIBA stage. A few examples are provided below: a. reports (at Preparation and Brief stage) outlining the activity relating to material efficiency (ideas discussed, analysis and decisions taken) b. drawings or building integrated model (BIM), calculations showing reduction of material use through design (Concept Design/Developed Design stages) c. meeting notes, construction program, responsibilities schedule (indicating parties consulted).
Section Credit Total	**13**	**7**	**9**		
Section Weighted Total	**13.50%**	**7.27%**	**9.35%**		

Waste Credit Value 0.94%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Wst 01 Construction Waste Management	4	**4**	**4**	Route One Building Consultancy Ltd / Vincent and Partners / Main Contractor / Demolition Contractor	Evidence will be provided demonstrating that: ***First – Third Credits: (ACHIEVABLE)*** 1. The main contractor is to produce a BREEAM compliant Resource Management Plan (RMP) covering the non-hazardous waste related to on-site construction and dedicated off-site manufacture/fabrication (including demolition and excavation waste) generated by the building's design and construction. 2. Where non-hazardous construction related to on-site construction and dedicated off-site manufacture/fabrication (excluding demolition and excavation waste) meets or is lower than **<3.2 tonnes** or **<3.4m3 per 100m2 of gross internal floor area** and is proven at project completion. ***Fourth Credit: (ACHIEVABLE)*** The main contractor is to demonstrate that following percentages of non-hazardous construction (on-site and off-site manufacture/fabrication in a dedicated facility), demolition and excavation waste (where applicable) generated by the project have been diverted from landfill: Non-demolition: **80% by tonnage or 70% by volume** Demolition: **90% by tonnage** or **80% by volume** **In addition to the above - The below must form part of a contract for either the main contractor or the demolition contractor:** Where existing buildings on the site will be demolished a pre-demolition audit of any existing buildings, structures or hard surfaces must be completed to determine how to maximise the recovery of material from demolition for subsequent high grade/value applications. The audit must be referenced in the RMP / SWMP and cover: a. Identification of the key refurbishment/demolition materials. b. Potential applications and any related issues for the reuse and recycling of the key refurbishment and demolition materials in accordance with the waste hierarchy.

<table>
<tr><th>Waste

Credit Value 0.94%</th><th>Max No. of Credits Available</th><th><u>ACHIEVABLE</u> Credits</th><th><u>POSSIBLE</u> Credits</th><th>Responsible Party</th><th><u>BREEAM (New Construction) 2014 Offices 'Fully Fitted'</u> Credit Requirements</th></tr>
<tr><td><u>Wst 02</u>

Recycled Aggregates</td><td>1</td><td>1</td><td>1</td><td>Structural Engineer / Main Contractor</td><td>Evidence will be provided demonstrating that the total amount of recycled <u>AND/OR</u> secondary aggregate is to be greater than 25% of the total high-grade aggregate specified in line with the following minimum levels per application (where present):

Please note In order to contribute to the overall amount of recycled and/or secondary aggregate to be greater than 25% of the total high grade aggregate used for the development, the below minimum % per application (where present) must be met in order to be included in the overall calculation of the 25% amount. Where the minimum % levels per application are not met for an application, all the aggregate in that application must be considered as primary/virgin aggregate when calculating the total high grade aggregate specified.

<table>
<tr><th>Application</th><th>Min % for one credit</th></tr>
<tr><td colspan="2">BOUND</td></tr>
<tr><td>Structural Frame</td><td>15%</td></tr>
<tr><td>Bitumen or hydraulically bound base, binder and surface courses for paved areas & roads</td><td>30%</td></tr>
<tr><td>Building foundations</td><td>20%</td></tr>
<tr><td>Concrete road surfaces</td><td>15%</td></tr>
<tr><td colspan="2">UNBOUND</td></tr>
<tr><td>Pipe bedding</td><td>100%</td></tr>
<tr><td>Granular fill and capping</td><td>100%</td></tr>
</table>
</td></tr>
<tr><td><u>Wst 03</u>

Operational Waste
<u>MANDATORY Credit for EXCELLENT</u></td><td>1</td><td>1</td><td>1</td><td>Robin Lee Architecture</td><td>Evidence will be provided demonstrating there will be provision of a central (clearly labelled), dedicated storage space for recyclable office waste, which is large enough to cater for the extension and the existing building as follows:

