ONE BATTERSEA BRIDGE

SUSTAINABILITY STATEMENT

October 2024
Revision 02

RIDGE

ONE BATTERSEA BRIDGE
PROMONTORIA BATTERSEA LIMITED

SUSTAINABILITY STATEMENT – REVISION 02

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Prepared for

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CONTENTS

1. EXECUTIVE SUMMARY

This report has been produced by Ridge & Partners LLP, on behalf of Promontoria Battersea Limited (The Applicant) to outline the sustainability strategy for the Proposed Development, One Battersea Bridge.

The Proposed Development has been assessed across a wide variety of sustainability measures, and themes, as shown below

Energy and Carbon

- **16%** carbon reduction achieved at Be Lean site wide
- **47%** carbon reduction achieved at Be Green site wide
- Carbon offset payment in amount of £158K required
- Residential units have been assessed against Part O and CIBSE TM59 for thermal comfort and complies with requirements via a **mechanical ventilation strategy with supplementary cooling.**
- Non-domestic spaces have been assessed against CIBSE TM54 and predicts a total operational energy of **49.42 kWh/m2 per annum.** ***This figure includes the landlord circulation areas such as the communal corridors and stairways.***
- Whole life carbon assessment confirms developments embodied carbon emissions (Modules A to C) are **853 kgCO2e/m2.**

Water

- Water efficiency measures have been incorporated into the design with fittings and appliances proposed to achieve a daily water consumption rate of **110l per person per day,** including an allowance for any external use.
- Two credits targeted for BREEAM Wat 01, which equates to a **25% improvement** over the baseline building water consumption

Ecology and Biodiversity

- Preliminary Ecological Appraisal (PEA) confirms there are **no habitats present on site**, only small areas of shrubs and native/non-native scattered trees. There are n**egligible/low potential for any protected species** on site and there were also no invasive species recorded on site.
- Maximum number of BREEAM Land Use and Ecology credits are targeted
- Urban Greening Factor **(UGF) of 0.4** is anticipated.
- BNGBiodiversity Net Gain **(BNG) of 39.24%** is anticipated on Site.

Materials, Waste and Circular Economy

- Circular economy statement has been produced which confirms the following
    - The development is aiming for net-zero import/export of soil
    - A **pre-demolition audit** is to be completed to ensure material efficiency and waste reduction is minimised
    - All materials responsibly sourced using a **sustainable procurement plan**, prioritise materials with EPDs and cradle to cradle certification
    - Water targets **105 l/p/d (litres/person/day) for residential and 10 l/p/d for commercial**.
    - Adopting **all-electric air source heat pump and PV's to minimise energy use**.
    - Aim for **95% diversion form landfill** for any demolition or construction waste.
    - Use of precast elements where possible to reduce waste, offsite production with industry-controlled material use and waste standards
    - Contractor to produce a **site waste management plan.**
    - **SUDs** to reduce flood risk and enable reduction in surface water run-off by at least **30%**.
- Ensure all **timber** used throughout construction and in the design is **legally harvested and traded,**
- **Materials are responsibly sourced** with valid certification available (such as ISO14001, BES6001, FSC and PEFC).

Flood Risk and Drainage

- The Flood Risk Assessment (FRA) confirms that the Site is currently within **Flood zone 3**
- A Sustainable Drainage Strategy will be drafted, which will include an allowance for climate change to account for future increases in rainfall.

Pollution

- Air Quality Assessment confirms the development would not exceed the annual mean AQOs at any of the modelled sensitive receptors. Therefore, the **air quality impact are classed as negligible for all modelled receptors**. In terms of transport emissions, the development is **air quality neutral.**
- Noise Impact Assessment confirms that internal noise levels in accordance BS 8233, ProPG and WHO's noise guidelines can be achieved with good acoustic design. Report recommends alternative means of ventilation to remove the need to ventilate the building using openable windows.

Transport

- The existing site is in an area with moderate public transport connection, with a **PTAL of 3.**
- Two separate pedestrian access will be provided, for the affordable, and private housing elements.
- **18 of car parking spaces are proposed, including 5 Blue Badge spaces.**
- The development would provide **212 long-stay cycle storages i**n total, and **4 short-stay spaces**.
- For the non-residential elements, the Proposed Development will provide **8 long-stay and 10 short-stay cycle parking spaces.**

2. INTRODUCTION

1.1. Site Description.

The Site extends to 0.11ha and comprises a part five-storey, part six-storey 1980s office building (Class E) with a basement level car park providing 33 car parking spaces.

The Site is bound to the north by the Thames Path and River Thames, and to the south by Hester Road. Battersea Bridge Road bounds the Site to the west, with a six-storey residential building is situated to the immediate east. The nine-storey Albion Riverside development is situated further to the east.

