Sustainability Statement

RIBA Stage 2

Royal UK Property Holding Ltd

1 & 2 Longwalk Road

Hayes
Uxbridge
UB11 1DB
UB11 1BA
London Borough of Hillingdon

Version	Revision	Date	Author	Reviewer	Project Manager
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Executive Summary

This Sustainability Statement has been prepared by SRE for the proposed industrial scheme planned at 1 & 2 Longwalk Road, Stockley Park, Uxbridge (the Proposed Development) on behalf of Royal UK Property Holding Ltd (the Client).

The Proposed Development is requesting full planning permission for the demolition of the existing buildings; redevelopment of the site to provide two commercial units for flexible industrial, storage and distribution uses (Use Classes B2/B8/E(g)(iii)), with ancillary office space, yard areas, servicing, vehicular and cycle parking; hard and soft landscaping and associated works. Overall, contributing to 11,006m^2 of gross internal floor area (GIA).

This Sustainability Statement is being submitted to the Local Authority of the London Borough of Hillingdon to seek their agreement on the Proposed Development.

This statement demonstrates how the development accords with the relevant planning policy including The National Planning Policy Framework (2026), The London Plan (2021), The London Borough of Hillingdon Part 1 (2012) and Part 2 (2020).

In summary, the development has been designed to minimise regulated and unregulated carbon emissions, achieve high standards of fabric energy efficiency, meet water efficiency targets of at least a 15% improvement of water consumption of the baseline performance (in line with BREEAM ‘Excellent’ minimum requirements), protect and deliver ecological enhancement measures, incorporate sustainable drainage measures, promote active and sustainable travel and adopt circular economy and low-embodied-carbon principles.

The scheme is designed to be a policy-compliant, low-impact industrial development that responds proportionately to its scale, while delivering measurable environmental benefits.

Introduction

1. Introduction

The Sustainability Statement has been prepared by SRE on behalf of Royal UK Property Holding Ltd (the Client) in support of the planning application for 1 & 2 Longwalk Road (the Proposed Development) in order to report the sustainability targets and objectives in accordance with national and local sustainability policies to contribute to sustainable development.

Sustainable Development is defined as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs." (World Commission on Environment and Development: Our Common Future[1]).

The year 2024 was the warmest year since global records began in 1850, with global temperatures reaching 1.55 °C above pre-industrial levels, according to the World Meteorological Organization.[2] This marks the first time the 1.5 °C threshold was exceeded for an entire year, a critical milestone in climate monitoring. The UK Met Office reports a 98% likelihood that at least one of the next five years will be even warmer.[3] Projected annual emissions are only expected to rise, with global temperatures following the same trendline (**Error! Reference source not found.**).

The UK built environment is one of the largest contributors to Greenhouse Gas (GHG) emissions, contributing approximately 25% to the total share of UK GHG emissions according to the UK Green Building Council[4]. For a sustainable future, a clear pathway to

reducing emissions associated with construction is no longer a choice, but a requirement for many.

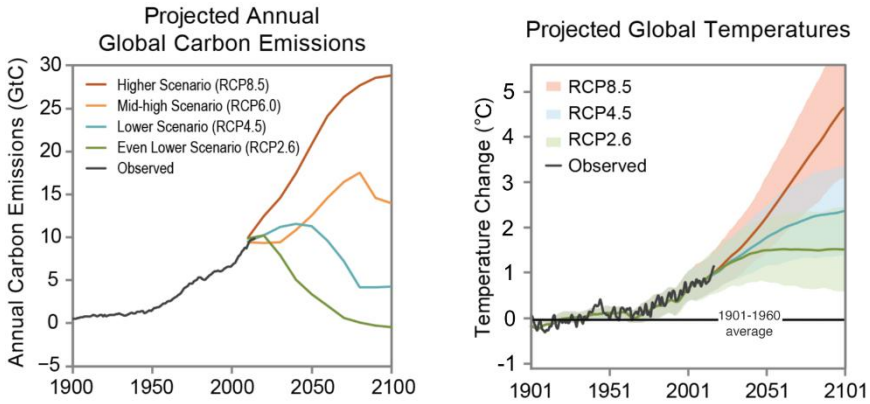

Figure 1 - Projected global emissions and temperatures

This statement incorporates policy and guidance structured around nine sustainability chapters which are to be used to inform the sustainability strategy for the Proposed Development:

1. Noise and vibration
2. Daylight and sunlight
3. Air quality and dust management
4. Water consumption

1 Report of the World Commission on Environment and Development: Our Common Future
2 World Meteorological Organization – News Portal
3 New global temperature records on the horizon - Met Office
4 UKGBC – Climate Change Mitigation

5. Materials
6. Waste management and resource efficiency
7. Flood risk and drainage
8. Biodiversity and green infrastructure
9. Sustainable transport

1.1. The Proposed Development

The Proposed Development is requesting full planning permission for the demolition of the existing buildings; redevelopment of the site to provide two commercial units for flexible industrial, storage and distribution uses (Use Classes B2/B8/E(g)(iii)), with ancillary office space, yard areas, servicing, vehicular and cycle parking; hard and soft landscaping and associated works. (
).Overall, contributing to 11,006m^2 of gross internal floor area (GIA).

The Proposed Development is located within the London Borough of Hillingdon.

1.2. Overview of the Site

The existing buildings are situated adjacent to the main entrance of Stockley Park and directly border the A408. 1 & 2 Longwalk Road act as the gateway buildings to Stockley Park, featuring more solid, panelised façades to the north that transition into lighter, more heavily glazed elevations towards the south. Roundwood Avenue, by contrast, is typically characterised by steel-framed buildings with external structural cross-bracing and panelised systems. Entrances are generally expressed through glazed curtain walling and emphasised by projecting canopies that highlight the building access points.

The remainder of the site comprises 2–4 storey office blocks and provides an array of hard and soft landscaping features, offering users car parking and outdoor amenity space. To the north of the site lies a golf course, offering expansive views over the surrounding landscape. The surrounding buildings make up the rest of the business park, comprising a mix of commercial office spaces. The main pedestrian and vehicular access to the site is from Longwalk Road to the east.



Figure 2 – Proposed Site Layout

1.3. Planning Policies

The national and local planning policy requirements relevant to the Proposed Development have been considered in detail in the preparation of this Sustainability Statement, and are referenced throughout, ensuring the design and construction approach demonstrates compliance with the applicable sustainability and climate change targets.

National Policies

- The Climate Change Act 2008[5]
- The Environment Act 2021[6]
- National Planning Policy Framework (NPPF, 2026)[7]

Local Plan Policies

- The London Plan (2021)[8]
- The London Borough of Hillingdon Local Plan: Part 1 - Strategic Policies (Adopted November 2012)[9]
- The London Borough of Hillingdon Local Plan: Part 2 – Development Management Policies (Adopted 16th January 2020)[10]

A summary of the relevant planning policies are outlined in each chapter.

1.3.1. The Climate Change Act 2008

The Climate Change Act 2008 is the UK's primary legislative framework for tackling climate change. It establishes a legally binding target to reduce net greenhouse gas emissions by 2050, supported by a system of five-yearly carbon budgets and an independent Committee on Climate Change to monitor progress. The Act also enables emissions trading schemes, sets requirements for national adaptation planning, and provides powers relating to waste reduction, recycling and carrier bag charging. For this Sustainability Statement, the Act underpins the national decarbonisation trajectory that the proposal's carbon and climate resilience strategy is aligned with.

1.3.2. The Environment Act 2021

The Environment Act 2021 is the UK's key legislation for protecting and improving the natural environment. It sets legally binding targets and long-term plans covering areas such as air and water quality, waste, and nature recovery, and creates the Office for Environmental Protection to hold government to account. The Act also introduces mandatory Biodiversity Net Gain, tightens rules on chemicals, and enables conservation covenants to protect land in the long term. For this Sustainability Statement, it provides the legal baseline against which the proposal's environmental and biodiversity commitments should be measured.

[5] The Climate Change Act 2008
[6] The Environment Act 2021
[7] The National Planning Policy Framework (NPPF, 2026)
[8] The London Plan 2021
[9] The London Borough of Hillingdon Local Plan: Part 1 – Strategic Policies (2012)
[10] The London Borough of Hillingdon Local Plan: Part 2 – Development Management Policies (2020)

1.3.3. The National Planning Policy Framework (2026)

The National Planning Policy Framework (NPPF), updated in August 2026, sets out the government's national planning rules for England, guiding how local plans are prepared and how planning applications are decided. At its heart is a simple aim: development should be sustainable, balancing economic growth, community wellbeing, and protection of the environment together, rather than treating them as competing priorities. This means supporting a strong economy, delivering good-quality homes and inclusive communities, and tackling climate change while safeguarding nature and heritage. For this Sustainability Statement, the NPPF provides the national benchmark against which the proposal's sustainability performance is measured.

1.3.4. The London Plan (2021)

The London Plan (March 2021) is the statutory Spatial Development Strategy for Greater London, setting the economic, environmental, transport and social framework guiding the capital's growth over the next 20–25 years. Local development plans must be in general conformity with it, and it is a material consideration in planning decisions. Its "Good Growth" agenda positions sustainable growth – inclusive, low-carbon, resource-efficient and climate-resilience – at the heart of the Plan. This Sustainability Statement uses the London Plan as the strategic policy benchmark against which the proposal's sustainability performance is assessed.

1.3.5. The London Borough of Hillingdon Local Plan: Part 1 and 2

The Hillingdon Local Plan: Part 1: Strategic Policies was adopted in November 2012 and is the key strategic planning document for Hillingdon. It sets out a long term spatial vision and objectives for the Borough, what is planned to happen, where and how it will be achieved[11].

The Development Management Policies document, adopted in January 2020, forms part of Hillingdon's Local Plan Part 2. Its purpose is to provide detailed policies that will form the basis of the Council's decisions on individual planning applications[12]. The relevant sections of this document are as follows:

- DMEI 1 – Living Walls and Roofs and Onsite Vegetation
- DMEI 2 – Reducing Carbon Emissions
- DMEI 7 – Biodiversity Protection and Enhancement
- DMEI 9 – Management of Flood Risk
- DMEI 10 – Water Management, Efficiency and Quality
- DMEI 14 – Air Quality
- DMT 1 – Managing Transport Impacts
- DMT 2 – Highways Impacts
- DMT 5 – Pedestrians and Cyclists
- DMT 6 – Vehicle Parking
- DMHB 11/12/14 where relevant

[11] The London Borough of Hillingdon Local Plan: Part 1 – Strategic Policies (2012)

[12] The London Borough of Hillingdon Local Plan: Part 2 – Development Management Policies (2020)

1.4. BREEAM

1.4.1. BREEAM Assessment Framework

The Proposed Development has been assessed against BREEAM UK New Construction Version 7 to demonstrate how it responds to national and local planning policy requirements for sustainable design and construction. The BREEAM Pre-Assessment indicates that the scheme can currently achieve an 'Excellent' rating (SRE Targeted), based on the assumptions and information agreed to date.

1.4.2. Assessment Scope

The BREEAM Assessment has been registered under the 'Industrial Unit – Logistics, Shell and Core' scheme to reflect the scope of the works. The credits assessed are therefore those relevant to a Shell and Core development.

1.4.3. Target BREEAM Score

The target score for the scheme is currently 84.02%, which meets the 'Excellent' rating threshold. SRE and the design team consider the targeted credits to be realistic and deliverable on site. Should any targeted credits prove unachievable, the potential credits identified in the Pre-Assessment will be reviewed at a later stage.

1.4.4. Delivery and Compliance

BREEAM 'Excellent' can be challenging to achieve. The design and construction teams should review the Pre-Assessment report (Appendix A) carefully to ensure all targeted credits are delivered, in order to meet the sustainability commitments of the planning submission.

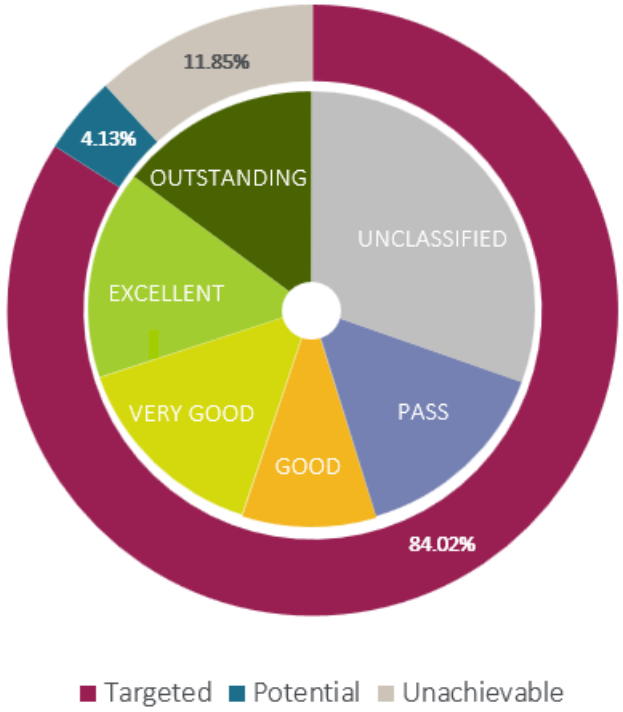

Figure 3 – BREEAM Score Chart for the Proposed Development

Noise and Vibration

2. Noise & Vibration

2.1. Planning Policy Targets

National Planning Policy Framework (2026) – *Section 17 – Pollution, public protection and security*

In order to support efforts to minimise levels of pollution and create safe places for building occupants, planning decisions should:

- Consider any wider opportunities to reduce noise, and contribute to compliance with national and local environmental targets and objectives.
- Prevent new and existing development from contributing to unacceptable levels of noise pollution.
- Avoid significant adverse impacts on health and quality of life.
- Mitigate and reduce adverse noise impacts to a minimum.
- Apply the **Agent of Change** principle, ensuring that new noise-sensitive development mitigates impacts from existing noise sources.

Development proposals must:

- have no significant adverse transport or associated air quality and noise impacts on the local and wider environment, particularly on the strategic road network.

The NPPF requires development to provide appropriate mitigation where noise could affect amenity.

The London Plan (2021) – *Policy D13 – Agent of Change*

Development proposals must:

- Manage noise and vibration to prevent. adverse impacts on health and quality of life
- Ensure new noise-sensitive development is designed to mitigate noise from existing sources.
- Incorporate good acoustic design from the outset.

The policy reinforces that mitigation should be secured through design measures rather than relying solely on planning conditions.

The London Borough of Hillingdon Plan: Part 2 – *Policy DMT 1 – Managing Transport Impacts*

development to provide appropriate mitigation where noise could affect amenity.

2.2. Design Measures – Noise Impact Assessment

An Acoustician has been appointed to carry out a noise assessment to determine internal noise levels required, and the impact to local noise levels. The Proposed Development will minimise the noise emanating from the site through the following measures:

1. The proposed development is a substantial distance from neighbouring properties.
2. A fabric first design; ensuring high levels of insulation and excellent airtightness.
3. Quiet plant equipment with acoustic enclosures used, if necessary, to minimise noise disturbance to the occupants and neighbours.

4. The proposed mechanical and electrical strategy included heat pumps on the outside of the building which, wherever possible, will be specified to be low decibel and of appropriate distance away from the nearest property.
5. Encouragement to use more sustainable modes of transport.

Quieter, well-maintained equipment will be used during construction, with acoustic screening added where necessary. Construction traffic, working hours and onsite activities will be managed to control noise. Appropriate mitigation measures will be maintained throughout both construction and operational phases to minimise pollution impacts that may affect the nearby sensitive receptors:

- Travelodge London Stockley Park Hayes (210m north-east)
- Residential dwellings along Emden Close (350m south-east)

Daylight and Sunlight

3. Daylight and Sunlight

3.1. Planning Policy Targets

National Planning Policy Framework (2026) – *Section 12 – Making effective use of land*

Local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards).

National Planning Policy Framework (2026) – *Section 14 – Achieving well-designed places*

Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities. Being clear about design expectations, and how these will be tested, is essential for achieving this.

Neighbourhood planning groups can play an important role in identifying the special qualities of each area and explaining how this should be reflected in development, both through their own plans and by engaging in the production of design policy, guidance and codes by local planning authorities and developers.

National Planning Policy Framework (2026) – *Section 17 – Pollution, protection and security*

The new development must be an appropriate size for its location and it must not give rise to an unacceptable level of access to daylight and sunlight for neighbouring residents and occupiers.

The London Borough of Hillingdon: Part 2 – *DMHB 11 – Design of New Development*

The Council will aim to minimise the impact of the loss of daylight and sunlight and unacceptable overshadowing caused by new development on habitable rooms, amenity space and public open space. The Council will also seek to ensure that the design of new development optimises the levels of daylight and sunlight. The Council will expect the impact of the development to be assessed following the methodology set out in the most recent version of the Building Research Establishments (BRE) “Site layout planning for daylight and sunlight: A guide to good practice”.

3.2. Design Measures – Daylighting

The site layout and designs of the Proposed Development have maximised internal daylight levels, taking into consideration a range of design and specification requirements, which include the following:

- Sensitivity of sightlines to neighbouring properties and engagement with the public space.
- All occupied rooms will have suitable areas of glazing to provide natural daylight that meets or exceeds national space standards.

- Light-coloured curtains or roller blinds will be encouraged to enable glare control and privacy.

An Impact Assessment for Sunlight and Daylight has been undertaken by SRE to confirm compliance with the relevant guidance.

It has been identified that there are surrounding properties which the proposed development could have an impact on. These are as follows:

- Unit 3, 3 Longwalk Road, UB11 1AW (Marks & Spencer)
- 1 Roundwood Avenue, UB11 1FG
- 3 Roundwood Avenue, UB11 1AH
- 5 Roundwood Avenue, UB11 1AF

It is worth noting the properties listed above are considered to be an extensive distance from the site, separated by a small body of water, and unlikely to be impacted by the erection of a two storey development.

In response to the policy targets (section 3.2) the Proposed Development has implemented the following measures: Building orientation and suitable levels of glazing to maximise daylighting in office areas because access to daylight is part of good design standards and acknowledges BRE guidance.

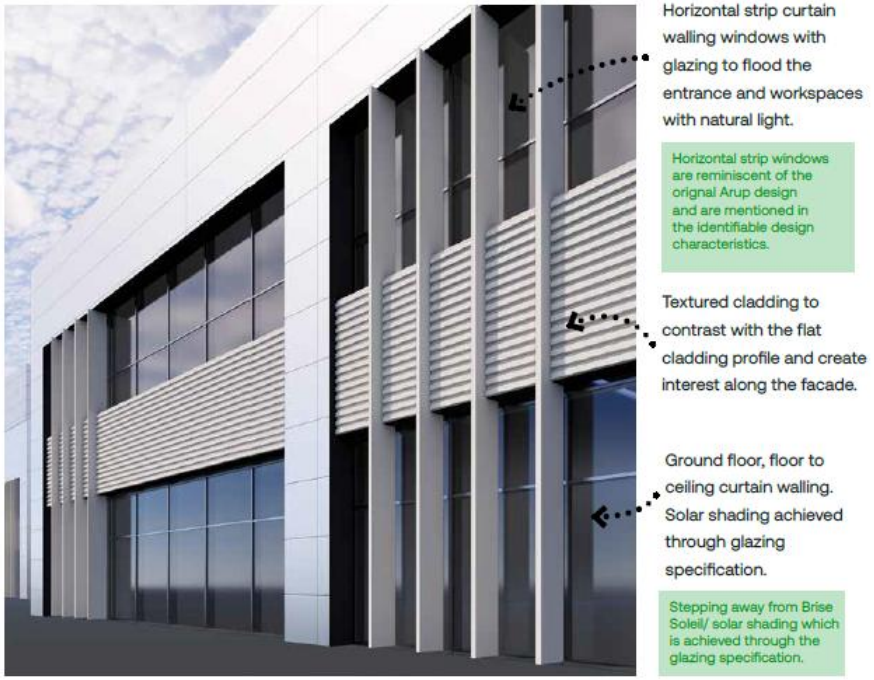

Figure 4 – Proposed façade design – Typical office frontage (UMC Architects Pre-app document)

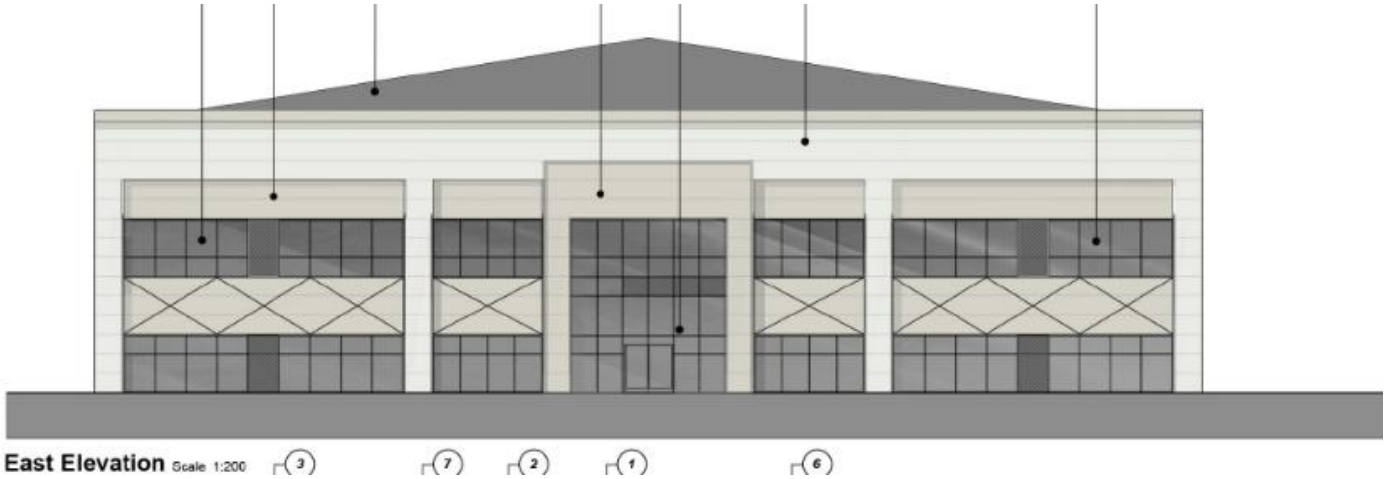

Figure 6 – Unit 200, Aluminium framed curtain walling on the East façade



Figure 5 – Unit 100, Aluminium framed curtain walling on the East façade

Air Quality and Dust Management

4. Air Quality and Dust Management

4.1. Policy Planning Targets

National Planning Policy Framework (2026) – *Section 17 – Pollution, public protection and security*

Development proposals should be appropriate for their location, having regard to the cumulative effects of pollution on health, living conditions and the natural environment, and to the sensitivity of the site, its users and the surrounding population, including vulnerable groups such as children and older people.

Development proposals must:

- Sustain and contribute to compliance with relevant limit values or national objectives and targets for air pollutants including PM2.5. Development proposals should take account of Air Quality Management Areas and be consistent with the objectives of relevant Air Quality Action Plans, Clean Air Plans and Local Air Quality Strategies.

National Planning Policy Framework (2026) – *Section 19 – Conserving and enhancing the natural environment*

The proposed development should take into account the presence of Air Quality Management Areas and Clean Air Zones and the cumulative impacts from individual sites in local areas.

Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications.

Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.

The Environment Act 2021 – *Schedule 11 – Local air quality management framework*

If air pollution in an area is too high, or likely to become too high, the local council must officially designate it an Air Quality Management Area (AQMA) and put together an action plan showing what will be done to improve it, and by when. Neighbouring councils are also expected to work together on this.

In practice, this means new developments — especially those near an AQMA — should be designed to avoid making local air quality worse. Ideally, they should go a step further, actively helping to improve air quality through good design, construction and day-to-day operation, rather than just staying within acceptable limits.

The London Plan (2021) – *Policy SI 1 – Improving air quality*

Opportunities to identify and deliver further improvements to air quality should be sought and should not reduce air quality benefits that result from the Mayor's or boroughs' activities to improve air quality.

To tackle poor air quality, protect health and meet legal obligations the following criteria should be addressed:

1) Development proposals should not:

a) lead to further deterioration of existing poor air quality

b) create any new areas that exceed air quality limits, or delay the date at which compliance will be achieved in areas that are currently in exceedance of legal limits
c) create unacceptable risk of high levels of exposure to poor air quality.
2) In order to meet the requirements in Part 1, as a minimum:
   a) development proposals must be at least Air Quality Neutral
   b) development proposals should use design solutions to prevent or minimise increased exposure to existing air pollution and make provision to address local problems of air quality in preference to post-design or retro-fitted mitigation measures
   c) major development proposals must be submitted with an Air Quality Assessment. Air quality assessments should show how the development will meet the requirements of B1
   d) development proposals in Air Quality Focus Areas or that are likely to be used by large numbers of people particularly vulnerable to poor air quality, such as children or older people should demonstrate that design measures have been used to minimise exposure.

In order to reduce the impact on air quality during the construction and demolition phase development proposals must demonstrate how they plan to comply with the Non-Road Mobile Machinery Low Emission Zone and reduce emissions from the demolition and construction of buildings following best practice guidance.