• At least 2m2 per 1000m2 of net floor area for buildings < 5000m2
• A minimum of 10m2 for buildings with a net floor area >5000m2
• Located accessible to building occupants or facilities operators for the deposit of materials and collection by waste management contractors
• The above provision must also be in addition to the general waste area provision</td></tr>
</table>

Waste Credit Value 0.94%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Wst 04 Speculative Floor & Ceiling Finishes	1	**0**	**1**	Robin Lee Architecture	***POSSIBLE Credit:*** Evidence will be provided demonstrating: 1. Prior to full Cat B fit-out works, floor finishes **AND** ceiling finishes in the tenanted areas of the building will only be provided within a show area (less than 25% of the total net lettable floor area) **OR** 2. That **NO** floor finishes **AND** ceiling finishes in the tenanted areas of the building are provided within the base build construction The credit can be awarded on the following basis: a. Office flooring only consists of raised access flooring with no hard or soft floor finishes e.g. carpets b. Office ceiling has no suspended ceiling tiles etc but can include paint finishes, decorative timber, plaster crown mouldings
Wst 05 Adaption to Climate Change	1	**0**	**0**	N/A	Evidence will **NOT** be provided demonstrating that: A climate change adaptation strategy appraisal will be conducted for structural and fabric resilience by the **end of RIBA Stage 2**, in accordance with the following approach: Carry out a systematic (structural and fabric resilience specific) risk assessment to identify and evaluate the impact on the building over its projected life cycle from expected extreme weather conditions arising from climate change and, where feasible, mitigate against these impacts. The assessment should cover the following stages: i. Hazard identification ii. Hazard assessment iii. Risk estimation iv. Risk evaluation v. risk management. **Please see next page for methodology of a climate change adaptation strategy appraisal**

Waste Credit Value 0.94%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Wst 05 Adaption to Climate Change	1	**Continued**	**Continued**	N/A	**CONTINUED** **Hazard identification:** 1. Review the evidence/information from relevant bodies to identify and understand the expected impacts of increased extreme weather events climate change for on the building. 2. Identify likely hazards **Hazard assessment:** 1. Identify the scale of the hazards identified. **Risk estimation:** 1. Identify the risk presented by these hazards to the building and the likely impact of the hazards taking into account the following aspects as a minimum: a. Structural stability b. Structural robustness c. Weather proofing and detailing d. Material durability e. Health and safety of building occupants and others f. Impacts on building contents and business continuity. **Risk evaluation:** 1. Evaluate the potential impact of these risks on the building. 2. Determine the tolerable risk threshold. 3. Check the sensitivity of the risk assessment. 4. Identify areas where the risks are unacceptable in health and safety, life cycle assessment and financial terms. **Risk management:** 1. Identify risk reduction measures. 2. Mitigate the hazards as far as is practically feasible. 3. Adapt the design/specification to incorporate the measures identified by the risk assessment in the final design.

Waste Credit Value 0.94%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Wst 06 Functional Adaptability	1	**1**	**1**	Robin Lee Architecture / Structural Engineer / WPP / Main Contractor	Evidence will be provided demonstrating that: 1. A building-specific Functional Adaptation Strategy Study has been undertaken by the client and design team by **RIBA Stage 2** or equivalent), which includes recommendations for measures to be incorporated to facilitate future adaptation. 2. Functional adaptation measures have been implemented by **RIBA Stage 4** in accordance with the functional adaptation strategy recommendations, where practical and cost effective. The Functional Adaptation Strategy Study should consider: a. The potential for major refurbishment, including replacing the façade. b Design aspects that facilitate the replacement of all major plant within the life of the building e.g. panels in floors/walls that can be removed without affecting the structure, providing lifting beams and hoists. c. The degree of adaptability of the internal environment to accommodate changes in working practices. d. The degree of adaptability of the internal physical space and external shell to accommodate change in-use. e. The extent of accessibility to local services, such as local power, data infrastructure etc. The implementation will be specific to the building and scope of project, but information should cover: a. The feasibility for multiple/alternative building uses and area functions e.g. related to structural design of the building b. Options for multiple building uses and area functions based on design details e.g. modularity c. Routes and methods for major plant replacement e.g. networks and connections have flexibility and capacity for expansion d. Accessibility for local plant and service distribution routes e.g. detailed information on building conduits and connections infrastructure e. The potential for the building to be extended, horizontally and/or vertically.
Section Credit Total	**9**	**7**	**8**		
Section Weighted Total	**8.50%**	**6.61%**	**7.56%**		

