



INTERIM STAGE ASSESSMENT: BREEAM (NC) 2018 Industrial 'Shell & Core' - Outstanding Credit Schedule – Issue 5

Watkins Payne Partnership has been commissioned by XLB Property to carry out a BREEAM New Construction 2018 Industrial Pre-Assessment of Units 1-4 Langstone Technology Park, Havant

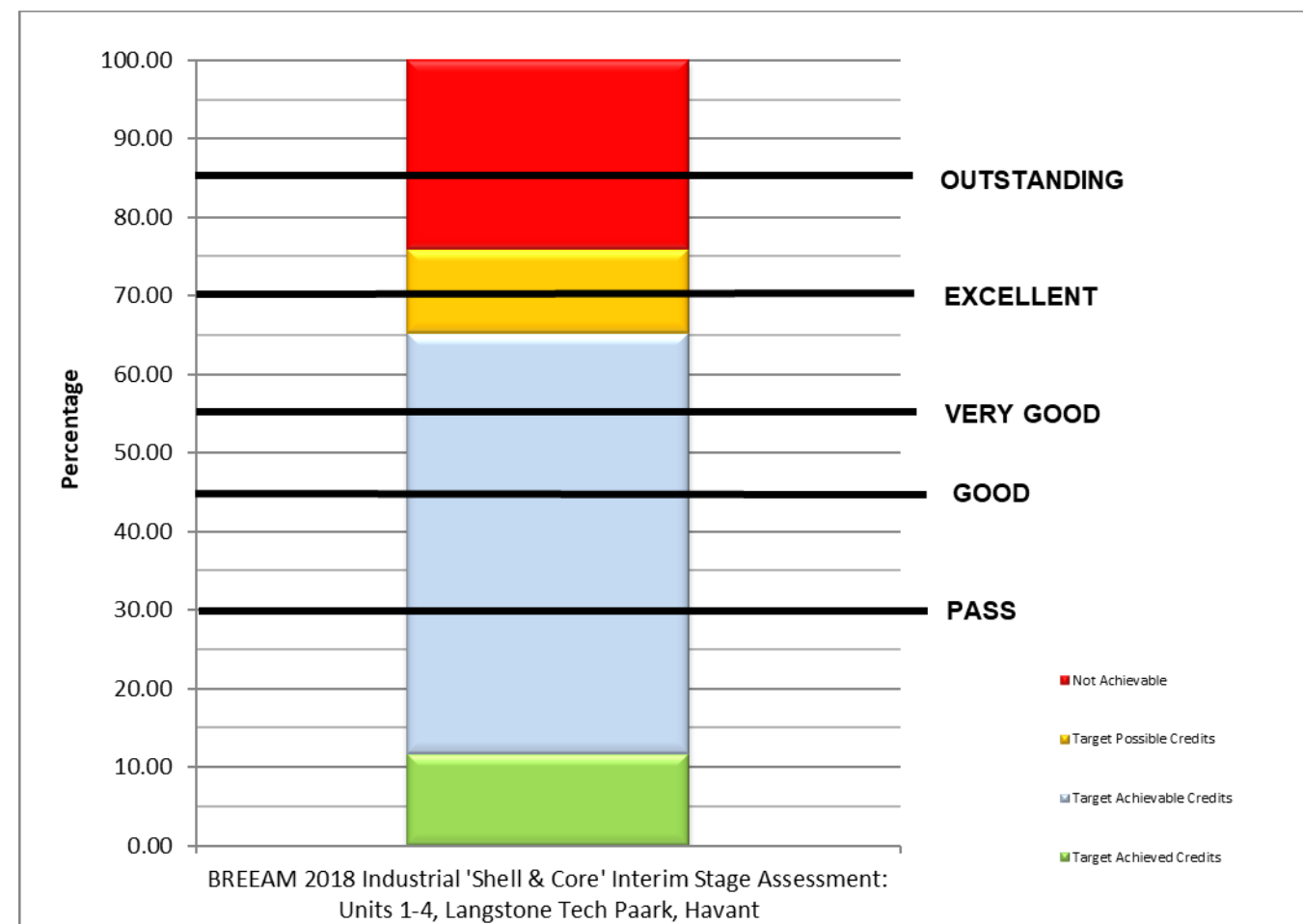
The Target **ACHIEVABLE** BREEAM score is **65.22% - VERY GOOD**

The Target **POSSIBLE** BREEAM score is **75.81% - EXCELLENT**

The Current **ACHIEVED** BREEAM score is **11.64%**

This Outstanding Credit Schedule details the information required and the responsible parties:

- **Outstanding credit information / requirements are detailed in RED**
- **Completed credit information / requirements are detailed in BLACK**



Project Directory		
Client	Paul Whelan / Tony Lawson	XLB Property Ltd
Project Manager	Paul Whelan / Tony Lawson	XLB Property Ltd
Cost Consultant	Martin Judd / James Cooney	AECOM
Architect	Mark Evans / Ian Williams	PRC Architecture & Planning
Consulting Building Services Engineer	Mike Cousins / Sai Kham Thein / Paulo de Jesus / Paul Maysey	Watkins Payne Partnership
Structural / Civil Engineer	Gavin Lord / Glenn Cashmore	Baynham Meikle Partnership
Planning Consultant	Paul Newton / Susie Stephan	Barton Willmore
Transport Consultant	John Russell	Motion
Suitably Qualified Ecologist	TBC	TBC
Acoustician	TBC	TBC
Main Contractor	TBC	TBC
Report produced by Watkins Payne Partnership		
BREEAM Accredited Professional (AP)	Jamie Daniel - Watkins Payne Partnership	

Mandatory credits are to be achieved to reach the **PASS / GOOD / VERY GOOD / EXCELLENT / OUTSTANDING** ratings, credits with mandatory requirements are detailed in **Bold BLUE**



Management Credit Value 0.61%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' <u>Interim Stage</u> Required Information/Evidence
Man 01 Project Brief & Design	4	3	3	0	XLB Property/ PRC Architecture / WPP (BREEAM AP)	First Credit: XLB Property to provide appropriate evidence [meeting minutes / responsibilities matrix / letters of appointment(s)] confirming: 1. That prior to end of RIBA Stage 2 the project delivery team have been involved in contributing to the decision-making process for the project. This must include meeting(s) to identify & define design team roles, responsibilities and contributions for each key phase of the project *The roles & responsibilities* need to include consideration of: The following items when defining roles, responsibilities and contributions for each key phase of the project must be covered: • End user requirements • Aims of the design and design strategy • Particular installation and construction requirements • Occupiers budget and technical expertise in maintaining any proposed systems • Maintainability and adaptability of the proposals • Operational energy • Requirements for the production of project and end user documentation • Requirements for commissioning, training and aftercare support. XLB Property and/or PRC Architecture to provide a statement demonstrating how the project delivery stakeholder contributions and internal design team consultation process have influenced (where relevant) • Initial Project Brief • Project Execution Plan • Communication Strategy • Concept Design. Definition of Project Execution Plan The RIBA Plan of Works 2013 defines a Project Execution Plan as a plan produced in collaboration between the project lead and lead designer, with contributions from other designers and members of the project team. The Project Execution Plan sets out the processes and protocols to be used to develop the design. It is sometimes referred to as a 'project quality plan'. Definition of Communication strategy: The RIBA Plan of Works 2013 defines the Communication Strategy as a strategy that sets out when the project team will meet, how they will communicate effectively and the protocols for issuing information between the various parties, both informally and at Information Exchanges Second Credit: NOT SOUGHT Third Credit: XLB Property to provide: • Evidence confirming that the BREEAM target rating has been agreed between client and design/project team • Letter of appointment confirming the BREEAM AP's appointment no later than RIBA Stage 2 in line with the credit requirements • Copy of the Project programme indicating RIBA work stages (Stage 1 – Strategic Definition Appraisal to Stage 7 – In Use) WPP (BREEAM AP) to undertake BREEAM Pre-Assessment at RIBA Stage 2 detailing the credit strategy to achieve the target BREEAM rating Fourth Credit: XLB Property to provide <u>Continual</u> minutes from Design Team Meetings / Workshops demonstrating: • That the BREEAM AP attends <u>key project / design meetings</u> [RIBA Stages 2 - 4] • That BREEAM is a regular agenda item • That the BREEAM AP is included on the circulation list for all key project / design meetings [RIBA Stages 2 – 4] WPP (BREEAM AP) to provide copies of BREEAM Progress reports for each relevant work stage