Development proposals should ensure that where emissions need to be reduced to meet the requirements of Air Quality Neutral or to make the impact of development on local air quality acceptable, this is done on-site. Where it can be demonstrated that emissions cannot be further reduced by on-site measures, off-site measures to improve local air quality may be acceptable, provided that equivalent air quality benefits can be demonstrated within the area affected by the development.

The London Borough of Hillingdon: Part 2 – *Policy DMEI 14 – Air quality*

Hillingdon was declared an Air Quality Management Area in September 2003. Planning applications for all relevant development should contain an assessment of the likely future levels of air quality in the area.

Development proposals should demonstrate appropriate reductions in emissions to sustain compliance with and contribute towards meeting EU limit values and national air quality objectives for pollutants.

Development proposals should, as a minimum:

- be at least “air quality neutral”
- include sufficient mitigation to ensure there is no unacceptable risk from air pollution to sensitive receptors, both existing and new
- actively contribute towards the improvement of air quality, especially within the Air Quality Management Area.

4.2. Design Measures – Air Quality Assessment

An Air Quality Assessment has been undertaken by Trium Environmental Consulting LLP. This has assessed the local air pollution and the suitability of the site for the proposed development.

The London Borough of Hillingdon (LBH) have declared an AQMA for exceedances of the annual mean NO2 AQO. The AQMA covers *‘the area from the southern boundary north to the border defined by, the A40 corridor from the western borough boundary, east to the*

intersection with the Yeading Brook north until its intersection with the Chiltern-Marylebone railway line'.

The site sits outside any Air Quality Focus Area, with the nearest (Hayes and West Drayton/Yiewsley) around 1.5km away. Local monitoring by the London Borough of Hillingdon (LBH) — including automatic monitors, diffusion tubes, and Defra background data — consistently shows NO2, PM10 and PM2.5 levels within national air quality objectives from 2021 to 2024, with concentrations trending downward. On this basis, existing air quality at the site is good, and is expected to keep improving as vehicles and heating systems become cleaner.

Hillingdon was declared an Air Quality Management Area in 2003, and Policy DMEI 14 requires new development to assess future air quality, be at least "air quality neutral," protect people from air pollution, and actively help improve air quality in the borough.

The Proposed Development responds directly to these requirements: it starts from a strong baseline of good existing air quality, and will be designed to be air quality neutral through implementing the following:

1. Low-emission heating.
2. Integrate green infrastructure by incorporating living wall/roof or off-site contribution if not appropriate.
3. EV charging provision.
4. Cycle storage for sustainable transport.
5. Dust and emissions control during construction.

Together, these measures protect existing and future occupants from air pollution and support Hillingdon's ongoing efforts to improve air quality within the AQMA.

As part of the air quality assessment, a Dust Risk Assessment (DRA) is conducted to assess the risk of dust impacts, as well as evaluate and identify suitable site-specific mitigation measures. As per the Institute of Air Quality Management's (IAQM) Guidance, the risk of dust impacts is categorized separately for demolition, earthworks, construction and track out. By analysing sensitivity of the area and the receptors, the site is defined as a low risk site.

Site Name (ID) & Classification	Approx. Location to Site	Pollutant	National Air Quality Objective[8]	Averaging Period	Annual Mean NO_2 Concentrations ($\mu g/m^3$)			
					2021	2022	2023	2024
London Hillingdon (HIL) Urban Background	1.8km south-west of site	NO_2	40µg/m³	Annual Mean (µg/m³)	25	28	25	23
			200µg/m³ (not to be exceeded more than 18 times a year)	1-Hour Mean (No. of Hours)	0	0	0	0
		PM_{10}	40µg/m³	Annual Mean (µg/m³)	-	-	14	13
			50µg/m³ (not to be exceeded more than 35 times a year)	24-Hour Mean (No. of Hours)	-	0	3	0
		$PM_{2.5}$	20µg/m³ (10µg/m³ by 31 December 2040)	Annual Mean	-	-	7	7
London Harlington (HRL) Airport	2.5km south of site	NO_2	40µg/m³	Annual Mean (µg/m³)	20	24	22	19
			200µg/m³ (not to be exceeded more than 18 times a year)	1-Hour Mean (No. of Hours)	0	0	0	0
		PM_{10}	40µg/m³	Annual Mean (µg/m³)	14	13	13	11
			50µg/m³ (not to be exceeded more than 35 times a year)	24-Hour Mean (No. of Hours)	0	2	0	0
		$PM_{2.5}$	20µg/m³ (10µg/m³ by 31 December 2040)	Annual Mean	8	8	8	7
Hillingdon Hayes (HIL5) Roadside	2.8km south-east of site	NO_2	40µg/m³	Annual Mean (µg/m³)	34	34	34	29
			200µg/m³ (not to be exceeded more than 18 times a year)	1-Hour Mean (No. of Hours)	0	0	0	0
		PM_{10}	40µg/m³	Annual Mean (µg/m³)	25	26	30	22
			50µg/m³ (not to be exceeded more than 35 times a year)	24-Hour Mean (No. of Hours)	25	23	16	6
Hillingdon Sipson (SIPS) Urban Background	3km south of site	NO_2	40µg/m³	Annual Mean (µg/m³)	19	24	23	22
			200µg/m³ (not to be exceeded more than 18 times a year)	1-Hour Mean (No. of Hours)	0	0	0	0
Tavistock Road (*Low-Cost Sensor*) Roadside	2.1km west of site	NO_2	40µg/m³	Annual Mean (µg/m³)	24.1	23.1	20.7	20.0
		$PM_{2.5}$	20µg/m³ (10µg/m³ by 31 December 2040)	Annual Mean	12.2	10.6	8.5	7.9

Figure 7 – London Borough of Hillingdon Automatic Monitoring Data within 3km of the Site, 2021-2024 (EIA Screening report, Trium)

Water Consumption

5. Water Consumption

5.1. Policy Planning Targets

National Planning Policy Framework (2026) – *Section 5 – Meeting the challenge of climate change*

Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating and drought from rising temperatures.

National Planning Policy Framework (2026) – *Section 10 – Securing clean energy and water*

Development plans should be informed by early engagement between planning authorities, utility providers, regulators and network operators to establish water supply, drainage and wastewater capacity, and any additional infrastructure required. This engagement should consider planned growth, changing consumption patterns and climate change. Plans should reflect these factors in the location and phasing of growth, make provision for new or enhanced water supply and wastewater infrastructure, and set out measures to avoid constraints on that infrastructure from neighbouring or nearby development.

The London Plan (2021) – *Policy SI 5 – Water infrastructure*

In order to minimise the use of mains water, water supplies and resources should be protected and conserved in a sustainable manner.

Development Plans should promote improvements to water supply infrastructure to contribute to security of supply. This should be done in a timely, efficient and sustainable manner taking energy consumption into account.

Development proposals should:

1) achieve at least the BREEAM excellent standard for Wat 01 water category or equivalent (commercial development).
2) incorporate measures such as smart metering, water saving and recycling measures, including retrofitting, to help to achieve lower water consumption rates and to maximise future-proofing.

Development proposals should seek to improve the water environment and ensure that adequate wastewater infrastructure capacity is provided and take action to minimise the potential for misconnections between foul and surface water networks.

The London Borough of Hillingdon: Part 2 – *Policy DMEI 10 – Water management, efficiency and quality*

All new development proposals (including refurbishments and conversions) will be required to include water efficiency measures, including the collection and reuse of rain water and grey water.

It is expected that major development proposals will provide an integrated approach to surface water run-off attenuation, water collection, recycling and reuse.

All new development proposals will be required to demonstrate that there is sufficient capacity in the water and wastewater infrastructure network to support the proposed development. Where there is a capacity constraint the local planning authority will require the developer to provide a detailed water and/or drainage strategy to inform what infrastructure is required, where, when and how it will be delivered.

5.2. Design Measures – Water Fittings

Water is a vital resource, and its efficient use should be encouraged across all new buildings. The Proposed Development therefore aims to significantly reduce mains water consumption through a combination of efficiency measures, including low-capacity fittings and flow restrictors.

To support this, water efficiency measures will also be incorporated in line with the requirements of the Building Research Establishment's Environmental Assessment Method (BREEAM). BREEAM is used to assess the environmental performance of new and existing non-residential buildings and is widely regarded across the UK's construction and property sectors as the benchmark for best practice in environmental design and management.

Internal water use will be reduced in line with The London Plan and achieve at least 15% improvement over the baseline water consumption for industrial building types. The water use within the development is proposed to be restricted through inline flow restrictors and reduced capacity cisterns to meet this target. These principles will be carried through in further fixture specification ensuring requirements are met.

The Proposed Development will implement the following design measures:

1. Compliant sanitaryware to be included in the proposed development.
2. Sanitaryware to be specified in line with the water consumption requirements.
3. Reduction of water use through the specification of compliant sanitaryware.
4. Reduce irrigation requirement for soft landscaping by specifying drought resilient planting.

The specification outlined below is indicative of one or a similar equivalent that the Proposed Development will follow:

Water fitting	Performance Level
Water closets (WCs)	4/2.6 litre effective dual flush volume
Hand wash basin taps	4.0-5.0 litres/min
Kitchenette taps	5.0-6.0 litres/min
Showers	6.0-8.0 litres/min
Baths	N/A – Not typically applicable to industrial building types
Domestic sized dishwashers (if installed)	N/A – Not typically applicable to industrial building types
Domestic sized washing machines (if installed)	7-8.5 litres/kg dry load

Table 1 – Proposed flow rate criteria in line with a ≥45% improvement over baseline water consumption as per BREEAM targets

Materials

6. Materials

6.1. Policy Planning Targets

National Planning Policy Framework (2026) - *Section 11 – Facilitating the sustainable use of minerals*

So far as practicable, take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials, before considering extraction of primary materials, whilst aiming to source minerals supplies indigenously.

The London Plan (2021) - *Policy SI 2 – Minimising greenhouse gas emissions*

Development proposals referable to the Mayor should calculate whole life-cycle carbon emissions through a nationally recognised Whole Life-Cycle Carbon Assessment and demonstrate actions taken to reduce life-cycle carbon emissions.

Major non-referable development should calculate unregulated emissions and are encouraged to undertake whole life-cycle carbon assessments.

The London Borough of Hillingdon: Part 2 – *Policy DMEI 2 – Reducing Carbon Emissions*

All developments are required to make the fullest contribution to minimising carbon dioxide emissions in accordance with London Plan targets.

All major development proposals must be accompanied by an energy assessment showing how these reductions will be achieved.

Proposals that fail to take reasonable steps to achieve the required savings will be resisted. However, where it is clearly demonstrated that the targets for carbon emissions cannot be met onsite, the Council may approve the application and seek an off-site contribution to make up for the shortfall.

6.2. Design Measures – Whole Life Carbon Assessment

A Whole Life Cycle Assessment (WLCA) has been undertaken by SRE in accordance with RICS Whole Life Carbon Assessment 2nd edition. The WLCA has assessed Modules A–D over a 60-year reference study period and establishes a robust carbon baseline at RIBA Stage 2.

The total whole life-cycle carbon emissions for modules A–C, including biogenic carbon are 951 $kgCO_2e/m^2$.

When analysing the WLC excluding modules B6, B7 and D compared to the Greater London Authority (GLA) benchmarks, it equates to 498 $kgCO_2e/m^2$. This is below both the GLA benchmark and the GLA aspirational benchmark for commercial building use and therefore the development meets and exceeds the Greater London Authority benchmarks for the development as Figure 9 below demonstrates.

The WLCA identified that the greatest carbon impacts arise from the product and construction stage (A1–A5) which contributes to 72% of the embodied carbon emissions over the lifecycle stages (Figure 8).

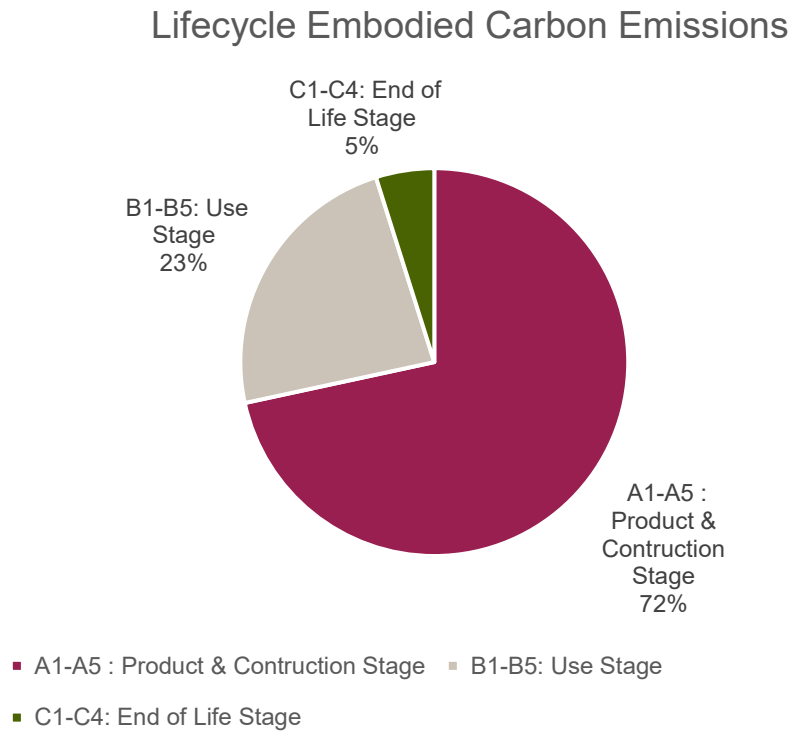

Figure 8 – Embodied Carbon emissions over lifecycle stages

The design integrates the following carbon reduction principles:

1. Use of recycled-content structural steel
2. Specification of durable, long-life materials
3. Design for flexibility and future adaptability
4. Minimisation of waste and promotion of material reuse
5. Local sourcing where practicable

Low-carbon options have been identified to offer the potential for further reduction in carbon for the detailed design, including alternative curtain walling systems, changing insulation from stone to recycled glass, and reducing the material thickness required for metal deck roof systems.

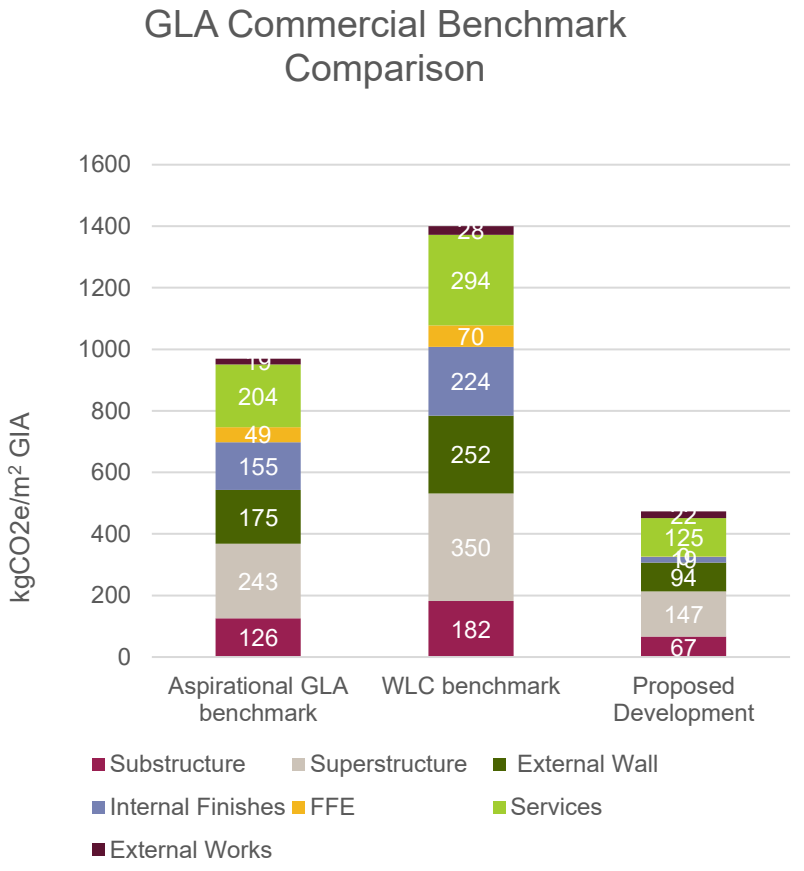

Figure 9 - Graph to show the performance of the development against the GLA Office benchmarks

The Proposed Development responds directly to London Plan Policy SI 2, which requires a nationally recognised Whole Life-Cycle Carbon Assessment demonstrating actions taken to reduce life-cycle carbon emissions. This has been undertaken, with sustainable material selection embedded within the assessment to support carbon reduction outcomes. In doing so, the Development also aligns with Hillingdon's Policy DMEI 2, contributing fully to minimising carbon dioxide emissions in accordance with London Plan targets:

1. Whole life carbon considerations have informed the design approach from an early stage, ensuring embodied and operational carbon impacts are addressed alongside conventional design criteria.
2. A Whole Life-Cycle Carbon Assessment has been completed for the Proposed Development, with results demonstrating that aspirational carbon benchmarks have been met.
3. Sustainable material specification has been considered as part of the Whole Life-Cycle Carbon Assessment, supporting reductions in embodied carbon across the building's life-cycle.

Waste Management and Resource Efficiency

7. Waste Management and Resource Efficiency

7.1. Policy Planning Targets

The London Plan (2021) - *Policy SI 7 – Reducing waste and supporting the circular economy*

Resource conservation, waste reduction, increases in material re-use and recycling, and reductions in waste going for disposal will be achieved by the Mayor, waste planning authorities and industry working in collaboration to:

1) promote a more circular economy that improves resource efficiency and innovation to keep products and materials at their highest use for as long as possible
2) encourage waste minimisation and waste prevention through the reuse of materials and using fewer resources in the production and distribution of products
3) ensure that there is zero biodegradable or recyclable waste to landfill by 2026
4) meet or exceed the municipal waste recycling target of 65 per cent by 2030
5) meet or exceed the targets for each of the following waste and material streams:
    a. construction and demolition – 95 per cent reuse/recycling/recovery
    b. excavation – 95 per cent beneficial use
6) design developments with adequate, flexible, and easily accessible storage space and collection systems that support, as a minimum, the separate collection of dry recyclables (at least card, paper, mixed plastics, metals, glass) and food.

The London Borough of Hillingdon: Part 2 – *Policy DMIN 4 – Re-use and Recycling of Aggregates*

The Council will promote the recycling of construction, demolition and excavation waste.

All developments will be encouraged to:

i. recycle and re-use construction, demolition and excavation waste as aggregates
ii. process and re-use the recyclable material on-site, and where this is not possible, the material should be re-used at another site or for land restoration
iii. use substitute or recycled materials in new development in place of primary minerals.
iv. Planning permission for aggregates recycling on active minerals extraction and landfill sites will be supported, subject to local amenity and other policies within the Local Plan. Applications for aggregates recycling sites in other areas such as Strategic Industrial Locations will be required to satisfy other relevant policies in the Local Plan including the West London Waste Plan.

7.2. Design Measures - Waste Management

Pre-demolition audit

The process of recycling aggregates should ideally be carried out on-site and as much of the recycled waste be re-used in the construction process. In order to quantify the expected waste arising and potential to re-use waste materials on-site, a pre-demolition audit is required to mitigate waste disposal to landfill.

Operational waste disposal

There is an allocated outside bin store for waste and recycling and the occupants will be responsible for moving the bins to the outside the property in advance of the collection day. The bin store will be of an appropriate size for the occupants waste streams and will provide separate bins for general waste and recycling.

Construction waste management plan

A Site Waste Management plan will be provided for the Proposed Development to minimise waste generation, maximise material recovery, and support circular economy principles in accordance with London Plan Policy and local planning policy.

The existing units will be carefully demolished with a focus on material recovery. Where practicable, concrete and hardstanding will be crushed and reused on-site as hardcore or piling mat material.

Any metals that are part of the demolition will be segregated and sent for recycling.

Hazardous materials (including asbestos cement sheeting, if confirmed) will be removed and disposed of in accordance with statutory requirements.

This approach reduces transportation emissions, diverts waste from landfill, and retains material value within the site boundary.

The construction waste will be monitored and the generated waste and the waste diverted from landfill will be recorded. A minimum of 95% reuse/recycling/recovery of construction and demolition waste is targeted, in line with the London Plan and the London Borough of Hillingdon targets.

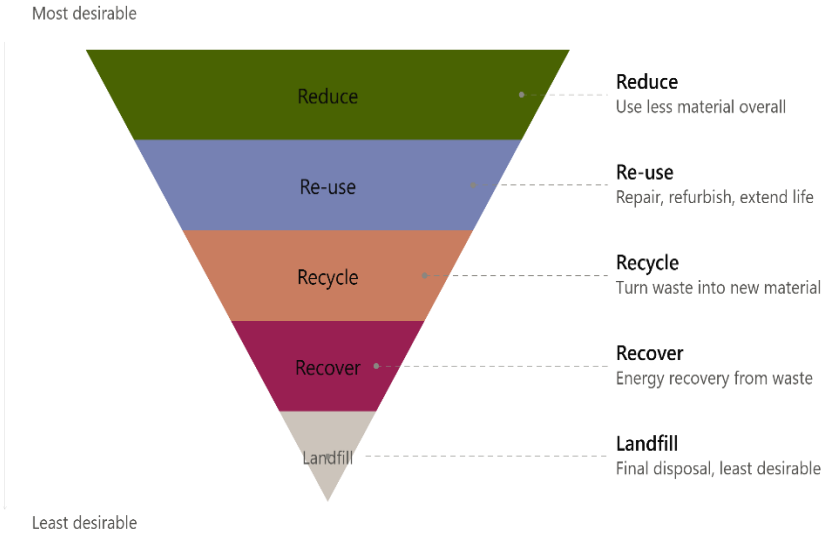

Figure 10 – The Waste Hierarchy

Flood Risk and Drainage

8. Flood Risk and Drainage

8.1. Policy Planning Targets

National Planning Policy Framework (2026) – *Section 18 – Managing flood risk and coastal change*

The flood and coastal risks should be managed as part of delivering sustainable development.

Development should take account of climate change impacts including flooding, water scarcity, overheating and coastal change.

Plans should improve resilience and improve vulnerability.

Development should be located in areas with a low flood risk and development should not be encouraged in areas with a high flood risk, where possible.

Where development is in an area at risk of flooding, proposals should show how measures to mitigate flooding have been incorporated such as sustainable drainage systems and appropriate resilience measures.

The London Plan (2021) – *Policy SI 12 – Flood risk management*

The aim of this policy is manage flood risk from all sources including tidal, fluvial, surface water, groundwater, sewer and reservoir flooding.

New development should minimise and mitigate flood risk and ensure any remaining risk is addressed through the design of the development and the incorporation of appropriate measures.

The London Plan (2021) – *Policy SI 13 – Sustainable drainage*

Surface water should be managed sustainably to reduce flood risk and encourage natural drainage patterns.

The proposed development should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible.

There should be a preference for green over grey features, in line with the following drainage hierarchy:

- rainwater use as a resource (for example rainwater harvesting, blue roofs for irrigation)
- rainwater infiltration to ground at or close to source
- rainwater attenuation in green infrastructure features for gradual release (for example green roofs, rain gardens)
- rainwater discharge direct to a watercourse (unless not appropriate)
- controlled rainwater discharge to a surface water sewer or drain
- controlled rainwater discharge to a combined sewer.

Impermeable paving should be avoided over large areas and drainage which has multiple benefits should be encouraged.

The London Borough of Hillingdon: Part 2 – *Policy DMEI 9 – Management of Flood Risk*

Development proposals in Flood Zones 2 and 3a will be required to demonstrate that there are no suitable sites available in areas of lower flood risk. Where no appropriate sites are available, development should be located on the areas of lowest flood risk within the site.

Flood defences should provide protection for the lifetime of the development. Finished floor levels should reflect the Environment Agency's latest guidance on climate change.

Development proposals in these areas will be required to submit an appropriate level Flood Risk Assessment (FRA) to demonstrate that the development is resilient to all sources of flooding.

Development in Flood Zone 3b will be refused in principle unless identified as an appropriate development in Flood Risk Planning Policy Guidance. Development for appropriate uses in Flood Zone 3b will only be approved if accompanied by an appropriate FRA that demonstrates the development will be resistant and resilient to flooding and suitable warning and evacuation methods are in place.

Developments may be required to make contributions (through legal agreements) to previously identified flood improvement works that will benefit the development site.

Proposals that fail to make appropriate provision for flood risk mitigation, or which would increase the risk or consequences of flooding, will be refused.

The London Borough of Hillingdon: Part 2 – *Policy DMEI 10 – Water Management Efficiency, and Quality*

Applications for all new build developments (not conversions, change of use, or refurbishment) are required to include a drainage assessment demonstrating that appropriate sustainable drainage systems (SuDS) have been incorporated in accordance with the London Plan Hierarchy (Policy 5.13: Sustainable drainage).

All major new build developments, as well as minor developments in Critical Drainage Areas or an area identified at risk from surface water flooding must be designed to reduce surface water run-off rates to no higher than the pre-development greenfield run-off rate in a 1:100 year storm scenario, plus an appropriate allowance for climate change for the worst storm duration. The assessment is required regardless of the changes in impermeable areas and the fact that a site has an existing high run-off rate will not constitute justification.