Vehicular access to the Site is via Hester Road to the south.

2.1. The Proposed Development

The table below provides a summary of the area schedule as provided by the architects. This includes all front and back of house areas and conditioned areas. For the purposes of the energy strategy however only conditioned areas have been included in the calculations.

Table 1: Proposed floor space.

Use	Existing (GIA sqm)	Proposed (GIA sqm)
Residential (C3)	0	20,086
Community (Class F2)	0	274
Restaurant (Class E)	0	189
Office (Class E)	4877.1	535
Shared	0	355
Plant		368
Total	4877.1	21,807

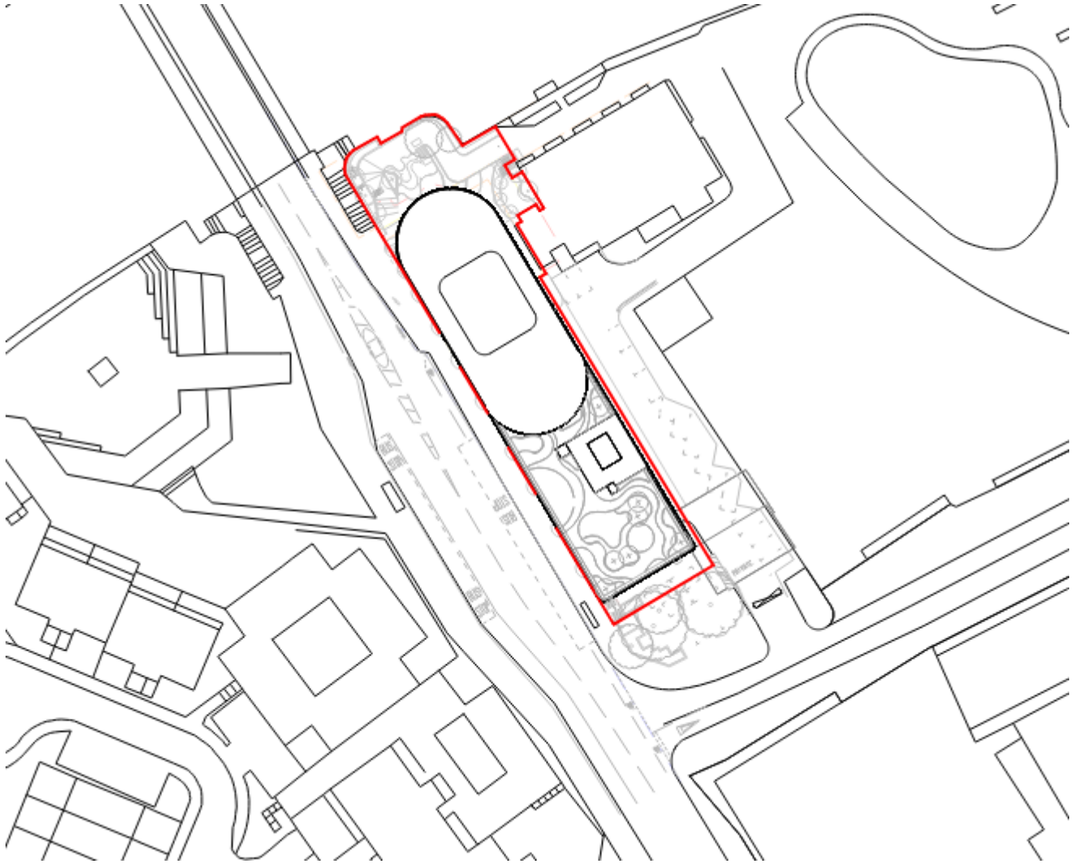


Figure 1: Proposed Site Location. Source: Farrells

3. POLICY CONTEXT

The Proposed Development has been developed in compliance with various planning policies, as outlined on Figure 2.

Please note that some policies are addressing elements that are covered in their respective reports, however those relevant in terms of sustainability have been summarised below. Full policy compliance should be confirmed by the reports prepared specifically to cover these issues.

Figure 2 - Policy context

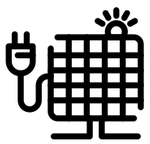
3.1. Wandsworth Local Plan – Wandsworth Riverside Area Strategy

The Wandsworth Local Plan 2023-2028 adopted in July 2023 sets out policies for developments within the borough. The following sustainability policies have been reviewed as part of the outline sustainability strategy.

