



BREEAM Pre-assessment

Penrhyn Road,
Knowsley

Job Nr. 2502 Rev A

22/02/2022

Revision Notes / Comments	Date	Prepared By	Checked By	Approved By
Final issue	22/02/2022	SH	MM	NE

Introduction

Yonder have been engaged, as BREEAM assessors, to undertake a preliminary review of a BREEAM strategy at Penrhyn Road, Knowsley.

BREEAM Excellent is the required target from the Local Authority.

Additional potential credits have been highlighted as an uplift.

BREEAM Outstanding represents performance equivalent to the top 1% of UK new non-domestic buildings

BREEAM Excellent represents performance equivalent to the top 10% of UK new non-domestic buildings

BREEAM Very Good represents performance equivalent to the top 25% of UK new non-domestic buildings.

Site Summary

The existing site is currently overgrown dense shrub with scattered trees and Hedges and small areas of hard standing. It is surrounded by further industrial and commercial sites.

The proposed site comprises 1no industrial unit equipped with loading doors, and provided with ancillary office space and associated soft and Hard landscaping.

The following Industrial BREEAM Pre-Assessment considers the industrial unit as a "Shell and Core" building. If the scope of assessment changes to "Fully Fitted" or "Shell Only", a review will be required to ensure the correct scope is applied.

Score Summary

- The development is required to achieved an Excellent rating with a minimum score of 70%. It is recommended a contingency of 3-5% is established above this threshold.
- The pre-assessment strategy demonstrate that the development is currently anticipated to achieve 71.08%, BREEAM Excellent.
- An additional 12.19% has been identified that may potentially be achieved.
- The 'targeted' score has exceeded the minimum threshold however it is recommended some of the potential credits are investigate further.