Rain Gardens and non-householder development should be designed to reduce surface water run-off rates to Greenfield run-off rates.

Schemes for the use of SuDS must be accompanied by adequate arrangements for the management and maintenance of the measures used, with appropriate contributions made to the Council where necessary.

Proposals that would fail to make adequate provision for the control and reduction of surface water run-off rates will be refused.

Developments should be drained by a SuDs system and must include appropriate methods to avoid pollution of the water environment. Preference should be given to utilising the drainage options in the SuDS hierarchy which remove the key pollutants that hinder improving water quality in Hillingdon. Major development should adopt a 'treatment train' approach where water flows through different SuDS to ensure resilience in the system.

8.2. Design Measures - Flood Risk and Drainage Assessment

The consideration of potential effects on water resources, flood risk and drainage has been undertaken by Howard Ward Associates (HWA).

The site is located within Flood Zone 1, indicating a low probability of flooding from rivers and the sea (less than 1 in 1,000 annual probability). The majority of the site also falls within a Very Low risk category for surface water flooding, with only localised areas of medium risk identified around the existing buildings. The site is not located within a Groundwater Source Protection Zone.

Surface water currently drains, unattenuated, into Stockley Park's balancing ponds before discharging to an adopted sewer or the Grand Union Canal, while foul drainage is conveyed via a pumping station to the public sewer network. Thames Water will be consulted to confirm capacity and any necessary mitigation ahead of submission.

Policy DMEI 9 directs new development toward the lowest flood risk locations, requires flood defences and finished floor levels to remain effective for the development's lifetime, and requires a proportionate Flood Risk Assessment (FRA) demonstrating resilience to all sources of flooding.

The site's location within Flood Zone 1 already satisfies the policy's preference for development in areas of lowest flood risk, avoiding the sequential and exception test requirements that apply to Flood Zones 2, 3a and 3b. To address the localised medium surface water flood risk and to meet the policy's requirement for resilience across all flooding sources, the Proposed Development will incorporate Sustainable Urban Drainage System (SuDS) measures to improve run-off rates and reduce surface water flood risk to the site and surrounding area. A full FRA and Drainage Strategy, covering both surface and foul water, will be submitted with the planning application, and standard construction-phase mitigation for surface water management, drainage and contamination prevention will be secured through the CEMP. Together, these measures demonstrate that the Development responds appropriately to Policy DMEI 9, without triggering the more restrictive requirements that apply to higher flood risk zones.

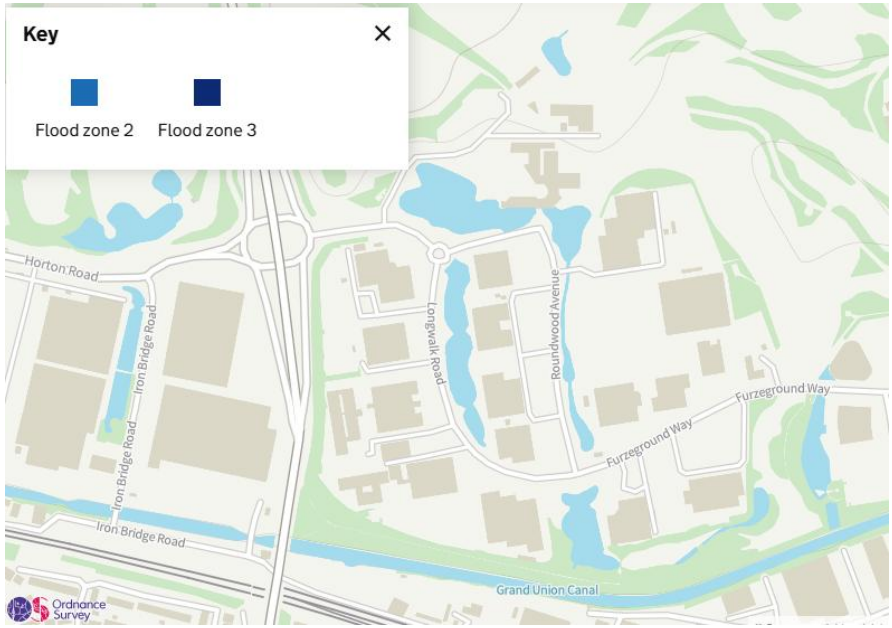

Figure 11 - Flood map showing the risk of flooding from rivers or the sea at the site (GOV.UK)

Furthermore, the Proposed Development complies with the relevant policies and procedures through the following measures:

1. To improve flood resilience, a sustainable drainage strategy has been included in the design, incorporating Sustainable Drainage Systems (SuDS) to reduce surface water flood risk to the site and surrounding area.
2. Flood risk has been managed in line with the drainage hierarchy. The site lies within Flood Zone 1, the lowest fluvial and tidal flood risk category. SuDS have been incorporated, and surface water discharge will be restricted to greenfield run-off rates.
3. Undertaking the sequential site selection, lifetime flood defence and finished floor level requirements. A Flood Risk Assessment and Drainage Strategy covering surface and foul water will accompany the planning application. It will demonstrate resilience to all sources of flooding and confirm SuDS provision in line with the drainage hierarchy, without increasing flood risk on or off site.

Biodiversity and Green Infrastructure

9. Biodiversity and Green Infrastructure

9.1. Policy Planning Targets

National Planning Policy Framework (2026) – *Section 19 – Conserving and enhancing the natural environment*

Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

Minimising impacts on and providing net gains for biodiversity and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs

Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Environment Act 2021 – *Schedule 14*

All developments are required to deliver a minimum 10 % net gain for biodiversity as a condition of planning approval, unless exempt through the Biodiversity Gain Requirements (Exemptions) Regulations 2024 (as amended).

London Plan (2021) - *Policy G5 – Urban greening*

Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design, and by incorporating measures such as:

- high-quality landscaping (including trees)
- green roofs
- green walls
- nature-based sustainable drainage

Proposed developments should consider contributing to urban greening targets as required.

The Urban Greening Factor (UGF) should be based on the factors set out in the guidance, but tailored to local circumstances. In the interim, the Mayor recommends a target score of 0.3 for developments that are predominately commercial. Although, this excludes Use Classes B2 and B8. Existing green cover retained on site should count towards developments meeting the interim target scores but is not a strict requirement for the Proposed Development Use Class.

The London Plan (2021) – *Policy G6 – Biodiversity and access to nature*

Development proposals should manage impacts on biodiversity and aim to secure net biodiversity gain. This should be informed by the best available ecological information and addressed from the start of the development process.

The London Borough of Hillingdon: Part 2 – *Policy DMEI 1 – Living Walls and Roofs and on-site Vegetation*

All development proposals are required to:

- incorporate living roofs and/or walls into the development. Suitable justification should be provided where living walls and roofs cannot be provided

- Major development in Air Quality Management Areas must provide onsite provision of living roofs and/or walls. A suitable offsite contribution may be required where onsite provision is not appropriate.

The London Borough of Hillingdon: Part 2 – *Policy DMEI 7 – Biodiversity Protection and Enhancement*

The design and layout of new development should retain and enhance any existing features of biodiversity or geological value within the site. Where loss of a significant existing feature of biodiversity is unavoidable, replacement features of equivalent biodiversity value should be provided on-site. Where development is constrained and cannot provide high quality biodiversity enhancements on-site, then appropriate contributions will be sought to deliver off-site improvements through a legal agreement.

If development is proposed on or near to a site considered to have features of ecological or geological value, applicants must submit appropriate surveys and assessments to demonstrate that the proposed development will not have unacceptable effects. The development must provide a positive contribution to the protection and enhancement of the site or feature of ecological value.

All development alongside, or that benefits from a frontage on to a main river or the Grand Union Canal will be expected to contribute to additional biodiversity improvements.

Proposals that result in significant harm to biodiversity which cannot be avoided, mitigated, or, as a last resort, compensated for, will normally be refused.

9.2. Design Measures – Ecological Protection and Enhancement

A Preliminary Ecological Appraisal and Roost Assessment, undertaken by MKA Ecology for Trium Environmental Consulting, confirms the site has no statutory or non-statutory nature designation and no priority habitat. It is dominated by buildings, hardstanding and managed landscaping of limited ecological value. The nearest Site of Importance for Nature Conservation is 100m east, and the South West London Waterbodies SPA/Ramsar is 6.6km away, with no significant effects anticipated. A targeted survey found a likely absence of roosting bats.

In line with Policy DMEI 1 and DMEI 7, London Plan Policy G5 and NPPF Section 19, the Proposed Development will adopt the ecologists' recommendations to avoid harm. Trees will be retained where possible and protected under BS 5837 root protection, invasive willow-leaved cotoneaster will be removed, and vegetation

clearance will take place between September and February, or follow a nesting bird check. Demolition will be ecologically supervised through a CEMP, and a sensitive lighting scheme will safeguard foraging bats.

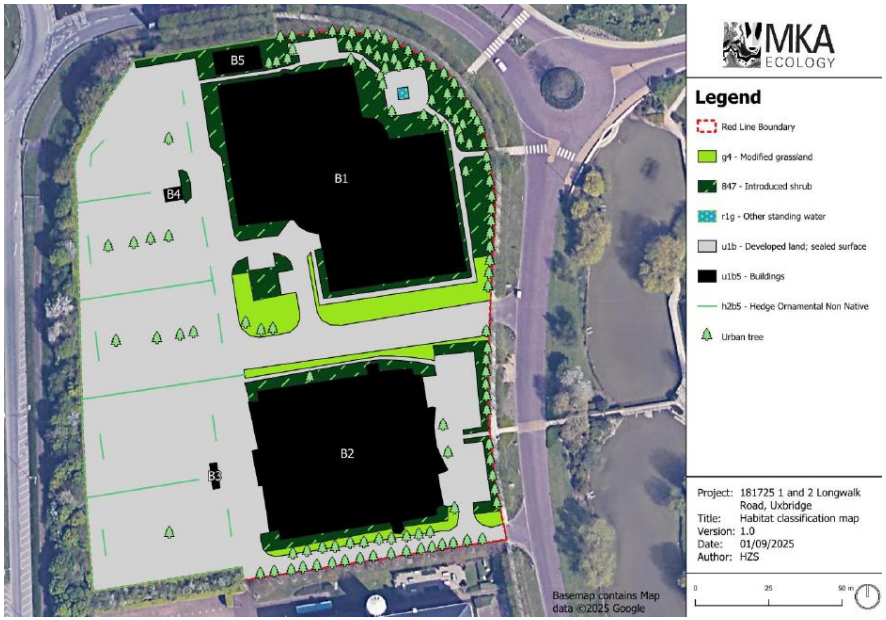

Figure 12 – UK Habitat Classification map of the existing site (MKA Ecology PEA)

Net gains will be delivered through native, nectar-rich planting, log piles and deadwood, and at least six swift boxes, two generalist bird boxes and integrated bat boxes.

A Biodiversity Net Gain Assessment has been undertaken. The Proposed Development results in a net change of -13.78% in habitat units and +133.08% in hedgerow units. This does not meet the statutory requirement for a minimum 10% net gain in biodiversity value, nor does it comply with the Trading Rules associated with the statutory metric, with a shortfall of 0.82 habitat units associated with individual trees.

	Area Habitat Units	Hedgerow Units	Watercourse Units
Baseline Habitat Value	6.54	0.56	N/A
Value of Habitat Lost	2.12	0.26	-
Value of Habitat Retained	4.42	0.3	-
Value of Habitat Enhanced	0.00	0.00	-
Value of Habitat Created	1.22	1.00	-
Total Post-Development Habitat Value	5.64	1.30	-
Net Change (Biodiversity Units)	-0.90	+0.74	-
Percentage Net Change	**-13.78%**	**+133.08%**	-

Table 2 – Change in Biodiversity Value (Biodiversity Net Gain Appraisal, Trium)

This shortfall in units can be secured through off-site provision, set out within the Offsetting Strategy and secured through either a registered offsetting scheme or the purchase of Statutory Biodiversity Credits. The approach will be confirmed and delivered through the Biodiversity Gain Plan, in discharging the associated condition associated with a planning approval.

Sustainable Transport

10. Sustainable Transport

10.1. Policy Planning Targets

National Planning Policy Framework (2026) - *Section 15 – Promoting sustainable transport*

Transport should be assessed and mitigated from an early stage. The impacts of existing or proposed transport patterns should be considered and sustainable transport methods such as cycling, walking and public transport are identified and pursued.

Parking should account for accessibility, development type, availability of public transport, and provision for electric vehicle charging.

- Prioritise walking, cycling and public transport
- Minimise reliance on private vehicles
- Provide electric vehicle charging infrastructure
- Assess and mitigate transport impacts proportionately

The London Plan (2021) – *Policy T1 – Strategic approach to transport*

Development proposals should facilitate the delivery of the Mayor's strategic target of 80 per cent of all trips in London to be made by foot, cycle or public transport by 2041 and encourage the use of the proposed transport schemes set out in the London Plan.

All development should make the most effective use of land, reflecting its connectivity and accessibility by existing and future public transport, walking and cycling routes, and ensure that any impacts on London's transport networks and supporting infrastructure are mitigated.

The London Borough of Hillingdon: Part 2 – *Policy DMT 1 – Managing Transport Impacts*

Development proposals will be required to meet the transport needs of the development and address its transport impacts in a sustainable manner. In order for developments to be acceptable they are required to:

i. be accessible by public transport, walking and cycling either from the catchment area that it is likely to draw its employees, customers or visitors from and/or the services and facilities necessary to support the development;
ii. maximise safe, convenient and inclusive accessibility to, and from within developments for pedestrians, cyclists and public transport users;
iii. provide equal access for all people, including inclusive access for disabled people;
iv. adequately address delivery, servicing and drop-off requirements; and
v. have no significant adverse transport or associated air quality and noise impacts on the local and wider environment, particularly on the strategic road network.

Development proposals will be required to undertake a satisfactory Transport Assessment and Travel Plan if they meet or exceed the appropriate thresholds. All major developments that fall below these thresholds will be required to produce a satisfactory Transport Statement and Local Level Travel Plan. All these plans should demonstrate how any potential impacts will be mitigated and how such measures will be implemented.

10.2. Design Measures – Sustainable Transport

The Proposed Development makes a concerted effort to facilitate and encourage sustainable transport options for the occupants and visitors both in its intended siting and adopted design strategies.

A Transport Note has been prepared by Mode Transport Planning and the EIA screening report being submitted and assesses a Healthy Streets Transport Assessment (TA) will be submitted in support of the planning application and will assess the operational effects of the Proposed Development. The TA will also be accompanied by a Framework Travel Plan (FTP).

Section 15 in the NPPF asks developers to look at transport impacts early, favour walking, cycling and public transport, and plan parking sensibly, including electric charging. The transport note for this site was carried out before the planning application, and its findings shaped the design. Parking has been cut to suit a warehouse and industrial use, which employs fewer people than an office of the same size, and more than a quarter of spaces will offer electric charging. The new use is expected to generate about 90 fewer trips than the current offices in both the morning and evening rush hours, including around 65 fewer car journeys. Staff will also have good options besides driving: three local bus routes, a free shuttle bus to Hayes and Harlington station, and a canal towpath that links to Elizabeth Line stations within about a ten-minute cycle.

The London Plan backs the Mayor's aim for four in five trips in London to be made on foot, by bike or by public transport by 2041. It also asks developments to make good use of land. The scheme reuses an established employment site rather than building on new land. Fewer parking spaces, cycle parking, walking and cycling routes, and a travel plan to encourage greener journeys all push people towards sustainable travel. Because the site will generate fewer trips overall, it will not add pressure to London's transport network.

The local policy asks developments to meet their own transport needs without harming the surrounding area. The site is close to bus stops and has walking and cycling routes to two railway stations, with well-lit pavements and safe crossings nearby. Six accessible parking bays are provided, which meets the London Plan standard. Deliveries will be handled in the rear yard, and testing has confirmed that the largest lorries can enter and turn safely. A delivery management plan will keep this organised. Overall, the scheme should not harm traffic, air quality or noise on nearby roads, because total journeys fall and lorries have a direct route to the A408. The one increase is about nine extra lorry movements in each rush hour, which the transport assessment considers minor. A full transport assessment and travel plan will be submitted with the application, as the policy requires.

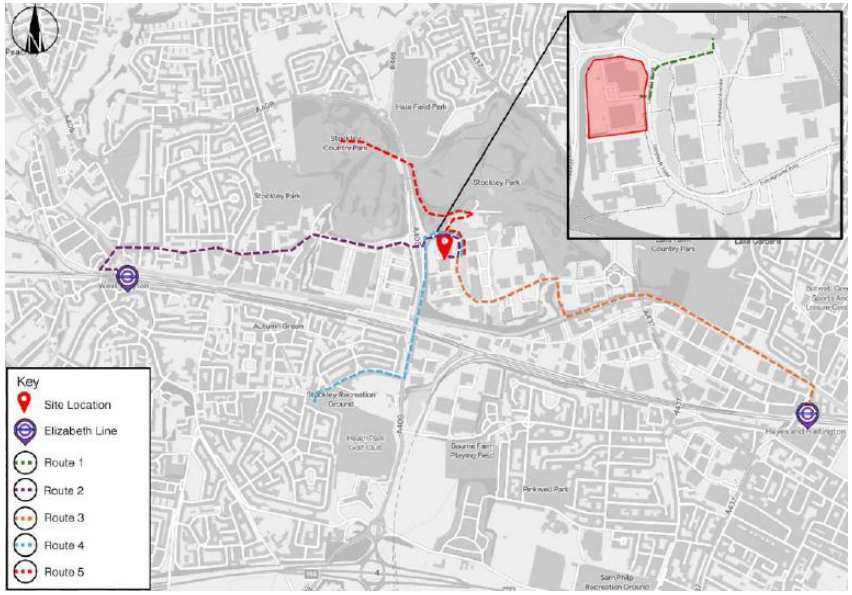

Figure 13 – The Active Travel Zone for the Proposed Development (Transport Scoping Note, Mode Transport Planning)

Appendices

Appendix A – BREEAM Pre-Assessment

Executive Summary

SRE exists to ensure that the built environment enhances life without costing the earth. This BREEAM[1] Pre-Assessment has been developed by SRE on behalf of Royal UK Properties LLC (The Client) and Zinc RE Limited (The Instructing Client) to demonstrate the likely BREEAM score of the Stockley Park Industrial Scheme, located at 1&2 Longwalk Road, Stockley Park, Hayes, Uxbridge (the Proposed Development).

This Pre-assessment has been based on details supplied by the Client and wider design team to date, in addition to further desk-based study, best practice and historical data. SRE has been a licensed BREEAM organisation for over 10 years and has extensive knowledge of the methodology, which is used to produce an accurate assessment score.

Project Name	Longwalk Road, Stockley Park
Lead Assessor	Samantha May
Target Rating	'Excellent' (≥ 70%)
BREEAM Version	BREEAM UK New Construction Version 7
Assessment Type	Industrial Unit – Logistics
BREEAM Type	Shell and Core

Scenario	Min Standards met?	Score	BREEAM Rating
Targeted credits	Yes	**84.02%**	'Excellent'

The potential credits have not been thoroughly investigated at this stage of the BREEAM Assessment. They are to remain potential until the original sought out credits are deemed unachievable by the Project Team and Assessor, and are used to secure the score in case the targeted rating is at risk.

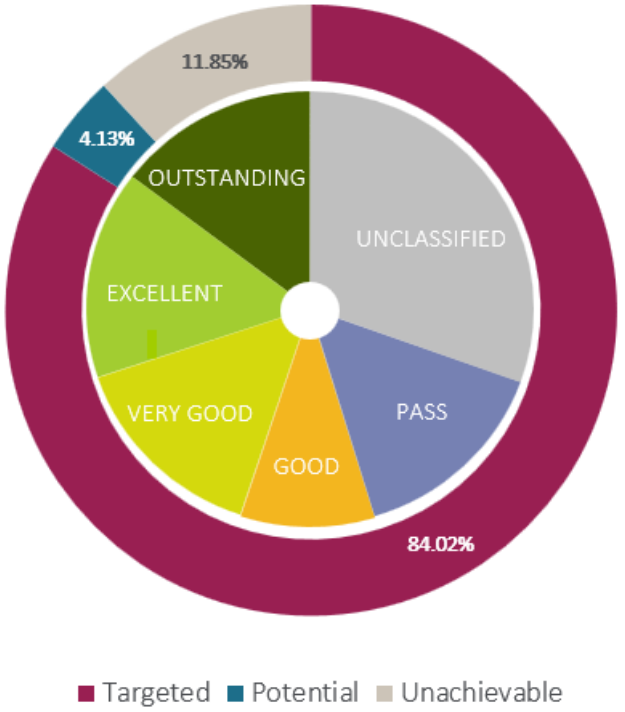

Figure 1 - BREEAM Score Chart for the Proposed Development.

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2.0 Credit Summary

2.1. Summary score sheet

BREEAM Category		Available	Targeted	Potential
Management (0.52 % per Credit)				
Man 01	Project brief and design	4	4	0
Man 02	Life cycle cost and service life planning	4	3	1
Man 03	Responsible construction	6	5	1
Man 03 - Exemplary(1)	Responsible construction	1	0	0
Man 04	Commissioning and handover	4	4	0
	Standard Management Credit Total:	**18**	**16**	**2**
	Exemplary Management Credit Total:	**1**	**0**	**0**
	% Management Total (Standard + Exemplary):	**11.08**	**8.96**	**1.12**
Health & Wellbeing (0.75 % per Credit)				
Hea 01	Natural light	2	2	0
Hea 01 - Exemplary(1)	Natural light	1	0	0
Hea 02	Artificial light	1	1	0
Hea 04	Indoor air quality	2	2	0
Hea 05	Thermal comfort	2	2	0
Hea 06	Acoustic performance	1	1	0
Hea 07	Safe and accessible design	2	2	0
Hea 08	Security	1	0	0
Hea 08 - Exemplary(1)	Security	1	0	0
	Standard Health & Wellbeing Credit Total:	**11**	**10**	**0**
	Exemplary Health & Wellbeing Credit Total:	**2**	**0**	**0**
	% Health & Wellbeing Total (Standard + Exemplary):	**12.01**	**9.10**	**0.00**

BREEAM Category		Available	Targeted	Potential
Energy (0.46 % per Credit)				
Ene 01	Energy and carbon performance for regulated energy uses	9	6	0
Ene 01 - Exemplary(1)	Energy and carbon performance for regulated energy uses	3	0	0
Ene 02	Prediction of operational energy and carbon	12	9	0
Ene 02 - Exemplary(1)	Prediction of operational energy and carbon	1	0	0
Ene 02 - Exemplary(2)	Prediction of operational energy and carbon	1	0	0
Ene 02 - Exemplary(3)	Prediction of operational energy and carbon	1	0	0
Ene 02 - Exemplary(4)	Prediction of operational energy and carbon	1	0	0
Ene 03	Energy monitoring	2	2	0
Ene 04	Low carbon design	5	5	0
Ene 06	Energy efficient systems	2	2	0
Ene 08	Installed controls	2	1	0
	Standard Energy Credit Total:	**32**	**25**	**0**
	Exemplary Energy Credit Total:	**7**	**0**	**0**
	% Energy Total (Standard + Exemplary):	**24.92**	**14.00**	**0.00**
Transport (0.71 % per Credit)				
Tra 01	Transport assessment and travel plan	2	2	0
Tra 02	Sustainable transport measures	10	8	0
	Standard Transport Credit Total:	**12**	**10**	**1**
	Exemplary Transport Credit Total:	**0**	**0**	**0**
	% Transport Total (Standard + Exemplary):	**9.00**	**7.50**	**0.00**
Water (0.75 % per Credit)				
Wat 01	Water consumption	5	3	0
Wat 01 - Exemplary(1)	Water consumption	1	0	0
Wat 02	Water monitoring	1	1	0
Wat 03	Water leak detection and prevention	2	2	0

BREEAM Category		Available	Targeted	Potential
Wat 05	Prediction of operational water consumption	1	0	0
Wat 05 - Exemplary(1)	Prediction of operational water consumption	1	0	0
	Standard Water Credit Total:	**9**	**6**	**0**
	Exemplary Water Credit Total:	**2**	**0**	**0**
	% Water Total (Standard + Exemplary):	**10.01**	**5.34**	**0.00**
Materials (1.14 % per Credit)				
Mat 01	Building life cycle assessment	7	6	1
Mat 01 - Exemplary(1)	Building life cycle assessment	1	0	0
Mat 01 - Exemplary(2)	Building life cycle assessment	1	0	0
Mat 01 - Exemplary(3)	Building life cycle assessment	1	0	0
Mat 02	Environmental product declarations	1	1	0
Mat 03	Responsible sourcing of construction products	4	3	0
Mat 03 - Exemplary(1)	Responsible sourcing of construction products	1	0	0
Mat 04	Durability and resilience	1	1	0
Mat 05	Material efficiency	1	1	0
	Standard Materials Credit Total:	**14**	**12**	**1**
	Exemplary Materials Credit Total:	**4**	**0**	**0**
	% Materials Total (Standard + Exemplary):	**21.50**	**15.00**	**1.25**
Waste (0.70 % per Credit)				
Wst 01	Construction waste management	5	5	0
Wst 01 - Exemplary(1)	Construction waste management	1	0	0
Wst 02	Use of recycled and sustainably sourced aggregates	1	0	0
Wst 02 - Exemplary(1)	Use of recycled and sustainably sourced aggregates	1	0	0
Wst 03	Operational waste	1	1	0
Wst 05	Adapting to climate change	1	1	0
Wst 05 - Exemplary(1)	Adapting to climate change	1	0	0

