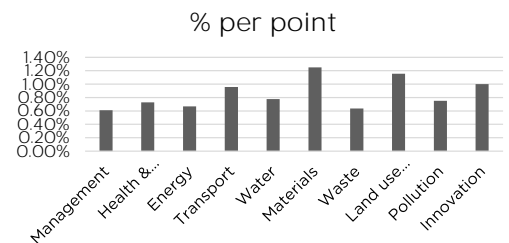
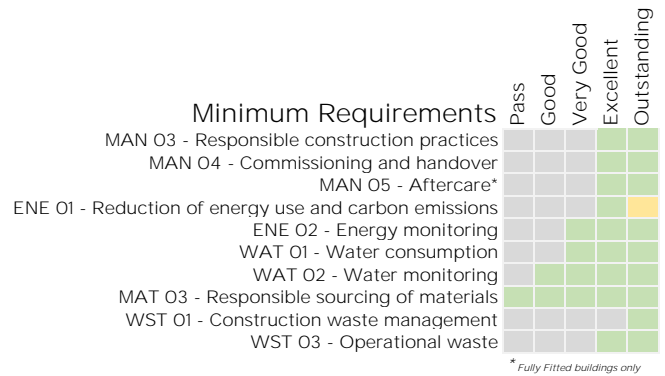
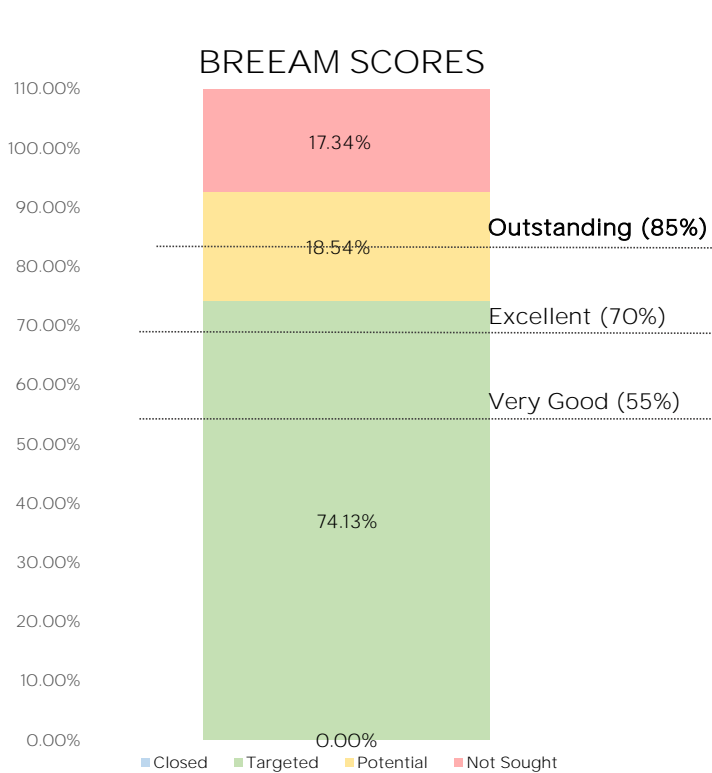


ASSESSMENT STATUS

DESKTOP PRE-ASSESSMENT	WORKSHOP PRE-ASSESSMENT	DESIGN STAGE ASSESSMENT	CONSTRUCTION STAGE ASSESSMENT
Desktop Pre-Assessment prepared by Twin&Earth based on preliminary information available.	Workshop on 30/06/2023. Attended by Hale Brown Architects, Imperial Hotels, ICFM Limited, and Walsing Planning.		

SUMMARY OF RESULTS



PROJECT DETAILS

Site details

Site Name	40 Bernard Street
Address	40 Bernard Street, London
Post code	WC1N 1LE
Local planning authority	Camden

Assessment

BREEAM Scheme	UK New Construction V6
BREEAM Version	SD5079
Project type	Shell & Core
Assessed Area (m2) - GEA	980
Assessed Area (m2) - GIA	980
Assessed Area (m2) - NIFA	980
Achievable (Target+Closed Score):	74.13%
Max Score (Above+Potential):	92.66%

SCOPE

Building type (main description)	Office
Building type (sub-group)	General Office Building
Is this a speculative building?	No
Heating system type	TBC
Cooling system type	TBC
Does the building have external areas within the boundary of the assessed development?	Yes
Are commercial or industrial-sized refrigeration and storage systems specified?	No
Are building user lifts present?	Yes
Are building user escalators or moving walks present?	No
Are there any water demands present other than those assessed in Wat O1?	Yes
Are there statutory requirements, or other issues outside of the control of the project, that impact the ability to provide outdoor space	No
Are there any systems specified that contribute to the unregulated energy load?	Yes
Are the Post-occupancy stage credits targeted in Ene O1 issue?	No
Are laboratories present?	No
Are there fume cupboard(s) and/or other containment devices present?	No

BREEAM PRE-ASSESSMENT
40 BERNARD STREET
BREEAM UK New Construction V6
27.07.2023

KEY:

AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE
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TARGET SCORE:
74.13%

TARGET + POTENTIAL:
92.66%

Blue Text: Mandatory Minimum Requirement

MANAGEMENT

ITEM	REQUIREMENTS SUMMARY	AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE	COMMENTS AND ACTIONS	RESPONSIBLE
MAN 01 - Project Brief and Design	Project delivery planning	1	1			Design team to demonstrate how consultation has influenced the Initial Project Brief and Concept Design. To confirm target in workshop but assumed achievable at this stage. STAGE 2 ACTION: Docs required: Stage 2 Project Execution Plan Stage 2 kick off meeting minutes Supporting letter	Colliers
	One credit-Stakeholder consultation (Interested parties)	1	1			Design team to demonstrate how consultation with third parties has influenced the project. To confirm target in workshop but assumed achievable at this stage. STAGE 2 ACTION: BREEAM requires consultation to be undertaken in Stage 2 with interested parties covering the minimum content.	Colliers
	One credit-BREEAM AP (Concept Design)	1	1			BREEAM targets have been formally agreed early in the design process. T&E appointment for pre-assessment works aids demonstrating compliance. STAGE 1 & 2 CREDIT	TWIN&EARTH
	One credit-BREEAM AP (Developed Design)	1	1			Continued appointment of BREEAM AP during the Developed Design. STAGES 2 TO 4 CREDIT	TWIN&EARTH
MAN 02 - Life Cycle Cost and Service Life Planning	Elemental life cycle cost (LCC)	2	2			To undertake an elemental level LCC options appraisal and integrate recommendations in design. STAGE 2 ACTION: Colliers to obtain a quote for undertaking an Elemental LCC options appraisal.	Colliers
	Component level LCC options appraisal	1	1			ACTION: To undertake a component level LCC options appraisal and integrate recommendations in design. STAGE 4 CREDIT	Contractor
	Capital cost reporting	1	1			Contractor will report the capital cost. Requirements to be included in the contractor prelims.	Cost Consultant
Prerequisite - Legal and sustainable timber	Prerequisite - Legal and sustainable timber	Y	Y			Contractor will need to prove the use of legal and sustainable timber. Requirements to be included in the contractor prelims.	Contractor
	Environmental Management	1	1			Assumes that the contractor will be required to comply with the requirements. Requirements to be included in the contractor prelims.	Contractor