The Plan is structured into three main parts;

1. Vision, Objectives and Spatial Strategy
2. Placemaking – This contains the Area Strategies
3. Policies – Grouped into related policy areas such as Housing, Economy and Climate Change

THEME	POLICY NO.	POLICY
		Responding to the Climate Crisis (Strategic Policy) – LP10
	A	Developments are required to achieve high standards of sustainable design and construction in order to mitigate the effects of climate change. Development proposals should: 1. Incorporate the London Plan's Circular Economy principles at the start of the design process 2. Submit a Whole Life Carbon Assessment for all major applications 3. Incorporate Sustainable Drainage Systems (SuDS) or demonstrate that any proposed alternative sustainable approaches to the management of surface water will be equally effective 4. Use sustainable construction methods and sustainably sourced and recycled materials, and maximise the use of the river for freight 5. Retain existing buildings and their embodied carbon in renewal and regeneration projects where this is a viable option 6. Re-use any demolished materials in-situ where practicable, in order to minimise the transportation of materials and waste, reduce the need for mineral extraction and reduce carbon emissions 7. Incorporate water conservation measures, to meet a maximum water efficiency standard of 110 litres per person per day for homes (including an allowance of five litres or less per person per day for external water consumption. Planning conditions will be applied to new residential development to ensure that the water efficiency standards are met 8. Incorporate green roofs and walls where possible
	B	1. New non-residential buildings over 100sqm will be required to meet BREEAM Outstanding standard, unless it can be demonstrated that this would not be technically feasible 2. New residential development will be expected to meet the BRE HQM or Passivhaus standards wherever practicable

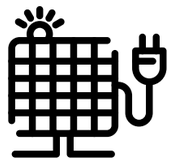
THEME	POLICY NO.	POLICY
	C	**Reducing Carbon-Dioxide emissions** Development proposals will be required to incorporate measures which improve energy conservation and efficiency, as well as contribute to renewable and low carbon energy generation. Proposals will be required to meet the following minimum reductions in carbon emissions: 1. All new major development should achieve zero carbon standards, as set out in the London Plan, with a minimum onsite reduction of 35% 2. All non-major new residential development provided in new buildings should achieve a minimum on-site reduction of 35% 3. Residential development should achieve at least a 15% reduction through the use of energy efficiency measures.
	D	**The Energy Hierarchy** All development is required to follow the energy hierarchy set out within the London Plan (Policy SI2) with respect to its design, construction and operation
	E	**Energy Assessments** All new residential development and major non-residential development proposals are required to submit an energy assessment, and minor non-residential development proposals are strongly encouraged to provide one
	F	**Compliance and monitoring** Major development proposals will be required to provide, or fund the provision of, post-construction monitoring of renewable and low-carbon equipment to demonstrate full compliance with the commitments identified within the permission, for a period of four years
	G	**Adapting to climate change** The council will expect all development to be fully resilient to the future impacts of climate change
	H	**Overheating** New development should, through its layout, design and construction, materials, landscaping, and operation, minimise the effects of overheating, mitigate the urban heat island effect, and minimise energy consumption in accordance with the cooling hierarchy set out in Policy SI4 of the London Plan
	**Energy Infrastructure – LP11**	
	A	New developments to connect to any existing decentralised energy network (DEN), or any alternative strategies that can be demonstrated as being more efficient, clean and decarbonised than the DEN in accordance with the London Plan Energy Hierarchy. Where networks do not exist, developments should make provision to connect to any future network that may be developed, having regard to the possibility for this to come forward

THEME	POLICY NO.	POLICY
	**Water and Flooding – LP12**	
	A	Avoid or reduce contributing to all sources of flooding, and take climate change into account
	Flood zone 3a	The following are required, these should cover the content of LP12 ▪ Sequential test ▪ Exception test for vulnerable developments ▪ Flood Risk Assessment
	G	The council will require the use of SuDS in all development proposals. The following need to be demonstrated: ▪ Reduction in surface water discharge to greenfield run-off rates (unless technically not feasible)
	**Circular Economy, Recycling and Waste Management – LP13**	
	B	Circular Economy Statements will be required for all referable applications, outlining how the Proposed Development promotes CE outcomes and aim for net zero waste
	C	Developers are expected to reuse, recycle, or recover 95% of construction and demolition waste and find beneficial use for 95% of excavation waste
	**Air Quality, Pollution and Managing Impacts of Development – LP14**	
	C	Developments to incorporate Air Quality Positive design. New proposals must be at least Air Quality Neutral, in accordance with London Plan Policy SI1
	D	The following will be required: ▪ Air Quality Impact Assessment ▪ Mitigation measures reducing the developments impact on air quality ▪ Measures to protect the occupiers ▪ Mitigation measures to accommodate sensitive receptors
	E	A Noise Impact Assessment to be developed in line with POLICY DI4 of the London Plan
	F	Developments are required to ensure that artificial lighting does not have any detrimental effects on health, quality of life and amenities
	H	Where there is land contamination on site, remediation of any contamination is to be agreed with the council before the development proceeds
	Sustainable Transport – LP49	
	A	Proposals to reduce the need for travel, and promote safe, sustainable and accessible transport solutions for all users