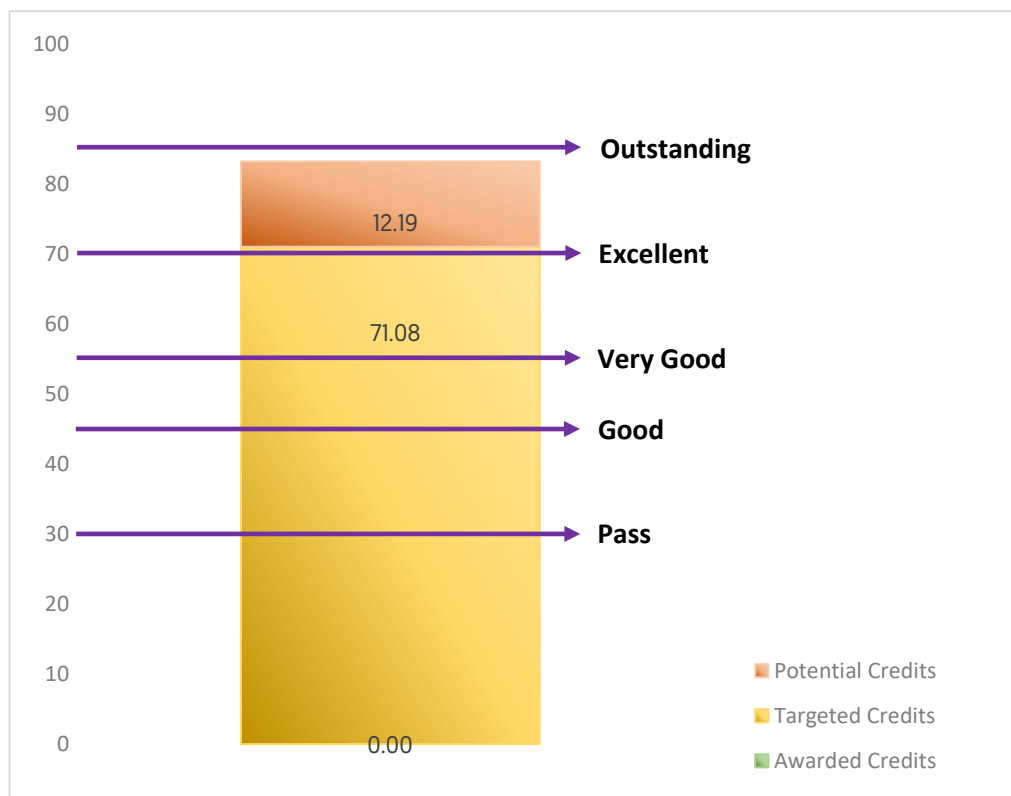
Assessment Details

BRE Reference	
Assessor	Sarah Howe
Assessor Organisation	Yonder Limited
Technical Manual	SD5078 BREEAM UK New Construction 2018 2.0
Building Type	Commercial: Industrial unit – warehouse storage/distribution
Assessment Type	New Build
Scope	Shell & Core

Project	Penryn Road, Knowsley
Date	22/02/2022
Report	Pre-assessment Rev A

Required Rating	Excellent	70.00 %
Awarded Rating	Unclassified	0.00 %
Targeted Rating	Excellent	71.08 %
Potential Rating	Excellent	83.27 %

	Credit Value %	Available		Targeted		Potential	
		Credits	Weight	Credits	Percent	Credits	Percent
Management	0.61	18	11	16	9.78	1	0.61
Health & Wellbeing	0.80	10	8	8	6.40	1	0.80
Energy	0.61	23	14	15	9.13	0	0.00
Transport	0.96	12	11.5	6	5.75	2	1.92
Water	0.78	9	7	7	5.44	0	0.00
Materials	1.25	14	17.5	7	8.75	2	2.50
Waste	0.78	9	7	9	7.00	0	0.00
Land Use & Ecology	1.15	13	15	7	8.08	4	4.62
Pollution	0.75	12	9	9	6.75	1	0.75
Innovation	1.00	10	10	4	4.00	1	1.00
Total		130	110	88	71.08	12	12.19



Time Critical Early Actions

RIBA Stage 2 - 4

Ene 04.1 - Passive Design Analysis to be carried out to identify opportunities for the implementation of passive design measures

Mat 03 - Sustainable Procurement Plan to be in place prior to Concept Design to guide specification towards sustainable construction products

Wst 01.1 - Pre-demolition Audit to be carried out on existing buildings and hardstanding on site to identify potential recovery of materials

Wst 05 - Climate Change Adaptation Strategy to be carried out to develop recommendations/solutions for the site mitigating the impacts identified, updated during Technical Design to confirm how these are implemented

Wst 06 - Disassembly and Functional Adaptability Study to explore ease of disassembly and functional adaptation potential of different design scenarios, making recommendations based on the study

RIBA Stage 3

Hea 04 - Thermal Comfort Analysis to be carried out to ensure design meets thermal comfort requirements in current and future climate scenarios

Next Steps

- Design team is required to review targeted and potential credits to identify sufficient achievable credits to target to achieve the required Excellent rating.
- Ensure reports are updated, and Guidance Notes completed, by relevant consultants in order to comply with the BREEAM criteria (Transport, Ecology, Drainage).
- Instruct further consultants to provide Passive Design Analysis and Thermal Comfort reports, any time-critical reports as detailed above, plus any additional reporting required to achieve the Excellent rating following design team review.