ITEM	REQUIREMENTS SUMMARY	AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE	COMMENTS AND ACTIONS	RESPONSIBLE	
MAN O3 - Responsible Construction Practices	BREEAM AP (site)	Involve a BREEAM AP in the project to: monitor construction progress against the performance targets agreed; proactively identify risks and opportunities related to the procurement and construction process; monitor and coordinate the generation of appropriate evidence by the project team and the provision to the assessor. To monitor construction progress against the agreed performance targets the BREEAM AP should ideally be site based or visit the site regularly to carry out spot checks and may advise actions to be taken to address shortcomings in compliance. Timing is critical for demonstrating compliance and inspections should be undertaken when works can be observed, before they are covered up or new works or trades start. Key evidence is required to be produced at specific times. This includes, but is not limited to, photographic evidence, delivery notes and other documentary evidence.	1	1			Assumes that the contractor will be required to comply with the requirements. Requirements to be included in the contractor prelims.	Contractor
	Responsible Construction Management - 1 credit required for Excellent. - 2 credits required for Outstanding	The Principal contractor evaluates the risks (on site and off site), plans and implements actions to minimise the identified risks in accordance with BREEAM Table 4.1. <u>One credit:</u> Implement the Mandatory Items in BREEAM Table 4.1 on site. Compliance can partially be demonstrated through CCS score ≥25. OR <u>Two credits:</u> Achieve Considerate Constructors Scheme Score of ≥35, and ensure clear and safe access in and around the buildings at the point of handover (Table 4.1, item G).	2	2			Assumes that the contractor will be required to comply with the requirements. Requirements to be included in the contractor prelims.	Contractor
	EXEMPLARY Responsible Construction Practices	Achieve all items in BREEAM Table 4.1. This includes: - Item P. All fleet operators undertakes driver training and awareness to promote safety within the development footprint and off site. - Item Q. All 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. <i>Note: The criteria relate to all fleet operators, even those not under the control of the main contractor.</i>	1		1		Assumes that the contractor will be required to comply with the requirements. Requirements to be included in the contractor prelims.	Contractor
	Monitoring of construction site Impacts	Assign responsibility to an individual for monitoring, recording and reporting energy use, water consumption and transportation data resulting from all on-site construction processes <u>One Credit - Utilities:</u> - Site energy / electricity consumption (kWh) - Site energy / electricity emissions (kgCO2) - Site water consumption (m³) <u>One Credit - Transport</u> - Materials from factory to site (litres of fuel, km, kgCO2) - Waste from site to processing centre (litres of fuel, km, kgCO2)	2	2			Assumes that the contractor will be required to comply with the requirements. Requirements to be included in the contractor prelims.	Contractor
MAN O4 - Commissioning and Handover	Commissioning - testing schedule and responsibilities - Credit required for Very Good and higher.	The main contractor shall prepare a schedule of commissioning and testing. The schedule shall identify and include a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems and for testing and inspecting building fabric. The schedule shall identify the appropriate standards for all commissioning activities to be conducted, where applicable, in accordance with: Current Building Regulations; BSRIA guidelines; CIBSE guidelines; Other appropriate standards (where applicable) Where a BSM is specified, the main contractor shall: - Carry out commissioning of air and water systems when all control devices are installed, wired and functional Include physical measurements of room temperatures, off-coil temperatures and other key parameters, as appropriate, in commissioning results: Ensure the BMS or controls installation is running in auto with satisfactory internal conditions prior to handover: Ensure all BMS schematics and graphics are fully installed and functional to user interface prior to handover: Fully train the occupier or facilities team in the operation of the system.	1	1			Compliant commissioning schedule will need to be provided identifying what needs commissioning and the standards they should meet. Requirements to be included in the contractor prelims.	M&E
	Commissioning - design and preparation	During the design stage, the main contractor shall appoint a specialist commissioning manager with responsibility for the following: Undertaking design reviews and giving advice on suitability for ease of commissioning. Providing commissioning management input to construction programming and during installation stages. Management of commissioning, performance testing and handover or post-handover stages. The specialist commissioning manager shall be a specialist contractor rather than a general sub- contractor, able to independently verify the work carried out by the project team members installing the systems. The specialist commissioning manager shall be appointed by the contractor to perform the tasks described under the relevant criteria for buildings with complex building services and systems and defined in their contract. The specialist commissioning manager shall be a professional who has experience or qualifications that enable them to undertake the responsibilities described.	1	1			Compliant commissioning activities will need to be undertaken. Requirements to be included in the contractor prelims.	M&E

HEALTH & WELLBEING

HEA 01 - Visual Comfort

ITEM	REQUIREMENTS SUMMARY	AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE	COMMENTS AND ACTIONS	RESPONSIBLE
Testing and Inspecting building fabric	<p>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.</p> <p>The survey and testing is undertaken by a Suitably Qualified Professional holding a valid Level 2 certificate in thermography.</p> <p>Any defects identified in the thermographic survey or the airtightness testing reports are rectified prior to building handover and close out. Any remedial work must meet the required performance characteristics for the building/element.</p>	1	1			Specialist thermographic testing agent would need to be appointed in Stage 4. Requirements to be included in the contractor prelims.	Contractor
Handover - Building User Guide criterion required for Very Good and higher.	<p>Prior to handover, the main contractor shall be responsible for the development of two building user guides for the following users:</p> <p>a. A non-technical user guide for distribution to the building occupiers: The building user guide for building occupiers shall be written in plain English and provide easily accessible and understandable information relevant to the building's staff (or where relevant residents) and to other building users, e.g. visitors or community users.</p> <p>b. A technical user guide for the premises facilities managers: The building user guide for facilities managers can use more technical language if appropriate and provide understandable information relevant to the professionals managing the building facilities. This guide could be part of the operations and maintenance (O&M) manual.</p> <p>Prior to handover, the main contractor shall be responsible for the preparation of two 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.</p>	1	1			Assumes that the contractor will be required to comply with the requirements. Requirements to be included in the contractor prelims.	Contractor
SECTION TOTALS (excluding Exemplary)		18	18	0	0		
Daylighting	<p>Daylighting criteria have been met using either of the following options: a. The relevant building areas meet good practice daylight factors and other criteria OR: b. The relevant building areas meet good practice average and minimum point daylight illuminance criteria OR: c. The relevant building areas meet the median daylight factors and minimum daylight factors criteria.</p>	2	2			ACTION: Daylighting report will need to be undertaken and applicable criteria achieved.	Daylighting Consultant
EXEMPLARY Daylighting	<p>Daylighting: To achieve an exemplary performance credit for daylighting: Daylighting criteria have been met using either of the following options: Relevant building areas meet exemplary daylight factors and the relevant criteria in Table 5.8. Relevant building areas meet exemplary average and minimum point daylight illuminance criteria in Table 5.9.</p>	1			1	To be reviewed if daylighting assessment is completed.	Daylighting Consultant
View Out	<p>95% of the floor area in 95% of spaces for each relevant building area is within 8m of an external wall with a window \geq 20% of the surrounding wall area.</p>	1	1			<p>Calculations will need to be undertaken to confirm compliance with the criteria in all relevant occupied areas.</p> <p>Initial mark-up has been provided by Matt Hale which confirms compliance with the criteria. Additional confirmation that the central lightwell/atrium is compliant with BREEAM criteria.</p>	Hale Brown Architects
Internal and external lighting levels, zoning and control	<p>Design External Lighting to meet BS 5489 and BS EN 12464-2.</p>	1	1			Assumes that external lighting will be designed in compliance with the requirements.	M&E