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Man 02 Life Cycle Costing and Service Life Planning	4	4	4	0	Life Cycle Cost Consultant / PRC Architecture / Baynham Meikle Partnership / WPP / AECOM	First – Second Credits: Life Cycle Cost Consultant to provide a copy of the outline, entire asset <u>Elemental</u> Life Cycle Cost (LCC) plan carried out at RIBA Stage 2 together with any design options appraisals in line with 'Standardised method of life cycle costing for construction procurement' PD 156865:2008 The <u>Elemental</u> LCC plan needs to cover: - 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) - Includes service life, maintenance and operation cost estimates PRC Architecture to provide appropriate examples demonstrating how the <u>Elemental LCC</u> plan has been used to influence building and systems design and specification to minimise Life Cycle Costs and maximise critical value. Third Credit: Life Cycle Cost Consultant to provide a copy of the <u>Component Level</u> LCC option appraisal developed by the end of RIBA Stage 4 in line with PD 156865:2008 and includes the following component types (where present within developer's scope of works): - Envelope, e.g. cladding, windows, and/or roofing - Services, e.g. heat source cooling source, and/or controls - Finishes, e.g. walls, floors and/or ceilings - External spaces, e.g. alternative hard landscaping, boundary protection. PRC Architecture / Baynham Meikle Partnership / WPP to provide appropriate examples demonstrating how the <u>Component Level</u> LCC option appraisal has been used to influence building and systems design/specification to minimise Life Cycle Costs and maximise critical value Examples could be in the form of component specifications coupled with justifications for their selection (i.e. how they reduce life cycle costs / maximise critical value). Fourth Credit: AECOM to provide formal confirmation of the predicted Capital Cost for the building in pounds per square metre (£k/m2) Life Cycle Cost (LCC): The cost of an asset, or its parts throughout its life cycle, while fulfilling the performance requirements; a methodology for systematic economic evaluation of life cycle costs over a period of analysis, as defined in the agreed scope. Elemental LCC plan: This is commonly used for developing solutions at project level during option appraisals. Costs are normally at building elemental level on the entire asset. Information may be a mix of typical benchmark costs for key elements, comparative cost modelling or approximate estimates. It is expressed as cost per square metre of gross internal floor area (GIFA) and presented for elemental analysis, aligned to the level of capital cost plans. Component Level LCC plan: A component level LCC plan is commonly used for cost planning specification choices of systems, elements or component levels during design development. Component level LCC appraisal for service life planning at the feasibility stage requires the environment of the building and other local conditions to be identified, and the fundamental requirements to be met in planning the service life of the building. Decisions should be made on: - The likely design life of the building (rather than the contractual design life) - Minimum functional performance criteria for each component over the building's design life - Components that must be repairable, maintainable or replaceable within the design life of the building. 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 / 4th CREDIT FOR OUTSTANDING	6	6	6	0	AECOM / XLB Property / WPP (BREEAM AP)	<u>MANDATORY Pre-requisite:</u> AECOM to provide a copy of the relevant section of the main Contract Specification / Tender documentation confirming a requirement for the <u>Demolition and Main Contractor</u> to source all site timber and timber-based products used on the project as '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 <u>First Credit:</u> AECOM to provide a copy of the relevant section of the main Contract Specification / Tender documentation confirming a requirement for the <u>Demolition and Main Contractor</u> to: • Operate an environmental management system (EMS), the EMS must be third party certified to ISO 14001 • Implement best practice pollution prevention policies and procedures on-site in accordance with Pollution Prevention Guidelines, Working at construction and demolition-sites: PPG6 <u>Second Credit:</u> XLB Property to provide • A Letter of appointment confirming the BREEAM AP's appointment throughout RIBA Stages 5 – 6 in line with the credit requirements • <u>Continual</u> Meeting minutes from Design Team Meetings / Workshops demonstrating that the BREEAM AP attends key project / design meetings [RIBA Stages 5 - 6] and that BREEAM is a regular agenda item AECOM to provide a copy of the relevant section of the main Contract Specification / Tender documentation that the BREEAM target rating has been agreed between client and the main contractor WPP (BREEAM AP) to provide copies of BREEAM Progress reports for each relevant work stage <u>Third – Fourth Credits:</u> AECOM to provide a copy of the relevant section of the main Contract Specification / Tender documentation confirming a requirement for the <u>Demolition and Main Contractor</u> is to be registered and certified under the Considerate Constructor's Scheme – Code of Considerate Practice and achieve a score of 35 out of 50 or more, with a score of at least 7 in of the 5 sections <u>Fifth Credit:</u> AECOM to provide a copy of the relevant section of the main Contract Specification / Tender documentation confirming a requirement for the <u>Demolition and Main Contractor</u> to monitor, record & report Energy consumption, CO2 Emissions and Water Consumption from the use of construction plant, equipment (mobile & fixed) and site accommodation necessary for completion of all construction processes <table><tr><th><u>Energy Consumption</u></th><th><u>CO2 Emissions</u></th><th><u>Water Consumption</u></th></tr><tr><td>Total kWh</td><td>Total KgCO2eq</td><td>Total net water consumption m3</td></tr><tr><td>Total Kwh / £100K of project value</td><td>Total kgCO2eq / £100K of project value</td><td>Total net water consumption m3 / £100K of project value</td></tr></table> <u>Sixth Credit:</u> AECOM to provide a copy of the relevant section of the main Contract Specification / Tender documentation confirming a requirement for the <u>Demolition and Main Contractor</u> to 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 b. Transport of construction waste from the construction gate to waste disposal processing/recovery centre gate. Scope of this monitoring must cover the construction waste groups outlined in the project's waste management plan. <table><tr><th><u>Materials to Site Consumption</u></th><th><u>Waste from Site Consumption</u></th></tr><tr><td>Total distance (km) of materials to site</td><td>Total distance (km) of waste from site</td></tr><tr><td>Total litres of fuel used for materials to site</td><td>Total litres of fuel used of waste from site</td></tr><tr><td>Litres/km for materials to site</td><td>Litres/km of waste from site</td></tr><tr><td>Total KgCO2eq of materials to site</td><td>Total KgCO2eq of waste from site</td></tr><tr><td>Total KgCO2eq/km of materials to site</td><td>Total KgCO2eq/km of waste from site</td></tr></table>	<u>Energy Consumption</u>	<u>CO2 Emissions</u>	<u>Water Consumption</u>	Total kWh	Total KgCO2eq	Total net water consumption m3	Total Kwh / £100K of project value	Total kgCO2eq / £100K of project value	Total net water consumption m3 / £100K of project value	<u>Materials to Site Consumption</u>	<u>Waste from Site Consumption</u>	Total distance (km) of materials to site	Total distance (km) of waste from site	Total litres of fuel used for materials to site	Total litres of fuel used of waste from site	Litres/km for materials to site	Litres/km of waste from site	Total KgCO2eq of materials to site	Total KgCO2eq of waste from site	Total KgCO2eq/km of materials to site	Total KgCO2eq/km of waste from site
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Man 04 Commissioning & Handover MANDATORY 4TH CREDIT FOR EXCELLENT	4	4	4	3	WPP / AECOM	<u>First Credit:</u> WPP to provide Specification clauses confirming: - A requirement for the Main Contractor to produce a schedule of commissioning and testing that identifies and includes: - A suitable timescale for commissioning and re-commissioning of all complex and noncomplex building services and control systems and testing and inspecting building fabric. - The appropriate standards that all commissioning activities will be conducted in accordance with, such as current Building Regulations, BSRIA & CIBSE guidelines and where provided BMS in line with the BREEAM requirements - The appointment of an appropriate team member to monitor and programme pre-commissioning, commissioning and where necessary re-commissioning on behalf of the client - That the Main Contractor is account for the commissioning and testing programme, responsibilities and criteria within their budget and main programme of works, allowing for the required time to complete all commissioning and testing activities prior to handover <u>Second Credit:</u> WPP to provide Specification clauses confirming the requirement for the main contractor to appoint a specialist commissioning manager during the design stage for complex systems with responsibility for: - Undertaking design reviews and giving advice on suitability for ease of commissioning - Providing commissioning management input into construction programming and during installation stages - Management of commissioning, performance testing and handover/post-handover stages <u>Third Credit:</u> AECOM to provide a copy of the relevant section of the main Contract Specification / Tender documentation confirming a requirement for the Main Contractor to: - Undertake BOTH a Thermographic survey AND an Air-tightness test at post construction stage in line with the specific BREEAM requirements. - If necessary, undertake remedial work following any defects highlighted by the Thermographic survey and/or Air-tightness test prior to building handover <u>Fourth Credit:</u> WPP to provide Specification clauses confirming a requirement for the Main Contractor to comply with the following: - Develop two BREEAM compliant building user guides for the following users: - A non-technical user guide for distribution to the building occupiers - A technical user guide for the premises facilities managers Draft copies are to be developed and discussed with users first (where the building occupants are known) to ensure the guide is most appropriate and useful to potential users. - Prepare two BREEAM compliant training schedules timed appropriately around handover and proposed occupation plans for the following users: - A non-technical training schedule for the building occupiers - A technical training schedule for the premises facilities managers
Section Credit Total	18	17	17	3		
Weighted Section Total	11.00%	10.39%	10.39%	1.83%		