Credit			Available	Targeted	Potential	Responsible Party	Time Limitation	Requirement Summary
	Project brief and design	Project Delivery Planning	1		1	Client	Concept Design	Project delivery stakeholders meet to identify roles, responsibilities and contributions for key phases of project delivery. The project team demonstrate how the project delivery stakeholders have influenced or changed the initial project brief, project execution plan, communication strategy and concept design.
		Stakeholder consultation (interested parties)	1			Client	Concept Design	Design team consult with all interested parties on specific content and demonstrate how the consultation outcomes influenced the Initial Project Brief and Concept Design. All interested parties receive consultation feedback prior to the completion of Technical Design.
		Prerequisite BREEAM AP	-	Yes		Client	Developed Design	The project team and client formally agree broad sustainability performance targets, e.g. BREEAM target in a pre-assessment, with the support of the BREEAM AP if appointed.
		Prereq + BREEAM AP (Concept Design)	1	1		Client	Concept Design	Appointment of BREEAM AP to maximise project performance, monitor progress, identify risks and opportunities, support any required corrective actions and co-ordinate generation of appropriate evidence by the project team. The AP must attend a key meeting during the Concept Design stage.
		Prereq + BREEAM AP (Developed Design)	1	1		Client	Developed Design	Appointment of BREEAM AP to maximise project performance, monitor progress, identify risks and opportunities, support any required corrective actions and co-ordinate generation of appropriate evidence by the project team. The AP must attend a key meeting during the Developed Design stage.
Man 02	Life cycle cost and service life planning	Elemental LCC	2	2		Client	Concept Design	Outline, entire asset, Life Cycle Cost plan with any design options appraisals in line with PD 156865:2008 providing an indication of future replacement costs over a period of analysis and includes service life, maintenance and operation cost estimates. The LCC plan must be used to influence building and systems design and specification.
		Component level LCC	1	1		Client	Technical Design	Component level Life Cycle Cost options appraisal in line with PD 156865:2008 including valued comparisons of envelope, services, finishes and external spaces. The LCC plan must be used to influence building and systems design and specification.
		Capital cost reporting	1	1		Contractor	-	Report the capital cost for the building in £k/sqm.
	Responsible construction practices	Prerequisite: Legal timber	-	Yes		Contractor	-	All timber and timber based products must be 'legally harvested and traded'
		Prereq + Environmental management	1	1		Contractor	-	All parties who manage the construction site (e.g. principal contractor, and demolition contractor where applicable) operate an Environmental Management System covering their main operations (e.g. ISO14001:2015 or BS8555:2016 audits 1-4) and implement best practice pollution prevention policies and procedures on site in accordance with PPG6.
		Prereq + BREEAM AP (site)	-	Yes		Contractor	-	The client and contractor formally agree the BREEAM rating and minimum standards required (e.g. BREEAM pre-assessment)
		Prereq + BREEAM AP (site)	1	1		Contractor	-	Appointment of BREEAM AP to maximise project performance, monitor progress, identify risks and opportunities, support any required corrective actions and co-ordinate generation of appropriate evidence by the project team. The AP must attend a key meeting during the construction process.
		Prereq + Responsible construction management	2	2		Contractor	-	Where the principal contractor evaluates and mitigates risks in relation to vehicular movements, pollution management, tidiness, health and wellbeing and security process. Where the contractor implements training, awareness and feedback, monitoring and reporting. One Credit: Where required items are achieved (refer to Appendix A) Two Credits: Where 6 additional items are achieved Exemplary Credit: Where all items are achieved.
		Prerequisite: Monitoring of construction site impacts	-			Contractor	-	An individual is assigned for monitoring, recording and reporting energy use, water consumption and transportation data (where measured) resulting from all on-site construction processes (and dedicated off-site manufacturing).