	ITEM	REQUIREMENTS SUMMARY	AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE	COMMENTS AND ACTIONS	RESPONSIBLE
HEA 02 - Indoor Air Quality	Prerequisite - Indoor air quality (IAQ) plan	A site-specific indoor air quality plan has been produced and implemented. The objective of the plan is to facilitate 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: 1.a: Removal of contaminant sources 1.b: Dilution and control of contaminant sources: Where present, consideration is given to the air quality requirements of specialist areas such as laboratories 1.c: Procedures for pre-occupancy flush out 1.d: Third party testing and analysis 1.e: Maintaining good indoor air quality in-use.	Y	Y			Compliant Indoor Air Quality Plan will need to be undertaken and any recommendations met. ACTION: T&E to provide a quote.	Indoor Air Quality Consultant
	Ventilation	a. Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation. b. Ventilation pathways are designed to minimise the ingress and build-up of air pollutants inside the building (e.g. air intakes and exhausts at least 10m of horizontal distance apart). c. HVAC systems incorporate suitable filtration to minimise external air pollution. Filters should achieve supply air classification of at least SUP 2. d. Areas of the building subject to large and unpredictable or variable occupancy patterns have carbon dioxide (CO ₂) or air quality sensors specified and provide demand-controlled ventilation linked to the mechanical ventilation system or automatic opening windows or roof vents. e. For naturally ventilated or mixed mode buildings, the ventilation strategy provides adequate cross flow of air in accordance with CIBSE AM10.	1	1			Ian Cheesman has confirmed that this is likely to be achievable. Ventilation drawings would need to be provided to confirm compliance.	M&E
HEA 04 - Thermal Comfort	Thermal Modelling	Current Climate - Thermal modelling is carried out using software in accordance with CIBSE AM11 and demonstrates that summer and winter operative temperature ranges in occupied spaces are in accordance with CIBSE Guide A. For air conditioned buildings, the PMV (predicted mean vote) and PPD (predicted percentage of dissatisfied) are reported. Note: For naturally ventilated buildings, the design must limit the risk of overheating in accordance with CIBSE TM52.	1	1			Thermal modelling will need to be undertaken in line with CIBSE AM11.	M&E
HEA 04 - Thermal Comfort	Design for Future Thermal Comfort	Future Climate - The thermal modelling demonstrates that the relevant requirements for the credit above are achieved for a projected climate change environment.	1	1			Thermal modelling considering the future climate change would need to be completed.	M&E
HEA 05 - Acoustic Performance	Acoustic Performance	The building meets the appropriate acoustic performance standards and testing requirements defined in the relevant BREEAM table. The table defines criteria for the acoustic principles of: Indoor ambient noise level.	1	1			Quantifiable acoustic assessment to confirm fabric is a suitable standard for tenant to achieve compliance with Section 7 of BS 8233:2014.	Acoustic Consultant
HEA 06 - Security	Security of site and building	A Suitably Qualified Security Specialist (SQSS) conducts an evidence-based Security Needs Assessment (SNA) during or prior to Concept Design (RIBA Stage 2). The SQSS develops a set of security controls and recommendations for incorporation into the proposals. Those controls and recommendations shall directly relate to the SNA. The controls and recommendations shall be incorporated into proposals and implemented in the as-built development. Any deviation must be justified and agreed with the SQSS.	1	1			A Security Needs Assessment will need to be undertaken and any recommendations implemented into the design. STAGE 2 ACTION: To confirm appointment of Security Consultant - Alex Walduck has confirmed security on site does not comply with the criteria. However, another consultant has been sourced.	Security Consultant via Client
	EXEMPLARY Security of site and building	Security: A compliant risk based security rating scheme has been used (e.g. SABRE). The performance against the scheme has been confirmed by independent assessment and verification.	1			1	Additional appointment for independent security rating scheme would be required.	Security Consultant via Client
HEA 07 - Safe and Healthy Surroundings	Safe Access	Dedicated and safe cycle paths are provided from the site entrance to any cycle storage, and connect to off-site cycle paths where applicable. Dedicated and safe footpaths are provided on and around the site. Pedestrian drop-off areas are designed off, or adjoining to, the access road and should provide direct access to other footpaths. Delivery areas are not accessed through general parking areas and do not cross or share pedestrian and cyclist paths, outside amenity areas. There is a dedicated parking or waiting area for goods vehicles with appropriate separation from the manoeuvring area and staff and visitor car parking. Parking and turning areas are designed for simple manoeuvring according to the type of delivery vehicle likely to access the site, thus avoiding the need for repeated shunting.	1	1			Only external area appears to be the terrace which is only accessed from within. Access into the building is via the public highway or footpath, therefore the credit is awarded by default.	Hale Brown Architects
	Outside Space	There is an outside space providing commercial building users with an external amenity area. This must include seating and be non-smoking, and be sufficiently sized for the predicted number of building users during coffee or lunch breaks etc.	1	1			Roof terrace will provide a suitable outside amenity space with benches for building users.	Hale Brown Architects
SECTION TOTALS (excluding Exemplary)			11	11	0	0		

ENERGY

	ITEM	REQUIREMENTS SUMMARY	AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE	COMMENTS AND ACTIONS	RESPONSIBLE
ENE 01 - Reduction of Energy Use and Carbon Emissions	<p>Energy Performance - 4 credits required for Excellent*</p> <p>- 6 credits required for Outstanding</p> <p>*4 credits for Excellent can be covered here or in 'Prediction of operational energy consumption'</p>	<p>Calculate an Energy Performance Ratio for New Constructions (EPR NC).</p> <p>Compare the EPR NC achieved with the benchmarks in BREEAM Table 6.1 and award the corresponding number of credits</p> <p>This is based on SBEM performance / BRUKL output.</p>	9	4	2		<p>Outstanding: 6 credits mandatory Excellent: 4 credits mandatory.</p> <p>ACTION: Energy target to be reviewed based on targeted rating - BRUKLs within the T&E Energy and Sustainability report have been reviewed: - Baseline BRUKL has achieved 0 credits. - Be Lean BRUKLs achieve 4/3 credits. - Be Green BRUKLs achieve 5/6 credits. Please note these have been undertaken under 2013 regs and would need to be upgraded to 2021 regs.</p>	M&E
	<p>EXEMPLARY Beyond zero net regulated carbon</p>	<p>The building achieves an EPRNC ≥ 0.9 and zero net regulated CO₂ emissions. Energy generation from on-site and near-site LZC sources is sufficient to offset carbon emissions from regulated energy use plus a percentage of emissions from unregulated energy use.</p> <p><u>One Credit:</u> Offset 10% of additional emissions from unregulated energy through LZC sources.</p> <p><u>Two Credits:</u> Offset 50% of additional emissions from unregulated energy through LZC sources."</p> <p><u>Three Credits:</u> The building is deemed carbon negative where >100% of carbon emissions from unregulated (and regulated) energy use are offset by energy generated from on-site and near site LZC sources.</p>	3			3	EPRNC ≥ 0.9 is not typically feasible	M&E
	<p>Prediction of operational energy consumption - 4 credits required for Outstanding.</p>	<p>Involve relevant members of the design team in an energy design workshop focusing on operational energy performance.</p> <p>Undertake additional energy modelling during the design and post-construction stage to generate predicted operational energy consumption figures.</p> <p>Report predicted energy consumption targets by end use, design assumptions and input data (with justifications).</p> <p>Carry out a risk assessment to highlight any significant design, technical, and process risks that should be monitored and managed throughout the construction and commissioning process.</p>	4		4		Detailed energy modelling would need to be undertaken to determine how energy will be used once the building is in operation.	M&E
	<p>EXEMPLARY Post-occupancy stage</p>	<p>Achieve maximum available credits in Ene 02 Energy monitoring AND:</p> <p>The client or building occupier commits funds to pay for the post occupancy stage. This requires an assessor to be appointed and to report on the actual energy consumption compared with the targets set in criterion 4 of Ene 01.</p> <p>The energy model (criterion 3 on the previous page) is: Submitted to BRE, and Retained by the building owner.</p>	2			2	<p>To be confirmed if this should be targeted.</p> <p>Will require an appointment for Post Construction review.</p>	M&E
ENE 02 - Energy Monitoring	<p>Sub-metering of end-use categories - First credit required for Very Good and higher.</p>	<p>Install energy metering systems so that at least 90% of the estimated annual energy consumption of each fuel is assigned to the end-use categories</p> <p>Buildings >1,000m² shall include automatic meter reading systems or building energy management systems (BEMS)</p>	2	2			<p>Energy metering to be installed to account for end use categories.</p> <p>Any high energy load areas (if present) to be sub-metered.</p>	M&E
ENE 03 - External Lighting	<p>External Lighting</p>	<p>The average initial luminous efficacy of the external light fittings within the construction zone is not less than 70 lumens per Watt.</p> <p>All external light fittings are automatically controlled for prevention of operation during daylight hours and presence detection in areas of intermittent pedestrian traffic.</p>	1	1			Assumed that all external lighting will be specified in line with the credit requirements.	M&E