Health & Wellbeing Credit Value 0.80%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' <u>Interim Stage</u> Required Information/Evidence								
<u>Hea 01</u> Visual Comfort	3	2	3	2	Daylight Consultant / PRC Architecture / WPP	<u>First Credit:</u> <u>Daylight Consultant</u> to provide report/daylight calculations for the <u>office areas</u> of each unit confirming compliance with the below: <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>Offices and all other occupied spaces</td><td>2%</td><td>80%</td><td>EITHER (a) OR (b) <u>and</u> (c) as per below</td></tr></table> (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% (b) At least 80% of the room has a view of sky from desk or table top height of 0.7m (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 <u>Definition of occupied spaces:</u> BREEAM defines relevant occupied spaces as areas within the building where good daylighting is considered to be of benefit to the building users (typically those areas occupied continuously for 30 minutes or more).	Building/Area Type	Average Daylight Factor required	Minimum area (m2) to comply	Other requirements	Offices and all other occupied spaces	2%	80%	EITHER (a) OR (b) <u>and</u> (c) as per below
						Building/Area Type	Average Daylight Factor required	Minimum area (m2) to comply	Other requirements					
Offices and all other occupied spaces	2%	80%	EITHER (a) OR (b) <u>and</u> (c) as per below											
<u>POSSIBLE Second Credit:</u> <u>PRC Architecture</u> to provide: 1. Floor layout drawing demonstrating for each unit that 95% of the office floor area is within 8m of a window providing an adequate view out 2. Elevations with calculations demonstrating: - For areas where the room depth is <8m that the area window/opening is ≥ 20% of the surrounding wall area - For areas where the room depth is >8m the percentage of window/opening is the same as, or greater than, the values in table 1.0 of BS 8206 <u>Third Credit:</u> <u>WPP</u> to provide specification clauses confirming: - Internal lighting in all relevant areas of the building is designed to provide illuminance (lux) levels and colouring rendering index in accordance with the SLL Code for Lighting 2012 - For areas where computer screens are regularly used, the lighting design complies with CIBSE Lighting Guide 7 sections 2.4, 2.13 to 2.15, 2.20, and 6.10 to 6.20 - External Lighting is specified in accordance with BS5489-1:2013 Code for the practice for the design of road lighting. Lighting of roads and public amenity areas and BS EN 12464-2:2014 Light and lighting - Lighting of workplaces- Part 2: Outdoor workplaces - Furthermore, the lighting installation is be zoned, in all appropriate occupied areas, to allow <u>separate occupant control</u> in line with the BREEAM requirements <u>Definition of Separate Occupant Control:</u> Light switches or controls for a particular area/zone of the building that can be accessed and operated by the individual(s) occupying that area or zone. Such controls must be located within, or within the vicinity of, the zone or area they control														



Health & Wellbeing Credit Value 0.80%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' <u>Interim Stage</u> Required Information/Evidence		
<u>Hea 02</u> Indoor Air Quality	1	0	0	0	N/A	<u>Credit: NOT SOUGHT</u>		
<u>Hea 04</u> Thermal Comfort	2	2	2	0	Main Contractor	<u>First Credit:</u> <u>Main Contractor</u> to provide a thermal comfort assessment utilising software that is CIBSE AM11 compliant demonstrating that the services strategy for the <u>office areas</u> of the building can deliver thermal comfort levels in accordance CIBSE Guide A, Table 1.5. Plus, for air-conditioned buildings, the PMV (predicted mean vote) and PPD (predicted percentage of dissatisfied) indices based on the modelling are confirmed. <u>Second Credit:</u> <u>Main Contractor</u> to provide a thermal comfort assessment utilising software that is CIBSE AM11 compliant demonstrating that the services strategy for the <u>office areas</u> of the building can deliver thermal comfort levels in accordance CIBSE Guide A, Table 1.5 can be achieved for a projected climate change environment. Plus, for air-conditioned buildings, the PMV (predicted mean vote) and PPD (predicted percentage of dissatisfied) indices based on the modelling are confirmed.		
<u>Hea 05</u> Acoustic Performance	1	1	1	0	Suitably Qualified Acoustician / AECOM	<u>Suitably Qualified Acoustician</u> to provide report provide for the <u>office areas</u> of the building confirming compliance with the acoustic performance standards and testing requirements as follows: <table><tr><td><u>Internal Ambient Noise Levels</u></td><td>A programme of pre-completion acoustic testing can demonstrate that the indoor ambient noise levels comply with the design ranges detailed in Section 7 of BS 8233:2014</td></tr></table> <u>AECOM</u> to provide main Contract Specification / Tender documentation confirming: - That a Programme of Pre-completion Acoustic Testing will be carried out by a 'Compliant Test Body' to ensure that relevant spaces (as built) achieve the above required performance standards. - Where testing identifies that spaces do not meet the standards, remedial works will be carried out by the Main Contractor prior to handover and occupation	<u>Internal Ambient Noise Levels</u>	A programme of pre-completion acoustic testing can demonstrate that the indoor ambient noise levels comply with the design ranges detailed in Section 7 of BS 8233:2014
<u>Internal Ambient Noise Levels</u>	A programme of pre-completion acoustic testing can demonstrate that the indoor ambient noise levels comply with the design ranges detailed in Section 7 of BS 8233:2014							



Health & Wellbeing Credit Value 0.80%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' <u>Interim Stage</u> Required Information/Evidence
Hea 06 Security	1	1	1	0	PRC Architecture / WPP	<u>PRC Architecture</u> to provide: 1. Meeting minutes demonstrating that prior to the end of RIBA Stage 2, A Designing Out Crime Officer (DOCO) OR Architectural Liaison Officer (ALO) OR a Crime Prevention Design Advisor (CPDA) OR a Suitably Qualified Security Specialist (SQSS) has conducted an evidence-based Security Needs Assessment (SNA) and developed 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. Drawings and/or specification demonstrating that the recommendations or solutions are implemented into the final scheme design/construction (<u>this information can be provided post Stage 2</u>) <u>WPP</u> to provide drawings and/or specification demonstrating that the recommendations or solutions are implemented into the final scheme design/construction (<u>this information can be provided post Stage 2</u>) Definition of a Security Needs Assessment (SNA) The project and site-specific assessment of security needs, including: • An audit of the site and surroundings, identifying environmental cues and features pertinent to the security of the proposed development. • Formal consultation with relevant stakeholders, including the local DOCO ALO, CPDA (as applicable), in order to obtain a summary of crime and disorder issues in the immediate vicinity of the proposed development. • Identify risks specific to the proposed, likely or potential use of the building(s). • Identify risks specific to the proposed, likely or potential user groups of the building(s). • 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. <u>An individual achieving any of the following can be considered as 'suitably qualified' for the purposes of compliance with this BREEAM issue:</u> • Designing Out Crime Officer (DOCO) or Architectural Liaison Officers (ALO) or Crime Prevention Design Advisors (CPDA) • A specialist registered with a BREEAM-recognised third party accreditation scheme for security specialists. • A practising security consultant that meets the following requirements: a. Minimum of three years relevant experience within the last five years. This experience must clearly demonstrate a practical understanding of factors affecting security in relation to construction and the built environment, relevant to the type and scale of the project being undertaken. b. Hold a suitable qualification relevant to security. c. Maintains a full membership to a relevant professional body, institute or certification scheme that has a professional code of conduct, to which members adhere. *Please Note* Where consultation has taken place late than RIBA stage 2, the credit may still be achievable. If the DOCO, ALO, CPDA or SQSS confirms that the implementation of security measures have not been restricted, impaired or are not possible as a result of their later involvement (i.e. everything that would / could have been recommended can still be implemented) The credit can still be awarded providing all the proposed security related recommendations are implemented into the scheme
Hea 07 Safe & Health Surroundings	2	0	0	0	N/A	<u>Credit: NOT SOUGHT</u>
Section Credit Total	10	6	7	1		
Weighted Section Total	8.00%	4.80%	5.60%	0.80%		