		Prereq + Monitoring of construction site impacts - Utility Consumption	1	1		Contractor	-	Set targets, monitor and record site energy consumption (kWh) and potable water consumption (m3) for construction plant, equipment and site accommodation. Report the total carbon emissions (kgCO2/project value) and total net water consumption (m3).
		Prereq + Monitoring of construction site impacts - transport of construction materials and waste	1	1		Contractor	-	Set targets, monitor and record transportation movements resulting from delivery of the majority of construction materials to site and construction waste from site. Report that total transport related carbon dioxide (kgCO2eq) and distance travelled (km).
		Man 04	Commissioning and handover	Commissioning - testing schedule and responsibilities	1	1		Contractor
Commissioning - design and preparation	1			1		Contractor	M&E Design	Where an appropriate team member (not involved in installation) is appointed to undertake design reviews, have input into programming and to manage commissioning, performance testing and handover. For complex systems this will be a specialist commissioning manager.
Testing and inspecting building fabric	1			1		Contractor	Prior to Handover	Completion of thermographic survey and airtightness test and inspection, along with any defects remediated.
Handover	1			1		Building Physics / Contractor	Prior to Handover	A Building User Guide and training schedule will be prepared for both non-technical and technical building users to be delivered appropriately around handover.
Health and Wellbeing				7	5.25			
Hea 01	Visual comfort	Daylighting	1		1	Building Physics	-	80% of all occupied spaces to achieve 2% average daylight factor AND EITHER - Uniformity ratio of 0.3 or minimum point daylight factor of 0.6%. Atria must achieve uniformity of 0.7 or minimum point 1.4% OR - 80% of the room has a view of the sky from table height and room depth criterion met
		View out	1	1		Building Physics	-	95% of the floor area in 95% of spaces where close work would be undertaken, provides an adequate view out: - Seated view (1.2-1.3m) must be of landscape or buildings (rather than just sky). - Glazed area a minimum %, where room depth is: <8m, 20% ≥8 ≤11, 25% >11 ≤14, 30% >14, 35%
		Internal and external lighting levels, zoning and control	1	1		Contractor / M&E	-	External lighting in line with BS 5489-1:2013 and BS EN 12464-2:2014.
Hea 02	Indoor air quality	Prerequisite Indoor Air Quality Plan	-	No	Yes	Client	Concept Design	Site specific indoor air quality plan
		Prereq + Ventilation	1	1		M&E	-	Provision of fresh air in line with BS ISO 17772-1:2017 or, for naturally ventilated buildings, CIBSE AM10.
Hea 04	Thermal comfort	Thermal modelling	1	1		Building Physics	Detailed Design	Thermal modelling in accordance with CIBSE AM11 (full dynamic analysis). Air conditioned buildings meet CIBSE Guide A Table 1.5 for summer and winter. Naturally ventilated meet the same for winter and CIBSE TM52 to limit overheating risk.
		Design for future thermal comfort	1	1		Building Physics	Detailed Design	Thermal modelling, as above, for the projected climate change environment. Where comfort conditions are not met, demonstration of how the building may easily be adapted to incorporate additional passive measures to achieve the comfort requirements.
Hea 05	Acoustic performance	Acoustic performance	1	1		Acoustician		Where a suitably qualified acoustician is appointed to define the fabric specification required, to enable a fitout tenant to achieve sound insulation levels in line with BS8233:2014.
Hea 06	Security	Security of site and building	1	0		Architect / Client	Concept Design	Security Needs Assessment from a Suitably Qualified Security Specialist and incorporation of the recommendations. Exemplary credit will be achieved where a SABRE assessment is completed.
Hea 07	Safe and healthy surroundings	Safe access	1	1		Architect	-	Dedicated and safe cycle paths from site entrance to any storage Dedicated and safe footpaths Any drop-off areas providing direct access to other footpaths Delivery areas not access through general parking areas and do not cross or share pedestrian or cyclist paths or outside amenity areas. Dedicated parking or waiting areas of goods vehicles with appropriate room for manoeuvre.
		Outside space	1	1		Architect	-	Outside space providing an external amenity space for building users.