	ITEM	REQUIREMENTS SUMMARY	AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE	COMMENTS AND ACTIONS	RESPONSIBLE
ENE 04 - Low Carbon Design	Passive Design Analysis	<p>Achieve the first credit Hea 04 Thermal comfort: One credit - Thermal modelling to demonstrate that the building design delivers appropriate thermal comfort levels in occupied spaces.</p> <p>The project team analyses the proposed building design and development during Concept Design to identify opportunities for the implementation of passive design measures.</p> <p>Implement passive design measures to reduce the total heating, cooling, mechanical ventilation, lighting loads and energy consumption in line with the passive design analysis findings. Quantify the reduced total energy demand and carbon dioxide (CO₂-eq) emissions resulting from the passive design measures.</p>	1	1			<p>Passive design analysis would need to be undertaken - Be Lean section in the T&E Energy and Sustainability Statement.</p> <p>STAGE 2 CREDIT</p>	TWIN&EARTH
	Free Cooling	<p>Achieve the passive design analysis credit. Include a free cooling analysis in the passive design analysis. Identify opportunities for the implementation of free cooling solutions.</p> <p>The building is naturally ventilated or uses any combination of the free cooling strategies listed by BRE (e.g. Night time cooling, Ground coupled air cooling).</p>	1		1		To be confirmed whether a free cooling strategy is feasible.	M&E
	Low and Zero Carbon Technologies	<p>An energy specialist completes a Low and zero carbon feasibility study by the end of Concept Design to establish the most appropriate recognised local (on-site or near-site) low and zero carbon (LZC) energy sources for the building or development.</p> <p>Specify local LZC technologies for the building or development in line with the feasibility study recommendations. Quantify the reduced regulated carbon dioxide (CO₂-eq) emissions resulting from the feasibility study.</p>	1	1			<p>LZC study would need to be completed at RIBA Stage 2 and any recommended technologies will need to be installed - Be Green section in the T&E Energy and Sustainability Statement.</p> <p>STAGE 2 CREDIT</p>	TWIN&EARTH
ENE 06 - Energy Efficient Transportation Systems	Energy Efficient Transportation System (Lifts)	<p><u>Lifts:</u></p> <ul style="list-style-type: none"> - An analysis of the transportation demand and usage patterns for the building is carried out to determine the optimum number and size of lifts - The energy consumption is calculated for at least two types of systems and the lowest energy consumption specified - Each lift includes: Standby mode: Lighting >70 lumens per Watt; VVVF drive; - Regenerative drives are specified where demonstrated to save energy 	2	2			The Updated Design & Access Statement (HaleBrown, Feb 2023) confirms that 2 new lifts will be installed. A Lift Consultant will need to provide a transport analysis confirming compliance with the criteria.	Lift Consultant
SECTION TOTALS (excluding Exemplary)			21	11	7	0		

TRANSPORT

TRA 01 -
Transport
Assessment and
Travel Plan

ITEM	REQUIREMENTS SUMMARY	AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE	COMMENTS AND ACTIONS	RESPONSIBLE
Transport Assessment and Travel Plan	<p>No later than Concept Design stage, undertake a site-specific transport assessment.</p> <p>The site-specific travel assessment shall cover as a minimum:</p> <p>a: Travel patterns and attitudes of existing building or site users towards cycling, walking and public transport, to identify relevant constraints and opportunities.</p> <p>b: Predicted travel patterns and transport impact of future building or site users.</p> <p>c: Current local environment for pedestrians and cyclists, accounting for any age-related requirements of occupants and visitors.</p> <p>d: Reporting of the number and type of existing accessible amenities within 500m of the site.</p> <p>e: Disabled access accounting for varying levels and types of disability, including visual impairment.</p> <p>f: Calculation of the existing public transport Accessibility Index (AI).</p> <p>g: Current facilities for cyclists.</p> <p>Following a transport assessment, develop a site-specific travel plan that provides a long term management strategy which encourages more sustainable travel. The travel plan includes measures to increase or improve more sustainable modes of transport and movement of people and goods during the building's operation see Methodology.</p> <p>If the occupier is known, involve them in the development of the travel plan.</p> <p>Demonstrate that the travel plan will be implemented and supported by the building's management in operation.</p>	2	2			Compliant Transport Assessment and Travel Plan has been produced by Motion (19/05/2021).	Motion

TRA 02 -
Sustainable
Transport
Measures

Sustainable Transport Measures	<p>Up to 10 credits are available for Tra02, for local public, private and active transport through provision of sustainable transport measures appropriate to the site.</p> <p>'Points' are awarded based on compliance with BREEAM Table 7.4 and are converted into BREEAM converted into credits depending on the Accessibility Index. Refer to the Options below. For an AI of between 25 and 40, the following list applies:</p> <p>1 point: 1 credit. 2 points: 3 credits. 3 points: 5 credits. 4 points: 6 credits. 5 points: 7 credits. 6 points: 8 credits. 7 points: 9 credits. 8 points: 10 credits.</p>	10	10			Note: Criteria 3 to 5 from TRA 01 issue are a pre-requisite. To confirm measures (and credits) targeted during workshop.	TWIN&EARTH
Transport Option: Accessibility Index >8	The existing AI calculated in Tra 01 achieves ≥ 8	Y	Y			The PTAL output is 6b which consists of an AI of 40.01+.	TWIN&EARTH
Transport Option: Improved Accessibility Index	Demonstrate an increase over the existing Accessibility Index through negotiation with local bus, train or tram companies	Y			Y	Not feasible due to AI being at the maximum.	N/A
Transport Option: Transport information screen	Provide a public transport information system in a publicly accessible area, to allow building users access to up-to-date information on the available public transport and transport infrastructure.	Y	Y			A public transport information system will be installed within the reception area.	Halebrown Architects
Transport Option: Electric charging stations	Provide electric recharging stations of a minimum of 3kW for at least 10% of the total car parking capacity for the development.	Y			Y	Car parking is provided within the basement of the building. There are approximately 116 car parking spaces so a minimum of 12 EV spaces would be required. Building regs prevent this due to the increased fire risk of EV spaces in basements.	Halebrown Architects
Transport Option: Car sharing	Set up a car sharing group or facility to facilitate and encourage building users to car share. Raise awareness of the sharing scheme with marketing and communication materials. Provide priority spaces for car sharers for at least 5% of the total car parking capacity for the development. Locate priority parking spaces nearest the development entrance used by the sharing scheme participants.	Y	Y			Car parking is provided within the basement of the building. There are approximately 116 car parking spaces so a minimum of 6 car sharing spaces would be required.	Halebrown Architects
Transport Option: Local Network Improvement	<p>During preparation of the brief, the design team consults with the local authority (LA) on the state of the local cycling network and public accessible pedestrian routes, to focus on whichever the LA deems most relevant to the project, and how to improve it.</p> <p>Agree and implement one proposition chosen with the local authority. The proposition supported by the development is additional to existing local plans and has a significant impact on the local cycling network or on pedestrian routes open to the public.</p>	Y		Y		Consultation could be held with the Local Authority and a significant improvement could be made to the local cycling network or pedestrian routes.	Colliers
Transport Option: Cycle spaces	Install compliant cycle storage spaces to meet the minimum levels set out in BREEAM Table 7.5. Cycle racks must be secure and covered overhead.	Y	Y			As confirmed in the Travel Plan (Motion, 19/05/2021), 150 additional cycle spaces will be provided at basement level.	Halebrown Architects
Transport Option: Cyclist facilities	Cycle spaces are installed (as above), and at least two compliant cyclists' facilities are provided for the building users: Lockers, Showers, Changing rooms, drying space for wet clothes	Y	Y			Lockers, showers and changing rooms will be provided within the building.	Halebrown Architects
Transport Option: Existing accessible amenities	<p>At least three existing accessible amenities are present within 500m safe walking distance:</p> <ul style="list-style-type: none"> - Food outlet - ATM - Outdoor open space (e.g. park) - Sports centre / Gym - Post Office / Post Box - Community facility - Pharmacy 	Y	Y			Existing local amenities are within 500m of the site: - Appropriate food outlet - Tesco Express - Access to cash - Tesco Express ATM - Post box located on the corner between Bernard Street and Herbrand Street.	TWIN&EARTH
Transport Option: New accessible amenities	<p>Provide new accessible amenities, in accordance with the list above. Up to three points are available for:</p> <p>a) One new amenity [2 points] OR b) More than one new amenity [3 points]</p>	Y	Y			Roof terrace is access to a outdoor open space. Food outlet may be potentially provided within the building.	Halebrown Architects
SECTION TOTALS (excluding Exemplary)		12	12	0	0		