Energy Credit Value 0.67%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' <u>Interim Stage</u> Required Information/Evidence
<u>Ene 01</u> Reduction of Energy Use & Carbon Emissions MANDATORY 4 CREDITS FOR EXCELLENT 10 CREDITS FOR OUTSTANDING	13	6	11	0	Main Contractor	<u>First – Sixth Credits / POSSIBLE Seventh Credit:</u> Main Contractor to provide for each unit the Building Regulations Output Document (BRUKL) from the approved software based on the design stage of analysis detailing the modelled building's: • Notional Heating & Cooling demand (MJ/m2/yr) • Actual Heating & Cooling demand (MJ/m2/yr) • Notional Primary Energy demand (kWh/m2/yr) • Actual Primary Energy demand (kWh/m2/yr) • Target Emission Rate (TER) kgCO2/m2/yr • Building Emission Rate (BER) kgCO2/m2/yr <u>POSSIBLE Seventh – Tenth Credits:</u> Main Contractor to provide evidence confirming: 1. That a preliminary design workshop focusing on operational energy performance with the relevant members of the design team has been carried out at RIBA Stage 3/4 2. Report detailing: • Results from undertaking additional energy modelling during RIBA Stage 4/5 to generate predicted operational energy consumption figures, predicted energy consumption targets by end use, design assumptions and input data (with justifications). • Risk assessment to highlight any significant design, technical, and process risks that should be monitored and managed throughout the construction and commissioning process. 3. Commitment to undertake additional energy modelling at RIBA Stage 6 to generate predicted operational energy consumption figures and updated to account for any changes to the building specification, and the consumption target revised accordingly. Definition of Operational Energy Workshop: The workshop should establish the levels of risk pertaining to the operational energy performance of the building. It should consider how the energy performance of the building will be affected by future weather patterns, changes of use and variations in the expected usage of the building and consider the resilience of building systems. The outcomes of the workshop should be used to inform improvements to the design of the building and to the operational, maintenance and handover strategies. The energy performance risk assessment should inform the scenarios that are to be modelled.
<u>Ene 02</u> Energy Monitoring MANDATORY 1ST CREDIT FOR VERY GOOD	2	2	2	2	WPP	<u>First Credit:</u> WPP to provide specification clauses and schematics confirming Energy Metering Systems are installed (using an appropriate energy monitoring and management system) that enables 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 <u>Second Credit:</u> WPP to provide specification clauses and schematics confirming that 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 0.67%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' <u>Interim Stage</u> Required Information/Evidence
<u>Ene 03</u> External Lighting	1	1	1	1	WPP	<u>WPP</u> to provide: - Specification clauses confirming: - The average initial luminous efficacy of the external light fittings within the construction zone is not less than 70 luminaire lumens per circuit Watt. - All external light fittings are automatically controlled for prevention of operation during daylight hours and presence detection in areas of intermittent pedestrian traffic - Drawings detailing the location and purpose of all external lighting
<u>Ene 04</u> Low Carbon Design	3	2	2	0	Main Contractor / WPP	<u>First Credit:</u> <u>Main Contractor</u> to provide the thermal comfort assessment utilising software that is CIBSE AM11 compliant required for the 1st credit for Hea 04 <u>WPP</u> to provide: - A BREEAM compliant Passive Design Analysis carried out by the <u>end of RIBA Stage 2</u> which: - Identifies opportunities for the implementation of passive design solutions that reduce demands for energy consuming building services - Details the quantify of the reduced total energy demand and carbon dioxide (CO2-eq) emissions resulting from the passive design measures - Evidence confirming that the building uses 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 <u>Second Credit: NOT SOUGHT</u> <u>Third Credit:</u> <u>WPP</u> to provide: - A BREEAM compliant LZC Feasibility study report carried out by the <u>end of RIBA Stage 2</u> which: - Determines the most appropriate LZC energy sources for the project - Details the quantify of the reduced regulated carbon dioxide (CO2-eq) emissions resulting from the proposed LZC technology - Evidence confirming that LZC energy sources will be specified in line with recommendations of the feasibility study report
<u>Ene 06</u> Energy Efficient Lifts	2	2	2	2	WPP	<u>First – Second Credits:</u> <u>WPP</u> to provide: - A Lift Traffic Analysis report confirming: - An analysis of the transportation demand and usage patterns for the building carried out to determine the optimum number and size of lifts. - The energy consumption has been calculated in accordance with BS EN ISO 25745 for one of the following: - At least two types of system (for each transportation type required); OR - An arrangement of systems (e.g. for lifts, hydraulic, traction, machine room-less lift (MRL)); OR - A system strategy which is 'fit for purpose'. - The use of regenerative drives has been considered. - Specification confirming: - The lift system with the lowest energy consumption has been specified - The following energy efficient features have been specified: - 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 - The lift car lighting and display lighting provides an average lamp efficacy, (across all fittings in the car) of > 70 lamp lumens/circuit Watt - The lift uses a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor - The use of regenerative drives where it is demonstrated to save energy
Section Credit Total	21	13	18	5		
Weighted Section Total	14.00%	8.67%	12.00%	3.33%		



Transport Credit Value 0.96%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' <u>Interim Stage</u> Required Information/Evidence
<u>Tra 01</u> Transport Assessment and Travel Plan	2	2	2	0	Motion / PRC Architecture / XLB Property	<u>First – Second Credits:</u> <u>Motion</u> to provide a site-specific Travel Plan no later than RIBA Stage 2 covering as a minimum: - Existing travel patterns and opinions of existing building or site users towards cycling and walking, identifying constraints and opportunities, if relevant - Travel patterns and transport impact of future building users - Current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children) - Reporting of the number and type of existing accessible amenities within 500m of the site - Disabled access (accounting for varying levels of disability and visual impairment) - Calculation of the existing public transport Accessibility Index (AI) - Current facilities for cyclists - Proposals to increase or improve sustainable modes of transport and movement of people and goods during the building's operation and use <u>PRC Architecture</u> to provide drawings showing the implementation of any suggested recommendation made within the Travel Plan <u>XLB Property</u> to provide formal letter, if applicable, confirming the measures detailed within the Travel Plan will be implemented during occupation
<u>Tra 02</u> Sustainable Transport Measures	10	4	4	0	PRC Architecture / WPP / XLB Property	<u>Four Credits: BASED ON TRA 01 CREDITS BEING ACHIEVED</u> <u>PRC Architecture</u> to provide: - Site Plan showing that electric recharging stations are provided of a minimum of 3kW for at least 10% of the total car parking capacity for the development - Site Plan showing priority spaces are provided for car sharers for at least 5% of the total car parking capacity for the development and the priority parking spaces are to be located nearest the development entrance used by the sharing scheme participants - Drawing & Specification confirming that BREEAM compliant cycle storage provision to each unit <u>Definition of BREEAM compliant cycle storage:</u> - Cycles can be secured within spaces in rack(s). They are covered overhead and the cycle racks are set in or fixed to a permanent structure (building or hard-standing). Alternatively, the cycle storage may be located in a locked structure fixed to or part of a permanent structure with appropriate surveillance. - The distance between each cycle rack, and cycle racks and other obstructions, e.g. a wall, allows for appropriate access to the cycle storage space, to enable bikes to be easily stored and accessed. - The storage facility or entrance to the facility is in a prominent site location that is viewable / overlooked from either an occupied building or a main access to a building. <u>WPP</u> to provide specification clauses confirming: - That the external lighting is in accordance with BS 5489-1:2013 'Lighting of roads and public amenity areas' and BS EN 12464-2:2014 'Light and lighting - Lighting of work places - Part 2: Outdoor work places' AND is controlled to avoid out-of-hours use and operation during daylight hours, where there is sufficient daylight in or around the facility - That electric recharging stations will be provided of a minimum of 3kW for at least 10% of the total car parking capacity for the development <u>XLB Property</u> to provide a section of the Tenant Handover Pack confirming the recommendation for the incoming building occupants: - To set up a car sharing group or facility to facilitate and encourage building users to car share - That awareness of the sharing scheme will be distributed with marketing and communication materials.



Transport Credit Value 0.96%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' <u>Interim Stage</u> Required Information/Evidence
<u>Tra 02</u> Sustainable Transport Measures	10	Continued	Continued	Continued	PRC Architecture / WPP / XLB Property	PRC Architecture to provide Drawings showing that at least two of the following types of compliant cyclist facilities will be provided for all staff use to each unit: • Showers (1 shower provided for every 10 cycle spaces) • Changing facilities • Lockers (equal to the number of cycle spaces) • Dedicated drying space Definition of BREEAM compliant showers • Any building providing eight showers or more will comply regardless of the number of cycle storage spaces provided. • Both male and female users must be catered for, i.e. either separate showers within shared gender-specific facilities (required provision split 50-50) or single shower cubicles and changing space for mixed use. • The showers do not need to be dedicated to cyclists and can be those shared with other users/uses. Definition of BREEAM compliant changing facilities • Appropriately sized for the likely/required number of users. The assessor should use their judgement to determine whether the changing area is appropriately sized given the number of cycle storage spaces or showers provided. • Changing areas must include adequate space and facilities to hang or store clothing and equipment while changing or showering, e.g. bench seat and/or hooks. • Toilet/shower cubicles cannot be counted as changing facilities. Definition of BREEAM compliant lockers • Appropriately Lockers are either in, or adjacent to, compliant changing rooms, where provided. • The lockers are sized appropriately for the storage of a cyclist's equipment.
Section Credit Total	12	6	6	0		
Weighted Section Total	11.50%	5.75%	5.75%	0.00%		



Water Credit Value 0.88%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' <u>Interim Stage</u> Required Information/Evidence														
<u>Wat 01</u> Water Consumption MANDATORY 1 CREDIT FOR GOOD	5	4	4	0	WPP / PRC Architecture	<u>First – Fourth Credits:</u> WPP to provide specification clauses confirming that the main contractor is to provide flow restrictors on the supply to any future provision of tea points/kitchenette taps which are to be flow regulated a max of 3 litres/min PRC Architecture to provide: • Drawings showing the location of all sanitary areas • Specification detailing the proposed sanitary ware specification <table><tr><th colspan="2"><u>EXAMPLE SANITARY-WARE SPECIFICATION</u></th></tr><tr><th>Sanitary Item</th><th>Flush Volume / Flow Rate</th></tr><tr><td>All WCs cisterns (excluding Disabled/Doc M)</td><td>4 / 2.6 litre dual flush</td></tr><tr><td>All Disabled/DOC M WCs cisterns</td><td>4.5 litre single flush</td></tr><tr><td>All showers</td><td>Flow regulated to max 8 litres/min</td></tr><tr><td>All wash hand basin taps (including within Disabled WC areas)</td><td>Flow regulated to max 2.5 litres/min</td></tr><tr><td>If provided (including the facility for future provision) all kitchenette taps</td><td>Flow regulated to max 3 litres/min</td></tr></table>	<u>EXAMPLE SANITARY-WARE SPECIFICATION</u>		Sanitary Item	Flush Volume / Flow Rate	All WCs cisterns (excluding Disabled/Doc M)	4 / 2.6 litre dual flush	All Disabled/DOC M WCs cisterns	4.5 litre single flush	All showers	Flow regulated to max 8 litres/min	All wash hand basin taps (including within Disabled WC areas)	Flow regulated to max 2.5 litres/min	If provided (including the facility for future provision) all kitchenette taps	Flow regulated to max 3 litres/min
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<u>Wat 02</u> Water Monitoring MANDATORY CREDIT FOR GOOD	1	1	1	1	WPP	WPP to provide specification clauses confirming the specification of: • A water meter on the mains incoming water supply to the building. • Water sub-meters on the individual water consuming plant or building areas consuming ≥10% of the building's total water demand All water meters must be 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														
<u>Wat 03</u> Water Leak Detection	2	2	2	2	WPP	<u>First Credit:</u> WPP to provide specification clauses confirming that a BREEAM 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 will be installed. The leak detection system must be: • A permanent automated water leak detection system that alerts the building occupants to the leak OR an in-built automated diagnostic procedure for detecting leaks is installed. • Activated when the flow of water passing through the water meter/data logger is at a flow rate above a pre-set maximum for a pre-set period of time. • Able to identify different flow and therefore leakage rates, e.g. continuous, high and/or low level, over set time periods. • Programmable to suit the owner/occupiers' water consumption criteria. • Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers <u>Second Credit:</u> WPP to provide specification clauses confirming the specification of PIR operated solenoid valves to control the water supply for each toilet area in the building														
Section Credit Total	8	7	7	3																
Weighted Section Total	7.00%	6.13%	6.13%	2.63%																