Land Use & Ecology Credit Value 1.00%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
LE 01 Site Selection	2	**1**	**1**	Robin Lee Architecture	Evidence will be provided demonstrating that: ***First Credit: (ACHIEVABLE)*** At least **75%** of the proposed development footprint is on an area of land previously developed within the past 50 years. ***Second Credit: (NOT SOUGHT)*** That the site is **NOT** to be classed as 'significantly contaminated' and a programme of remediation is to be undertaken.
LE 02 Ecological Value of Site and Protection of Ecological Features	2	**2**	**2**	Suitably Qualified Ecologist / Route One Building Consultancy Ltd / Vincent and Partners / Main Contractor	Evidence will be provided demonstrating that: ***First Credit: (ACHIEVABLE)*** A Suitably Qualified Ecologist (SQE) who has identified the land as being of 'low ecological value' within an ecological assessment report, based on a site survey. ***Second Credit: (ACHIEVABLE)*** **EITHER** 1. Where existing features of ecological value within and surrounding the construction zone and site boundary area are present, adequate protection from damage is undertaken during clearance, site preparation and construction activities in line with BS42020: 2013 2. In all cases, the main contractor is required to construct ecological protection recommended by the SQE, prior to any preliminary site construction or preparation works (e.g. clearing of the site or erection of temporary site facilities). **OR** 3. Where there are no features of ecological value, the credit for the protection of ecological features can only be awarded if the construction zone is defined as 'land of low ecological value'.
LE 03 Minimising Impact on Existing Site Ecology **MANDATORY One Credit for VERY GOOD**	2	**2**	**2**	Suitably Qualified Ecologist / Route One Building Consultancy Ltd / Vincent and Partners / Robin Lee Architecture / Main Contractor	Evidence will be provided demonstrating that: ***First – Second Credits: (ACHIEVABLE)*** A Suitably Qualified Ecologist is appointed to provide an Ecology Report based on their site survey confirming the change in the ecological value of the site as a result of development is equal to or greater than zero plant species, i.e. no negative change. This is to be determined by the following information and input of data into the BREEAM LE 03/LE 04 calculator: i. The habitat type(s) that define the landscape of the assessed site in its existing pre-developed state and proposed state ii. Area (m2) of the existing and proposed broad habitat types

Land Use & Ecology Credit Value 1.00%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
LE 04 Enhancing Site Ecology	2	**1**	**1**	Suitably Qualified Ecologist / Route One Building Consultancy Ltd / Vincent and Partners / Robin Lee Architecture / Main Contractor	Evidence will be provided demonstrating that: ***First Credit: (ACHIEVABLE)*** 1. A suitably qualified ecologist (SQE) has been appointed by the client or their project representative by the **end of the RIBA Stage 1** to advise on enhancing the ecology of the site at an early stage. 2. The SQE has provided an Ecology Report with appropriate recommendations for the enhancement of the site's ecology at **RIBA Stage 2**. The report is based on a site visit/survey by the SQE 3. The early stage advice and recommendations of the Ecology Report for the enhancement of site ecology have been, or will be, implemented in the final design and build. ***Second Credit: (NOT SOUGHT)*** The recommendations of the Ecology Report for the enhancement of site ecology have been implemented in the final design and build, and the SQE confirms that this will **NOT** result in an increase in ecological value of the site, **with an increase of six plant species or greater**
LE 05 Long Term Impact on Biodiversity	2	**2**	**2**	Suitably Qualified Ecologist / Route One Building Consultancy Ltd / Vincent and Partners / Robin Lee Architecture / Main Contractor	Evidence will be provided demonstrating that: ***First Credit: (ACHIEVABLE)*** 1. Where a Suitably Qualified Ecologist (SQE) is appointed prior to commencement of activities on-site and they confirm that all relevant UK and EU legislation relating to the protection and enhancement of ecology has been complied with during the design and construction process. 2. Where a landscape and habitat management plan, appropriate to the site, is produced covering at least the first five years after project completion in accordance with BS 42020:2013, Section 11.1. This is to be handed over to the building owner/occupants for use by the grounds maintenance staff. ***Second Credit: (ACHIEVABLE)*** A Suitably Qualified Ecologist's will **NOT** be appointed to produce an Ecology Report demonstrating that the Main Contractor and/or Architect is to confirm compliance with all relevant *Additional requirements* deemed applicable by the ecologist.
Section Credit Total	**10**	**8**	**8**		
Section Weighted Total	**10.00%**	**8.00%**	**8.00%**		