BREEAM Category		Available	Targeted	Potential
Wst 06	Disassembly and adaptability	2	2	0
	Standard Waste Credit Total:	**10**	**9**	**0**
	Exemplary Waste Credit Total:	**3**	**0**	**0**
	% Waste Total (Standard + Exemplary):	**10.00**	**6.30**	**0**
Land Use & Ecology (0.81 % per Credit)				
Lue 01	Site selection	2	1	1
Lue 02	Ecological risks and opportunities	2	2	0
Lue 02 - Exemplary(1)	Ecological risks and opportunities	1	0	0
Lue 03	Managing impacts on ecology	3	3	0
Lue 04	Ecological change and enhancement	4	2	1
Lue 04 - Exemplary(1)	Ecological change and enhancement	1	0	0
Lue 05	Long term ecological management	2	2	0
	Standard Land Use & Ecology Credit Total:	**13**	**10**	**2**
	Exemplary Land Use & Ecology Credit Total:	**2**	**0**	**0**
	% Land Use & Ecology Total (Standard + Exemplary):	**13.44**	**8.80**	**1.76**
Pollution (0.62 % per Credit)				
Pol 01	Impact of refrigerants	3	3	0
Pol 02	Local air quality	3	3	0
Pol 03	Flood and surface water management	5	5	0
Pol 04	Reduction of nighttime light pollution	1	1	0
Pol 05	Reduction of noise pollution	1	1	0
	Standard Pollution Credit Total:	**13**	**13**	**0**
	Exemplary Pollution Credit Total:	**0**	**0**	**0**
	% Pollution Total (Standard + Exemplary):	**8.97**	**8.97**	**0.00**
Innovation (1 % per Credit)				
Inn 01	Innovation			

BREEAM Category	Available	Targeted	Potential
AI - Innovation Credit Total:	**1**	**0**	**0**
% Innovation Total (Standard + Exemplary):	**1**	**0**	**0**
OVERALL TOTALS		**112**	**5**
% OVERALL SCORE TOTALS		**84.02**	**4.13**

Detailed Pre-Assessment

3.0 Detailed Pre-Assessment

	Credit	Available	Targeted	Potential	Comments
Management (0.52 % per Credit)					
Man 01 - Project brief and design					
1	Project planning	1	1	0	**Project Delivery Planning (1 credit)** **Completed BEFORE end of RIBA Stage 2** **Targeted - Yes** A clear brief is developed prior to completion of the concept design, to include input from all design team members and this information is shared with all relevant parties. This clear briefing document sets out the particular ambitions for the project: • Client requirements, e.g. internal environmental conditions required. • Sustainability objectives and targets, including BREEAM performance targets and any wider business or project sustainability objectives. • Timescales and budget. • List of consultees and professional appointments that may be required, e.g. suitably qualified acoustician (SQA) etc. • Constraints for the project, e.g. technical, legal, physical, environmental. Prior to completion of the concept design, the project team (Client, Design Team and Principal Contractor) meet specifically to discuss, identify and define the roles, responsibilities and contributions for each key phase of the project. When defining responsibilities, the following must be considered: • Building user requirements. • Aims of the design and design strategy. • Particular installation and construction requirements and limitations. • Design and construction risk assessments, e.g. national health and safety regulations or best practice, legionella risk assessment. • Legislative requirements, e.g. local building regulations, heritage requirements. • Sustainability objectives for the project. • Ecological protection measures (where required). • Procurement and supply chain â€“ responsible and ethical sourcing. • Identifying and measuring project success in line with project brief objectives.

	Credit	Available	Targeted	Potential	Comments
					• Building manager's or occupiers' budget and technical expertise in maintaining any proposed systems. • Maintainability and adaptability of the proposals. • Requirements for the production of project and end user documentation. • Requirements for commissioning, training and aftercare support. The project team demonstrate how the project delivery stakeholders' contributions and their input in the design process have influenced the following: • Initial Project Brief. • Project Execution Plan. • Communication Strategy. • Concept Design. • Final Design. **Comments & Actions** • *Stakeholder consultation has been carried out with the public* • *Design Team to provide a completed copy of the SRE Man 01 meeting plan, the project execution plan, and the communication strategy.*
2	Stakeholder consultation	1	1	0	**Stakeholder Consultation (1 credit)** **Completed BEFORE end of RIBA Stage 2** **Targeted – Yes** Prior to completion of the Concept Design, the design team consult with all interested parties on matters that covers the minimum consultation content. The project must demonstrate concisely how the interested party contributions and outcomes of the consultation exercise have influenced or changed the initial project brief and concept design; and these changes were implemented within the final design at post-construction. Prior to completion of the detailed design (Technical Design or equivalent), consultation feedback has been given to, and received by, all relevant parties. **Comments & Actions**

	Credit	Available	Targeted	Potential	Comments
					• *Stakeholder consultation has been carried out with the public* • *Design Team to provide evidence of meetings between third-party stakeholders and how the outcomes of the meetings have influenced the Project Brief and early design options.*
3	BREEAM AP – Concept Design	1	1	0	**BREEAM AP – Concept Design (1 credit)** **Completed BEFORE end of RIBA Stage 2** **Targeted – Yes** A BREEAM AP has been appointed to facilitate the setting and achievement of BREEAM performance targets for the project. Their involvement must be early in the design process. The defined BREEAM performance targets have been formally agreed between the client and design/project team no later than the concept design stage. The BREEAM AP must demonstrate targets have been achieved vis a BREEAM Assessor's design stage assessment report. **Comments & Actions** • *SRE have been appointed as the acting BREEAM AP for the concept design stage.*
4	BREEAM AP – Monitoring Progress	1	1	0	**BREEAM AP – Monitoring Progress (1 credit)** **Completed BEFORE end of RIBA Stage 4** **Targeted – Yes** The credit for BREEAM AP – Concept Design must be achieved. A BREEAM AP has been appointed to monitor progress against the BREEAM performance targets throughout the design process and formally report progress to the client and design team. The BREEAM AP must attend key project and design team meetings during the concept design, developed design and technical design stages. Reporting must be carried out for each stage, as a minimum. **Comments & Actions**

	Credit	Available	Targeted	Potential	Comments
					• *SRE have been appointed as the acting BREEAM AP for the developed design and technical design stage.*
Man 02 - Life cycle cost and service life planning					
1	Elemental LCC options appraisal	2	2	0	**Elemental LCC options appraisal (2 credits)** **Completed BEFORE end of RIBA Stage 2** **Targeted – Yes** A competent person carries out an outline, entire asset elemental life cycle cost (LCC) options appraisal (at least two) at the Concept Design stage in line with ISO 15686-5:2017. The elemental LCC plan: a. Provides an indication of future replacement costs over a period of analysis as required by the client (e.g. 20, 30, 50 or 60 years); b. Includes service life, maintenance and operation cost estimates. *The study period should ideally be agreed by the client, in line with the design life expectancy of the building. However, where the life expectancy of the building is not yet formally agreed (due to being at very early design stages), the default design life of 60 years should be used for modelling purposes (in line with the UK default).* Demonstrate, using appropriate examples provided by the design team, how the elemental LCC plan has been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value. **Comments & Actions** • *SRE have been appointed as the suitably qualified individual to perform Elemental LCC calculations before the end of Concept Design (RIBA Stage 2).* • *The ELCC report will be required prior to the end of Concept Design, as well as evidence to confirm how the ELCC has influenced building and systems design and specifications.*

	Credit	Available	Targeted	Potential	Comments
2	Component level LCC options appraisal	1	0	1	**Component level LCC options appraisal (1 credit)** **Completed BEFORE end of RIBA Stage 4** **Targeted – No (Potential)** A competent person develops a component level LCC options appraisal (at least two) by the end of Technical Design stage in line with ISO 15686-5:2017, and includes the following component types (where present): a. Envelope, e.g. cladding, windows, or roofing b. Services, e.g. heat source, cooling source, or controls, also intelligent lighting controls against standard controls. c. Finishes, e.g. walls, floors or ceilings d. External spaces, e.g. alternative hard landscaping, boundary protection. *The component level LCC option appraisal should review all of the above component types (where present). However, you do not need to consider every single example cited under each component; only a selection of those most likely to draw valued comparisons. This is to ensure that a wide range of options are considered and help focus the analysis on components which would benefit the most from appraisal.* Demonstrate, using appropriate examples provided by the design team, how the component level LCC options appraisal has been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value. Component Level LCC: This is commonly used for cost planning specification choices of systems or component levels during the design development. Component level LCC options appraisal for service life planning requires the environment of the building and other local conditions to be identified and the fundamental requirements to be met in planning the service life of the building. Decisions should be made on: • The likely design of the building (rather than the contractual design itself). • Minimum functional performance criteria for each component over the buildings design life. • Components that must be repairable, maintainable or replaceable within the design of the building. Only the key differentiators between components and systems need to be comparatively modelled. **Comments & Actions**

	Credit	Available	Targeted	Potential	Comments
					• *This credit is not sought at this stage.* • *Client or Project Team to appoint a competent individual to undertake a component level LCC options appraisal.* • *SRE can provide this service for an additional fee, if required.*
3	Capital Cost Reporting	1	1	0	**Capital Cost Reporting (1 credit)** **Targeted – Yes** Report the capital cost for the building in pounds per square meter (£/m^2) of gross internal area (GIA). Written confirmation of the anticipated cost is to be provided during the Design Stage, with final confirmation of the actual cost provided at the end of the project during the Post-Construction Stage assessment. The capital cost for the building includes the expenses related to the initial construction of the building: • Construction, including preparatory works, materials, equipment and labour • Site management • Construction financing • Insurance and taxes during construction • Inspection and testing Costs relating to land procurement, clearance, design, statutory approvals and post occupancy aftercare are not included. **Comments & Actions** • *Quantity Surveyor to confirm that written confirmation of the final capital cost of the project in £k/m^2 will be provided.*
Man 03 - Responsible construction					
Pre-req	Prerequisite Legal and sustainable site timber	✔	✔		**Prerequisite: Legal and sustainable site timber** All temporary site timber and timber-based products (excluding reused timber) used during the construction process of the project must be legal and sustainable timber.
1	Environmental management	1	1	0	**Environmental management (1 credit)** **Targeted – Yes**

	Credit	Available	Targeted	Potential	Comments
					All parties who manage the construction site at any stage must operate an EMS covering their main operations. The EMS must be third-party certified to ISO 14001, EMAS (EU Eco-Management and Audit Scheme), or an equivalent standard. All parties who manage the construction site at any stage must implement best practice pollution prevention policies and procedures on site in order to minimise air and water pollution during construction works. **Comments & Actions** • *Client to ensure that the Main Contractor and Demolition Contractors appointed have ISO 14001/EMAS certification, and the commitment to implementing Pollution Prevention Guideline (PPG6) has been made.*
2	BREEAM Advisory Professional Site	1	0	1	**BREEAM Advisory Professional - Site (1 credit)** **Targeted – No (Potential)** The client must formally agree with the contractor the performance targets relating to the BREEAM certification that have been set for the project. A BREEAM AP must be involved in the project at an appropriate time and level to ensure that the agreed performance targets are met. Specifically, the AP must: a. Work with the project team, including the client, to help them maximize performance against the agreed targets throughout construction, handover and closeout. This support will include considering links between the criteria that need to be met across all project areas to be assessed by BREEAM (e.g., Management, Energy, Ecology etc), going beyond the design intent wherever possible. b. Monitor progress against the agreed performance targets throughout all stages of the construction, paying particular attention wherever decisions are made that could critically impact the BREEAM performance, and keeping all records needed as evidence for the assessment. c. Proactively identify risks and opportunities related to the procurement and construction processes and the achievement of the targets agreed above. d. Feedback promptly and regularly to the contractor and project team helping the project stay on track to meet its targets and supporting any necessary corrective actions.

	Credit	Available	Targeted	Potential	Comments
					Where appropriate, coordinate and help the project team to provide the assessor with the necessary evidence to achieve the credits. To achieve this credit at the final post-construction stage of assessment, the submitted assessors report must show that a BREEAM AP was appointed and that the agreed performance targets have been demonstrably achieved by the project. **<u>Comments & Actions</u>** • *This credit is not sought at this stage.* • *Main Contractor to ensure that a BREEAM AP is appointed during the construction stage to ensure that performance standards are achieved.* • *SRE can provide this service for an additional fee.*
3	Responsible construction management	2	2	0	**Responsible construction management (2 credits)** **Minimum standard to achieve one credit for 'Excellent' target rating OR two credits for 'Outstanding' target rating** **Targeted – Yes** For small-scale projects: a. The contractor must achieve items below: i. Implement practices to ensure the development footprint is safe, clean and organised at all times. This includes, but is not limited to, facilities, materials and waste storage (f). ii. Provide processes and equipment required to respond to medical emergencies (h). iii. Identify and implement initiatives to promote and maintain the health and wellbeing of all site operatives within the development footprint. This can involve site facilities, site management arrangements, staff policies etc (i). iv. Establish management practices and facilities encouraging equality, fair treatment and respect of all site operatives and visitors (j). v. Minimising nuisance and intrusion on the lives of the local community, and engaging with the community and neighbourhood to ensure that any unavoidable impacts of construction are communicated regularly and sensitively (m)

Credit	Available	Targeted	Potential	Comments
				b. Where the contractor achieves those items checked as required for one credit (for standard projects), the small-scale project may achieve two credits. All buildings not defined as small-scale projects are considered to be standard projects and credits are awarded as follows: a. **1 credit**: All items below achieve (for standard projects) must be achieved for one credit to be awarded**: (Targeted)** i. Manage the construction site entrance to minimise the impacts (e.g. safety, disruption) arising from vehicles approaching and leaving the development footprint (a). ii. Minimise the risks of air, land and water pollution (for EU Taxonomy compliance (d). iii. Minimise the risks of nuisance from vibration, light and noise pollution (e). iv. Implement practices to ensure the development footprint is safe, clean and organised at all times. This includes, but is not limited to, facilities, materials and waste storage (f). v. Ensure clear and safe access in and around the buildings at the point of handover (g). vi. Provide processes and equipment required to respond to medical emergencies (h). vii. Identify and implement initiatives to promote and maintain the health and wellbeing of all site operatives within the development footprint. This can involve site facilities, site management arrangements, staff policies etc (i). viii. Establish management practices and facilities encouraging equality, fair treatment and respect of all site operatives and visitors (j). ix. Minimising nuisance and intrusion on the lives of the local community, and engaging with the community and neighbourhood to ensure that any unavoidable impacts of construction are communicated regularly and sensitively (m) x. All visitor, workforce and community accidents, incidents and near misses are recorded and action is taken to reduce the likelihood of them reoccurring (r). b. **2 credits:** Projects achieving the criterion above PLUS six additional items from below, may be awarded a second credit:

Credit	Available	Targeted	Potential	Comments
				i. Ensure the development footprint is accessible for delivery vehicles fitted with safety features (e.g. side under run protection) to remove or limit the need for on-street loading or unloading. Where on-street loading is unavoidable, this should be appropriately managed (b). ii. Identify access routes to the development footprint, including for heavy vehicles to minimise traffic disruption and safety risks to others (c). iii. Provide secure, clean and organised facilities (e.g. welfare, changing and storage facilities) for site operatives within the development footprint (k). iv. Minimise risks of the site becoming a focus for antisocial behaviour in the local community (e.g. robust perimeter fencing, CCTV, avoid creating dark corners etc.) (l). v. Ensuring ongoing and up-to-date training is provided for personnel and visitors (covering items a to l, as appropriate.) (n). vi. Ensuring all site operatives are trained for the tasks they are undertaking (including any site-specific considerations) (o). vii. Promoting safety on and off-site by ensuring driving and operator training and safety awareness have been undertaken for any company vehicles (cars and vans), movable plant and equipment (such as dumpers, diggers, cranes), trucks, lorries or waste removal wagons whether owned, leased or hired by the principal contractor (p). viii. Any vehicular accidents, incidents and near misses, on-site or in the vicinity of the site entrance and relating to site activities, are recorded, investigated and analysed and that learnings are incorporated in updated policies and training (q). ix. Processes are in place to facilitate collecting and recording feedback from the community and to address any concerns related to the development footprint (s). If the activities listed above are not relevant for the development, then the project team should provide adequate evidence to the assessor to demonstrate why the project is compliant without these items having been achieved. **Comments & Actions** • *Project team to provide signed letter of commitment demonstrating specifically which responsible management items will be fulfilled.*

	Credit	Available	Targeted	Potential	Comments
4	Site monitoring	2	2	0	**Site monitoring (2 credits)** **Targeted – Yes** Assign responsibility for site monitoring to a named individual. This is a prerequisite for the award of any of the site monitoring credits as set out below. The responsible individual must have the appropriate authority and experience to access the data required. They may be the BREEAM AP, where one has been appointed. They will be required to monitor, record and report energy use, water consumption and transportation data (where measured) resulting from all on-site construction processes (and dedicated off-site manufacturing) throughout the build programme. Report the project value. **One credit – Monitoring utility consumption** *Energy consumption* Set targets at design stage for the site energy consumption in kWh (and where relevant, litres of fuel used) resulting from the use of construction plant, equipment (mobile and fixed) and site accommodation. Monitor and record data for the energy consumption and show that the consumption targets have been achieved. Report the total carbon dioxide emissions (total kgCO,,e) and energy consumption (electricity in kWh or litres of fuel) resulting from the construction process. *Water consumption* Set targets at design stage for the potable water consumption (m^3) arising from the use of construction plant, equipment (mobile and fixed) and site accommodation. Monitor and record data for the potable water consumption and show that the consumption targets have been achieved. Use the collated data to report the total net water consumption resulting from the construction process (m^3), i.e. consumption minus any recycled water use. **One credit – Monitoring transport of construction materials and waste** Set targets at design stage and monitor and record data relating to transport movements and other impacts resulting from delivery of the majority of construction

	Credit	Available	Targeted	Potential	Comments
					materials to the site and removal of construction waste from the site. As a minimum this must cover: a. Transport of materials from the point of supply to the building site, including any transport, intermediate storage and point of supply. b. The scope of this monitoring must cover the materials used within the following as a minimum: i. Superstructure ii. Internal finishes iii. Substructure and hard landscaping iv. Core building services c. Transport of construction waste from the construction gate to waste disposal processing or recovery centre gate. Monitoring must cover the construction waste groups outlined in the project's resource management plan. Using the collated data, report separately for materials and waste, the total transport-related carbon dioxide emissions ($kgCO_{,,}e$), plus total distance travelled (km) and amount of fuel used (litres). **Comments & Actions** • *Project Team to ensure the appointed Main Contractor commits to monitoring energy and water (**one credit – Targeted**) and transport of materials on site and transport of waste (**one credit – Targeted**).*
e1	Responsible construction management - Exemplary credit	1	0	0	**Comments & Actions** • *Credit not sought.*
Man 04 - Commissioning and handover					
Pre-req	Minimum standard - Handover	✔	✔		**Prerequisite: Minimum standard to achieve 'Very Good' target rating – Handover** Prepare two training schedules timed appropriately around handover and proposed occupation plans for the following users: a. A non-technical training schedule for the building occupiers. b. A technical training schedule for the premises facilities managers.

	Credit	Available	Targeted	Potential	Comments
1	Schedule and responsibilities	1	1	0	**Schedule and responsibilities (1 credit)** **Minimum Standard to achieve 'Very Good' target rating** **Targeted – Yes** Prepare a schedule of commissioning and testing. The schedule identifies and includes 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 identifies the appropriate standards for all commissioning activities to be conducted, where applicable, in accordance with: a. Current Building Regulations . b. BSRIA guidelines(5). c. CIBSE guidelines(6). d. Other appropriate standards (see CN1 on page 68). Any process or manufacturing-related equipment specified as part of the project can be excluded from the assessment, except where it forms an integral part of building HVAC services, such as some heat recovery systems. Where a building management system (BMS) is specified: a. Carry out commissioning of air and water systems when all control devices are installed, wired and functional. b. Include physical measurements of room temperatures, off-coil temperatures and other key parameters, as appropriate, in commissioning results. c. The BMS or controls installation should be running in auto with satisfactory internal conditions prior to handover. d. All BMS schematics and graphics (if BMS is present) are fully installed and functional to user interface prior to handover. e. Fully train the occupier or facilities team in the operation of the system. Appoint an appropriate project team member to monitor and programme pre-commissioning, commissioning and testing. Where necessary include re-commissioning activities on behalf of the client. The principal contractor accounts for the commissioning and testing programme, responsibilities and criteria within their budget and the main programme of works. Allow the required time to complete all commissioning and testing activities prior to handover.

	Credit	Available	Targeted	Potential	Comments
					Comments & Actions • *Project Team to ensure the appointed Main Contractor will account for a commissioning and testing schedule within the project's budget and ensure that these are provided at the post-construction stage.* • *Prepare and deliver a commissioning schedule (where available).*
2	Commissioning role	1	1	0	**Commissioning role (1 credit)** **Targeted – Yes** Achieve the schedule and responsibilities credit. During the design stage, the client or the principal contractor appoints an appropriate project team member, provided they are not involved in the general installation works for the building services systems, with responsibility for: a. Undertaking design reviews and giving advice on suitability for ease of commissioning. b. Providing commissioning management input to construction programming and during installation stages. c. Management of commissioning, performance testing and handover or post-handover stages. For buildings with complex building services and systems, this role needs to be carried out by a specialist commissioning manager. **Comments & Actions** • *Project Team to deliver signed letter confirming appointment of specialist commissioning manager.* • *Provide the relevant documentation confirming the appointed commissioning manager meets the definition for the role. i.e. membership of the Commissioning Specialists Association (CSA).*
3	Envelope testing	1	1	0	**Envelope testing (1 credit)** **Targeted – Yes**

	Credit	Available	Targeted	Potential	Comments
					Rectify any defects identified during post-construction testing and inspection prior to building handover and close out. Any remedial work must meet the required performance characteristics for the building or element as defined at the design stage. Achieve the schedule and responsibilities credit. Complete post-construction testing and inspection to quality-assure the integrity of the building fabric, including continuity of insulation, avoidance of thermal bridging and air leakage paths (this is through **airtightness testing and a thermographic survey**). A suitably qualified professional undertakes the survey and testing in accordance with the appropriate standard. For EU taxonomy alignment, please see. **Comments & Actions** • *Client/developer to confirm that post-construction testing and inspection will take place, and any required remedial work before project handover, and that the airtightness testing and a thermographic survey are included in the project's budget. through signed letter of commitment.*
4	Handover	1	1	0	**Handover (1 credit)** **Targeted – Yes** Prior to handover, develop two building user guides for the following users: • A non-technical user guide for distribution to the building occupiers. • A technical user guide for the premises facilities managers. A draft copy is developed and discussed with users first (where the building occupants are known) to ensure the guide is most appropriate and useful to potential users Prepare two 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. **Comments & Actions**

	Credit	Available	Targeted	Potential	Comments
					• *BUGs and training schedules will be required from the Main Contractor at the Post-construction stage, before handover takes place. The Main Contractor must commit to producing and discussing the BUG with building users, and providing the relevant training to building users in line with the training schedule, prior to handover.* • *Draft BUGs and training schedules should be provided at the design stage, where available.* • *SRE can provide this service for an additional fee.*
		18	16	2	**Standard Management Credit Total**
		1	0	0	**Exemplary Management Credit Total**
		11.08	8.96	1.12	**% Management Total (Standard + Exemplary)**
Health & Wellbeing (0.75 % per Credit)					
Hea 01 - Natural light					
Pre-req	Minimum standard - Natural light	✔	✔		**Prerequisite: Minimum standard for 'Outstanding' target rating - Natural light** Achieve one of the following: a. At least 95% of all relevant building areas for daylight, have vertical and/or inclined windows with a glazed area 20% of the surrounding wall area. OR b. At least 80% of relevant building areas for daylight have a glazed area as a percentage of floor area 7%.
1	Glare Control	n/a	n/a	n/a	**Glare control** This credit is not applicable for Shell and Core.
2	Daylighting	1	1	0	**Daylighting (1 credit)** **Targeted – Yes** Daylighting criteria have been met for Industrial developments using either one of the options outlined below: **OPTION 1**

	Credit	Available	Targeted	Potential	Comments
					• The relevant building areas* meet good practice average and minimum point daylight illuminance criteria as outlined below: - Internal association or atrium aria: 80% of the area achieves an average daylight illuminance of at least 300 lux for 2650 hours per year or more **AND** achieves minimum point daylight illuminance of at least 210 lux for 2650 hours per year or more. - Teaching, lecture and seminar spaces: 80% of the area achieves an average daylight illuminance of at least 300 lux for 2000 hours per year or more **AND** achieves minimum point daylight illuminance of at least 90 lux for 2000 hours per year or more. - All occupied spaces: 80% of the area achieves an average daylight illuminance of at least 300 lux for 2000 hours per year or more **AND** achieves minimum point daylight illuminance of at least 90 lux for 2000 hours per year or more. **OPTION 2** • The relevant building areas* meet any level of recommendation using the daylight illuminance criteria in EN 17037. **OPTION 3** • The relevant building areas* achieve at least 'nominally accepted' daylight sufficiency as per IES LM-83. * Relevant building areas – Areas within the building where good daylighting is of benefit to the building users, if it is an occupied space (i.e a room or space within the assessed building that is likely to be occupied for 30 minutes or more by a building user). **Comments & Actions** • *Project Team have appointed SRE to perform daylight modelling (ideally before planning) to confirm the occupied spaces of the development achieve the above daylighting levels.*
4	View out	1	1	0	**View out (1 credit)** **Targeted – Yes** **Assessment type specific note – Where it is not possible to confirm which areas of the building will contain workstations or benches or desks, then all areas of the building designed for or likely to be occupied by workstations or benches or desks must comply with the relevant criteria.**

<table>
<tr><th></th><th>Credit</th><th>Available</th><th>Targeted</th><th>Potential</th><th>Comments</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>At least 95% of the floor area in 95% of spaces for each relevant building area are within the distances of a window or permanent opening that provides an adequate view out in line with the below:

<table><tr><th>Distance from window to workspace or desk, X (in metres)</th><th>Window or opening size (as % of surrounding wall area)</th></tr><tr><td>X < 8</td><td>20%</td></tr><tr><td>8 ≤ X ≤ 11</td><td>25%</td></tr><tr><td>11 < X ≤ 14</td><td>30%</td></tr><tr><td>X > 14</td><td>35%</td></tr></table>
OR

At least 75% of the floor area in 95% of spaces for each relevant building area can meet both of the following criteria:

a. Horizontal sight angle 28°

AND

b. The landscape layer and at least one additional layer (sky or ground) are visible through a permanent opening.