Energy								
Ene 01	Reduction of energy use and carbon emissions	Energy performance	9	4		Building Physics	-	Energy performance improvement against Building Regulations: Excellent Rating - 4 credits minimum requirement Outstanding Rating - 6 credits minimum requirement
		Prerequisite Prediction of operational energy consumption	-	No	Yes	Building Physics	Concept Design	Preliminary design workshop focusing on operational energy performance.
		Prediction of operational energy consumption	4	4		Building Physics	Design Stage	Energy modelling, during design and post construction stage, to generate predicted operational energy consumption. Targets to be reported. Risk assessment to identify design, technical and process risks to be monitored and managed through construction and commissioning.
Ene 02	Energy monitoring	Sub-metering of end-use categories	1	1		Contractor / M&E	-	Energy metering systems to ensure 90% of the estimated annual energy consumption of each fuel is assigned to the end use categories which are identifiable to building users: <1000sqm - Energy monitoring and management system or separate accessible pulsed submeters >1000sqm - Energy monitoring and management system
		Sub-metering of high energy load and tenancy areas	1	1		Contractor / M&E	-	Energy monitoring and management system, or submeters, monitoring the significant majority of the energy supply in tenanted areas, functional areas in single occupancy buildings. Sub-metering per floor plate in large single occupancy buildings with one homogenous function (e.g. offices).
Ene 03	External lighting	External lighting	1	1		Contractor / M&E	-	External lighting with average initial luminous efficacy of not less than 70lm/cw. Automatic control to prevent operation during daylight hours and presence detection in areas of intermittent pedestrian traffic.
Ene 04	Low carbon design	Passive design analysis	1	1		Building Physics	Concept Design	Hea 04 is required to be achieved. Passive design analysis and implementation of recommended passive measures.
		Free cooling	1	0		Building Physics	Concept Design	Passive design analysis is required to be achieved. Free cooling analysis and implementation of natural ventilation or free cooling to meet the building's cooling demand.
		Low zero carbon feasibility study	1	1		Building Physics	Concept Design	LZC feasibility study to establish the most appropriate renewables and implementation of the recommendations to achieve reduced regulation carbon dioxide emissions.
Ene 06	Energy efficient transportation systems	Energy consumption	1	1		Contractor / Lift Supplier	-	Lift traffic analysis to determine optimum number and size of lifts, escalators or moving walks. Calculation of energy consumption in accordance with BS EN ISO25745 Part 2 or 3 for two systems or arrangements. Use of regenerative drives, where energy savings occur. Specification of the lowest energy options.
		Energy efficient features - lifts	1	1		Contractor / Lift Supplier	-	Standby condition for off-peak periods. Lighting (including display) with an average luminous efficacy of >70lm/cw and use of VVVF control of the drive motor.
Transport								
Tra 01	Transport assessment and travel plan	Travel plan	2	2		Client / Contractor / Transport Consultant	Feasibility and Design	Develop a travel plan based on a travel assessment that will be implemented by end users. The travel assessment must include reference to disabled access, calculation of accessibility index and amenities review.
Tra 02	Sustainable transport measures	Prerequisite	-	Yes				Achievement of Tra 01
		Prereq + Transport options implementation	10	4	2	Various	Preparation and Brief (for certain considerations)	Implementation of sustainable transport measures (points based system for measures implemented). Where AI<25, 1 point = 1 credit. - Accessibility Index (AI) of >8 (1 point) - Negotiated extra services with increased AI (2 points) or - New stops or diverted route with increased AI (3 points) or - Provision of public transport information system (1 point) - 3kW electric recharging stations for 10% of parking (1 point) - Car sharing group with preferable priority spaces (1 point) - Consultation at Preparation and Brief stage with LPA and cycle or pedestrian network improvement (2 points) - Cycle storage (1 point) - Commercial: 1 per 10 staff - 2 of the following for cycle users: showers, changing, lockers, drying spaces (1 point) - 3 existing accessible amenities (1 point) - 1 new accessible amenity (2 points) or - More than 1 new accessible amenity (3 points)
Water								
Wat 01	Water consumption	Efficacy	5	3		M&E	-	Efficient sanitaryware is specified. Example specifications below: + 4 credits achieved where specifications average WC 3L flush, WHB 4l/min, showers 6l/min, kitchen tap 5l/min
Wat 02	Water monitoring	Water Meter	1	1		M&E	-	Water meter on mains supply to each building. Sub metering of all water consuming plant or building areas, consuming more than 10% of the building's total water demand. Connections to an appropriate utility monitoring and management system e.g. BMS.
Wat 03	Water leak detection	Leak detection	1	1		M&E	-	Leak detection system capable of detecting a major leak on the utilities water supply, within the building and between the buildings and the utilities water supply.
		Flow Control	1	1		M&E	-	Installation of flow control devices to regulate supply to each WC area or sanitary facility.
Wat 04	Water efficient equipment	Water efficient equipment	1	1		Contractor	-	Identification of all unregulated water uses (e.g. swimming pools, irrigation, vehicle wash, process, water filtration and treatment process) and reduction of the water demand.
Materials								
Mat 01	Environmental impacts from construction products - Building life cycle assessment	Superstructure	6	2	2		Concept Design	Concept Design: Building LCA Concept Design: LCA Options Appraisal of 2-4 significant options Technical Design: Building LCA Technical Design: LCA Options Appraisal of 2-3 significant options (or update of the one complete at concept design).
		Substructure and hard landscaping	1				Concept Design	The previous credit must be achieved. LCA Options Appraisal of 6 significant options (minimum 2 substructure and 2 hard landscaping)
Mat 02	Environmental impacts from construction products	Specification of products with a recognised EPD	1	1		Contractor	-	Use of sufficient number of products with Environmental Product Declarations to achieve 20 points in the BREEAM calculator.
Mat 03	Responsible sourcing of materials	Prerequisite	-	Yes		Contractor	-	All timber and timber based products must be 'legally harvested and traded'
		Prereq + Enabling sustainable procurement	1	1		Client / Contractor	Concept Design	Sustainable procurement plan.
		Prereq + Measuring responsible sourcing	3	1		Contractor	-	Calculation demonstrating the responsible sourcing of products (superstructure, internal finishes, substructure and hard landscaping) e.g. BES6001, FSC, ISO14001, CARES.
Mat 05	Designing for durability and resilience	Designing for durability and resilience	1	1		Architect	-	Protection measures to reduce damage to building's fabric or materials against accidental or malicious damage. Additionally, protection measures for key exposed building elements against degradation due to environmental factors by meeting BS 7543:2015 or alternative standard.
Mat 06	Material efficiency	Material efficiency	1	1		Architect	Preparation & Brief	Set targets, report on opportunities and methods to optimise materials use from preparation and brief through to construction. Record the implementation of material efficiency from developed design to construction and report the targets and actual material efficiencies achieved.