Pollution Credit Value 0.77%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Pol 01 Impact of Refrigerants	3	**0**	**1**	WPP / Main Contractor	Evidence will be provided demonstrating that: **Pre-requisite** All systems (with electric compressors) comply with the 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 ***First Credit: (POSSIBLE)*** 1. The systems using refrigerants will have Direct Effect Life Cycle CO2 equivalent emissions (DELC CO2e) of ≤ 1000 kgCO2e/kW cooling capacity. ***Second Credit: (NOT SOUGHT)*** 1.The air-conditioning or refrigeration systems are installed will **NOT** use refrigerants that have a Global Warming Potential (GWP) ≤10 (e.g. R1234ze) OR have Direct Effect Life Cycle CO2 equivalent emissions (DELC CO2e) of ≤ 100 kgCO2e/kW cooling capacity. ***Third Credit: (NOT SOUGHT)*** 1. Where systems using refrigerants will **NOT** have a permanent automated refrigerant leak detection system installed; **OR** where an in-built automated diagnostic procedure for detecting leakage is installed. In all instances a robust and tested refrigerant leak detection system must be installed and must be capable of continuously monitoring for leaks. 2. The system will **NOT** be capable of automatically isolating and containing the remaining refrigerant(s) charge in response to a leak detection incident 3. The permanent refrigerant leak detection will **NOT** be a robust and tested automated system, normally defined as that included on the Enhanced Capital Allowance (ECA) Energy Technology Product List
Pol 02 NOx Emissions	3	**0**	**0**	N/A	Evidence will **NOT** be provided demonstrating: ***First – Third Credits: (NOT SOUGHT)*** The plant installed to the building's delivered heating **AND** hot water demand has, under normal operating conditions, a NOx emission level (measured on a dry basis at 0% excess O2) of **≤100 mg/kWh.**

Pollution Credit Value 0.77%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Pol 03 Surface Water Run-Off	5	**4**	**4**	Suitable Consultant / Route One Building Consultancy Ltd / Vincent and Partners	Evidence will be provided demonstrating that: ***First – Second Credits*: *(ACHIEVABLE)*** Where a site-specific flood risk assessment (FRA) confirms the development is situated in a flood zone that is defined as having a low annual probability of flooding (in accordance with current best practice national planning guidance). The FRA must take all current and future sources of flooding into consideration. ***Third Credit*: *(ACHIEVABLE)*** A suitable consultant is to demonstrate that drainage measures are specified to ensure that the peak rate of run-off from the site to the watercourses (natural or municipal) is no greater for the developed site than it was for the pre-development site. This should comply at the 1-year and 100-year return period events ***Fourth Credit*: *(ACHIEVABLE)*** A suitable consultant is to demonstrate that flooding will not occur in the event of local drainage failure **AND EITHER** a. The post development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development. b. Any additional predicted volume of run-off for the 100 year 6 hour event must be prevented from leaving the site by using infiltration or other SuDS techniques **OR** (only where point b for this credit cannot be achieved) c. Justification from the suitable consultant indicating why the above criteria cannot be achieved i.e. where infiltration or other SuDS techniques are not technically viable options. d. The post development peak rate of run-off is reduced to a limiting discharge. The limiting discharge is defined as the following and the option with the highest flow rate must be achieved; 1. The pre development 1-year peak flow rate OR 2. The mean annual flow rate Qbar OR 3. 2l/s/ha ***Please Note* The third & fourth credit can be achieved by default where the man-made impermeable area draining to the watercourse (natural or municipal) has decreased or remains unchanged post development** ***Fifth Credit*: *(NOT SOUGHT)*** A suitable consultant is **NOT** to confirm that there is no discharge from the developed site for rainfall up to 5mm and there is the specification of appropriate pollution prevention measures in surface water drainage systems in accordance with the specific BREEAM requirements