<u>Comments & Actions</u>

• Architect and SRE to confirm whether the above criteria are achievable for the Proposed Development.</td></tr>
<tr><td>e2</td><td>Daylighting - Exemplary credit</td><td>1</td><td>0</td><td>0</td><td>Daylighting - Exemplary credit (1 credit)
Targeted – No
Daylighting criteria have been met using EITHER one of the following options:

OPTION 1
a. Relevant building areas meet exemplary criteria for average and minimum point daylight illuminance as outlined below:
i. <u>All occupied spaces</u>: 80% of the area achieves an average daylight illuminance of at least 300 lux for 2650 hours per year or more AND</td></tr>
</table>

	Credit	Available	Targeted	Potential	Comments
					achieves minimum point daylight illuminance of at least 90 lux for 2650 hours per year or more. **OPTION 2** b. Relevant building areas meet the highest rating in EN 17037:2018+A1:2021 OR IES LM-83-23 and the relevant criteria outlined above (a.i): i. Highest rating in standard is met. **Comments & Actions** • *This credit is not sought at this stage due to high benchmarks.*
Hea 02 - Artificial light					
Pre-req	Prerequisite Flicker	✔	✔		**Prerequisite: Flicker** All lighting types should be designed to avoid flicker and stroboscopic effects, including across their full dimming and colour tuning range if applicable. This is applicable to all internal and external lighting.
1	Internal and external lighting levels	1	1	0	**Internal and external lighting levels (1 credit)** **Targeted – Yes** *Internal lighting* Internal lighting in all relevant areas of the building is designed to provide illuminance (lux) levels and colouring rendering index in accordance with the SLL Code for Lighting 2022(24) and any other relevant industry standard. Internal lighting should be appropriate to the tasks undertaken, accounting for building user concentration and comfort levels. Compliance criteria should include, as applicable for each type of application: a. Illuminance levels and uniformity b. Glare limits c. Colour appearance (where standard recommendations exist) d. Colour rendering For areas where computer screens are regularly used, the lighting design complies with CIBSE Lighting Guide 7 Sections 2.5, 2.15 to 2.17, 2.22, and 6.10 to 6.20.(25) This gives recommendations highlighting:

	Credit	Available	Targeted	Potential	Comments
					a. Limits to the luminance of the luminaires to avoid screen reflections. (Manufacturers data for the luminaires should be sought to confirm this.) b. Any area where a surface is used to reflect light in to a space, such as uplighting, the recommendations refer to the luminance of the lit ceiling rather than the luminaire; a design team calculation is usually required to demonstrate this. c. Recommendations for direct lighting, ceiling illuminance, and average wall illuminance. *External lighting* All external lighting located within the construction zone is specified in accordance with BS 5489-1:2020(26) and BS EN 12464-2:2024(27). External lighting should provide illuminance levels that enable users to perform outdoor visual tasks efficiently and accurately, especially during the night. Compliance criteria should include, as applicable for each type of application: a. Illuminance / luminance levels and uniformity b. Glare limits c. Colour rendering **<u>Comments & Actions</u>** • *Project Team building services engineer or lighting designer to confirm internal lighting is designed in accordance with SLL code for lighting, and all external lighting is designed to comply with BS 5489-1:2020(26) and BS EN 12464-2:2024(27).* • *Deliver design drawings and lighting schedules in line with the standards.*
Hea 03 – Non-visual effects of light					
1	Non-visual effects of light	n/a	n/a	n/a	**Non-visual effects of light (1 credit)** This credit is not applicable for Shell and Core.
Hea 04 - Indoor air quality					
1	Indoor air quality plan	1	1	0	**Indoor air quality plan (1 credit)** **Minimum standard to achieve 'Very Good' target rating** **Targeted – Yes**

	Credit	Available	Targeted	Potential	Comments
					A site-specific indoor air quality plan has been produced in accordance with Guidance Note 6 (GN06). This plan informs the design, specification, and installation to maximise improvement of indoor air quality during occupation. The plan must consider the following: a. Removal of highly contaminating sources b. Dilution and control of other contaminant sources, including: i. Air quality requirements of specialist areas such as laboratories, where present c. Procedures for pre-occupancy flush out and purge ventilation d. Third party testing and analysis e. Maintaining indoor air quality in-use f. Any relevant local or national authority plans or policies (for example, Air Quality Management Areas or Local Air Quality Action Plans) **Comments & Actions** • *SRE have been appointed to provide compliant Indoor Air Quality Plan (IAQP).* • *Trium have been appointed to provide an Air Quality Assessment*
2	Ventilation	1	1	0	**Ventilation (1 credit)** **Targeted – Yes** The building has been designed to minimise the concentration and recirculation of pollutants in the building as follows: Provide fresh air into the building in accordance with one of the best practice standards for ventilation: Clinical areas with controlled environmental conditions a. BS ISO 17772-1:2017 (excluding naturally ventilated buildings), whichever requires the higher performance. All other buildings (mixed mode or mechanical ventilation) a. BS ISO 17772-1:2017 Annex I. All other buildings (naturally ventilated) a. CIBSE AM10.

Credit	Available	Targeted	Potential	Comments
				Ventilation pathways are designed to minimise the ingress and build-up of air pollutants inside the building: *Mechanically ventilated* The design of air-conditioned and mixed mode buildings must minimise the build-up of air pollutants. Locations of ventilation intakes and airflow pathways should be designed in accordance with one or a combination of the following methods: **METHOD 1** 1. Locating the building's air intakes and exhausts, in relation to each other and sources of external pollution, in accordance with the following best practice as appropriate: a. PDCEN/TR 16798-4:2017 Sections 8.8.1 to 8.8.4 b. b. BRE FB 30 Ventilation for healthy buildings: Reducing the impact of urban air pollution (2011) c. c. BRE IP 9/14 Locating ventilation inlets to reduce ingress of external pollutants into buildings, as appropriate d. CIBSE TM21 **METHOD 2** 2. Pollutant dispersion modelling can be used to inform the location of the building's air intakes and exhausts in relation to each other and sources of external pollution. This can be achieved using either **wind tunnel modelling** or **numerical modelling**. Undertaken by a competent person. **METHOD 3** 3. Positioning the building's air intakes and exhausts at least 10 m of horizontal distance apart. Positioning intakes at least 10 m horizontal distance from sources of external pollution (including the location of air exhausts from other buildings). There is no minimum vertical distance set in this approach. The building's air intakes and exhausts should be located to reduce the risk of the intake air being contaminated by the exhausts. Exhausts or other pollutant sources should not be discharged into enclosed spaces, such as courtyards, in which intakes are also located. Where significant levels of gaseous pollutants such as nitrogen dioxide are identified in the outdoor air, as in an Air Quality Management Area (AQMA), the use of appropriate gas phase filtration in the building ventilation system should be considered. Design

	Credit	Available	Targeted	Potential	Comments
					teams must ensure that filter performance is appropriate for the pollutant conditions experienced at the site Where present, HVAC systems must incorporate suitable filtration to minimise external air pollution, as defined in BS EN 16798-3:2025 Section B.4.2. The specified filters should achieve supply air classification of at least SUP 2. The level of filtration required is dependent on the quality of the outdoor air. a. In mechanically ventilated buildings or spaces: sensors are linked to the mechanical ventilation system and provide demand-controlled ventilation to the space **(Assumed).** b. In naturally ventilated buildings or spaces: sensors either have the ability to alert the building owner or manager when CO2 levels exceed the recommended set point or are linked to controls with the ability to adjust the quantity of fresh air, i.e. automatic opening windows or roof vents. c. The total number of sensors, and the net internal area of relevant areas covered by the sensors, is reported via the BREEAM Platform. The ventilation strategy provides adequate ventilation rates throughout the year, including sufficient airflow rates in summer to prevent overheating and maintain required thermal comfort conditions, in accordance with: a. CIBSE AM10 (for naturally ventilated buildings) b. CIBSE AM13 (for mixed-mode buildings) **(Assumed)** **Comments & Actions** • *Project team/MEP to confirm the ventilation system specified for the Proposed Development and that the above criteria will be met.*
Hea 05 - Thermal comfort					
1	Thermal modelling Current climate	1	1	0	**Thermal modelling current climate (1 credit)** **Targeted – Yes** Thermal modelling has been carried out using software in accordance with CIBSE AM1 Building Energy and Performance Modelling. The software used to carry out the simulation at the detailed design stage provides full dynamic thermal analysis. The modelling demonstrates that:

	Credit	Available	Targeted	Potential	Comments
					a. For air-conditioned buildings, summer and winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5; or other appropriate industry standard (where this sets a higher or more appropriate requirement or level for the building type); or the thermal environment in occupied spaces meet the Category B requirements for PPD, PMV and local discomfort set out in Table A.1 of Annex A of ISO 7730:2005. b. For naturally ventilated buildings and mechanically ventilated buildings with limited comfort cooling: i. Winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5. Or other appropriate industry standard (where this sets a higher or more appropriate requirement or level for the building type). ii. The building is designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in either of the following standards as appropriate; CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings or CIBSE TM59: Design methodology for the assessment of overheating risk in homes. For air-conditioned buildings, when generated, report the PMV and PPD indices based on the above modelling via the BREEAM Platform. **<u>Comments & Actions</u>** • *Client and/or the M&E team to confirm if thermal modelling will be carried out in accordance with CIBSE AM11.*
2	Thermal modelling Future climate	1	1	0	**Thermal modelling future climate (1 credit)** **Targeted – Yes** The Thermal modelling for current climate credit is achieved. The thermal modelling demonstrates that the relevant requirements, set out above in the Thermal modelling Current climate criteria, are achieved for a projected climate change environment: *Naturally ventilated buildings*

	Credit	Available	Targeted	Potential	Comments
					a. Time period: 50 years after construction is complete b. Emission scenario: Medium c. 50th percentile DSY 2 and DSY 3 *Mechanically ventilated or mixed mode buildings* a. Time period: 15 years after construction is complete b. Emission scenario: High c. 50th percentile DSY 2 and DSY 3 Where design teams feel that added consideration of building occupant risk or sensitivity to overheating is necessary, weather files can be used that exceed the minimum requirements outlined above. Where above is not met, the project team demonstrates how the building has been adapted, or designed to be easily adapted in future using passive design solutions. For air-conditioned buildings, when generated, report the PMV and PPD indices based on the above modelling via the BREEAM **Comments & Actions** • *Client and/or the M&E team to confirm if thermal modelling will be carried out in accordance with CIBSE AM11.*
Hea 06 - Acoustic performance					
1	Acoustic performance	1	1	0	**Acoustic performance (1 credits)** **Targeted – Yes** The building meets the appropriate acoustic performance standards and testing requirements for the acoustic principles of: (See 'Acoustic criteria' below for further details) a. Indoor ambient noise level OR A suitably qualified acoustician (SQA) is appointed to define a bespoke set of performance requirements for all function areas in the building. The bespoke

	Credit	Available	Targeted	Potential	Comments
					performance requirements use the three acoustic principles defined above, setting out the performance requirements for each and the testing regime required. *Acoustic criteria for **'All other building types'**:* <u>Indoor ambient noise levels</u> Criteria: Achieve indoor ambient noise levels that comply with the design ranges given in Section 7 of BS 8233:2014. Testing: A programme of pre-completion acoustic testing is carried out by a compliant test body. **<u>Comments & Actions</u>** • *A suitably qualified acoustician is appointed to undertake an indoor ambient noise level assessment in accordance with BS 8233:2014.*
Hea 07 - Safe and accessible design					
1	Safe access	1	1	0	**Safe access (1 credit)** **Targeted – Yes** Where external site areas form part of the assessed development the following apply: 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 providing suitable links for the following: a. The site entrance to the building entrance b. Car parks (where present) to the building entrance c. The building to outdoor space d. Connecting to off-site paths where applicable. Pedestrian drop-off areas are designed off, or adjoining to, the access road and should provide direct access to other footpaths. Where vehicle delivery access and drop-off areas form part of the assessed development, the following apply:

	Credit	Available	Targeted	Potential	Comments
					Delivery areas are not accessed through general parking areas and do not cross or share the following: a. Pedestrian and cyclist paths b. Outside amenity areas accessible to building users and general public. 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. **Comments & Actions** • *Project Team and Architect to deliver design drawings highlighting safe pedestrian and cycle routes, and other compliant features.*
2	Outside space	1	1	0	**Outside space (1 credit)** **Targeted – Yes** There is an outside space providing building users with an external amenity area. The space is of an appropriate size to provide enough amenity for the predicted number of building users during coffee or lunch breaks to gather, socialise, relax and connect with the natural environment. The space is predominantly intended for building staff, but can be used by other building users where relevant and beneficial to the building users. The outside space must: a. Be an outdoor landscaped area, for example a garden, balcony or terrace; the majority of the space should be open to the sky. b. Have appropriate seating areas. c. Be non-smoking and controlled by building management (seeCN2). d. Be located to ensure it is accessible to all intended building users and avoids areas that will have disturbances from sources of noise (e.g. building services, car parks, busy roads, delivery areas etc.). e. Be permanent and be away from roads or be visually screened. f. Be on-site or in close proximity to the site (within 500m from the building entrance point).

	Credit	Available	Targeted	Potential	Comments
					Comments & Actions • *Project Team and Landscape Architect to confirm through signed letter of commitment that the designated outside space will comply with the criteria.* • *Design drawings showing designated outside space.*
Hea 08 - Security					
1	Security of site and building	1	0	0	**Security of site and building (1 credit)** **Completed BEFORE end of RIBA Stage 2** **Targeted – No** **Assessment type specific note – For speculative developments, if the SQSS cannot make complete recommendations due to the speculative nature of the assessment, the credit is still achievable. The SQSS must confirm that they have addressed all parts of the project where feasible based on the information available to them at the time of the assessment. Regarding the occupiers' influence on security, the SQSS shall document their assumptions in the SNA.** A suitably qualified security specialist (SQSS) must conduct an evidence-based security needs assessment (SNA) during or before Concept Design (RIBA Stage 2). The purpose of the SNA is to identify any security-relevant attributes of the proposed development, site context, and surrounding environment that may influence the security strategy. Based on the SNA findings, the SQSS must develop a set of security controls and design recommendations. These must directly address the specific threats and assets identified in the SNA. The agreed security controls and recommendations shall be incorporated into proposals and implemented in the as-built development. Any deviation from those controls and recommendations shall be justified and agreed with the SQSS. **Comments & Actions** • *The Client/developer has confirmed a suitably qualified security specialist has not been appointed. If this changes, the following needs to be met:* - *A SQSS to deliver compliant security needs assessment before the end of concept design.*

	Credit	Available	Targeted	Potential	Comments
					- *Design drawings to confirm security recommendations have been implemented.*
e1	Security rating scheme - Exemplary credit	1	0	0	**Security rating scheme - Exemplary credit (1 credit)** **Targeted – No** A compliant risk-based security rating scheme has been used. The performance against the scheme has been confirmed by independent assessment and verification. *The Security of site and building credit must first be achieved for the exemplary credit to be awarded.* **<u>Comments & Actions</u>** • *This credit is not sought at this stage.* • *Project Team to confirm whether a compliant security rating scheme has been used.* • *Provide a copy of the security rating scheme certificate from design stage.*
		11	10	0	**Standard Health & Wellbeing Credit Total**
		2	0	0	**Exemplary Health & Wellbeing Credit Total**
		12.01	9.10	0.00	**% Health & Wellbeing Total (Standard + Exemplary)**
Energy (0.46 % per Credit)					
Ene 01 - Energy and carbon performance for regulated energy uses					
1	Calculated energy performance	9	6	0	**Calculated energy performance (9 credits)** **Minimum Standard to achieve 'Excellent' target rating the Energy Performance Ratio (EPR_{NC}) must be ≥ 0.4** **Targeted – Yes (6 credits)** Calculate the overall Energy Performance Ratio (EPR_{NC}). Must achieve ≥ 0.4 EPR_{NC}. BREEAM uses the following three metrics to determine the overall energy performance improvement: a. Demand – the building's demand for heating and cooling per unit floor area (kWh/m² per year)

	Credit	Available	Targeted	Potential	Comments
					b. Primary energy – energy consumption measured in primary energy per unit floor area (kWh/m² per year) c. Carbon emissions – carbon emissions arising from energy use per unit floor area ($kgCO_2e/m^2$ per year) Generate a BRUKL.inp file at the design stage, using an approved energy calculation software: - For Scotland: Non-domestic Technical Handbook 2023 - Section 6, Energy. **Comments & Actions** • *SBEM energy modelling is to be undertaken by an energy specialist, to deliver the BRUKL file to determine the credits.*
e1	Beyond zero net regulated carbon - Exemplary credit	3	0	0	**Comments & Actions** • *This credit is not sought due to high benchmarks.*
Ene 02 - Prediction of operational energy and carbon					
Pre-req	Minimum standard - No fossil fuels on-site	✔	✔		**Prerequisite: Minimum standard - No fossil fuels on-site** No fossil fuels will be used by the building in operation.
1	Predictive energy modelling process	5	5	0	**Predictive energy modelling process (5 credits)** **Targeted – Yes** *One credit – Energy strategy* **Completed BEFORE the end of RIBA Stage 2** Define an energy strategy for the building at the concept design stage that describes qualitatively how the operational energy and carbon performance of the building will be minimised. *Three credits – Predictive energy modelling* **Completed BEFORE the end of RIBA Stage 4** Estimate unregulated energy uses and occupancy patterns for the building:

Credit	Available	Targeted	Potential	Comments
				Significant energy end uses that will be present in the building must be identified. As a minimum the following end uses should be considered: a. Energy use for lighting not covered by building regulations b. Energy use for lifts and escalators c. Energy use for small power d. Energy use for catering e. Energy use for server rooms f. Energy use for domestic hot water g. Energy use for any other types of unregulated plant and equipment – e.g., commercial refrigeration, medical equipment etc. h. Energy use for industrial process load Construct a detailed energy model during the technical design stage and undertake sensitivity analysis and scenario modelling to explore the impact of key parameters and assumptions on energy consumption: The following operational assumptions should be considered when selecting input variables for the sensitivity analysis: a. The efficiency of major energy consuming components b. Alternative system configurations and control strategies c. Occupancy density and hours of use d. Management and occupant behaviour e. Current and future weather scenarios The results of the sensitivity analysis should be used to inform the development of scenarios that reflect the likely energy performance range for the building. The scenarios must include: a. A central case scenario which represents the most reasonable assumptions about occupancy, fabric and building system efficiencies and control strategies. b. A high energy consumption scenario based on uncertainties relating to key input parameters which result in higher energy consumption. c. A low energy consumption scenario based on uncertainties relating to key input parameters which result in lower energy consumption.

Credit	Available	Targeted	Potential	Comments
				Predict annual operational energy consumption in use by fuel type for the building based on the scenario modelling. The modelling must be updated at the post-construction stage to account for any changes to the building specification: The predicted annual operational energy consumption for the building must be based on the scenario modelling results and be higher than that for central case scenario. How high the predicted energy performance should be set above the central case scenario should be informed by the range of the scenario modelling results, the extent to which risks of underperforming in use have been mitigated, and previous experience with other similar projects. An uncertainty margin of 25% over the central case scenario should be used as a default unless a lower modelling margin is recommended by a suitably qualified energy modeller in which case the margin used must be justified in the energy modelling report. An energy modelling report must be produced covering the following: a. The approach to modelling the building fabric, HVAC systems, and control strategies b. Sources of the information for the assumptions and inputs about occupancy patterns and unregulated energy loads c. The levels of uncertainty that can be ascribed to the key assumptions and inputs d. The selection of input parameters for the sensitivity analysis and scenario modelling e. The energy modelling margin and any justification. *One credit – Risk assessment and mitigation* Achieve the predictive energy modelling credits. Highlight any significant design, technical, and process risks that might prevent the buildings achieving energy performance target and indicate how these risks will be mitigated throughout the construction and commissioning process.

Credit	Available	Targeted	Potential	Comments
				The risk assessment should consider situations where the design assumptions and operational situation could have a significant negative impact on energy consumption in use. Risks to be considered (where relevant) include: a. Product specification and the management of value engineering decisions b. Construction quality c. System installation considerations, particularly for complex or novel systems d. Appropriate commissioning of servicing systems e. Ensuring that end users understand how to operate the building as intended. Options for mitigating these risks include: a. Product specification and the management of value engineering decisions –Contractual requirements relating to changes to the design specification. b. Construction quality – Achieving the Testing and inspecting building fabric credit in Man 04. c. System installation considerations, particularly for complex or novel systems – The use of experienced installers and contractors. d. Appropriate commissioning of servicing systems – Achieving the Commissioning building services credit in Man 04 and/or the In-use commissioning credit in Man 05. e. Ensuring that end users understand how to operate the building as intended – Achieving the Handover credit in Man 04. **Comments & Actions** • *SRE have been appointed to provide this service.* • *Project Team to deliver an energy strategy for the building.* • *Project Team to appoint a suitably qualified energy specialist to undertake Predictive Energy modelling in line with CIBSE TM 54.* • *The energy modelling report must include a risk assessment.*

	Credit	Available	Targeted	Potential	Comments
2	Predicted operational energy performance score	7	4	0	**Predicted operational energy performance score (7 credits)** **Minimum Standard to achieve 'Excellent' target rating the Operational Energy Performance score (OEP_{NC}) must be ≥ 0.4286** **Targeted – Yes (4 credits)** Achieve the predictive energy modelling credits. Credits are awarded based on the Operational Energy Performance score for New Construction (OEP_{NC}). **Comments & Actions** • *Project Team and energy specialist to deliver the predictive energy modelling report to determine the credit.* • *SRE have been appointed to provide this service.*
e1	Disclosing an in-use energy performance target - Exemplary credit	1	0	0	**Disclosing an in-use energy performance target - Exemplary credit (1 credit)** **Completed BEFORE practical completion on site** **Targeted – No** An in-use energy performance target has been disclosed to stakeholders and been made publicly available prior to practical completion. **Comments & Actions** • *This credit is not sought at this stage.* • *Client/developer to confirm whether in-use energy performance target will be disclosed to stakeholders and made publicly available prior to practical completion.*
e2	Third-party validation of predictive energy modelling - Exemplary credit	1	0	0	**Third-party validation of predictive energy modelling - Exemplary credit (1 credit)** **Targeted – No** The predicted energy consumption modelling results have undergone third-party validation. **Comments & Actions** • *This credit is not sought at this stage.* • *Project Team to confirm that the energy modelling will be undertaken by a suitably qualified third party.*

	Credit	Available	Targeted	Potential	Comments
					• *Energy specialist to provide energy model validation report.*
e3	Preparing for in-use measurement of energy consumption - Exemplary credit	1	0	0	**Comments & Actions** • *This credit is not sought at this stage.*
e4	Commitment to measure energy consumption in-use - Exemplary credit	1	0	0	**Comments & Actions** • *This credit is not sought at this stage.*
Ene 03 - Energy monitoring					
1	Energy monitoring by end-use	1	1	0	**Energy monitoring by end-use (1 credit)** **Minimum standard to achieve 'Very Good' target rating** **Targeted – Yes** Identify the energy sources that will be used by the building and estimate the annual energy consumption for the following: a. Grid supply electricity b. Grid supply gas c. District heating d. District cooling e. Renewable electricity generated on-site. Energy monitoring is installed that allows 90% of the estimated annual energy consumption for each energy source to be assigned to an end-use category. As a minimum the following end-uses must be considered, where present: a. Space heating and cooling generators b. Hot water generator c. Fans for mechanical ventilation, space heating or cooling d. Pumps for distribution heating or cooling e. Commercial scale refrigeration or cold storage f. Internal lighting g. External lighting h. Controls and telecommunications i. IT equipment and small plug-in loads j. Internal transport (lifts and escalators)

	Credit	Available	Targeted	Potential	Comments
					Renewable electricity generated on-site and exported from the building must be separately monitored. There is an energy metering system appropriate for the size of the building: a. For buildings with a gross internal area >1000 m², the energy meters are connected to an energy monitoring and management system. b. For buildings with a gross internal area < 1000 m², the energy meters are either: i. Connected to an appropriate energy monitoring and management system. OR ii. Are accessible meters with pulsed outputs or other open protocol communication outputs. Those responsible for monitoring the buildings energy consumption can clearly identify the end-use category covered by each meter. **Comments & Actions** • *MEP to confirm that energy metering systems will be specified and installed in line with the above requirements and that an appropriated energy monitoring and management system will be installed.* • *MEP to deliver the specification for the energy monitoring system and/or meters.*
2	Energy monitoring for different occupiers and functional areas	1	1	0	**Energy monitoring for different occupiers and functional areas (1 credit)** **Targeted – Yes** Energy monitoring is installed that allows energy consumption to be assigned to separately tenanted or occupied areas and to relevant functional areas within the building. Identify units or areas in the building with different tenants or occupiers, OR, where the building is designed for a single occupancy, different functional areas. Devise an energy metering strategy that ensures that different occupants or functional areas are separately monitored where it is technically feasible and cost effective to do so.