Waste								
Wst 01	Construction waste management	Pre-demolition audit	1	1		Contractor	Concept Design	Pre-demolition audit to identify whether refurbishment or reuse is feasible and, in the case of demolition, to maximise recovery potential.
		Construction resource efficiency	3	3		Contractor	-	Where a Resource Management Plan has been developed, including demolition and excavation (where applicable), and where the following resource efficiencies are achieved (waste per 100sqm gross internal floor area): - 1 Credit: ≤13.3m3 or ≤11.1 tonnes (target) - 2 Credits: ≤7.5m3 or ≤6.5 tonnes - 3 Credits: ≤3.4m3 or ≤3.2 tonnes Note, m3 volume is actual, not bulk and therefore voids should be omitted from the volume.
		Diversion of resources from landfill	1	1		Contractor	-	Where water materials are separated into key waste groups either on-site or through a licensed contractor for recovery, and where the following percentages of non-hazardous waste have been diverted from landfill: - Construction: 70% volume or 80% tonnage - Demolition: 80% volume or 90% tonnage
Wst 02	Use of recycled and sustainably sourced aggregates	Prerequisite Pre-demolition Audit	-	Yes		Contractor	Concept Design	Pre-demolition audit in line with Wst 01, to encourage the reuse of existing material on site.
		Aggregates	1	0		Contractor	-	Calculation rewarding the use of secondary and recycled aggregates, use of local aggregates and from sustainable locations.
Wst 03	Operational waste	Operational waste	1	1		Architect	-	Dedicated space for the segregation and storage of operation waste that is clearly labelled, accessible for occupants and waste contractors and of appropriate capacity for the predicted waste volumes. For consistent large volumes of waste, a static waste compactor or baler and/or segregated food waste (with tap)
Wst 05	Adaptation to climate change	Resilience of structure, fabric, building services and renewables installation	1	1		Building Physics	Concept Design	Where a climate change adaption strategy appraisal has been conducted to demonstrate a risk assessment of extreme weather conditions arising from climate change, on the building over its projected life cycle.
Wst 06	Design for disassembly and adaptability	Design for disassembly and functional adaptability - recommendations	1	1		Architect / Structural Engineer	Concept Design	A study to explore the ease of disassembly and the functional adaptation potential of different design scenarios with recommendations or solutions.
		Disassembly and functional adaptability – implementation	1	1		Architect / Structural Engineer	Technical Design	An update on the previous credit to demonstrate how recommendations or solutions have been implemented, where practical and cost effective. Provision of a building adaptability and disassembly guide for future tenants.
Land Use and Ecology								
LE 01	Site selection	Previously occupied land	1			Architect	-	Demonstration that at least 75% of the proposed development's footprint is on an area of land which has previously been occupied.
		Contaminated land	1		1	Civil Engineer	Commencement on Site	Where the site is affected by contamination and is remediated to enable development. Remediation of the site will be carried out in line with a remediation strategy.
LE 02	Identifying and understanding the risks and opportunities for the project	Prerequisite	-	Yes		Client / Contractor	-	Where compliance will be monitored against all relevant UK and EU or international legislation relating to the ecology of the site.
		Survey, evaluation & determining outcomes	2	1	1	Ecologist	Preparation & Brief	Survey & Evaluation Appointment of Suitable Qualified Ecologist for involvement in site configuration and input into any strategic planning decisions. Completion of survey and evaluation prior to completion of the preparation and brief, to determine the ecological baseline, risks to ecological value and capacity for enhancement. Determining the Ecological Outcomes During Concept Design the project team liaise with representative stakeholders to identify the optimal ecological outcome for the site. Solutions and measures are implemented for avoidance, protection, mitigation of negative impacts, on site compensation and enhancement to achieve the optimal ecological outcome.
LE 03	Managing negative impacts on ecology	Prerequisite	-	Yes		Ecologist	-	LE 02 must be achieved.
		Prereq + Planning, liaison, implementation and data	1	1		Ecologist	Preparation & Brief	Roles and responsibilities for managing negative impacts on the ecology are defined and allocated from Preparation and Brief stage. Potential impact of site preparation and construction works on ecology identified (including through stakeholder engagement) and solutions/measures implemented.
		Prereq + Managing negative impacts of the project	2	1	1	Ecologist	-	Negative impacts from site preparation and construction have been managed and where there is: - no net loss of ecological value (2 credits) - loss of ecological value has been minimised (1 credit)