WATER

	ITEM	REQUIREMENTS SUMMARY	AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE	COMMENTS AND ACTIONS	RESPONSIBLE
WAT 01 - Water Consumption	<p>Water Consumption - 1 credit required for Good to Excellent. - 2 credits required for Outstanding.</p>	<p>The water consumption (L/person/day) for the assessed building is compared against a baseline performance and credits awarded based upon BREEAM Table 8.1, including:</p> <ul style="list-style-type: none"> • WCs • Urinals • Taps (wash hand basins, kitchen taps, waste disposal units) • Showers • Baths • Dishwashers (domestic and commercial sized) • Washing machines (domestic and commercial sized) 	5	3	1		<p>Energy & Sustainability Statement (Twin&Earth, 22/05/2021) proposes a sample specification to achieve 3 credits.</p> <p>Sanitaryware schedule will need to be provided to confirm the flow rates of WCs, showers and taps to ensure specification meets the targeted improvement over the baseline water consumption.</p>	M&E
	EXEMPLARY Water consumption	<p>Water consumption: The water consumption (litres/person/day) for the assessed building achieves the 65% improvement described as exemplary performance in Table 8.1</p>	1			1	Not typically feasible due to onerous requirements	M&E
WAT 02 - Water Monitoring	<p>Water Monitoring - First criterion required for Good and higher.</p>	<p>The specification of a water meter on the mains water supply to each building</p> <p>Water-consuming plant or building areas, consuming 10% or more of the building's total water demand, are fitted with easily accessible sub-meters</p> <p>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. BMS</p> <p>Note: For Fully fitted Shell & Core assessments the above must be installed; for Shell Only assessments capped off water connections are required to enable future tenant installation.</p>	1	1			<p>Pulsed water meters and submeters will need to be installed for any high water consuming uses.</p>	M&E
WAT 03 - Water Leak Detection	Water Leak Detection	<p>A leak detection system which capable of detecting a major water leak on the mains water supply within the building and between the building and the utilities water meter is installed that is:</p> <ul style="list-style-type: none"> • A permanent automated water leak detection system that alerts the building occupants to the leak • 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 • Programmable to suit the owner/occupiers' consumption • Designed to avoid false alarms large water-consuming plant <p>Note: For Fully fitted Shell & Core assessments the above must be installed; for Shell Only assessments capped off water connections are required to enable future tenant installation.</p>	1		1		To confirm whether a leak detection systems will be installed on the water supply.	M&E
	Flow Control Devices	<p>Flow control devices are installed that regulate the supply of cold water to all taps, toilets and urinals in to each WC area/facility according to demand. (e.g. Solenoid valves connected to PIR at entrance to in toilet facilities).</p>	1	1			To be confirmed whether flow control devices will be installed on applicable sanitaryware.	M&E
Wat 04 - Water Efficient Equipment	Water Efficient Equipment	<p>The design team has identified all unregulated water demands and specified systems or processes to reduce the relevant water demand</p> <p>This must cover at least (where applicable):</p> <ul style="list-style-type: none"> • Equipment used for irrigation • Swimming pools / hot tubs / hydrotherapy pools • Vehicle wash equipment • Project-specific industrial processes • Water filtration and treatment processes • Building services (e.g. cooling towers, humidification) 	1	1			It is currently assumed that there are no unregulated demands for water other than landscaping. Any landscaping will rely solely on precipitation.	Landscape Architect
SECTION TOTALS (excluding Exemplary)			9	6	2	0		