	Credit	Available	Targeted	Potential	Comments
					For this issue metering is considered cost effective where the cost of installing a sub-meter is lower than the energy cost savings arising from improved energy management over the expected lifetime of the building. There is an energy metering system appropriate for the size of the building: a. For buildings with a gross internal area > 1000 m², the energy meters must be connected to an energy monitoring and management system. b. For buildings with a gross internal area < 1000 m², the energy meters are either: i. Connected to an appropriate energy monitoring and management system. OR ii. Are accessible meters with pulsed outputs or other open protocol communication outputs. Those responsible for monitoring the buildings energy consumption can clearly identify the functional or occupier area covered by each meter. **Comments & Actions** • *MEP to confirm that energy metering systems will be specified and installed in line with the above requirements and that an appropriated energy monitoring and management system will be installed.* • *MEP to deliver the specification for the energy monitoring system and/or meters.* • *MEP to deliver floor plans showing functional or tenanted areas, where applicable.*
Ene 04 - Low carbon design					
1	Building form optimisation	1	1	0	**Building form optimisation (1 credit)** **Completed BEFORE end of RIBA Stage 2** **Targeted – Yes** The project team carries out an analysis of the site and proposed development during the Concept Design stage to explore the effect of building form on energy demand. Demonstrate that the analysis has informed the building design and will lead to a reduction in building energy consumption in use.

	Credit	Available	Targeted	Potential	Comments
					Comments & Actions • *A suitable member of the Project Team to deliver a compliant building form analysis report.* • *Drawings to show how the report has influenced the final design.*
2	Fabric performance optimisation	2	2	0	**Fabric performance optimisation (2 credits)** **Targeted – Yes** The project team carries out an analysis of the proposed development to explore the impact of alternative fabric specifications on the building's demand for heating and cooling. **One credit:** 5% reduction in building energy demand AND implement fabric performance measures which reduce the overall building heating and cooling energy demand by ≥5% compared to minimum values set by building regulations. OR **Two credits**: 10% reduction in building energy demand AND implement fabric performance measures which reduce the overall building heating and cooling energy demand by ≥10% compared to minimum values set by building regulations **(Targeted).** OR **Two credits**: Fabric performance has been optimised. Demonstrate that the fabric specification has minimised the demand for heating and cooling **(Targeted).** The analysis to reduce energy demand from heating and cooling must consider the following: i. Fabric insulation ii. Thermal mass to store heat or coolth iii. Air tightness iv. Solar gains **Comments & Actions** • *Project Team to confirm they will undertake an analysis of fabric performance.*

	Credit	Available	Targeted	Potential	Comments
					• *Energy modelling to demonstrate the reduced energy demand for heating and cooling arising from the proposed development.*
3	Low and zero carbon energy generation technologies	2	2	0	**Low and zero carbon energy generation technologies (2 credits)** **Targeted – Yes** *One credit – Installation of LZC energy generation technologies* One or more eligible LZC energy generation technologies have been installed by competent installers. *One credit – Meeting LZC energy generation targets* Achieve the Installation of LZC energy generation technologies credit. The energy generated by the installed LZC energy generation technologies meet the following targets: a. Where photovoltaic (PV) panels are the only LZC energy generation technology installed, the electricity generated must: i. Be equal to, or exceed, that generated by reference PV panels covering 50% of the ground floor area. OR ii. Account for ≥ 60% of the buildings annual electricity consumption. b. Where only LZC energy generation technologies other than PV panels are installed, the energy generated must: i. Be equal to, or exceed, 137 kWh/year/m² of ground floor area. OR ii. Meet ≥ 60% of the buildings annual demand for the relevant energy source.

	Credit	Available	Targeted	Potential	Comments
					c. Where the installed LZC energy generation technologies include both PV panels and other LZC energy generation technologies, selected generation targets as listed in 11.a and 11.b should be used in conjunction scaled proportionally to the amount of electricity generated by each technology. **Comments & Actions** • *SRE have been appointed to undertake LZC technologies study.* • *Drawings and technical specifications of LZC technologies proposed for the development required.*
Ene 06 - Energy efficient systems					
1	Energy efficient systems	2	2	0	**Energy efficient systems (2 credits)** **Targeted – Yes** Identify in-scope systems of unregulated energy demand. i.e. Building energy consumption resulting from building services and fittings that are not generally covered by building regulations and are not included in the scope of the Ene 01 assessments, unless one of the following apply: 1. They are part of an industrial process. 2. They provide temporary services e.g., external lighting for theatrical, stage, and local display installations. 3. They are only used when maintenance work is being carried out. 4. They are only used in an emergency. 5. There are overriding safety, security or accessibility requirements that prevent energy efficiency criteria being met by any relevant compliance routes. 6. Existing systems are used in place of new systems (due to the reduction in embodied carbon). Estimate the expected annual energy consumption by in-scope systems. Some include: a. External lighting **(Assumed)** b. Cold storage c. Lifts and escalators d. Swimming pools e. Commercial laundries f. Cooling systems in server rooms

Credit	Available	Targeted	Potential	Comments

Determine the number of credits available using Table 6.7:

In-scope unregulated energy using systems / regulated energy use (%)	Credits available
No in-scope equipment OR Energy consumption of in-scope equipment is not significant	Issue filtered out
< 10%	1
≥ 10% - 20%	2
≥ 20% - 30%	3
≥ 30% - 40%	4
≥ 40% - 50%	5
≥ 50% - 60%	6
≥ 60% - 70%	7
≥ 70% - 80%	8
≥ 80%	9

Determine in-scope systems that are energy efficient by one of the following:

a. Where the system is more energy efficient than that of a standard version of the system
b. Where the systems meet specific “deemed to comply” energy efficiency requirements

OPTION A: Exceeding the standard version
You must demonstrate that the energy performance of the actual system achieves a meaningful reduction in energy consumption compared to a standard version.

A standard system is defined as being a system that:
1. Has energy using components with energy efficiency levels that are typical for the component types.
2. Has not been designed to optimise energy consumption.
3. Has only energy efficient features and controls that are typical for the system type

OPTION B: “Deemed to comply”
This is an alternative compliance route that is available for the following types of system:
g. External lighting **(Assumed)**
h. Cold storage

	Credit	Available	Targeted	Potential	Comments
					i. Lifts and escalators j. Swimming pools k. Commercial laundries l. Cooling systems in server rooms Deemed to comply requirements: *External lighting* 1. The average initial luminous efficacy across all in-scope external lighting systems within the construction zone achieves ≥ 70 luminaire lumens per circuit watt. 2. All external light fittings are automatically controlled to prevent operation during daylight hours and are fitted with presence detection in areas of intermittent pedestrian traffic **Comments & Actions** • *Project Team to confirm that a meaningful reduction in energy reduction will be demonstrated for all relevant energy efficient systems on site.*
Ene 08 - Installed controls					
1	Installed controls	2	1	0	**Installed controls (2 credits)** **Targeted – Yes (1 credit)** Determine the number of installed controls points available based on the installed HVAC services and relevant system details. Determine the number of installed controls points achieved based on the functionality of the controls. The number of credits awarded is determined by the proportion of available installed controls points that are achieved. ***One credit strategy: 40-55% available points*** *Space Heating (Air system)* - *Room / Zone Level Temperature Control - Heating output controlled at room/zone level.*

	Credit	Available	Targeted	Potential	Comments
					- *Variable Speed Fans - Variable speed control of fans* - *Outside Temperature Sensor – Weather compensation* *Space Cooling (Air conditioning / Comfort cooling)* - *Room / Zone Level Cooling Control - Cooling output controlled at room/zone level* - *Variable Control Cooling Plant - Inverter / variable capacity compressors* - *Variable Speed Fans - Cooling distribution airflow modulation* *Mechanical Ventilation* - *Central Air Quality Sensors (CO_2) - Ventilation controlled centrally based on IAQ* - *Multistage AHU Control – Basic staged control* - *Heat Recovery (Sensor Controlled) - Heat recovery linked to exhaust sensors* **Comments & Actions** • *Project Team and MEP to confirm the specification for HVAC systems and controls will support the available points required for 1 credit.* • *Relevant contracts and drawings will be provided in support.*
		32	25	0	**Standard Energy Credit Total**
		7	0	0	**Exemplary Energy Credit Total**
		24.92	14.00	0.00	**% Energy Total (Standard + Exemplary)**
Transport (0.71 % per Credit)					
Tra 01 - Transport assessment and travel plan					
1	Transport assessment and travel plan	2	2	0	**Transport assessment and travel plan (2 credits)** **Completed BEFORE end of RIBA Stage 2** **Targeted – Yes** Conduct a site-specific transport assessment by the end of the Concept Design stage. Develop a site-specific travel plan following the transport assessment recommendations by the end of the Concept Design stage.

	Credit	Available	Targeted	Potential	Comments
					Demonstrate that the travel plan can guide the appropriate implementation of sustainable transport measures during the design, construction, and occupancy stages and be supported by the building's management during operation. **Comments & Actions** • *Mode - Project Team to confirm Transport Assessment and Travel Plan will be provided before the end of Concept Design.*
Tra 02 - Sustainable transport measures					
Pre-req	Prerequisite Transport assessment and travel plan	✔	✔		**Prerequisite: Transport assessment and travel plan** Complete a transport assessment and travel plan in line with Tra 01. If these documents are completed after Concept Design, they can still be used to meet this prerequisite.
1	Transport options implementation	10	8	0	**Transport options implementation (10 credits)** **Targeted – Yes (8 credits), Potential (1 credits)** Building type: Building type A Credits are awarded based upon the site's Accessibility Index (AI) and the implementation of any of the following: **Targeted:** 1. Provide up-to-date local public transport information in a convenient. accessible area to help building users plan journeys by public transport – *1 point.* 2. Existing amenities - Ensure at least three relevant amenity types within less than or equal to 500 m of proximity **(Assumed – Subway, Nuffield Health, Post box). –** *1 point* 3. New or enhanced amenities - Provide relevant and accessible new amenities within ≤500m of the building entrance. These can be an enhanced existing amenity, or a new type of amenity. a. **2 Points:** at least one new or enhanced amenity type **(Assumed – outside space on site). –** *2 points* *Suitable outdoor open space – allows building users to sit outside and take a break. The space must be suitably sized for the number of people likely to use it and must not form part of the public highway.* b. **3 Points:** Two or more new or enhanced amenities type.

Credit	Available	Targeted	Potential	Comments
				4. Install at least the minimum number of cycle storage spaces **(Targeted). –** *1 point* a. 4 cycle spaces for staff as a minimum b. Provide 1 cycle space per 10 staff c. Fixed structure, covered, appropriate surveillance, adequate lighting. 5. Car sharing **(Targeted)** – *1 point*: a. Set up a car sharing group or facility to promote car sharing among building users. b. Actively market the car sharing scheme and provide communication channels that make it easy to join and use. c. Provide priority spaces for car sharers, allocating ≥ 5% of the total staff car parking capacity. d. Ensure that car share spaces are placed near the building entrance as the requirements of other types of priority parking (disabled, etc.) allow. 6. Provide electric vehicle charging infrastructure a. **1 Point:** 10% parking spaces are fitted with ≥ 7 kW EV charging points AND 20% parking spaces have necessary infrastructure for future demand **(Not targeted – see b.)** b. **2 Points:** Requirements for 1 Point are met AND, EITHER EV charging score of ≥20 is achieved, OR ≥30% of parking spaces must be active EV charging (each with a charging point ≥7kW) **(Targeted)** – *2 points* **<u>Not targeted:</u>** 7. The existing PTAI calculated is ≥ 8 – **the PTAI is 5.41.** 8. Improve the existing PTAI by at least 1.00, for example: a. Negotiating with local public transport companies to increase service provision for the development. b. Providing a diverted bus route, a new bus stop, or similar. c. Providing a dedicated transport service, such as a bus route. 9. Pedestrian/cycle route improvements: a. Engage with the local authority at the earliest (brief) stage to review public cycle and pedestrian routes.

	Credit	Available	Targeted	Potential	Comments
					b. Agree on possible improvements to the local active travel network that supplement existing plans and are relevant to the site/project. c. Select at least one such improvement and carry it out. 10. Carry out one site-specific improvement measure in line with the travel plan not listed as an option in Tra 02. Submit this for BRE review. 11. Having supplied cycle storage space as per Option 7 above, provide building users with at least two of the following facilities: a. Showers - *1 shower for every 10 cycle spaces (minimum of 1); separate showers within gender specified facilities OR single shower cubicles and mixed-use changing-space.* b. Changing facilities - a*ppropriately sized for the number of users; private spaces for any gender; adequate space and storage is provided for clothing and equipment.* c. Lockers - *appropriately sized; adjacent to changing rooms; number of lockers is equal to number of cycle spaces required.* d. Drying spaces *(Where facilities are combined – e.g. showers and changing facilities – it must be possible for different people to use them at the same time if they are to count as more than one facility).* **(Not targeted) –** *1 point* **Comments & Actions** • *Project Team to confirm the transport options which will be implemented.*
		12	10	0	**Standard Transport Credit Total**
		0	0	0	**Exemplary Transport Credit Total**
		9.00	7.50	0.00	**% Transport Total (Standard + Exemplary)**
Water (0.75 % per Credit)					
Wat 01 - Water consumption					
1	Water consumption	5	3	0	**Water consumption (5 credits)** **Minimum standard to achieve one credit for 'Excellent' target rating must achieve 15% improvement over baseline** **Targeted – Yes (3 credits)** This issue assesses the efficiency of the domestic water-consuming components specified for the development.

Credit	Available	Targeted	Potential	Comments

Determine the water efficiency of all in-scope water-consuming components.

Determine the amount of recycled water expected from approved blackwater, greywater, and rainwater systems.

The number of credits awarded is determined by the percentage improvement in potable water use in litres per person per day for the actual building compared to that of a baseline building.

Information on the types of water-using components present in the building, and the number of each type of water-using component should be provided by the project team.

For this assessment, it is assumed a **≥ 45% improvement over baseline** is achievable.

Table 8.3: Baseline performance levels for water-consuming components

Water consuming component	**Baseline performance level**
WCs/toilet	6.0 litres effective flush volume
Urinal	8.75 litres/bowl/hour
Washbasin taps	10 litres/minute
Shower	12 litres/minute
Kitchen tap	10 litres/minute
Bath	200 litres
Dishwasher – Domestic sized	17 litres/cycle
Dishwasher – Commercial sized	8 litres/rack
Washing machine – Domestic sized	90 litres/use
Washing machine – Commercial sized	14 litres/kg
Waste disposal unit	17 litres/minute

Comments & Actions

- *Project Team to confirm that they will achieve a 45% improvement from the baseline water consumption.*
- *MEP to confirm domestic sanitaryware proposed and deliver specifications in line with the below recommendations.*

	Credit	Available	Targeted	Potential	Comments
					• *Assessor must be informed if water fittings quantity and/or flow rate will change.* *Consider the following performance levels when proposing Sanitaryware:* - *WCs/toilet ~ ≤ 4.5/3 L dual flush capacity* - *Urinals ~ ≤ N/a* - *Washbasin taps ~ ≤ 5.0 L* - *Showers ~ ≤ N/a* - *Kitchen tap (kitchenette) ~ N/a*
e1	Water consumption - Exemplary credit	1	0	0	**Comments & Actions** • *This credit is not sought due to high benchmarks.*
Wat 02 - Water monitoring					
Pre-req	Prerequisite - Water monitoring	✔	✔		**Prerequisite - Water monitoring** **Minimum Standard to achieve 'Good' target rating** A water meter with a pulsed or other open protocol output is installed on all potable water supplies entering the building.
1	Water monitoring	1	1	0	**Water monitoring (1 credit)** **Minimum Standard to achieve 'Good' target rating** **Targeted – Yes** A water meter with a pulsed or other open protocol output is installed on all potable water supplies entering the building. Water-consuming plant or building areas with significant water demand must be fitted with easily accessible sub-meters or have water monitoring equipment that is integral to the plant or area. A water monitoring system that is appropriate for the size of the building has been installed in accordance with the below: a. For buildings with a gross internal area ≥ 1000 m², the water meters are connected to a monitoring and management system. b. For buildings with a gross internal area < 1000 m², the water meters are either:

Credit		Available	Targeted	Potential	Comments
					i. Connected to an appropriate water monitoring and management system. ii. Accessible meters with pulsed outputs or other open protocol communication outputs Appropriate labelling is used to clearly identify the water uses and areas covered by each meter. **<u>Comments & Actions</u>** • *MEP to confirm that water meters will be specified in line with the above requirements.* *Water uses deemed to be significant and to be fitted with a sub-meter:* - *Common areas (e.g., covering the supply to toilet blocks).* - *Service areas (covering the supply to outlets within storage, delivery, waste disposal areas etc.).* - *Ancillary or separate buildings to the main development with a water supply.* - *All water consuming systems or building areas that are expected to account for more than 10% of the buildings total water demand must be considered when determining significant water uses.* *It is not recommended to install a sub-meter in the following cases:* - *Where a building has only one or two small sources of water demand (e.g. an office with sanitary fittings and a small kitchen).* - *Where the building has two sources of water demand, one significantly larger than the other, and the water consumption for the larger demand is likely to mask the smaller demand.*
Wat 03 - Water leak detection and prevention					
1	Leak detection system	1	1	0	**Leak detection system (1 credit)** **Targeted – Yes** Install a leak detection system capable of detecting a major water leak: a. On the utilities' water supply within the building, to detect any major leaks within the building. AND

	Credit	Available	Targeted	Potential	Comments
					b. Between the building and the utilities' water supply, to detect any major leaks between the utilities' supply and the building under assessment. The leak detection must be either: a. A permanent automated water leak detection system that alerts the building occupants to any leaks. OR b. An inbuilt automated diagnostic procedure for detecting leaks. **Comments & Actions** • *This credit is not sought at this stage.* • *MEP to confirm that a leak detection system will be installed in line with the above requirements.*
2	Flow control devices	1	1	0	**Flow control devices (1 credit)** **Targeted – Yes** Flow control devices that regulate the supply of water to each WC area or facility according to demand are installed. The following types of flow devices meet the criteria: a. A time controller, i.e. an automatic time switch device to switch off the water supply after a predetermined interval. b. A programmed time controller, i.e. an automatic time switch device to switch water on or off at predetermined times. c. A volume controller, i.e. an automatic control device to turn off the water supply once the maximum pre-set volume is reached. d. A presence detector and controller, i.e. an automatic device that switches water on and off, depending on the detection of occupancy or movement. e. A central control unit, i.e. a dedicated computer-based control unit for the overall management of a water control system, utilising some or all the types of control elements listed above. **Comments & Actions**

	Credit	Available	Targeted	Potential	Comments
					• *MEP to confirm whether flow control devices will be specified for each WC area, in line with the above.*
Wat 05 - Prediction of operational water consumption					
1	Predict operational water consumption	1	0	0	**Comments & Actions** • *This credit is not sought.*
e1	Disclosing an in-use water performance target and commitment to measure water consumption in-use - Exemplary credit	1	0	0	**Comments & Actions** • *This credit is not sought.*
		9	6	0	**Standard Water Credit Total**
		2	0	0	**Exemplary Water Credit Total**
		10.01	5.34	0.00	**% Water Total (Standard + Exemplary)**
Materials (1.14 % per Credit)					
Mat 01 - Building life cycle assessment					
1	Early design LCA and embodied carbon reporting	2	2	0	**Early design LCA and embodied carbon reporting (2 credits)** **Minimum Standard to achieve 'Excellent' target rating an LCA and embodied carbon reporting must be produced at ANY project stage** **Completed BEFORE end of RIBA Stage 2** **Targeted – Yes** Carry out an early design phase LCA calculation from the materials that the project incorporates into the building. The LCA must: a. Meet the requirements for tools and scope: i. Use an LCA tool recognised by BREEAM. ii. Early stage reporting (Concept Design) must be delivered no later than 20 working days after submitting for planning application. iii. Results must be submitted for all core environmental impact indicators.