LE 04	Change and enhancement of ecological value	Prerequisite - Managing negative impacts on ecology	-	Yes		Ecologist	-	Roles and responsibilities for managing negative impacts on the ecology are defined and allocated from Preparation and Brief stage. Potential impact of site preparation and construction works on ecology identified.
		Prereq + Route 2: Liaison, implementation and data collation	1	1		Ecologist	-	Based on data collated from representative stakeholders, ecological enhancements have been selected on site or, where not feasible, off site within the zone of influence.
		Prereq + Enhancement of ecology	3	1	1	Ecologist	-	The calculation of change in ecological value: - minimising loss of ecological value (1 credit) - no net loss of ecological value (2 credits) - net gain of ecological value (3 credits)
LE 05	Long term ecology management and maintenance	Prerequisite - Roles and responsibilities, implementation, statutory obligations	-	Yes		Ecologist	-	Roles and responsibilities for managing negative impacts on the ecology are defined and allocated from Preparation and Brief stage. Potential impact of site preparation and construction works on ecology identified. 1 credit under LE04 has been achieved.
		Planning, liaison, data, monitoring and review management and maintenance	1	1		Ecologist / Contractor	-	Project team monitor and review effectiveness of credits LE03 and LE04 and develop and review management and maintenance solutions, actions or measures. Building user information to include section on Ecology and Biodiversity.
		Landscape and ecology management plan (or similar) development	1	1		Ecologist	Hand Over	Landscape and ecology management plan in accordance with BS42020:2013 covering the first five years after project completion.
Pollution								
Pol 01	Impact of refrigerants	Prerequisite - Refrigerant Use	-	Yes		M&E	-	3 credits will be awarded by default where there are no refrigerants. Any refrigerant systems must comply with BS EN 378:2008 parts 2 and 3.
		Prereq + Impact of refrigerant	2	1		M&E	-	Where refrigerant containing systems have Direct Effect Life Cycle CO2 equivalent emissions of the following for cooling/heating capacity: - <100kgCO2e/kW or GWP<10 (2 credits) - <1000 kgCO2e/kW(1 credit)
		Prereq + Leak detection	1	0		M&E	-	Where all systems are hermetically sealed, only use environmentally benign refrigerants, have a permanent automated refrigerant leak detection system or an inbuilt automated diagnostic procedure for detecting a leakage with capability of automatically responding and managing the remaining refrigerant change.
Pol 02	Local air quality	Combustion / Emissions	2	2		M&E		Where all heating and hot water is supplied by non-combustion systems (i.e. electricity only), OR NOx emissions are the following (mg/kWh): Gas boilers: 27 (1 credit), 24 (2 credits) Gas heat pumps: 34 (1 credit), 30 (2 credits)
Pol 03	Flood and surface water management	Flood Risk	2	2		Civil Engineer		A site specific flood risk assessment must be provided confirming the flood zone and flood risk from all sources. Low risk (2 credits), Medium or high risk with FFL 600mm above the flood level or compliance with BS8533:2017 (1 credit)
		Pre-requisite - Surface Water Run-off	-	Yes				Surface water run off design bespoke to the project with appropriate involvement of an appropriate consultant.
		Surface Water Run-Off - Rate	1	1		Civil Engineer		Brownfield: Where peak rate of run-off shows a 30% improvement for the developed site for 1 and 100 year return periods with climate change allowance. Greenfield: Where peak rate of run-off is no greater for the developed site for 1 and 100 year return periods with climate change allowance.
		Surface Water Run-Off - Volume	1	1		Civil Engineer		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. Where this is not achieved, justification and implementation of drainage measures to meet the limiting discharge.
		Minimising watercourse pollution	1		1	Civil Engineer		Where there is no discharge from the developed site for rainfall up to 5mm. Appropriate levels of pollution prevention treatment using SuDS techniques in accordance with the SuDS manual.
Pol 04	Reduction of night time light pollution	Reduction of night time light pollution	1	1		M&E		External lighting strategy in line with Table 2 of the ILP Guidance notes for the reduction of obtrusive light, 2011. All external lighting can be automatically switched off between 23:00 and 07:00. Illuminated advertisements in compliance with ILP PLG05.
Pol 05	Reduction of noise pollution	Reduction of noise pollution	1	1		M&E / Acoustician		Noise impact assessment compliant with BS4142:2014 to determine existing background noise levels. Compliance will be met where noise from the assessed building, at the most exposed receptor, is at least 5dB lower.