MATERIALS

ITEM	REQUIREMENTS SUMMARY	AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE	COMMENTS AND ACTIONS	RESPONSIBLE	
MAT 01 - Building Life Cycle Assessment (LCA)	Life Cycle Assessment (LCA): Superstructure	Up to six credits - Superstructure (all building types) <u>Comparison with the BREEAM LCA benchmark during Concept Design</u> Carry out a building LCA on of the superstructure design. Submit the Mat 01/02 Results Submission Tool to BRE at the end of Concept Design, and before planning permission is applied for. <u>Comparison with the BREEAM LCA benchmark during Technical Design</u> Carry out a building LCA on of the superstructure design. Submit the Mat 01/02 Results Submission Tool to BRE at the end of Technical Design. <u>Option appraisal during Concept Design</u> During Concept Design, carry out building LCA options appraisal of 2 to 4 significantly different superstructure design options. Submit the Mat 01/02 Results Submission Tool to BRE at the end of Concept Design, and before planning permission is applied for. <u>Option appraisal during Technical Design</u> During Technical Design, carry out building LCA options appraisal 2 to 3 significantly different superstructure design options (based on the selected Concept Design option). Submit the Mat 01/02 Results Submission Tool at the end of Technical Design.	6	1	1		Design team has confirmed that a Concept Design LCA cannot be undertaken as no external products and materials have been submitted to the LA. Technical Design LCA would need to be undertaken post-planning and submitted to the BRE. ACTION: - T&E to provide quote for the Technical Design LCA works.	TBC
	Life Cycle Assessment (LCA): Substructure & hard landscaping	Substructure and hard landscaping options appraisal during Concept Design Carry out building LCA options appraisal of a combined total of at least six significantly different substructure or hard landscaping design options (at least two shall be substructure and at least two shall be hard landscaping). Submit the Mat 01/02 Results Submission Tool to BRE at the end of Concept Design, and before planning permission is applied for.	1			1	Design team has confirmed that a Concept Design LCA cannot be undertaken as no external products and materials have been submitted to the LA.	N/A
	EXEMPLARY Core building services options appraisal during Concept Design	<u>Core Building Services - Option Appraisal (Concept Design):</u> During Concept Design identify opportunities for reducing environmental impacts as follows: a. Carry out building LCA options appraisal of at least 3 significantly different core building services design options. b. Use a building LCA tool that is recognised by BREEAM.	1			1	Design team has confirmed that a Concept Design LCA cannot be undertaken as no external products and materials have been submitted to the LA.	N/A
	EXEMPLARY LCA and LCC alignment	Achieve MAN 02 credits. Include design options appraised in the Concept Design LCA in the 'elemental LCC plan'. Include design options appraised in the Technical Design LCA in the 'component level LCC option appraisal'. Integrate the aligned LCA and LCC options appraisal activity within the wider design decision-making process. Record this in an options appraisal summary document including the relevant cost information from the 'elemental LCC plan' and 'Component level LCC option appraisal'.	1			1	Design team has confirmed that a Concept Design LCA cannot be undertaken as no external products and materials have been submitted to the LA.	N/A
	EXEMPLARY Third party verification	A suitably qualified third party carries out the building LCAs or produces a report verifying the building LCAs accurately represent the designs under consideration during Concept Design and Technical Design. For each LCA option, itemise the findings of the verification checks made by the suitably qualified third party in the report including, as a minimum, the quality requirements. Include details of the suitably qualified third party's relevant skills and experience and a declaration of their third party independence from the project client and design team in the report.	1			1	Design team has confirmed that a Concept Design LCA cannot be undertaken as no external products and materials have been submitted to the LA.	N/A
MAT 02 - Environmental Product Declarations (EPD)	Construction Products: Environmental Product Declarations (EPD)	Specify construction products with EPD that achieve a total EPD points score of at least 20, according to the BREEAM Tables 9.8 and 9.9 An EPD compliant with BREEAM is an independently verified environmental label (i.e. ISO Type III label) according to the requirements of ISO 14025.	1	1			Products must be procured with an EPD where possible.	Contractor
MAT 03 - Responsible Sourcing of Construction Products	Prerequisite - Legal and sustainable timber - Minimum requirement for any rating.	All timber and timber-based products used on the project is 'Legally harvested and traded timber' in accordance with the UK Government Timber Procurement Policy	Y	Y			Contractor will need to prove the use of legal and sustainable timber. Requirements to be included in the contractor prelims.	Contractor
	Enabling Sustainable Procurement	Prior to completion of the Concept Design, a sustainable procurement plan must be used by the design team to guide specification towards sustainable construction products which includes: • Objectives and strategic targets to guide procurement activities • A policy to procure construction products locally where possible • Procedures to check and verify effective implementation If the plan is applied to several sites or adopted at an organisational level it must also identify the risks and opportunities against social, environmental and economic issues, following BS ISO 20400:2017.	1	1			Compliant sustainable procurement plan will need to be provided.	Contractor
	Measuring Responsible Sourcing	Use the Mat 03 calculator tool to determine the number of credits achieved for the construction products specified or procured. <u>One Credit:</u> Where 10% of the available points are achieved when assessing the superstructure. <u>Two Credits:</u> Where 20% of the available points are achieved when assessing the superstructure, internal finishes, substructure and hard landscaping. <u>Three Credits:</u> Where 30% of the available points are achieved when assessing the superstructure, internal finishes, substructure and hard landscaping.	3	2	1		Products should be procured with responsible sourcing certification where possible e.g. FSC/PEFC/BES6001/CARES/ISO14001 etc.	Contractor
	EXEMPLARY Measuring Responsible Sourcing	As above, but 50% of the available points are achieved when assessing the superstructure, internal finishes, substructure, hard landscaping and core building services.	1				To be reviewed once products have been procured.	Contractor

	ITEM	REQUIREMENTS SUMMARY	AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE	COMMENTS AND ACTIONS	RESPONSIBLE
Mat 05 - Designing for Durability and Resilience	Durability & Resilience	<p>The building incorporates suitable durability and protection measures to prevent damage to vulnerable parts of the building and landscaping, including protection against high pedestrian traffic, internal trolley movement, external vehicular collision, vandalism.</p> <p>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:</p> <ul style="list-style-type: none"> - The element or product achieving an appropriate quality or durability standard or design guide, see Table 9.14. If none are available, use BS 7543:20151 as the default appropriate standard, OR - A detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors. <p>Include convenient access to the roof and façade for cost-effective cleaning, replacement and repair in the building's design. Design the roof and façade to prevent water damage, ingress and detrimental ponding.</p>	1	1			Compliant durability and resilience report will need to be completed.	Hale Brown Architects M&E Colliers
	Material Efficiency	<p>Set targets and report on opportunities and methods to optimise the use of materials for each of the following stages.</p> <ul style="list-style-type: none"> • Preparation and Brief • Concept Design • Developed Design • Technical Design • Construction. <p>Develop and record the implementation of material efficiency, see BREEAM Table 9.15, during:</p> <ul style="list-style-type: none"> • Developed Design • Technical Design • Construction. <p>Report the targets and actual material efficiencies achieved.</p>	1		1		Compliant materials efficiency report will need to be completed at each RIBA Stage.	Hale Brown Architects M&E Colliers
SECTION TOTALS (excluding Exemplary)			14	6	3	1		
WASTE	Pre-Demolition Audit	<p>Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition to determine whether refurbishment or reuse is feasible and, in the case of demolition, to maximise the recovery of materials. The audit must:</p> <ol style="list-style-type: none"> Be undertaken at Concept Design by a competent person prior to strip-out or demolition works. 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 forecast and investigate significant deviations from planned targets. <p>Make reference to the audit in the resource management plan.</p>	1	1			Demolition of the roof of the existing building.	Demolition / Strip-out contractor
	Construction Resource Efficiency - 1 credit required for Outstanding.	<p>Prepare a compliant Resource Management Plan covering:</p> <ul style="list-style-type: none"> Non-hazardous waste materials (from on-site construction and dedicated off-site manufacture or fabrication), including demolition and excavation waste; Accurate data records on waste arisings and waste management routes. <p>Meet or improve upon the following benchmarks for generating non-hazardous construction waste (this excludes demolition and excavation waste):</p> <p><u>One Credit:</u> ≤13.3m3 OR ≤11.1 tonnes of waste per 100m2 of GIFA</p> <p><u>Two Credits:</u> ≤7.5m3 OR ≤6.5 tonnes of waste per 100m2 of GIFA</p> <p><u>Three Credits:</u> ≤3.4m3 OR ≤3.2 tonnes of waste per 100m2 of GIFA</p>	3	2	1		Provision of site waste management plan and achievement of waste volume targets.	Contractor
	Diversion of Resources from Landfill - 1 credit required for Outstanding.	<p>Achieve the following diversion of resources from landfill targets for non-hazardous construction waste and demolition waste generated:</p> <p>Non-Demolition Waste: ≥70% by volume OR ≥80% by tonnage. Demolition Waste: ≥80% by volume OR ≥90% by tonnage. Sort waste materials into key waste groups, either on-site or via a licensed contractor for recovery.</p>	1	1			Achievement of waste diverted from landfill targets.	Contractor
	EXEMPLARY Construction waste management	<p>Non-hazardous construction waste generated, excluding demolition and excavation waste, is less than or equal to the exemplary level resource efficiency benchmarks:</p> <ul style="list-style-type: none"> - ≤1.6m3 OR ≤1.9 tonnes of waste per 100m2 of GIFA. <p>The percentage of non-hazardous construction, demolition and excavation waste (if relevant) diverted from landfill meets or exceeds the exemplary level benchmarks:</p> <ul style="list-style-type: none"> - Non-Demolition Waste: ≥85% by volume OR ≥90% by tonnage. - Demolition Waste: ≥85% by volume OR ≥95% by tonnage. - Excavation Waste: ≥95% by volume OR ≥95% by tonnage. <p>All key waste groups in Table 10.3 for diversion from landfill are covered in the RMP.</p> <p>Waste data obtained from licensed external waste contractors is reliable and verifiable, by using data from EA/SEPA/EA Wales/NIEA Waste Return Forms or from a PAS 402:2013 compliant company.</p>	1		1		Relies on waste quantities produced and will be reviewed in line with Wst 01.	Contractor
	WST 01 - Construction Waste Management							