	Credit	Available	Targeted	Potential	Comments
					iv. The following life cycle modules must be covered (based on EN 15978): a. Modules A1–A5: Product sourcing and construction stage. b. Modules B1–B5: Use stage (excluding B6–7). c. ModulesC1–C4: End-of-life stage. d. Module D:Considering benefits and loads beyond the system boundary. This is required unless EN 15804-A2 EPD data is not available for used products. v. All building elements must align with RICS Whole Life Carbon Assessment Standard, 2nd Edition. b. Include relevant options appraisals, including a baseline assessment. There are no requirements to carry out a specific number of options appraisals for the project. c. Be used as a basis for choosing design solutions and materials with the aim of achieving a low environmental impact. If an alternative solution with a lower environmental impact has not been chosen, then this must be justified. From the early design LCA results, report the embodied carbon emissions from materials used in the building. **Comments & Actions** • *SRE have been appointed to undertake an LCA for the Proposed Development during Concept Design.*
2	Technical design LCA and embodied carbon reporting	1	1	0	**Technical design LCA and embodied carbon reporting (1 credit)** **Completed BEFORE end of RIBA Stage 4** **Targeted – Yes** Carry out a technical design phase LCA calculation from the materials that the project incorporates into the building. The LCA must: a. Meet the requirements for tools and scope as stated above. b. Include at least one assessment showing the evolving design and specification at technical design. From the technical design LCA results, report the embodied carbon emissions from materials used in the building. **Comments & Actions**

	Credit	Available	Targeted	Potential	Comments
					• *Client/developer to appoint a suitable project team member to undertake an LCA for the Proposed Development during Technical Design.*
3	Post-construction LCA and embodied carbon reporting	2	2	0	**Post-construction LCA and embodied carbon reporting (2 credits)** **Targeted – Yes** Carry out a post-construction phase LCA calculation from the materials that the project incorporates into the building. The LCA must: a. Meet the requirements for tools and scope as stated above. b. Include as-built specification at post-construction. From the post-construction LCA results, report the embodied carbon emissions from materials used in the building. **Comments & Actions** • *Client/developer to appoint a suitable project team member to undertake an LCA for the Proposed Development at Post-Construction.*
4	Embodied carbon benchmark comparison	2	1	1	**Embodied carbon benchmark comparison (2 credits)** **Targeted – Yes** For relevant assessment and building types, compare the calculated embodied carbon emissions (modules A1-A5, B1-B5, C1-C4) against the benchmark (see Table 9.1). The comparison against the benchmark must use the latest embodied carbon calculation available: For interim design stage assessment: 1. Technical design LCA For final post-construction stage assessment: 2. Post-construction LCA Table 9.1: Number of credits achieved for each benchmark band **Benchmark Band** | **Credits** A | 2 credits + 1 exemplary credit B | 2 credits

	Credit	Available	Targeted	Potential	Comments
					<table><tr><td>C</td><td></td></tr><tr><td>D</td><td rowspan="2">1 credit</td></tr><tr><td>E</td></tr><tr><td>F</td><td rowspan="2">0 credits</td></tr><tr><td>G</td></tr><tr><td>Benchmark not applicable</td><td>Credits filtered out</td></tr></table> **Comments & Actions** • *Client/developer to appoint a suitable project team member to undertake an LCA at Technical Design AND Post-Construction, which confirms the embodied carbon benchmark band of >C.*
e1	Embodied carbon benchmark comparison - Exemplary credit	1	0	0	**Comments & Actions** • *This credit is not sought due to high benchmarks.*
e2	Third party verification - Exemplary credit	1	0	0	**Third party verification - Exemplary credit (1 credit)** **Targeted – No** A suitably qualified third party verifies the building LCA work. The suitably qualified third party must: 1. Produce a report describing how they have checked that the building LCA work accurately represents the designs under consideration during the: a. Early design phase, and b. Technical design phase, and c. Post-construction phase (only relevant if criteria for Post-construction LCA and embodied carbon reporting has been met) 2. Itemise in the report the checks made for each LCA option. 3. Include in the report details of their relevant skills and experience and a declaration of their third-party independence from the project client and design team. **Comments & Actions** • *Client/developer to appoint third party to verify LCA for Concept and Technical Design data.*

	Credit	Available	Targeted	Potential	Comments
					• *Client/developer to commit that third-party will be appointed to verify LCA at the Pot-Construction stage.* • *SRE can offer this service for an additional fee, if required*
e3	Embodied carbon public data disclosure - Exemplary credit	1	0	0	**Comments & Actions** • *This credit is not sought.*
Mat 02 - Environmental product declarations					
1	Product specification	1	1	0	**Product specification (1 credit)** **Targeted – Yes** Specify construction products with EPDs, for the significant material categories listed below, that achieve a total EPD points score of at least 20. Material categories: - Timber and timber-based products - Concrete or cementitious - Metal - Stone or aggregate - Clay-based - Gypsum - Glass - Plastic, polymer, resin, paint, chemicals, and bituminous - Animal fibre or skin, cellulose fibre - Other The score available for each material category is capped at 4. Therefore, you must present evidence which sufficiently covers as many significant materials as possible. **Comments & Actions** • *Prefer products with verified EPDs. Where these products are specified, copies of their EPD certificates to be provided at the design stage.*
Mat 03 - Responsible sourcing of construction products					

	Credit	Available	Targeted	Potential	Comments
Pre-req	Prerequisite Legally harvested and traded timber	✔	✔		**Prerequisite: Legally harvested and traded timber** **Minimum Standard to achieve ANY target rating** 100% of timber and timber-based products used on the project are 'Legal' and 'Sustainable' as per the UK Government's Timber Procurement Policy (TPP).
1	Enabling sustainable procurement	1	1	0	**Enabling sustainable procurement (1 credit)** **Completed BEFORE end of RIBA Stage 2** **Targeted – Yes** A sustainable procurement plan must be used by the design team to guide specification towards sustainable construction products. The plan must: a. Be in place before the end of Concept Design. b. Include sustainability aims, objectives, and strategic targets to guide procurement activities. Targets do not need to be achieved for the credit to be awarded at post-construction stage but justification must be provided for targets that are not achieved. c. Include a requirement for assessing the potential to procure construction products locally. There must be a policy to procure construction products locally where possible. d. Include details of procedures in place to check and verify the effective implementation of the sustainable procurement plan. e. The documented policy and procedure must be disseminated to all relevant internal and external personnel, and included within the construction contract to ensure that they are enforceable on the assessed project. In addition, if the plan is applied to several sites or adopted at an organisational level it must: a. Identify the risks and opportunities of procurement against a broad range of social, environmental, and economic issues following the process set out in ISO 20400:2017. **Comments & Actions** • *SRE have been appointed to deliver a compliant sustainable procurement plan before the end of concept design.*

	Credit	Available	Targeted	Potential	Comments
2	Measuring responsible sourcing	3	2	0	**Measuring responsible sourcing (3 credits)** **Targeted – Yes (2 credits)** Credits for this issue are awarded based on the proportion of responsible sourcing of materials (RSM) points achieved. To assess this issue there are up to four types of data needed for each product: - Material category - Responsible sourcing certification scheme (RSCS) or environmental management system (EMS) certifications - Product or material quantities (optional, route 2 only). To determine the number of credits that are achieved for responsible sourcing of construction products, the Mat 03 calculator must be completed with all the relevant information. For **2 credits** to be awarded, data for building materials must cover the minimum scope level requirements: - Superstructure, AND; - Internal finishes - Substructure and hard landscaping ≥ 20% of available points for RSM must be achieved. Calculation of the above requires completion of the Mat 03 Calculator tool by the BREEAM assessor, based on materials information (including materials schedule, drawings and responsible sourcing certificates) provided by the Project Team (specifically the Main Contractor or Architect). **Comments & Actions** • *Prefer products from verified manufacturers who operate with EMS certification or RSM certificates.*
e1	Measuring responsible sourcing - Exemplary credit	1	0	0	**Comments & Actions** • *This credit is not sought due to high benchmarks.*

	Credit	Available	Targeted	Potential	Comments
Mat 04 - Durability and resilience					
1	Durability and resilience	1	1	0	**Durability and resilience (1 credit)** **Targeted – Yes** *Protecting vulnerable parts of the building from damage* Protection measures are incorporated into the building's design and construction to reduce damage to the building's fabric or materials in case of accidental or malicious damage occurring. These measures must provide protection against: a. Negative impacts of high user numbers in relevant areas of the building (e.g. corridors, lifts, stairs, doors etc.). b. Damage from any vehicle or trolley movements within 1 metre of the internal building fabric in storage, delivery, corridor and kitchen areas. c. External building fabric damage by a vehicle. Protection where parking or manoeuvring areas are within 1 metre of the building façade and where delivery areas or routes are within 2 metres of the façade, i.e. specifying bollards or protection rails. d. Potential malicious damage to building materials and finishes, in public and common areas where appropriate. *Protecting exposed parts of the building from material degradation* 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: a. The element or product achieving an appropriate quality or durability standard or design guide. Use the BREEAM manual or refer to BS 7543:2015(93) as the default appropriate standard or use relevant equivalent standards. OR b. A detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors. Produce an access to the roof and façade strategy 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.

	Credit	Available	Targeted	Potential	Comments
					Comments & Actions • *Project team to provide design drawings illustrating vulnerable parts of the building.* • *Architect to prepare drawings/specification confirming the durability measures specified.* • *Architect to prepare drawings/specification measures in paces to limit degradation effects.* • *Project team/Architect to deliver Roof and façade access strategy and design drawings showing measures to prevent water damage, ingress and ponding.* *Examples of suitable durability measures:* - *Bollards, barriers or raised kerbs to delivery and vehicle drop-off areas* - *Robust external wall construction, up to 2m high* - *Corridor walls specified to Severe Duty (SD) as per BS 5234-2* - *Protection rails to walls of corridors* - *Kick plates or impact protection (e.g. trolleys) on doors* - *Hard-wearing and easily washable floor finishes in heavily used circulation areas* - *Door stoppers to prevent door handles damaging walls* - *Designing out the risk without the need for additional materials specification to protect vulnerable areas.* *Designing to prevent water damage* - *Carefully consider the drainage mechanisms of the façade and roof* - *Prevent staining, detrimental oxidation, ponding, rot, ingress, penetration or any other deleterious effect.*
Mat 05 - Material efficiency					
1	Material efficiency	1	1	0	**Material efficiency (1 credit)** **Completed BEFORE end of RIBA Stage 1 and UPDATED at every project stage (RIBA Stage 2, 3, 4, 5 and 6)** **Targeted – Yes** At the Preparation and Brief and Concept Design stages, set targets and report on opportunities and methods to optimise the use of materials. This must be done for each of the following stages:

Credit		Available	Targeted	Potential	Comments
					• Preparation and Brief • Concept Design • Developed Design • Technical Design • Construction Develop and record the implementation of material efficiency during: • Developed Design • Technical Design • Construction Report the targets and actual material efficiencies achieved. **<u>Comments & Actions</u>** • *Architect to provide the Material Efficiency report for RIBA stages 1, 2 and 3 and 4.* • *Main Contractor to supply the report for RIBA Stage 5 (Construction).* *Examples of suitable material efficiency design measures can include:* - *Increasing the utilisation factor of structural members* - *Designing to standard material dimensions to reduce off-cuts and waste on site* - *Removing redundant materials from the design* - *Using materials that can be recycled or reused at the end of their service life* - *Making use of recycled or reclaimed materials* - *Designing for deconstruction and material reuse* - *Using pre-fabricated elements where appropriate to reduce material waste* - *Consider using an 'exposed thermal mass' design strategy to reduce finishes* - *Avoiding over-specification of predicted loads* - *Using lightweight structural design strategies* - *Making use of bespoke structural elements where this will reduce overall material use* - *'Rationalisation' of structural elements* - *Optimising the foundation design for embodied environmental impact.*
		14	12	1	**Standard Materials Credit Total**

	Credit	Available	Targeted	Potential	Comments
		4	0	0	**Exemplary Materials Credit Total**
		21.50	15.00	1.25	**% Materials Total (Standard + Exemplary)**
Waste (0.70 % per Credit)					
Wst 01 - Construction waste management					
1	Pre-demolition audit	1	1	0	**Pre-demolition audit (1 credit)** **Completed BEFORE end of RIBA Stage 2** **Targeted – Yes** Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition. This must be used to determine whether refurbishment or reuse is feasible and, in the case of demolition, to maximise the recovery of material for subsequent high grade or value applications. The audit must cover the following: a. Be carried out at Concept Design stage by a competent person prior to strip-out or demolition works b. Guide the design, consider materials for reuse and set targets for waste management c. Engage all contractors in the process of maximising high-grade reuse and recycling opportunities Make reference to the audit in the resource management plan (RMP). A compliant RMP defines: 1. A target benchmark for resource efficiency, i.e. m³ of waste per 100 m² or tonnes of waste per 100 m² 2. Procedures and commitments to minimise non-hazardous waste in line with the target benchmark 3. Procedures to minimise hazardous waste 4. A waste-minimisation target and details of waste minimisation actions to be undertaken 5. Procedures to estimate, monitor, measures and report on hazardous and non-hazardous site waste and demolition waste, where relevant, arising from work carried out by the principal contractor and all subcontractors. Waste data obtained from licensed external waste contractors needs to be reliable and verifiable, e.g. using data from EA/SEPA/EA Wales/NIEA waste return forms or from a PAS 402 compliant company

	Credit	Available	Targeted	Potential	Comments
					6. Monthly reporting of all construction waste data throughout the project checked against what would be expected based on the stage of the project, invoices, etc., to validate completeness of waste reporting data 7. Procedures to sort, reuse and recycle construction waste into defined waste groups, either on site or through a licensed external contractor 8. Procedures to review and update the plan 9. The name or job title of the individual responsible for implementing the above Compare actual waste arisings and waste management routes (e.g. reused, recycled, recovered and disposed) used with those forecast and investigate significant deviations from planned targets. **Comments & Actions** • *Project Team to provide a Pre-demolition audit before the end of Concept Design – Project team to confirm if there is potential to reuse existing structural components on-site.*
2	Construction resource efficiency	3	3	0	**Construction resource efficiency (3 credits)** **Targeted – Yes** Prepare a compliant Resource Management Plan (RMP) covering: a. Non-hazardous waste materials (from on-site construction and dedicated off-site manufacture or fabrication), including demolition and excavation waste. b. Accurate data records on waste arisings and waste management routes. Meet or improve upon the benchmarks below: - One credit awarded where the amount of waste generated per 100m^2 is ≤13.3 (m^3) or ≤11.1 (tonnes) - Two credits awarded where the amount of waste generated per 100m^2 is ≤7.5 (m^3) or ≤6.5 (tonnes) - **Three credits awarded where the amount of waste generated per 100m^2 is ≤3.4 (m^3) or ≤3.2 (tonnes) – Targeted** - Exemplary level awarded where the amount of waste generated per 100m^2 is ≤1.6 (m^3) or ≤1.9 (tonnes) **Comments & Actions**

<table>
<tr><th></th><th>Credit</th><th>Available</th><th>Targeted</th><th>Potential</th><th>Comments</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>Client/developer to appoint and deliver compliant resource management plan. Where the main contractor is not yet appointed, letter of commitment may be used to award the credits.</td></tr>
<tr><td>3</td><td>Diversion from landfill</td><td>1</td><td>1</td><td>0</td><td>Diversion from landfill (1 credit)
Targeted – Yes
Meet, where applicable, the diversion from landfill benchmarks in Table 10.2 for non-hazardous construction waste and demolition and excavation waste generated.

Table 10.2: Diversion from landfill benchmarks
<table>
<tr><th>BREEAM Credits</th><th>Type of waste</th><th colspan="2">Amount of waste diverted from landfill</th></tr>
<tr><td rowspan="3">One credit</td><td>Construction</td><td>70%</td><td>80%</td></tr>
<tr><td>Demolition</td><td>80%</td><td>90%</td></tr>
<tr><td>Excavation</td><td>N/A</td><td>N/A</td></tr>
<tr><td rowspan="3">Exemplary level</td><td>Construction</td><td>85%</td><td>90%</td></tr>
<tr><td>Demolition</td><td>85%</td><td>95%</td></tr>
<tr><td>Excavation</td><td>95%</td><td>95%</td></tr>
</table>
Sort waste materials into separate key waste groups, either on-site or through a licensed contractor for recovery.

<u>Comments & Actions</u>
Client/developer to appoint and deliver compliant resource management plan, including the relevant commitments/targets to divert waste from landfill. Where the main contractor is not yet appointed, letter of commitment may be used to award the credits.
Ensure procedures in place for sorting construction waste into key waste groups.</td></tr>
<tr><td>e1</td><td>Construction waste management - Exemplary credit</td><td>1</td><td>0</td><td>0</td><td>Construction waste management - Exemplary credit (1 credit)
Targeted – No
Non-hazardous construction waste generated, excluding demolition and excavation waste, is less than or equal to the exemplary level resource efficiency benchmarks in Table 10.2.</td></tr>
</table>

	Credit	Available	Targeted	Potential	Comments
					The percentage of non-hazardous construction, demolition, and excavation waste (if relevant) diverted from landfill meets or exceeds the exemplary level percentage benchmarks in Table 10.2. All key waste groups (outlined below) for diversion from landfill are covered in the RMP: - Bricks; Concrete; Insulation; Packaging; Timber; Electrical and electronic equipment; Oils; Asphalt and tar; Tiles and ceramics; Inert; Metals; Gypsum; Binders; Plastics; Soils; Liquids; Hazardous; Floor coverings (soft); Architectural feature; Mixed or other 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. **Comments & Actions** • *This credit is not sought at this stage due to high benchmarks.*
Wst 02 - Use of recycled and sustainably sourced aggregates					
Pre-req	Prerequisite Pre-demolition audit	✔	✔		**Prerequisite Pre-demolition audit** If demolition occurs on site, to encourage the reuse of site-won material on site, complete a pre-demolition audit of any existing buildings, structures or hard surfaces in accordance with Wst 01 Construction waste management.
1	Project sustainable aggregate points	1	0	0	**Project sustainable aggregate points (1 credit)** **Targeted – No** The following data is required for all aggregate uses and types on the project: - Quantity (tonnes) - The region in which the aggregate source is located - Distance (km) travelled by all aggregates by transport type - The use/application to the project Credits are awarded based on the calculated Project Sustainable Aggregate Points achieved:

Credit	Available	Targeted	Potential	Comments
				Table 10.4: Credits available relating to the Project Sustainable Aggregate Points **BREEAM Credits** | **Project Sustainable Aggregate Points** 1 credit | 3.5–6 1 exemplary credit | > 6 **Methodology** 1. Identify all aggregate uses and aggregate type – 'Recycled' aggregates are those derived from reprocessing materials previously used in construction. 2. Determine the quantity in tonnes for each. Include all aggregates that represent ≥5% of overall aggregate demand. 3. Identify the region of each aggregate type. 4. Determine the distance (km) travelled by all aggregates from source to site. 5. The BREEAM Platform will determine the points achieved based on the above. **Comments & Actions** • *This credit is not sought due to high benchmarks.* • *Project Team confirmed that aggregate types will be recycled on-site. Types, quantities (tonnes) and applications to be determined by Structural/Civil Engineer.* *Examples: Where applicable, potential aggregate applications on the project must be accounted for* - *Backfill to basement walls; Sub-base and base courses for hard landscape and local roads.* - *Foundations, frame, floors as ready-mix concrete or precast concrete* - *Access roads, and external circulation areas* - *Bedding for surface water drainage and sewage pipes installed in external areas* - *Bedding for concrete paving stones, natural stone or concrete blocks in external circulation areas* - *Piling mats; Sub-base and base courses for hard landscape and local roads; Utility trench reinstatement*

	Credit	Available	Targeted	Potential	Comments
e1	Project sustainable aggregate points - Exemplary credit	1	0	0	**Comments & Actions** • *This credit is not sought due to high benchmarks.*
Wst 03 - Operational waste					
1	Operational waste	1	1	0	**Operational waste (1 credit)** **Targeted – Yes** Provide a dedicated space, identified by clear signage, for the segregation and storage of operational recyclable waste. The space is: a. Clearly labelled for long-term durability, to assist with segregation, storage and collection of the recyclable waste streams. b. Accessible to building occupants or facilities operators for the deposit of materials and collections by waste management contractors. c. Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from daily or weekly operational activities and occupancy rates Determining the capacity appropriate to the building type & size: **Buildings < 5000 m²** - At least 2 m² per 1000 m² of net floor area OR - 4 m² per 1000 m² of net floor area where commercial-scale catering is provided **Buildings ≥ 5000 m²** - A minimum of total of 10 m² **(Assumed)** OR - 20 m² where commercial-scale catering is provided Note: The net floor area should be rounded up to the nearest 1000 m². For consistent and large amounts of operational waste generated, provide:

	Credit	Available	Targeted	Potential	Comments
					a. Static waste compactors or balers; situated in a service area or dedicated waste management space. b. Vessels for composting suitable organic waste OR adequate spaces for storing segregated food waste and compostable organic material for collection and delivery to an alternative composting facility. c. A water outlet provided adjacent to or within the facility for cleaning and hygiene purposes where organic waste is to be stored or composted on site. **Comments & Actions** • *10 m^2 of refuse space should be provided given the development's GIA = ≥5000m^2.* • *Project Team has confirmed waste refuse store adequate for the size of the development will be provided.* • *Design drawings to show that this has been incorporated into the Proposed Development have been provided.*
Wst 05 - Adapting to climate change					
1	Resilience of structure, fabric, building services and renewables installation	1	1	0	**Resilience of structure, fabric, building services and renewables installation (1 credit)** **Completed BEFORE end of RIBA Stage 2 and provide an update BEFORE end of RIBA Stage 4** **Targeted – Yes** Conduct a climate change adaptation strategy appraisal using a systematic risk assessment to identify the impact of expected extreme weather conditions arising from physical climate risks and climate change on the building and vulnerabilities over its projected life cycle. The assessment covers the installation of building services and renewable systems, as well as structural and fabric resilience aspects and includes: a. Hazard identification b. Hazard assessment c. Risk estimation d. Risk evaluation e. Risk management Develop recommendations or solutions based on the climate change adaptation strategy appraisal, before or during Concept Design, that aim to mitigate the identified impact.

	Credit	Available	Targeted	Potential	Comments
					Provide an update during Technical Design demonstrating how the recommendations or solutions proposed at Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing by the assessor. **Comments & Actions** • *Project Team/Architect to provide a copy of a compliant climate change adaptation strategy appraisal before the end of Concept Design, AND an update required at Technical Design.* *All adaptation plans should consider the following impacts of climate change and extreme weather events and describe how the design mitigates against them, where appropriate:* - *Flooding* - *Storms (including high winds)* - *Cold events* - *Heat waves (including temperature increases)* - *Drought (including reduced summer rainfall)* - *Milder winters* - *Wetter winters (including increased moisture and driving rain)* - *Warmer summers and increased solar radiation* - *Temperature variation* - *Precipitation, e.g. rain and snow* - *Subsidence or ground movement.*
e1	Responding to climate change - Exemplary credit	1	0	0	**Comments & Actions** • *This credit is not sought due to high benchmarks.*
Wst 06 - Disassembly and adaptability					
1	Design for disassembly and adaptability Recommendations	1	1	0	**Design for disassembly and adaptability Recommendations (1 credit)** **Completed BEFORE end of RIBA Stage 2** **Targeted – Yes** By the end of Concept Design, conduct a study to explore the disassembly and adaptation potential of different design scenarios.

Credit	Available	Targeted	Potential	Comments
				By the end of Concept Design, develop solutions based on the study that allow disassembly and adaptability. *Adaptability principles:* 1. **Versatility**: the ability of spaces to accommodate changes in use with minimal changes to maximise space utilisation. For example, a performance space that can also be used as a meeting or community space. 2. **Convertibility**: related to versatility, the potential of internal spaces to accommodate more significant changes in use without affecting building structure. For example, changing a cellular office to an open plan office through changing the internal layout and partitions. 3. **Expandability**: the ability of a design to accommodate a substantial change that supports or facilitates the addition of new space, features, capabilities, and capacities. It involves designing to allow for either vertical or horizontal additions in floor space. *Disassembly principles:* 1. **Ease of access to components and services**: it allows for a material, component, or connector of an assembly, especially those with the shortest anticipated life cycle, to be easily approached, with minimal damage to and impact on it and adjacent assemblies. 2. **Independence**: it allows for parts, components, modules, and systems to be removed or upgraded without affecting the performance of connected or adjacent systems. 3. **Avoidance of unnecessary treatments and finishes**: choice of finishes can limit the options for reusing or recycling, particularly if potentially hazardous substances are included. To support disassembly, finishes that can prevent components from being re-used or recycled should be avoided. 4. **Supporting re-use (circular economy) business models**: this principle is concerned with supporting the market for re-used, refurbished, remanufactured, and recycled materials and products now and in the future, in support of circular economy business models. 5. **Simplicity**: it refers to the quality of an assembly or system that is designed to be straightforward, easy to understand, and meet performance requirements with the least amount of customization. 6. **Standardization**: it is concerned with the use of common components, products, or processes to satisfy a multitude of requirements.

	Credit	Available	Targeted	Potential	Comments
					7. **Safety of disassembly**: it is concerned with easy access to accurate information on the original materials and assembly methods used for an asset, together with details of any subsequent major renovation. **<u>Comments & Actions</u>** • *Project Team/Architect to deliver a copy of a compliant disassembly and adaptability study before the end of Concept Design.* *Examples:* - *Modular insulated panel systems (demountable & reusable)* - *Bolted structural steel frame* - *Replaceable refrigeration plant & services zones* - *Durable long-life envelope components*
2	Design for disassembly and adaptability Implementation	1	1	0	**Design for disassembly and adaptability Implementation (1 credit)** **Completed BEFORE end of RIBA Stage 4** **Targeted – Yes** Achieve criteria for the Design for disassembly and adaptability Recommendations credit as above. During Technical Design, provide an update on the following: a. How the solutions proposed by Concept Design have been implemented where practical and cost effective. Omissions must be clearly justified. b. Changes to the recommendations and solutions during the development of the Technical Design. Produce a building design for disassembly and adaptability manual to communicate the disassembly and adaptability principles and characteristics to prospective owners or building operators. A disassembly and adaptability manual shall be prepared and submitted, including the following information: a. Design details: Sufficient information shall be generated documenting specific disassembly methods, material composition, recovery methods, and adaptable design features.