Materials Credit Value 1.25%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' Interim Stage Required Information/Evidence
<u>Mat 01</u> Environmental Impacts from Construction Products - Building Life Cycle Assessment	7	0	2	0	LCA Consultant	<u>POSSIBLE Two Credits:</u> <u>LCA Consultant</u> to provide Report with supporting information confirming that an <u>IMPACT Compliant LCA tool according to the BREEAM methodology</u> has been used to demonstrate compliance with the below in line with the BREEAM 2018 criteria <u>Comparison with the BREEAM benchmark during RIBA Stage 4</u> the environmental performance of the building has been demonstrated as follows: - A building LCA has been carried on of the <u>superstructure</u> design - The Mat 01/02 Results Submission Tool has been submitted to BRE at the <u>end of RIBA Stage 4</u> <u>Option appraisal during RIBA Stage 4</u> opportunities has been identified for reducing environmental impacts as follows: - A building LCA options appraisal has been carried of <u>2 to 3 significantly different superstructure design options</u> based on the selected Stage 2 option and as applicable to Stage 4 - The LCA options appraisal activity has been integrated within the wider design decision-making process and recording in an updated options appraisal summary document. - Record the following in the Mat 01/02 Results Submission Tool: - The differences between the design options; - The reasons for selecting it and the reasons for not selecting the other design options. - The Mat 01/02 Results Submission Tool has been submitted to BRE at the <u>end of RIBA Stage 4</u>
<u>Mat 02</u> Environmental Impacts from Construction Products - Environmental Product Declarations	1	0	0	0	N/A	<u>Credit: NOT SOUGHT</u>
<u>Mat 03</u> Responsible Sourcing of Materials MANDATORY PRE-REQUISITE	4	3	3	0	AECOM / Main Contractor	<u>MANDATORY Pre-requisite:</u> <u>AECOM</u> to provide a copy of the relevant section of the main Contract Specification / Tender documentation confirming a requirement for the Main Contractor to source all timber and timber-based products installed within the project's construction 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 <u>First Credit:</u> <u>AECOM</u> to provide a copy of the project's Sustainable Procurement Plan developed and in place before the <u>end of RIBA Stage 2</u> 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 products. The plan must: - Include sustainability aims, objectives and strategic targets to guide procurement activities. Note: targets do not need to be achieved for the credit to be awarded but justification must be provided for targets that are not achieved. - Include a requirement for assessing the potential to procure construction products locally. There must be a policy to procure construction products locally where possible. - Include details of procedures in place to check and verify the effective implementation of the sustainable procurement plan.



Materials	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial ‘Shell & Core’ <u>Interim Stage</u> Required Information/Evidence																			
Credit Value 1.25%																									
Mat 03 Responsible Sourcing of Materials MANDATORY PRE-REQUISITE	4	Continued	Continued	Continued	AECOM / Main Contractor	<u>Second Credit:</u> <u>Main Contractor</u> to provide 1. A completed schedule detailing: - The <u>breakdown (by either m3 or kg) of the *Applicable Materials* within the *Superstructure Building Elements* for each construction/specification type making up the total of each applicable building element</u> - Details confirming the relevant responsible sourcing accreditation schemes (e.g. BES 6001 / ISO 14001 / FSC etc) for each material detailed on the completed responsible sourcing schedule 2. Copies of the responsible sourcing certificates for each material detailed within the completed responsible sourcing schedule																			
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<u>Third Credit:</u> <u>Main Contractor</u> to provide: 1. A further completed schedule detailing: - The <u>breakdown (by either m3 or kg) of the *Applicable Materials* within the *Substructure, Internal Finishes & Hard Landscaping Building Elements* for each construction/specification type making up the total of each applicable building element</u> - Details confirming the relevant responsible sourcing accreditation schemes (e.g. BES 6001 / ISO 14001 / FSC etc) for each material detailed on the completed responsible sourcing schedule 2. Copies of the responsible sourcing certificates for each material detailed within the completed responsible sourcing schedule																									
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<u>Fourth Credit: NOT SOUGHT</u>																									



Materials Credit Value 1.25%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' <u>Interim Stage</u> Required Information/Evidence
Mat 05 Designing for Durability and Resilience	1	1	1	0	PRC Architecture	PRC Architecture to provide evidence confirming compliance with points 1 to 3: 1. Protection measures to vulnerable parts of the building from damage have been specified: Specification and Drawings confirming that protection measures are incorporated into the building's design and construction to reduce damage to the building's fabric or materials in case of accidental or malicious damage occurring. These measures must provide protection against: - Negative impacts of high user numbers in relevant areas of the building (e.g. corridors, lifts, stairs, doors etc.). - Damage from any vehicle or trolley movements within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. - External building fabric damage by a vehicle. Protection where parking or manoeuvring areas are within 1 metre of the building façade and where delivery areas or routes are within 2 metres of the façade, i.e. specifying bollards or protection rails. - Potential malicious damage to building materials and finishes, in public and common areas where appropriate. Examples of suitable durability measures in areas of higher risk, suitable durability and protection measures to vulnerable parts of the building can include: - Bollards, barriers or raised kerbs to delivery and vehicle drop-off areas - Robust external wall construction, up to 2m high - Corridor walls specified to Severe Duty (SD) as per BS 5234-22 - Protection rails to walls of corridors - Kick plates or impact protection (e.g. trolleys) on doors - Hard-wearing and easily washable floor finishes in heavily used circulation areas (i.e. main entrance, corridors, public areas etc.) - Door stoppers to prevent door handles damaging walls - Designing out the risk without the need for additional materials specification to protect vulnerable areas. 2. That convenient access to the roof and façade for cost-effective cleaning, replacement and repair is included in the building's design. Access to the roof and façade is safe and convenient for routine maintenance, cleaning and repair. A façade access strategy designed in line with CIRIA guide C686 would be considered compliant. If access to the majority of the façade requires contracting on a one-off basis an external firm with specialist equipment, or specialist access professionals it would not generally be considered to be convenient 3. The roof and façade is designed to prevent water damage, ingress and detrimental ponding A common and potentially significantly damaging failure mechanism for external envelopes is water ingress or other type of water damage. The design team should demonstrate that they have carefully considered the drainage mechanisms of the façade and roof on a small and large scale to prevent staining, detrimental oxidation, ponding, rot, ingress, penetration or any other deleterious effect. This should take the form of a risk assessment, the complexity and detail of which is related to the complexity and innovative nature of the façade and roof. The final design should demonstrate that, where possible, these negative impacts have been avoided.