Pollution Credit Value 0.77%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Pol 04 Reduction of Night Time Light Pollution	1	**1**	**1**	WPP / Main Contractor	Evidence will be provided demonstrating that the external lighting design is to designed to be in accordance with the following: 1. The new build extension has no new external lighting **OR** 1. Table 2 (and its accompanying notes) of the ILP Guidance notes for the reduction of obtrusive light, 2011; 2. All external lighting (except for safety and security lighting) will be automatically switched off between 23:00 to 07:00; 3. If safety or security lighting is provided and will be used between 23:00 and 07:00, this part of the lighting system complies with the lower levels of lighting recommended during these hours in Table 2 of the ILP's Guidance notes 4. Illuminated advertisements, where specified, are designed in accordance with ILE Technical Report 5 – The Brightness of Illuminated Advertisements
Pol 05 Noise Attenuation	1	**1**	**1**	Suitably Qualified Acoustician / Route One Building Consultancy Ltd / Vincent and Partners / Robin Lee Architecture / WPP / Main Contractor	Evidence will be provided demonstrating that a suitable qualified Acoustician will be appointed to undertake a noise impact assessment in compliance with BS 7445 confirming that new sources of noise from the development, as measured in the locality of the nearest or most exposed noise-sensitive development, is a difference no greater than +5dB during the day (07:00 to 23:00) and +3dB at night (23:00 to 07:00) compared to the background noise level.
Section Credit Total	**13**	**6**	**7**		
Section Weighted Total	**10.00%**	**4.62%**	**5.38%**		

Innovation Credit Value 1.00%	**Max No. of Credits Available**	**ACHIEVABLE Credits**	**POSSIBLE Credits**	**Responsible Party**	**BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Credit Requirements**
Inn Man 03 Responsible Construction Practices	1	**1**	**1**	Route One Building Consultancy Ltd / Vincent and Partners / WPP / Main Contractor	Evidence will be provided demonstrating that the main contractor is to be registered and certified under the Considerate Constructor's Scheme – Code of Considerate Practice; the contractor is to achieve a score of **40 out of 50** or more, with a score of at least **7** in of the 5 sections
Section Credit Total	**10**	**1**	**1**		
Section Weighted Total	**10.00%**	**1.00%**	**1.00%**		

BREEAM (New Construction) 2014 Offices *'Fully Fitted'* Pre-Assessment Results for: Stephenson Way, London		
Results	**ACHIEVABLE CREDITS**	**POSSIBLE CREDITS**
Final Predicted Score:	**65.96%**	**77.36%**
Final Predicted BREEAM Ratings:	**VERY GOOD**	**EXCELLENT**

Summary of Minimum Standards by BREEAM 2014 by Rating Level					
BREEAM Issue	**PASS >30%**	**GOOD >45%**	**VERY GOOD >55%**	**EXCELLENT >70%**	**OUTSTANDING >85%**
Man 03 – Responsible Construction Practices	None	None	None	**One Credit (Considerate Construction)**	Two Credits (Considerate Construction)
Man 04 – Commissioning & Handover	None	None	None	**Building User Guide**	Building User guide
Man 05 – Aftercare	None	None	None	**One Credit (Seasonal Commissioning)**	One Credit (Seasonal Commissioning)
Ene 01 – Reduction of Energy Use & Carbon Emissions	None	None	None	**Five Credits**	Eight Credits
Ene 02 – Energy Monitoring	None	None	One Credit (First Sub-Metering Credit)	**One Credit (First Sub-Metering Credit)**	One Credit (First Sub-Metering Credit)
Wat 01 – Water Consumption	None	One Credit	One Credit	**One Credit**	Two Credits
Wat 02 – Water Monitoring	None	One Credit	One Credit	**One Credit**	One Credit
Mat 03 – Responsible Sourcing of Materials	Legally Sourced Timber requirement	Legally Sourced Timber requirement	Legally Sourced Timber requirement	**Legally Sourced Timber requirement**	Legally Sourced Timber requirement
Wst 01 – Construction Waste Management	None	None	None	**None**	One Credit
Wst 03 – Operational Waste	None	None	None	**One Credit**	One Credit
LE 03 – Minimising Impact on Existing Site Ecology	None	None	One Credit	**One Credit**	One Credit