	Credit	Available	Targeted	Potential	Comments
					b. Material constituents and manufacturers: Products and materials should be traceable to a specific manufacturer or supplier, with contact details, such as product manufacturer websites, included in the construction documentation. c. Connection detailing: Connection detailing, especially for reversible connections, should be well documented for the aspect of assembly and disassembly. **Comments & Actions** • *Project Team/Architect to provide an update of a compliant disassembly and adaptability study before the end of Technical Design.* • *Client/developer to provide letter of commitment confirming that they will produce a building design for disassembly and adaptability manual.*
		10	9	0	**Standard Waste Credit Total**
		3	0	0	**Exemplary Waste Credit Total**
		10.00	6.30	0.00	**% Waste Total (Standard + Exemplary)**
Land Use & Ecology (0.81 % per Credit)					
Lue 01 - Site selection					
1	Previously occupied land	1	1	0	**Previously occupied land (1 credit)** **Targeted – Yes** At least 75% of the proposed development is on previously occupied land. **Comments & Actions** . • *The Proposed Development is on ≥75% of previously occupied land.*
2	Contaminated land	1	0	1	**Contaminated land (1 credit)** **Targeted – No (Potential)** A contaminated land professional undertakes a site investigation, risk assessment and appraisal, using ISO 18400 or equivalent, which deems that land within the development footprint to be affected by contamination. This report identifies: a. The degree of contamination b. The contaminant sources or types

	Credit	Available	Targeted	Potential	Comments
					c. The options for remediating sources of contamination which present an unacceptable risk. The client or principal contractor confirms that a remediation strategy will be implemented, in line with the report. The credit can ONLY be awarded where remediation has taken place to enable development of the site for the assessed building. **Comments & Actions** • *Project Team to confirm if a contaminated land professional has undertaken a contaminated land study.* • *To confirm whether land remediation has/will be carried out.* • *Remediation strategy to be provided.*
Lue 02 - Ecological risks and opportunities					
1	Survey and evaluation	1	1	0	**Survey and evaluation (1 credit)** **Targeted – Yes** **Foundation route** The site is evaluated using the BREEAM Ecological Risk Evaluation Checklist (Guidance Note 34) confirming that the foundation route can be used. **Comprehensive route – Targeted** **Completed BEFORE end of RIBA Stage 2 (typically Preparation and Brief stage)** 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 SQEs survey and evaluation determines the sites ecological baseline, including: a. Current and potential ecological value and condition of the site and related areas within the zone of influence. b. Direct and indirect risks to current ecological value from the project. c. Capacity and feasibility for enhancement of the site's ecological value and, where relevant, areas within the zone of influence. **Comments & Actions**

	Credit	Available	Targeted	Potential	Comments
					• *Project Team and Ecologist to provide a copy of the Ecological Survey and Evaluation report.*
2	Determining ecological outcomes	1	1	0	**Determining ecological outcomes (1 credit)** **Completed BEFORE end of RIBA Stage 2** **Targeted – Yes** **Foundation route** Achieve the criteria applicable to Foundation route for the Survey and evaluation credit. AND Relevant members of the project team liaise and collaborate, and where appropriate with representative stakeholders early enough to influence key planning decisions, to: a. Identify the optimal ecological outcomes for the site. b. Select measures to meet the optimal ecological outcomes for the site, in line with the mitigation hierarchy for the foundation route: i. Avoidance ii. Protection **Comprehensive route (Targeted)** Achieve the criteria applicable to Comprehensive route for the Survey and evaluation credit. AND The ecologist collaborates with appropriate project team members (e.g. landscape architect, architect etc.), sharing relevant information and recommendations from the survey and evaluation to influence the project design as well as decisions regarding site preparation and construction works. The ecologist, with full support from the project team, collaborates with representative stakeholders early enough to influence key planning decisions (typically Concept Design stage). The ecologist identifies the optimal ecological outcomes for the site, and identifies measures to achieve these outcomes in line with:

	Credit	Available	Targeted	Potential	Comments
					a. The collaborations undertaken with the project team and relevant stakeholders. b. The mitigation hierarchy for the comprehensive route: i. Avoidance ii. Protection iii. Reduction or limitation of negative impacts iv. On-site compensation v. Enhancement, considering the capacity and feasibility within the site, or where this is not viable, off-site. **Comments & Actions** • *Ecologist to provide a statement confirming that they collaborated with all the Project Team members and stakeholders necessary to identify and deliver the project's optimal ecological outcomes, no later than Concept Design.* • *Ecologist's report must identify the optimal ecological outcomes, and measures implemented (in line with the mitigation hierarchy).*
e1	Wider site sustainability - Exemplary credit	1	0	0	**Comments & Actions** • *This credit is not sought.*
Lue 03 - Managing impacts on ecology					
Pre-req	Prerequisite Ecological risks and opportunities	✔	✔		**Prerequisite Ecological risks and opportunities** Whether a project is using the foundation route or the comprehensive route, the criteria in Lue 02 for 'Survey and evaluation' and 'Determining ecological outcomes' must have been met to achieve any credits in this issue.
1	Implementation of measures on-site	2	2	0	**Implementation of measures on-site (2 credits)** **Targeted – Yes** **Foundation and comprehensive route** For both routes, handover between the design and construction teams must be sufficiently structured and thorough to ensure that all planned ecological measures are communicated, understood, and adhered to throughout construction. **Comprehensive route (Targeted)**

	Credit	Available	Targeted	Potential	Comments
					For the comprehensive route only, an ecologist will have been in place throughout planning and design. If an Ecological Clerk of Works has been appointed for the construction and handover stages (RIBA Stages 5 and 6), there must be an additional handover between the two ecologists. The measures required to achieve optimal ecological outcomes must be integrated with site preparation and construction processes. These must be measured and monitored throughout construction and handover (RIBA Stages 5 and 6) as follows: a. **Foundation route**: The contractor must nominate a biodiversity champion with authority to influence site activities and to ensure the necessary measures are implemented. b. **Comprehensive route**: An Ecological Clerk of Works (ECoW) will have been appointed by the contractor to monitor and advise on the protection of site ecology as agreed. If the ECoW requires the input of an additional ecological specialist at any point (for example, an expert on a particular form of wildlife), the contractor must provide for such services as required. **Comments & Actions** • *Project Team to confirm that an Ecologist has been appointed in the Design phase.* • *Project Team to provide tender documents incorporating ecological requirements to ensure ecological outcomes and measures required to achieve have been handed over to the demolition/construction team.* • *Where a contractor has not yet been appointed at Design, developer to include the appointment of an Ecologist, and the facilitation of handover between Ecologists, in the tender documents.* • *Ecologist to provide a statement covering:* - *All measures to achieve optimal ecological outcomes.* - *How each measures are to be implemented.* - *What evidence should be provided by the contractor to demonstrate compliance at handover.* - *The management and monitoring actions to be undertaken by the Ecologist (if any).* • *The statement must also state the name of the contractor's appointed on-site biodiversity champion, and their role (including appropriate authority).*
2	No net loss	1	1	0	**No net loss (1 credit)**

	Credit	Available	Targeted	Potential	Comments
					Targeted – Yes The criteria for Implementation of measures on-site credit have been achieved as above. There is no net loss of ecological value on site caused by construction and handover activities. This must be confirmed at project handover by the ecologist. **Comments & Actions** • *The Ecologist must confirm via report or statement that there will be no net loss of ecological value on site.*
Lue 04 - Ecological change and enhancement					
Pre-req	Prerequisite Managing negative impacts on ecology	✔	✔		**Prerequisite Managing negative impacts on ecology** Achieve Implementation of measures on-site credit in Lue 03.
1	Ecological enhancement	1	1	0	**Ecological enhancement (1 credit)** **Targeted – Yes** **Foundation route** Locally relevant ecological measures have been implemented that enhance the site's ecological value. The measures adopted are based on: a. Recommendations from recognised 'local' ecological expertise and specialist input and guidance b. Input from the project team in collaboration with representative stakeholders and data collated as part of 'Determining ecological outcomes' in Lue 02. **Comprehensive route** Measures have been implemented that enhance ecological value, which are based on input from the project team and SQE in collaboration with representative stakeholders and data collated as part of 'Determining ecological outcomes' in Lue 02. Measures are implemented in the following order: a. On-site, and where this is not feasible b. Outside of the site boundary, 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.

<table>
<tr><th></th><th>Credit</th><th>Available</th><th>Targeted</th><th>Potential</th><th>Comments</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td><u>Comments & Actions</u>

• Ecologist to provide recommendations for ecological enhancement within the report.
• Drawings and specifications demonstrating that the recommendations have been implemented in the design.</td></tr>
<tr><td>2</td><td>Quantifying change in ecological value</td><td>3</td><td>1</td><td>1</td><td>Quantifying change in ecological value (3 credits)
Targeted – Yes (1 credit), (1 Potential)
Comprehensive route | Site baseline > 0.1 BU
Up to three credits are available based on the scale in Table 11.4 below. The enhancement measures that contribute to the score for biodiversity net gain should be implemented in the following order:

a. On-site within the boundary, and where this is not feasible,
b. Enhancements within the zone of influence/wider development area, and where this is not feasible,
c. Off-site units following the rules of the Statutory Biodiversity Metric, subject to the following:
i. The SQE confirms that better outcomes for nature can be achieved off-site and/or off-site enhancement would be more be effective than what can be done solely in the development boundary/zone of influence.
ii. There has been no net loss of biodiversity on-site.
iii. There are arrangements in place for the on-going maintenance of the enhanced land to ensure the habitat is safeguarded over a 30-year period.

Table 11.4: Credits awarded based on output from the Statutory Biodiversity Metric tool
<table><tr><th>Total project biodiversity change</th><th>Credits</th></tr><tr><td>≥ 10%</td><td>1</td></tr><tr><td>≥ 20%</td><td>2</td></tr><tr><td>≥ 30%</td><td>3</td></tr><tr><td>≥ 40%</td><td>3 + 1 exemplary</td></tr></table>
OR</td></tr>
</table>

<table>
<tr><th></th><th>Credit</th><th>Available</th><th>Targeted</th><th>Potential</th><th>Comments</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>Comprehensive route | Site baseline ≤ 0.1 BU
Up to three credits are available based on biodiversity units (BUs) per site area (ha) or per 10 m of hedgerow post development as shown in Table 11.5 below. This is only based on the hedgerow-based metric and area-based metric.

Table 11.5: Credits awarded based on biodiversity units (BUs) per site area (ha) and per length of hedgerow
<table>
<tr><th>Biodiversity units per site area (BU/ha)</th><th>Biodiversity units per 10m length of hedgerow (BU/10m length)</th><th>Credits</th></tr>
<tr><td>≥ 1.50</td><td>≥ 0.01</td><td>1</td></tr>
<tr><td>≥ 2.00</td><td>≥ 0.03</td><td>2</td></tr>
<tr><td>≥ 2.50</td><td>≥ 0.04</td><td>3</td></tr>
<tr><td>≥3.00</td><td>≥ 0.05</td><td>3 + 1 exemplary</td></tr>
</table>
<u>Comments & Actions</u>

• Ecologist to provided completed version of the Statutory Biodiversity Metric tool in order to award the credits.</td></tr>
<tr><td>e1</td><td>Quantifying change in ecological value - Exemplary credit</td><td>1</td><td>0</td><td>0</td><td><u>Comments & Actions</u>

• This credit is not sought due to high benchmarks.</td></tr>
<tr><td colspan="6">Lue 05 - Long term ecological management</td></tr>
<tr><td>Pre-req</td><td>Prerequisite Ecological change and enhancement</td><td>✔</td><td>✔</td><td></td><td>Prerequisite Ecological change and enhancement
Achieve at least one credit in Lue 04.</td></tr>
<tr><td>1</td><td>Handover to building owner or tenant</td><td>1</td><td>1</td><td>0</td><td>Handover to building owner or tenant (1 credit)
Targeted – Yes
A section on ecology and biodiversity has been included as part of the information supplied to the tenant or building owner. This information must be in a separate document from the landscape and ecology management plan and:

a. Inform the building owner or tenant about local ecological features and biodiversity associated with the site including an ‘as-built’ biodiversity metric calculation (where relevant).</td></tr>
</table>

	Credit	Available	Targeted	Potential	Comments
					b. Include detailed management and maintenance plans and relevant handover information to minimise loss of planting during establishment phase. **Comments & Actions** • *Client/developer to confirm ecological and biodiversity handover information will be provided.* • *Project Team to provide copy of ecological and biodiversity handover information.*
2	Landscape and ecology management plan	1	1	0	**Landscape and ecology management plan (1 credit)** **Targeted – Yes** A landscape and ecology management plan, or equivalent, has been developed in accordance with BS 42020:2013 Section 11.1. This will cover detailed plans for an initial 5-year establishment period and maintenance of the scheme, as well as an additional 25-year management strategy. The whole plan should cover a period of 30 years in total. It should cover the broader management of habitats and other ecological features on site, not just those specific to the BNG measures. The plan includes: a. Actions and responsibilities of relevant individuals before handover. b. The ecological value and condition of the site at handover and how this is expected to develop and change over time. c. Procedures to monitor and review the on-going implementation and effectiveness of measures, incorporating an adaptive management approach. d. Risk register, including trigger for action and remedial measures with consideration on how these feed into monitoring requirements. e. Maintenance and management plans for the retained, enhanced and created habitats, as well as any features for protected species. This should include a detailed work schedule outlining relevant maintenance on a monthly basis for the first five years after completion. f. Identifying opportunities for ongoing alignment with activities external to the asset. g. Clearly defined responsibilities and competencies of those delivering the plan. **Comments & Actions** • *Project Team to provide a draft copy of the Landscape and Ecological Management plan.*

Credit		Available	Targeted	Potential	Comments
		13	10	2	**Standard Land Use & Ecology Credit Total**
		2	0	0	**Exemplary Land Use & Ecology Credit Total**
		13.44	8.80	1.76	**% Land Use & Ecology Total (Standard + Exemplary)**
Pollution (0.62 % per Credit)					
Pol 01 - Impact of refrigerants					
1	Impact of refrigerants	3	3	0	**Impact of refrigerants (3 credits)** **Targeted – Yes** **Specific note – credits may only be awarded where clauses are included in a green lease agreement that ensure that the relevant criteria will be met.** Up to three credits can be achieved where the building does not require the use of refrigerants within its installed plant or systems. *Buildings with systems that use refrigerants* ***(Assumed)*** **Prerequisite**: All systems with electric compressors must comply with relevant safety standards for installing refrigerant systems. Safety standards for installation of refrigeration systems: - EN 378-3:2016+A1:2020 – Refrigerating systems and heat pumps. Safety and environmental requirements – Installation site and personal protection - ISO 5149:2014 – Refrigeration systems and heat pumps - ASHRAE 15-2016 – Safety Standard for Refrigeration Systems - Safety Code of Practice for Ammonia Refrigerant R717 – Institute of Refrigeration - GBT9237-2017 Standard for Safety and Environmental Requirements for Refrigeration Systems and Heat Pumps The refrigerants used must have an **ozone depletion potential of zero.** *Impact of refrigerant* **One credit:** Systems using refrigerants must have an average direct effect life cycle (DELC) carbon dioxide equivalent (CO_2e) emission rate of < 1000 $kgCO_2e$ per kW of cooling or heating capacity (Targeted). OR

Credit	Available	Targeted	Potential	Comments
				Two credits: Systems using refrigerants must either: a. Have an average direct effect life cycle (DELC) carbon dioxide equivalent (CO_2e) emission rate of < 100 $kgCO_2e$ per kW cooling or heating capacity. OR b. Use a refrigerant with a global warming potential (GWP) of < 10 $kgCO_2e/kg$. *Leak detection* **One credit:** Systems using refrigerants are either: a. Hermetically sealed, OR; b. The refrigerant charge volume is < 500 tonnes of carbon dioxide equivalent (CO_2e), OR; c. Use environmentally benign refrigerants. OR There must either be: a. A permanent automated refrigerant leak detection system that is capable of continuously monitoring for leaks, OR; b. An inbuilt automated diagnostic procedure for detecting leakage capable of continuously monitoring for leaks. The leak detection system must facilitate the isolation and containment of the remaining refrigerant charge in response to a leak detection incident. **Comments & Actions** • *MEP confirmed that 1 credit is assumed at this stage.* • *MEP to provide letter of confirmation declaring systems using refrigerants will have an average direct effect life cycle (DELC) carbon dioxide equivalent (CO_2e) emission rate of < 1000 $kgCO_2e$ per kW of cooling or heating capacity.* • *All relevant datasheets for refrigerant type, and systems using refrigerants.* *Examples:*

<table>
<tr><th></th><th>Credit</th><th>Available</th><th>Targeted</th><th>Potential</th><th>Comments</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>Ensure that the chosen refrigerant has a GWP of < 10 kgCO_2e/kg. (e.g. R433B, R441A, R432A, R443A).

Hermetically sealed refrigerants or, consider using environmentally benign refrigerants (e.g. air, water, carbon dioxide, butane, lithium bromide, solid refrigerants)</td></tr>
<tr><td colspan="6">Pol 02 - Local air quality</td></tr>
<tr><td>1</td><td>No or low emission combustion plant</td><td>3</td><td>3</td><td>0</td><td>No or low emission combustion plant (3 credits)
Targeted – Yes
Three credits – No installed combustion plant: Non-combustion systems supply all space heating and domestic hot water generation on-site (Assumed).

If there is combustion on site, then 2 credits can be achieved if the following meets compliance:
Up to two credits – Low-emission combustion plant: Emissions from all installed combustion plant that provide space heating or domestic hot water do not exceed the levels set below:

Table 12.2: Credits awarded based on NO_x emission levels (mg/kWh) by population density
<table>
<tr><th colspan="4">Maximum mg NO_x/kWh fuel input in terms of gross calorific value (GCV)</th></tr>
<tr><td>1 credit (low population locations)</td><td>1 credit (high population locations)</td><td>2 credits (low population locations)</td><td>2 credits (high population locations)</td></tr>
<tr><td>56</td><td>27</td><td>27</td><td>24</td></tr>
</table>
<u>Comments & Actions</u>

• It is assumed that all electric plant equipment will be installed.
• MEP design drawings to be provided showing all heat-generating equipment for space heating and domestic hot water in the building.</td></tr>
<tr><td colspan="6">Pol 03 - Flood and surface water management</td></tr>
</table>

	Credit	Available	Targeted	Potential	Comments
Pre-req	Prerequisite Appropriate consultant	✔	✔		**Prerequisite Appropriate consultant** An appropriate consultant is appointed to carry out and demonstrate the development's compliance with the all the criteria for this issue.
1	Flood resilience	2	2	0	**Flood resilience (2 credits)** **Targeted – Yes** **Two credits Low flood risk (Targeted)** A site-specific flood risk assessment (FRA) confirms the development is in a flood zone that is defined as having a low annual probability of flooding. The FRA takes all current and future sources of flooding into consideration. **One credit Medium or high flood risk (Not assumed)** A site-specific FRA, developed by an appropriate consultant, confirms the development is in a flood zone that is defined as having a medium or high annual probability of flooding and is not in a functional floodplain. The FRA must take all current and future sources of flooding into consideration. As the site is **<2000m²** an acceptable FRA could be a brief report carried out by the contractor's engineer confirming the risk of flooding. This must include the risk from all sources of flooding, and information obtained from the Environment Agency, water company or sewerage undertaker, other relevant statutory authorities, site investigation and local knowledge. To increase the resilience and resistance of the development to flooding, one of the following must be achieved: a. The ground level of the building and access to both the building and the site, are designed (or zoned) so they are at least 600 mm above the design flood level of the site's flood zone. b. The final design of the building and the wider site reflects the recommendations made by an appropriate consultant in accordance with the hierarchy approach outlined in section 5 of BS 8533:2017. **Comments & Actions** • *Desk based study carried out and the site is located in flood zone 1 (a low flood risk zone).*

	Credit	Available	Targeted	Potential	Comments
					• *Project Team and Drainage consultant to provide a copy of a compliant Flood Risk Assessment.*
2	Surface water run-off	2	2	0	**Surface water run-off (2 credits)** **Targeted – Yes** **Pre-requisite for surface water run-off credits** Surface water run-off design solutions must be bespoke, i.e. they must take account of the specific site requirements and natural or man-made environment of and surrounding the site. The priority levels detailed below must be followed, with justification given by the appropriate consultant where water is allowed to leave the site. Priority levels: - Priority Level 1: Water is collected for use in the development (e.g. rainwater reuse) - Priority Level 2: Water is infiltrated into the ground - Priority Level 3: Water is discharged to surface water body - Priority Level 4: Water is discharged to the drainage system - Priority Level 5: Water is discharged to a combined sewer **One credit Surface water run-off Rate** For brownfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a 30% improvement for the developed site compared with the pre-developed site. This should comply at the 1-year and 100-year return period event AND For greenfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) is no greater for the developed site than it was for the pre-development site. This should comply at the 1-year and 100-year return period events AND Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place AND Calculations include an allowance for climate change. This should be made in accordance with current best practice planning guidance.

Credit	Available	Targeted	Potential	Comments
				One credit Surface water run-off Volume Flooding of assessed buildings will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance); AND EITHER a. Specify drainage design measures that ensure post-development surface water run-off volume is no greater than the pre- development run-off volume. Show this with calculations for a 100-year 6-hour event adjusted for climate change, timing the event at the end of the developments expected life AND any additional predicted volume of run-off for this event is prevented from leaving the site by using infiltration or other SuDS techniques. OR (only where the above (a.) cannot be achieved): b. Justification from the appropriate consultant indicating why the above criteria cannot be achieved, i.e. where infiltration or other SuDS techniques are not technically viable options. Drainage design measures are specified so that the post-development peak rate of run-off is reduced to the limiting discharge. The limiting discharge is defined as the highest flow rate from the following options: i. The pre-development one-year peak flow rate ii. The mean annual flow rate (Qbar) iii. 2 L/s/ha. For the one-year peak flow rate, the one-year return period event criterion applies. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place. For either option, above calculations must include an allowance for climate change; this should be made in accordance with current best practice planning guidance. **<u>Comments & Actions</u>**

	Credit	Available	Targeted	Potential	Comments
					• *Surface water drainage report and calculations required to show the pre-development, greenfield and post-development peak rate of run-off and volume run-off.* • *Design drawings required to show the drainage design.* *Examples:* *SuDS management to reduce run-off rate and volume:* - *Source control: Porous paving; Rainwater harvesting; Green roofs etc.* - *Site or local control: Infiltration basins; Swales; Detention basins etc.*
3	Minimising watercourse pollution	1	1	0	**Minimising watercourse pollution (1 credit)** **Targeted – Yes** There is no discharge from the developed site for rainfall up to 5 mm (confirmed by the appropriate consultant). Areas with a low risk source of watercourse pollution, have an appropriate level of pollution prevention treatment provided using appropriate SuDS techniques. Areas with a high risk of contamination or spillage of substances, such as petrol and oil, have separators (or an equivalent system) installed in surface water drainage systems. Chemical or liquid gas storage areas have a means of containment fitted to the site drainage system (i.e. shut-off valves). This is to prevent the escape of chemicals to natural watercourses in the event of a spillage or bunding failure. 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. 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.

	Credit	Available	Targeted	Potential	Comments
					All external storage and delivery areas are designed and detailed in accordance with the current best practice planning guidance. **Comments & Actions** • *Project Team/Structural Engineer confirmed credit is achievable.* • *Drainage report to include calculations confirming there will be no discharge from the site for rainfall up to 5mm.* • *Design drawings showing the drainage strategy:* - *High/low risk areas on site* - *Specification of SuDS, source control systems, oil or petrol separators and shut-off valves as appropriate.* - *Water pollution prevention systems.* - *External storage and delivery areas.* • *Letter of confirmation from the appropriate consultant to declare agreements for ownership, long-term operation and maintenance of all specified SuDS must be in place.*
Pol 04 - Reduction of nighttime light pollution					
1	Reduction of light pollution	1	1	0	**Reduction of light pollution (1 credit)** **Targeted – Yes** Light pollution has been eliminated through effective design that removes the need for artificial lighting at night. This does not adversely affect the safety and security of the site and its users. OR Where the building does use artificial lighting at night the lighting strategy has been designed to reduce obtrusive light. This includes both external lighting and internal lighting in spaces with glazed apertures AND; All external lighting (except for safety and security) is automatically switched off between 23:00 and 07:00 AND; Illuminated advertisements are designed to control brightness and minimise visual disturbance during nighttime hours AND; Lighting is designed to minimise impacts on nocturnal wildlife.

	Credit	Available	Targeted	Potential	Comments
					The lighting strategy design should follow the five sets of recommendations outlined in the Institution of Lighting Professionals (ILP) Guidance Note 01/21 – The reduction of obtrusive light (GN01/21): 1. Limitation of illumination on surrounding premises 2. Limitation of bright luminaires in the field of view 3. Limitation of the effects on transport systems 4. Limitation of skyglow 5. Limitations of the effect of over-lit building facades and signs **Comments & Actions** • *Project Team/MEP to confirm that the external lighting to be installed will comply with the standards.* • *Design drawings and lighting specifications must be provided, where available.* *Examples:* *Limit vertical illuminance where possible and make use of down lighters/cut-off type and angled luminaires.*
Pol 05 - Reduction of noise pollution					
1	Noise level	1	1	0	**Noise level (1 credit)** **Targeted – Yes** There are no noise-sensitive areas within the assessed building or within 800m radius of the assessed site OR Where there are noise-sensitive areas within the assessed building or noise-sensitive areas within 800m radius of the assessed site, a noise impact assessment compliant with BS 4142:2014(145) is commissioned. Noise levels must be measured or determined for: a. Existing background noise levels:

Credit	Available	Targeted	Potential	Comments
				i. At the nearest or most exposed noise-sensitive development to the proposed assessed site. ii. Including existing plant on a building, where the assessed development is an extension to the building. b. New noise level from the assessed building The noise impact assessment must be carried out by a suitably qualified acoustic consultant. 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 5 dB lower than the background noise throughout the day and night. If the noise sources from the assessed building are greater than the levels described above, measures have been installed to attenuate the noise at its source to a level where it will comply with the noise level limits. **Comments & Actions** • *Project Team to appoint suitably qualified acoustician to produce a compliant external noise impact assessment.* • *Client/developer commits to completing a post-construction testing.* • *Relevant design drawings confirming any attenuation measures or recommendations from the acoustician.* *Examples:* *Install noise attenuators / sound screening around any external plant equipment if relevant.*
	13	13	0	**Standard Pollution Credit Total**
	0	0	0	**Exemplary Pollution Credit Total**
	8.97	8.97	0.00	**% Pollution Total (Standard + Exemplary)**

	Credit	Available	Targeted	Potential	Comments
Innovation (1 % per Credit)					
Inn 01 - Innovation					
1	Approved innovations	1	0	0	**Approved innovations (1 credit)** **Targeted – No** One innovation credit can be awarded for each innovation application approved by BRE Global, where the building complies with the criteria defined within an approved innovation application form.
		0	0	0	**Standard Innovation Credit Total**
		1	0	0	**Exemplary Innovation Credit Total**
		1.00	0.00	0.00	**% Innovation Total (Standard + Exemplary)**



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