Materials Credit Value 1.25%	Max Credits	Target <u>Achievable</u> Credits	Target <u>Possible</u> Credits	Current <u>Achieved</u> Credits	Responsible Party	BREEAM 2018 Industrial ‘Shell & Core’ <u>Interim Stage</u> Required Information/Evidence					
<u>Mat 05</u> Designing for Durability and Resilience	1	Continued	Continued	Continued	PRC Architecture	<u>Continued:</u> <u>PRC Architecture</u> to provide evidence confirming compliance with point 4: <u>4. Protection measures to exposed parts of the building from material degradation have been specified:</u> Key exposed building elements have been designed and specified to limit long and short-term degradation due to environmental factors. This can be demonstrated through one of the following: - The element or product achieving an appropriate quality or durability standard or design guide, see Table below. If none are available, BS 7543:20151 can be used as the default appropriate standard OR - A detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors.					
						<u>Relevant industry durability or quality standards and design guides</u>					
						<u>Timber</u>	- BS EN 350:2016. Durability of wood and wood-based products - Testing and classification of the durability to biological agents of wood and wood-based materials, BSI; 2016. - WIS 4-28. Durability by design, TRADA; 2016 - WIS 2/3-60. Specifying timber exposed to weathering, TRADA; 2015 - WIS 1-47. Timber external doors, TRADA; 2015 - BS 8605-1:2014. External timber cladding - Method of specifying, BSI; 2014				
						<u>Curtain walling</u>	- Standard for systemised building envelopes, Centre for Window and Cladding Technology; 2006 - CWCT Curtain Wall Installation Handbook, Centre for Window and Cladding Technology; 2006 - BS EN 13830:2015. Curtain walling - Product standard, BSI; 2015				
						<u>Brickwork, blockwork</u>	- BDA Design Note 7 - Brickwork durability, Brick Development Association; 2011 - Severely Exposed Brickwork, Brick Development Association; 2014 - BS 8297-2017. (Design, manufacture and installation of architectural precast concrete cladding. Code of practice). - The standard refers to EN 13369 (Common Rules for precast concrete products) on durability requirements and requires concrete cover to be in accordance to EN 1992-1-1 and BS 8500. - BS 8500-1:2015 +A1:2016. Concrete – complementary British Standard to BS EN 2016 part 1: Method of specifying and guidance for the specifier and - BS 8500-2:2015 +A1:2016. Concrete – complementary British Standard to BS EN 2016 part 2: Specification for constituent materials and concrete				
						<u>Roof elements</u>	- BR 504. Roofs and roofing: Performance, diagnosis, maintenance, repair and the avoidance of defects (Third Edition), BRE; 2009 - Profiled sheet roofing and cladding. The guide to design and best practice (4th edition), National Federation of Roofing Contractors; 2016 - Guidelines for the Design & Application of Green Roof Systems, CIBSE; 2013 - Single Ply: Design Guide 2016 Edition, Single Ply Roofing Association; 2016 - SPRA: Guidance and standards - LRWA: technical guidance notes				
						<u>Metal cladding</u>	- Profiled sheet roofing and cladding. The guide to design and best practice (4th edition) National Federation of Roofing Contractors 2016 - Metal Fabrications: Design, Detailing and Installation Guide, Metal Cladding and Roofing Manufacturers Association; 200				
						<u>Glazing</u>	BS EN 12488:2016. Glass in building - Glazing recommendations - Assembly principles for vertical and sloping glazing, BSI; 2016				
						<u>Masonry</u>	- PD 6697:2010. Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2, BSI; 2010 - BS EN 1996-2:2006. Eurocode 6. Design of masonry structures. Design considerations, selection of materials and execution of masonry, BSI; 2006				
						<u>Other useful standards or design guides</u>	<u>BR 292. Cracking in buildings (Second edition), BRE; 2016</u> <u>BRE Good Practice guidance's</u>				
<u>BS 7543:2015: Guide to durability of buildings and building elements, products and components</u> This standard gives a useful overview of the field of durability and provides a process for predicting a materials service life. It provides useful guidance on the methodology for assessing and measuring durability and identifies common durability failures for typical construction materials. In addition, it lists some example predicted service lives for typical materials.											



Materials Credit Value 1.25%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' <u>Interim Stage</u> Required Information/Evidence
Mat 06 Material Efficiency	1	0	0	0	N/A	<u>Credit: NOT SOUGHT</u>
Section Credit Total	14	4	6	0		
Weighted Section Total	17.50%	5.00%	7.50%	0.00%		



Waste Credit Value 0.70%	Max Credits	Target <u>Achievable</u> Credits	Target <u>Possible</u> Credits	Current <u>Achieved</u> Credits	Responsible Party	BREEAM 2018 Industrial ‘Shell & Core’ <u>Interim Stage</u> Required Information/Evidence														
<u>Wst 01</u> Construction Waste Management	5	5	5	0	AECOM	<u>First Credit:</u> AECOM to provide a copy of the relevant section of the main Contract Specification / Tender documentation confirming that the Demolition Contractor or Competent Person is to complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition before the end of RIBA Stage 2 and prior to strip-out or demolition works This must be used to determine whether refurbishment or reuse is feasible and, in the case of demolition, to maximise the recovery of material for subsequent high grade or value applications. The audit must cover the following content & scope: • Guide the design, consider materials for reuse and set targets for waste management • Engage all contractors in the process of maximising high-grade reuse and recycling opportunities • Compare actual waste arisings and waste management routes used with those forecasted and investigate significant deviations from planned targets. • Identification and quantification of the key materials where present on the project • Potential applications and any related issues for the reuse and recycling of the key materials in accordance with the waste hierarchy • Opportunities for reuse and recycling within the same development • Identification of local reproprocessors or recyclers for recycling of materials • Identification of overall recycling targets where appropriate • Identification of reuse targets where appropriate • Identification of overall landfill diversion rate for all key materials <u>Second – Fifth Credits:</u> AECOM to provide a copy of the relevant section of the main Contract Specification / Tender documentation confirming a requirement for the Main Contractor to produce a BREEAM compliant Resource Management Plan (RMP) covering with the following: • The non-hazardous waste materials (from on-site construction and dedicated off-site manufacture or fabrication) <u>including</u> demolition and excavation waste generated by the building’s design and construction • Accurate data records on waste arisings and management routes • Meet or improve upon the project target benchmark <u>detailed below</u> for the amount of non-hazardous construction waste (excluding demolition and excavation waste) generated per 100m2 of the gross internal floor area of the building • Meet or improve upon, where applicable, the project target diversion from landfill benchmark <u>detailed below</u> for non-hazardous construction waste and demolition waste generated • Sort waste materials into separate key waste groups according to the European Waste Catalogue, either on-site or through a licensed contractor for recovery. <table><tr><td colspan="2">Project target benchmark for the amount of non-hazardous construction waste (excluding demolition and excavation waste) generated per 100m2 of the gross internal floor area of the building</td></tr><tr><td>Tonnes</td><td>m3 (actual, not bulk volume)</td></tr><tr><td>≤3.2</td><td>≤3.4</td></tr><tr><td colspan="2">Project target diversion from landfill benchmark for non-hazardous construction waste and demolition waste generated</td></tr><tr><td>Tonnes</td><td>m3 (actual, not bulk volume)</td></tr><tr><td>Construction 80%</td><td>Construction 70%</td></tr><tr><td>Non-demolition 90%</td><td>Non-demolition 80%</td></tr></table>	Project target benchmark for the amount of non-hazardous construction waste (excluding demolition and excavation waste) generated per 100m2 of the gross internal floor area of the building		Tonnes	m3 (actual, not bulk volume)	≤3.2	≤3.4	Project target diversion from landfill benchmark for non-hazardous construction waste and demolition waste generated		Tonnes	m3 (actual, not bulk volume)	Construction 80%	Construction 70%	Non-demolition 90%	Non-demolition 80%
Project target benchmark for the amount of non-hazardous construction waste (excluding demolition and excavation waste) generated per 100m2 of the gross internal floor area of the building																				
Tonnes	m3 (actual, not bulk volume)																			
≤3.2	≤3.4																			
Project target diversion from landfill benchmark for non-hazardous construction waste and demolition waste generated																				
Tonnes	m3 (actual, not bulk volume)																			
Construction 80%	Construction 70%																			
Non-demolition 90%	Non-demolition 80%																			



Waste Credit Value 0.70%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' <u>Interim Stage</u> Required Information/Evidence



Waste Credit Value 0.70%	Max Credits	Target <u>Achievable</u> Credits	Target <u>Possible</u> Credits	Current <u>Achieved</u> Credits	Responsible Party	BREEAM 2018 Industrial ‘Shell & Core’ <u>Interim Stage</u> Required Information/Evidence



Waste Credit Value 0.70%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' Interim Stage Required Information/Evidence
<u>Wst 06</u> Design for Disassembly and Adaptability	2	2	2	0	PRC Architecture / Baynham Meikle Partnership / WPP / Main Contractor	First Credit: PRC Architecture / Baynham Meikle Partnership / WPP to provide <u>separately based on applicable consultant's input</u> a building-specific Design for Disassembly and Functional Adaptation Strategy Study no later than RIBA Stage 2 in accordance with the following credit requirements: Ease of Disassembly Facilitated by principles allowing the building or parts of the building to be disassembled at the end of its life, or to be renovated rather than demolished, with individual components being used for other purposes. The study should consider the following as a minimum: • Accessibility • Durability: use materials which require less frequent maintenance, repair or replacement, considering them within the context of the life span of the building. • Exposed and reversible connections: making the connections more visible provides opportunities to optimise material and product reuse. Welded connections prohibit disassembly and it is preferable to use screws and bolts to allow for disassembly and material reuse. • Layer independence: designing building systems and components in layers so that removal, adjustment or replacement of some elements is feasible, especially when different components have different life spans and maintenance needs. • Avoidance of unnecessary toxic treatments and finishes. Some finishes can contaminate the substrate in a way that they are no longer reusable or recyclable. This should be avoided unless finishes serve a specific purpose. • Standardisation can accommodate reuse and upgrading. It involves aspects such as dimensions, components, connections and modularity. The Functional Adaptation Strategy Study should consider the following as a minimum: • Feasibility: The likelihood to contain multiple or alternative building uses, area functions and different tenancies over the expected life cycle, e.g. related to the structural design of the building. • Accessibility: Design aspects that facilitate the replacement of all major plant within the life of the building, e.g. panels in floors and walls that can be removed without affecting the structure, providing lifting beams and hoists. Accessibility also involves access to local services, such as local power, data infrastructure etc. • Versatility: The degree of adaptability of the internal environment to accommodate changes in working practices. • Adaptability: The potential of the building ventilation strategy to adapt to future building occupant needs and climatic scenarios. • Convertibility: The degree of adaptability of the internal physical space and external shell to accommodate changes of in-use. • Expandability: The potential for the building to be extended, horizontally or vertically. • 'Refurbishment potential': The potential for major refurbishment, including replacing the façade Second Credit: PRC Architecture / Baynham Meikle Partnership / WPP to provide <u>separately based on applicable consultant's input</u>: 1. An update no later than RIBA Stage 4 on: • How the recommendations or solutions proposed have been implemented where practical and cost effective with any omissions justified in writing to the assessor. • Changes to the recommendations and solutions during the development of the Technical Design 2. Examples detailing design measures and aspects regarding future disassembly and functional adaptation measures included in the Stage 4 design Main Contractor to provide a building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.
Section Credit Total	10	9	10	0		
Weighted Section Total	7.00%	6.30%	7.00%	0.00%		