Exemplary Credits							
Man 03	Responsible construction practices	Prereqs + Responsible construction management	1	1			Refer to credit issue
Hea 01	Visual comfort	Daylighting	1	0			Refer to credit issue
Hea 06	Security	Security of site and building	1	0			Refer to credit issue
Ene 01	Reduction of energy use and carbon emissions	Carbon negative	3	0			Refer to credit issue
		Post-occupancy stage	2	2			Refer to credit issue
Wat 01	Water consumption	Water consumption	1	0			Refer to credit issue
	Environmental impacts from construction products - Building life cycle assessment (LCA)	Core building services	1	0			Refer to credit issue
		LCA and LCC alignment	1	0			Refer to credit issue
		Third party verification	1	0			Refer to credit issue
Mat 03	Responsible sourcing of materials	Prereq + Measuring responsible sourcing	1	0			Refer to credit issue
Wst 01	Construction waste management	Construction resource efficiency	1	1			Refer to credit issue
Wst 02	Use of recycled and sustainably sourced aggregates	Use of recycled and sustainably sourced aggregates	1	0			Refer to credit issue
Wst 05	Adaptation to climate change	Responding to climate change	1	0			Refer to credit issue
LE 02	Identifying and understanding the risks and opportunities for the project	Determine the ecological outcomes for the site (sustainability-related activities)	1	0	1		Refer to credit issue

Further help and information

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