	ITEM	REQUIREMENTS SUMMARY	AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE	COMMENTS AND ACTIONS	RESPONSIBLE
WST 02 - Use of Recycled and Sustainably Sourced Aggregates	Recycled and Sustainably Sourced Aggregates	Identify all aggregate uses and types on the project (see BREEAM Table 10.5 and 10.6) and determine the quantity in tonnes for each identified use and aggregate type. Identify the region in which the aggregate source is located and calculate the distance in kilometres travelled by all aggregates by transport type. Recycled aggregates from materials in-situ or within the same construction site (e.g. crushed concrete) gain maximum points (0 kilometres). Corresponding credits awarded as per BREEAM Table 10.4.	1		1		Contractor to source local and sustainable aggregate sources where viable.	Contractor
	EXEMPLARY Recycled and sustainably sourced aggregates	The Project Sustainable Aggregate Points score meets or exceeds the exemplary level performance benchmark in Table 10.4 above.	1			1	Will be reviewed once contractor has identified viable aggregate sources.	Contractor
WST 03 - Operational Waste	Operational Waste - Credit required for Excellent and Outstanding.	Provide a dedicated space for the segregation and storage of operational recyclable waste generated. The space must be clearly labelled, accessible to building occupants or facilities operators, sufficiently sized, and appropriate to the building type Where the consistent generation in volume of the appropriate operational waste streams is likely to exist (e.g. packaging, food waste) additional facilities must be provided (e.g. water outlet, compactor/baler)	1	1			Recycling storage space will need to be provided, this is confirmed within the proposed drawings (Halebrown architects) and Energy & Sustainability Statement (T&E, 19/05/2021).	Hale Brown Architects
WST 04 - Speculative Finishes	Speculative Floor and Ceiling Finishes (Offices Only)	For tenanted areas: floor finishes and ceiling finishes have been installed in a show area only or the occupant has selected (or agreed to) the specified floor and ceiling finishes.	1		1		To confirm the extent of floor and ceiling finishes to be installed.	Colliers Contractor
WST 05 - Adaptation to Climate Change	Adaptation to Climate Change	Conduct a systematic risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle. The assessment covers the installation of building services and renewable systems, as well as structural and fabric resilience aspects Develop recommendations or solutions based on the climate change adaptation strategy appraisal, before or during Concept Design, that aim to mitigate the identified impact. Provide an update during Technical Design demonstrating how the recommendations or solutions proposed have been implemented where practical and cost effective	1	1			Adaptation to climate change study would need to be undertaken. Stage 2 action: Will likely require input from multiple disciplines. Stage 4 action: To provide an update demonstrating how the solutions or recommendations from the stage 2 report have been implemented.	Hale Brown Architects M&E Colliers
	EXEMPLARY Responding to climate change	Achieve the following credits: - Hea 04 - Design for Future Thermal Comfort. - Ene 01 - Reduction of Energy Use And Carbon Emissions (> 6 Credits). - Ene 04 - Passive Design Analysis. - Wat 01 - Water Consumption (> 3 Credits). - Mat 05 - Designing for Durability And Resilience. - Pol 03 - Flood Resilience (>1 Credit) & Surface Water Run-Off (2 Credits)	1		1		Potentially feasible: subject to review of all associated credits.	Hale Brown Architects M&E Colliers
WST 06 - Design for Disassembly and Adaptability	Design Disassembly and Functional Adaptability	<u>One Credit:</u> By the end of Concept Design, conduct a study to explore the ease of disassembly and the functional adaptation potential of different design scenarios; develop recommendations or solutions to enable and facilitate disassembly and functional adaptation. <u>Two Credits:</u> In addition to the above, provide an update during Technical Design on how the recommendations have been implemented; and produce a building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.	2	2			Functional adaptability study would need to be undertaken. Stage 2 action: Preliminary summary statement to be produced to recap measures explored for different design scenarios. Will likely require input from multiple disciplines. Stage 4 action: Updates to be included at Stage 4. A disassembly guide will be required.	Hale Brown Architects M&E Colliers
SECTION TOTALS (excluding Exemplary)			11	8	3	0		

LAND USE & ECOLOGY

	ITEM	REQUIREMENTS SUMMARY	AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE	COMMENTS AND ACTIONS	RESPONSIBLE
LE 01 - Site Selection	Previously Occupied Land	At least 75% of the proposed development's footprint is on an area of land which has previously been occupied	1	1			The 6th floor is being built on top of an existing building, therefore the criteria is met.	Hale Brown Architects
	Contaminated Land	A contaminated land professional's site investigation, risk assessment and appraisal has deemed land within the site to be affected by contamination. The client or principal contractor confirms that remediation of the site will be carried out in accordance with the remediation strategy and its implementation plan as recommended by the contaminated land professional.	1			1	To be confirmed during pre-assessment workshop but assumed not achievable.	Environmental Consultant
LE 02 - Ecological Risks and Opportunities	Statutory obligations, Survey and evaluation, and Determining ecological outcomes	A Suitably Qualified Ecologist (SQE) carries out a survey and evaluation for the site early enough to influence site preparation works, layout and, where necessary, strategic planning decisions (typically Preparation and brief stage). The SQE's survey and evaluation determines the site's ecological baseline within the Zone of Influence. Recommendations and data collected from the survey and evaluation are shared with appropriate project team members. The project team liaise and collaborate with representative stakeholders early enough to identify the optimal ecological outcomes for the site and select measures to meet the optimal ecological outcomes in line with the mitigation hierarchy of action.	2	2			ACTION: - Ecologist to be appointed to undertake a Preliminary Ecological Appraisal and confirmation of BREEAM credits under the comprehensive route.	Ecologist
	EXEMPLARY Wider site sustainability	Wider sustainability related activities and potential ecosystem service benefits are considered as part of determining the optimal ecological outcomes for the site, including the areas outlined in the Methodology below. Achieve the credits of the assessment issues outlined below: - Hea 07 Safe and healthy surroundings - Both credits - Pol 03 Flood and surface water management - Achieve credits for 'Surface water run-off' and 'Minimising watercourse pollution' - Pol 05 Reduction of noise pollution	1		1		Potentially feasible: subject to review of all associated credits.	TWIN&EARTH
LE 03 - Managing Impacts on Ecology	Planning and measures on-site	Further planning to avoid and manage negative ecological impacts on-site is carried out early enough to influence the concept design and design brief as well as site preparation planning (typically Concept Design stage). On-site measures for managing negative ecological impacts during site preparation and construction are implemented in-practice	1	1			ACTION: - Ecologist to be appointed to undertake a Preliminary Ecological Appraisal and confirmation of BREEAM credits under the comprehensive route.	Ecologist
	Managing negative Impacts	Negative impacts from site preparation and construction works have been managed according to the mitigation hierarchy, in line with the SQE's recommendations and, either: - No overall loss of ecological value has occurred (two credits), OR - The loss of ecological value has been minimised (one credit)	2	2			ACTION: - Ecologist to be appointed to undertake a Preliminary Ecological Appraisal and confirmation of BREEAM credits under the comprehensive route.	Ecologist
LE 04 - Ecological Change and Enhancement	Change and enhancement of ecology	The client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site. Measures have been implemented that enhance ecological value in the following order: a). On site, and where this is not feasible, b). Off site within the Zone of Influence. Data collated are analysed and where potentially valuable, provided to the local environmental records centres nearest to, or relevant for, the site.	1	1			ACTION: - Ecologist to be appointed to undertake a Preliminary Ecological Appraisal and confirmation of BREEAM credits under the comprehensive route.	Ecologist
	Ecological enhancement	Up to three credits are awarded based on the change in ecological value occurring as a result of the project. This must be calculated in accordance with the process set out in GN36 - BREEAM, CEEQUAL and HQM Ecology Calculation Methodology - Route 2. Credits are awarded in line with the Reward Scale table in GN36 where there are no residual impacts on protected sites or irreplaceable habitats.	3	1	1	1	ACTION: - Ecologist to be appointed to undertake a Preliminary Ecological Appraisal and confirmation of BREEAM credits under the comprehensive route.	Ecologist
	EXEMPLARY Ecological change and enhancement	Change and enhancement of ecology: The change in ecological value calculated under criterion 6 above confirms significant net gain has been achieved as set out in GN36 - BREEAM, CEEQUAL and HQMEcology Calculation Methodology - Route 2.	1			1	ACTION: - Ecologist to be appointed to undertake a Preliminary Ecological Appraisal and confirmation of BREEAM credits under the comprehensive route.	Ecologist