Land Use & Ecology Credit Value 1.15%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' <u>Interim Stage</u> Required Information/Evidence
<u>LE 01</u> Site Selection	2	1	1	0	PRC Architecture	<u>First Credit:</u> <u>PRC Architecture</u> to provide information confirming that at least 75% of the proposed development footprint is on an area which has been previously been occupied by industrial, commercial or domestic buildings or fixed surface infrastructure <u>Second Credit: NOT SOUGHT</u>
<u>LE 02</u> Ecological Risks & Opportunities	2	2	2	0	AECOM / Suitably Qualified Ecologist	<u>Prerequisite:</u> <u>AECOM</u> to provide a copy of the relevant section of the main Contract Specification / Tender documentation confirming a requirement for the Main Contractor is ensure compliance is to be monitored against all relevant UK and EU or international legislation relating to the ecology of the site. <u>First Credit:</u> <u>Suitably Qualified Ecologist</u> to provide report (in accordance with Guidance Note 40: BREEAM Ecology Assessment Issues Reporting Template) confirming compliance with: 1. A Suitably Qualified Ecologist (SQE) has been appointed at <u>RIBA Stage 1 (or equivalent)</u> to carry out a site survey and evaluation early enough to influence site preparation works, layout and, where necessary, strategic planning decisions 2. An appropriate level of survey and evaluation has been carried out by the SQE to determine the site's ecological including: • Current and potential ecological value and condition of the site, and related areas within the zone of influence. • Direct and indirect risks to current ecological value • Capacity and feasibility for enhancement of the site's ecological value and, where relevant, areas within the zone of Influence 3. Recommendations and data collected from the survey and evaluation are shared with appropriate project team members to influence decisions made for activities during site preparation, design and construction works, which can support ecological features <u>Second Credit: – Based on the 1st credit being achieved</u> <u>Suitably Qualified Ecologist</u> to provide report (in accordance with Guidance Note 40: BREEAM Ecology Assessment Issues Reporting Template) confirming compliance with: 1. <u>During RIBA Stage 2</u>, the SQE & project team have liaised and collaborated with representative stakeholders early enough to influence key planning decisions to: a. Identify the optimal ecological outcomes for the site b. Identify, appraise and select measures to meet the optimal ecological outcomes for the site in line with the mitigation hierarchy of action: • Avoidance • Protection • Reduction or limitation of negative impacts • On site compensation and, • Enhancement, considering the capacity and feasibility within the site, or where viable, off-site.



Land Use & Ecology Credit Value 1.15%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' Interim Stage Required Information/Evidence
LE 03 Managing Impacts on Ecology	3	3	3	0	Suitably Qualified Ecologist	Prerequisites: 1. The 1st and 2nd LE02 credits have been achieved First Credit: Suitably Qualified Ecologist to provide report (in accordance with Guidance Note 40: BREEAM Ecology Assessment Issues Reporting Template) confirming compliance with the Planning and Measures on-site credit in line with the BREEAM 2018 methodology Second – Third Credits: Suitably Qualified Ecologist to provide report (in accordance with Guidance Note 40: BREEAM Ecology Assessment Issues Reporting Template) confirming compliance that negative impacts from site preparation and construction works have been managed according to the BREEAM hierarchy for managing impacts on site and <u>no net loss of ecological value has occurred</u>
LE 04 Ecological Change & Enhancement	4	3	3	0	Suitably Qualified Ecologist / PRC Architecture / AECOM	Prerequisites: 1. The LE03 credit has been achieved for compliance with a Suitably Qualified Ecologist (SQE) confirming that negative impacts from site preparation and construction works have been managed according to the mitigation hierarchy First Credit: Suitably Qualified Ecologist to provide report (in accordance with Guidance Note 40: BREEAM Ecology Assessment Issues Reporting Template) confirming that: - Measures have been highlighted to be implemented that enhance ecological value, which are based on input from the project team and SQE in collaboration with representative stakeholders and data collated as part of credit LE 02. Measures are implemented in the following order: - On site, and where this is not feasible, - Off site within the Zone of Influence. - Data collated is analysed and where potentially valuable, provided to the local environmental records centres nearest to, or relevant for, the site. Second – Third Credits: Suitably Qualified Ecologist to provide report (in accordance with Guidance Note 40: BREEAM Ecology Assessment Issues Reporting Template) confirming compliance that a calculated change in ecological value as a result of the development (in accordance with the BREEAM's methodology based on the existing 'Defra biodiversity metric' which is habitat based as documented in BREEAM Guidance Note 36) of <u>no net loss of ecological value (percentage score of 95-104)</u> is applicable The attributes used in the Defra biodiversity metric are the habitat types, their distinctiveness, condition and area / length throughout the assessed project life cycle. This methodology follows the Defra metrics principles to quantify the impact of a development in terms of 'biodiversity units'. PRC Architecture to provide drawings / proposed site plan / planting proposals clearly detailing the implementation of ALL the ecologist's recommendations including specific reference to the ecological enhancement recommendations AECOM to provide relevant section of the main Contract Specification / Tender documentation confirming that the Main Contractor is to implement all the ecological enhancement recommendations put forward by the Ecology report Fourth Credit: NOT SOUGHT



Land Use & Ecology Credit Value 1.15%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' Interim Stage Required Information/Evidence
LE 05 Long Term Ecology Management & Maintenance	2	2	2	0	Suitably Qualified Ecologist / AECOM	Prerequisites: 1. The contractor is to ensure that compliance is to be monitored against all relevant UK, and EU or International legislation relating to the ecology of the site 2. At least one credit under LE04 has been achieved First – Second Credits: Suitably Qualified Ecologist to provide: 1. Report (in accordance with Guidance Note 40: BREEAM Ecology Assessment Issues Reporting Template) confirming compliance with the Management and maintenance throughout the project credit in line with the BREEAM 2018 methodology 2. A Landscape and ecology management plan, or similar, is to be developed in accordance with BS42020:2013 covering as a minimum the first five years after project completion and includes: • Actions and responsibilities of relevant individuals prior to handover • The ecological value and condition of the site at handover and how this is expected to develop and change over time • Identification of opportunities for ongoing alignment with activities beyond the development project, which support the aims of BREEAM's Strategic Ecology Framework • Identification and guidance to trigger appropriate remedial actions to address previously unforeseen impacts • Clearly defined and allocated roles and responsibilities for delivering the plan AECOM to provide relevant section of the main Contract Specification / Tender documentation confirming that the Main Contractor is to as part of the tenant or building owner information supplied, produce a section on Ecology and Biodiversity is provided to inform the owner or occupant of local ecological features, value and biodiversity on or near the site. The tenant/occupier/building manager information pack is to include the following content, as appropriate: • Detailed management and maintenance plans as required by landscape and asset managers as well as relevant parts of the handover information for occupiers written in a format that encourages understanding and supportive behaviours • Details of the ecological value within the property boundary (e.g. public and private gardens, green roofs), common areas (e.g. communal garden), and the surrounding area (e.g. public recreational space) • The benefits of the ecological value to the occupants and the broader community. • Guidance on how the occupants can make the most of the local ecology and contribute to its management, (e.g. planting ecologically appropriate species in their property), as well as things that should be avoided doing (e.g. disrupting wildlife corridors, planting invasive species or allowing them to colonise and spread) • Highlight relevant actions that can be taken to enhance value within the property that is owned or occupied to help ensure its ongoing management and maintenance. • Contact details for those responsible for the management and maintenance of the local ecology and sources of local information on biodiversity and ecological management including management companies and local wildlife trusts.
Section Credit Total	13	11	11	0		
Weighted Section Total	15.00%	12.69%	12.69%	0.00%		



Pollution Credit Value 0.75%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial ‘Shell & Core’ <u>Interim Stage</u> Required Information/Evidence						
Pol 01 Impact of Refrigerants	3	0	1	0	WPP / Main Contractor	<u>POSSIBLE First Credit:</u> (The systems using refrigerants have Direct Effect Life Cycle CO₂ equivalent emissions (DELC CO_{2e}) of ≤ 1000 kgCO_{2e}/kW cooling/heating capacity) WPP to provide specification confirming the all systems (with electric compressors) comply with the requirements of BS EN 378:2016 (parts 2 and 3) for refrigeration systems containing ammonia comply the Institute of Refrigeration Ammonia Refrigeration Systems Code of Practice Main Contractor to provide Technical Submission (with supporting documentation e.g. manufacturers data) detailing the following for all systems using refrigerants: <table><tr><td>The system type / name and manufacturer / model number</td></tr><tr><td>R-number for the specified refrigerant(s) and the applicable Global Warming Potential (GWP) for each system</td></tr><tr><td>System Capacity (kW) for each system</td></tr><tr><td>Total refrigerant charge (kg) for each system</td></tr><tr><td>System operational life (years) where the data cannot be confirmed the following default figure can be used: • 20 years for large scale Chillers • 15 years for small / medium scale Chillers • 15 years for VRF systems / unitary split • 10 years for all other systems </td></tr><tr><td>The applicable Sectoral release factors: • Annual refrigerant leakage rate (% of refrigerant charge) where the data cannot be confirmed following default figures can be used: 10% for small scale Chillers 5% for medium/large scale Chillers 6% for Heat Pumps 15% for Unitary split systems • Annual purge release factor (% of refrigerant charge) [where the data cannot be confirmed the default figure of 0.5% can be used] • Annual service release factor (% of refrigerant charge) [where the data cannot be confirmed the default figure of 0.25% can be used] • Probability factor for catastrophic system failure (%) [where the data cannot be confirmed the default figure of 1% can be used] • Recovery efficiency (% of refrigerant charge) [where the data cannot be confirmed the default figure of 95% can be used] </td></tr></table> <u>Second – Third Credits: NOT SOUGHT</u>	The system type / name and manufacturer / model number	R-number for the specified refrigerant(s) and the applicable Global Warming Potential (GWP) for each system	System Capacity (kW) for each system	Total refrigerant charge (kg) for each system	System operational life (years) where the data cannot be confirmed the following default figure can be used: • 20 years for large scale Chillers • 15 years for small / medium scale Chillers • 15 years for VRF systems / unitary split • 10 years for all other systems	The applicable Sectoral release factors: • Annual refrigerant leakage rate (% of refrigerant charge) where the data cannot be confirmed following default figures can be used: 10% for small scale Chillers 5% for medium/large scale Chillers 6% for Heat Pumps 15% for Unitary split systems • Annual purge release factor (% of refrigerant charge) [where the data cannot be confirmed the default figure of 0.5% can be used] • Annual service release factor (% of refrigerant charge) [where the data cannot be confirmed the default figure of 0.25% can be used] • Probability factor for catastrophic system failure (%) [where the data cannot be confirmed the default figure of 1% can be used] • Recovery efficiency (% of refrigerant charge) [where the data cannot be confirmed the default figure of 95% can be used]
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Pol 02 Local Air Quality	2	2	2	2	WPP	<u>First – Second Credits:</u> WPP to provide specification confirming that all heating and hot water is supplied by non-combustion systems. For example, only powered by electricity						



Pollution Credit Value 0.75%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' Interim Stage Required Information/Evidence
Pol 03 Flood and Surface Water Management	5	2	4	0	Baynham Meikle Partnership	First – Second Credits: Baynham Meikle Partnership to provide a site-specific Flood Risk Assessment report confirming that the site is located in a flood zone defined as having a low annual probability of flooding (in accordance with current best practice national planning guidance) AND takes into account all current and future sources of flooding into consideration: • Fluvial (rivers) • Tidal • Surface water: sheet run-off from adjacent land (urban or rural) • Groundwater: most common in low-lying areas underlain by permeable rock (aquifers) • Sewers: combined, foul or surface water sewers • Reservoirs, canals and other artificial sources. Prerequisites for Third & Fourth Credits: Baynham Meikle Partnership to provide a site-specific Flood Risk Assessment report confirming: 1. Surface water run-off design solutions are bespoke, i.e. taking into account the specific site requirements and natural or man-made environment of and surrounding the site. 2. The appropriate consultant is to follow the priority levels listed below (noting that level 1 has the highest priority). Justification is to be provided for each level which does not contribute to managing surface water run-off. This has been set so the most appropriate water management solutions are used, prioritising water use in the development and infiltration over discharge. This is so that the volume of water that leaves the site is limited as far as practicable: • Priority Level 1 - Water is collected for use in the development (e.g. rainwater harvesting) • Priority Level 2 - Water is infiltrated into the ground • Priority Level 3 - Water is discharged to surface water body • Priority Level 4 - Water is discharged to the drainage system • Priority Level 5 - Water is discharged to a combined sewer POSSIBLE Third Credit: Baynham Meikle Partnership to provide a site-specific Flood Risk Assessment report confirming that: • Drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a 30% improvement for the developed site compared with the pre-developed site, complying at the 1-year and 100-year return period events. • Calculations include an allowance for climate change made in accordance with current best practice planning guidance • Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. POSSIBLE Fourth Credit: Baynham Meikle Partnership to provide a site-specific Flood Risk Assessment report confirming that flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance) AND: EITHER – Option 1: a. Drainage design measures are specified to ensure that the post development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development for the 100-year 6-hour event, including an allowance for climate change b. Any additional predicted volume of run-off for this event is prevented from leaving the site by using infiltration or other Sustainable Drainage System (SuDS) techniques. OR – Option 2 (only where points a. and b. cannot be achieved): c. Justification from the Appropriate Consultant indicating why the above criteria cannot be achieved, i.e. where infiltration or other SuDS techniques are not technically viable options. d. Drainage design measures are specified to ensure that the post development peak rate of run-off is reduced to the limiting discharge. The limiting discharge is defined as the highest flow rate from the following options: • The pre-development 1-year peak flow rate; OR • The mean annual flow rate Qbar; OR • 2L/s/ha. PLUS • Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place. • For either option, above calculations must include an allowance for climate change; made in accordance with current best practice planning guidance. *PLEASE NOTE* Where the man-made impermeable area draining to the watercourse (natural or municipal) has decreased or remains unchanged post-development, the volume of run-off requirements for the surface water run-off 4th credit can be met by default. Volume calculations will not need to be provided. Instead, drawings clearly showing the impermeable areas of the site draining to the watercourse should be provided for the pre- and post-development scenarios. Figures must also be given (ideally on the drawings) to show a comparison between the areas of drained impermeable surfaces pre- and post-development. In this instance, it is still recommended that any opportunities identified to reduce surface water run-off are implemented. Fifth Credit: NOT SOUGHT



Pollution Credit Value 0.75%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' <u>Interim Stage</u> Required Information/Evidence
<u>Pol 04</u> Reduction of Night Time Light Pollution	1	1	1	1	WPP	WPP to provide: - Specification clauses confirming that the external lighting design is designed to be in accordance with the following: - Table 2 (and its accompanying notes) of the ILP Guidance notes for the reduction of obtrusive light, 2011; - All external lighting (except for safety and security lighting) will be automatically switched off between 23:00 to 07:00; - 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 - Illuminated advertisements, where specified, are designed in accordance with ILP PLG 05 – The Brightness of Illuminated Advertisements - Site plan & elevations drawings showing the location and purpose of all external lighting
<u>Pol 05</u> Noise Attenuation	1	1	1	0	Suitably Qualified Acoustician / PRC Architecture / WPP	Suitably Qualified Acoustician to provide a BREEAM compliant Noise Impact Survey (in accordance with BS 4142) confirming: - Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed development or at a location where background conditions can be argued to be similar - The Noise rating level from the assessed building. That the noise level from the proposed site/building, as measured in the locality of the nearest or most exposed noise-sensitive development, must be at least 5dB lower than the background noise throughout the day and night. PRC Architecture to provide (if applicable) Drawings confirming that any detailed attenuation measures confirmed within the Noise Impact Survey report will be installed WPP to provide (if applicable) specification clause confirming that any detailed attenuation measures confirmed within the Noise Impact Survey report will be installed
Section Credit Total	12	6	9	3		
Weighted Section Total	9.00%	4.50%	6.75%	2.25%		



Innovation Credit Value 1.00%	Max Credits	Target Achievable Credits	Target Possible Credits	Current Achieved Credits	Responsible Party	BREEAM 2018 Industrial 'Shell & Core' Interim Stage Required Information/Evidence
Inn Man 03 Responsible Construction Practices	1	1	1	0	AECOM	AECOM to provide a copy of the relevant section of the main Contract Specification / Tender documentation confirming a requirement for the <u>Demolition and Main Contractor</u> to comply with the following: 1. That clear and safe access in and around the site and buildings is to be ensured at the point of handover 2. Compliance with the Man 03 Items as follows, this can be demonstrated by confirmation of being an accredited organisation of The Fleet Operator Recognition Scheme (FORS): • The fleet operators, undertakes driver training and awareness to promote safety within the development footprint and off site • The fleet operators, captures and investigates any road accidents, incidents and near misses and reports them back to the principal contractor. The principal contractor analyses these items
Inn Wst 05 Adaption to Climate Change	1	0	1	0	WPP	POSSIBLE Credit: WPP to collate all the relevant information demonstrating that a holistic approach will be undertaken to the design and construction of the current building's life cycle, to mitigate against the impacts of climate change. This represented by the achievement of the following credits: • Achievement of credit Wst 05 – Adaption of Climate Change for the structural and fabric resilience criterion • Achievement of the 2nd credit under Hea 04 – Thermal Comfort for projected climate change scenario • Achievement of a minimum of 6 credits under Ene 01 - Reduction of energy use and carbon emissions • Achievement of the 1st credit under Ene 04 – Low Carbon Design for the Passive Design Analysis • Achievement of a minimum of 3 credits under Wat 01 – Water Consumption • Achievement of credit Mat 05 – Designing for Durability and Resilience • Achievement of the 1st and 3rd to 4th credits under Pol 03 – Surface Water Run Off
Section Credit Total	10	1	2	0		
Weighted Section Total	10.00%	1.00%	2.00%	0.00%		

BREEAM 2018 Industrial 'Shell & Core' Interim Stage Assessment Results for: Units 1 – 4 , Langstone Technology Park, Havant			
Credit Strategy:	Current Achievable Credits	Current Possible Credits	Current Achieved Credits
Totals:	65.22%	75.81%	%
Ratings:	VERY GOOD	EXCELLENT	N/A