		ITEM	REQUIREMENTS SUMMARY	AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE	COMMENTS AND ACTIONS	RESPONSIBLE
LE 05 - Long Term Ecology Management and Maintenance		Management and maintenance throughout the project	The client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site. Measures have been implemented to manage and maintain ecology throughout the project. These measures are based on input from the project team in collaboration with representative stakeholders and data collated as part of LEO2. A section on Ecology and Biodiversity has been included as part of the tenant or building owner information supplied, to inform the owner or occupant of local ecological features, value and biodiversity on or near the site. This should include 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.	1	1			ACTION: - Ecologist to be appointed to undertake a Preliminary Ecological Appraisal and confirmation of BREEAM credits under the comprehensive route.	Ecologist
		Landscape and ecology management plan	A Landscape and Ecology Management Plan, or equivalent, has been developed in accordance with BS 42020:2013 Section 11.1(205) covering at least the first five years after project completion as a minimum and including the BREEAM required scope. The landscape and management plan or similar will be updated to support maintenance of the ecological value of the site.	1	1			ACTION: - Ecologist to be appointed to undertake a Preliminary Ecological Appraisal and confirmation of BREEAM credits under the comprehensive route.	Ecologist
SECTION TOTALS (excluding Exemplary)				13	10	1	2		
POLLUTION	POL 01 - Impact of Refrigerants	Impact of Refrigerants	All refrigerant systems comply with the requirements of BS EN 378 The systems using refrigerants have Direct Effect Life Cycle CO2 emissions of: • Less than 1,000 kgCO2e/kW (one credit) • Less than 100 kgCO2e/kW (two credits) Note: The credits can be awarded by default if there are no systems using refrigerants	2	1	1		Achievement of a DELCO2 calculation of 1000 or less (typically achieved with VRF).	M&E
		Refrigerants Leak Detection	All systems are hermetically sealed or only use environmentally benign refrigerants: or Have a permanent automated refrigerant leak detection system, that is robust and tested, and capable of continuously monitoring for leaks, has an inbuilt automated diagnostic procedure, and is capable of automatically isolating and containing the remaining refrigerants Note: The credit can be awarded by default if there are no systems using refrigerants	1	1			To confirm whether the refrigerant containing systems will be hermetically sealed or another leak detection system.	M&E
	POL 02 - Local Air Quality	Local Air Quality	Up to two credits available where all heating and hot water is supplied only powered by electricity, or where the NOx emission requirements outlined in BREEAM Table 12.4 are met. For biomass and solid fuel fired technologies, PM and VOC emissions outlined in Table 12.5 must also be met.	2	2			To confirm that non-combustion heating and hot water systems will be installed.	M&E
	POL 03 - Flood and Surface Water Management	Flood Resilience	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 OR Where a site-specific FRA confirms the development is situated in a flood zone that is defined as having a medium or high annual probability of flooding and is not in a functional floodplain and the resilience and resistance of the development to flooding is increased sufficiently	2	2			Environment Agency Flood Map confirms that the site is in Flood Zone 1. Flood Risk Assessment will need to be provided confirming the flood zone and the current and future sources of flooding. ACTION: Alex Walduck has provided the building surveys undertaken when the building was purchased in 2010. The flood reports confirm that the site is located in Flood Zone 1 and takes into consideration of some current and future sources of flooding. Confirmation would be needed from a Drainage Engineer to confirm that the FRA is still applicable and that the building will not be affected by all current and future sources of flooding.	Drainage Engineer
		Surface Water Run-Off Rate	Pre-requisite: Surface water run-off design solutions must be site specific One credit - Surface Water Run-Off - Rate: The peak rate of run-off from the site is 30% better than the pre-developed site (for 1-year and 100-year return period events). Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. Calculations include an allowance for climate change.	1	1			It is assumed post development runoff will not exceed the pre-development scenario, including the climate change event. Drainage Engineer to confirm that the credit assumption is realistic.	Drainage Engineer
		Surface Water Run-Off Volume	Pre-requisite: Surface water run-off design solutions must be site specific One credit - Surface Water Run-Off - Volume: Drainage design measures are specified so 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. This must be for the 100-year 6-hour event, including an allowance for climate change. Flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance).	1	1			It is assumed post development runoff volume will not exceed the pre-development scenario, including the climate change event. Drainage Engineer to confirm that the credit assumption is realistic.	Drainage Engineer

		ITEM	REQUIREMENTS SUMMARY	AVAILABLE	TARGETED	POTENTIAL	NOT FEASIBLE	COMMENTS AND ACTIONS	RESPONSIBLE
INNOVATION		Minimising Watercourse Pollution	<p>There is no discharge from the developed site for rainfall up to 5 mm (confirmed by the appropriate consultant).</p> <p>Areas with a low risk source of watercourse pollution, an appropriate level of pollution prevention treatment is provided, using appropriate SuDS techniques.</p> <p>All water pollution prevention systems have been designed and installed in accordance with the recommendations of documents such as the SuDS manual and other relevant industry best practice. They must be bespoke solutions taking account of the specific site requirements and natural or man-made environment of and surrounding the site.</p> <p>A comprehensive and up to date drainage plan of the site will be made available for the building or site occupiers. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS must be in place.</p>	1		1		Infiltration on site - 5mm rule will need to be met. Drainage Engineer to confirm that the credit can be achieved.	Drainage Engineer
	Pol 04 - Reduction of Night-Time Light Pollution	Reduction of Night Time Light Pollution	<p>The external lighting strategy is in compliance with Table 2 of the ILP Guidance notes for the reduction of obtrusive light 2011, covering:</p> <ul style="list-style-type: none"> - Sky Glow - Upward Light Ratio (ULR) - Light intrusion into windows - Luminaire Intensity - Building Luminance <p>All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00. Safety or security lighting provided between 23:00 and 07:00 complies with the lower levels of lighting recommended during these hours in Table 2 of the ILP's Guidance notes.</p> <p>Illuminated advertisements, where specified, are in compliance with ILP PLG 05 The Brightness of Illuminated Advertisements</p>	1	1			Assumed that all external lighting will be specified in line with the credit requirements.	M&E
	Pol 05 - Reduction of Noise Pollution	Reduction of Noise Pollution	<p>A noise Impact assessment in compliance with BS 4142: 2014 is carried out to assess the existing background noise and proposed plant noise</p> <p>The noise level from the assessed 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.</p>	1	1			<p>It is currently assumed that noise levels from the proposed buildings will be 5dB lower than the background noise at the most exposed noise sensitive development.</p> <p>Acoustic Consultant to be appointed to confirm.</p>	Acoustic Consultant
	SECTION TOTALS				12	10	2	0	
	Innovation credits	Approved Innovations + Exemplary credits in individual categories	<p>Additional credits are available for Approved Innovations not currently recognised by an existing BREEAM issue.</p> <p>Exemplary level credits counted within the issues above.</p>	1				To be reviewed if required.	TWIN&EARTH
SECTION TOTALS (Including all Exemplary)				10	0	4	13		