THEME	POLICY NO.	POLICY
	B	Developments to put human-health and well-being at the centre of transport planning. Proposals will be supported, where: 1. The proportion of trips made by walking, cycling and public transport is high, and local connections by these modes are improved 2. Car dominance is reduced 3. Neighbourhood environments are made safer 4. Freight movement, including waterborne freight cargo is made safer 5. Air quality, and green and blue infrastructure are improved 6. The public realm is improved (e.g. introduction of parklets) 7. Placemaking, that promotes accessibility to existing and-or proposed mixed-use areas that provide a range of local facilities and amenities is considered 8. Accessibility to public transport is not negatively affected 9. Improve access on foot and by bicycle
	Transport and Development – LP50	
	B	Transport Assessments and Travel Plans should be developed (further policy elements to be addressed by these documents)
	Parking, Servicing and Car Free Development – LP51	
	A	1. Cycle parking is provided in line with Table 10.2 of London Plan 2. Residential car parking is provided in line with Table 10;3 of London Plan 3. Car club parking and memberships are provided is all residential developments 4. Off-street servicing arrangements are provided 5. Disabled spaces are provided in line with the London Plan 6. EV charging capacity is provided in line with the London Plan 7. Proposals should not lead to unacceptable amount on on-street parking 8. Car-free residential development is required where the PTAL is higher than 4
	**Biodiversity – LP55**	
	A	The borough's priority species and habitats are to be protected
	B	Proposals should protect and enhance biodiversity
	Urban Greening Factor – LP57	
	A	Urban greening to be included as a fundamental design element
	B	▪ UGF guidance to be followed in the London Plan ▪ Incorporate as much soft landscaping and permeable surfaces as possible ▪ Take local ecological resources into account

1.2. London Plan

The Mayor of London formally adopted the London Plan on March 4th, 2021. This new London Plan now forms part of the development plan, against which development proposals in London are assessed. Policies surrounding the London Plan are summarised in the following table.

THEME	POLICY NO.	POLICY
	**Policy SI1 – Improving Air Quality**	
		Requires developments to address air quality. Proposals should be Air Quality Neutral.
	**Policy SI2 – Minimising greenhouse gas emissions**	
		All major developments to be net zero carbon (in operation), and it is expected that developments are following the Be Lean, Be Clean, Be Green, Be Seen energy hierarchy methodology. Therefore a detailed Energy Strategy is required, discussing how the development proposals addressing the above. A minimum on-site reduction of at least 35% beyond Building Regulations are required for major developments. Residential development should achieve 10%, and non-residential developments should achieve 15% through energy efficiency measures. Any remaining carbon emissions are to be offset via an offset fund at £95 a ton. Additionally a Whole Life carbon Assessment should be prepared for referable developments.
	Policy SI3 – Energy Infrastructure	
		Energy masterplans to be developed for large-scale developments, to establish most effective energy supply options. Within Heat Network Priority Areas , the heating systems should be designed to facilitate cost-effective future connection (e.g. allocating space in plant rooms for heat exchangers and thermal stores).
	Policy SI4 – Managing heat risk	
		A reduction of overheating risk is required, whilst following the cooling hierarchy (Passive measures, minimised internal heat gain, passive ventilation, mechanical ventilation, active cooling systems).
	**Policy SI5 – Water infrastructure**	
		Proposals aim to reduce use of mains water, water supplies and requires conservation of resources as much as reasonably possible. Developments should achieve water consumption of 105 litres or less per day per head, and for commercial elements a BREEAM Excellent under the Wat01 category. Measures should be incorporated to achieve water saving (e.g. smart metering, recycling, etc)
	Policy SI7 – Reducing waste and supporting the circular economy	

Developments should aim to reduce waste, and support circular economy principles. Waste minimisation and prevention measures should be adopted, ensuring zero recyclable and biodegradable waste is to end up on landfills by 2026, and developments should meet or exceed municipal waste recycling target of 65% by 2030. A circular Economy Statement should be prepared. Additionally, developments should meet or exceed the following targets:
95% reuse/recycle/recovery for construction and demolition waste
95% beneficial use for excavation waste

Policy SI12 – Flood risk management

Flood risk from all sources to be managed in a sustainable and cost-effective way. The Mayor's Regional Flood Risk Appraisal should be used, as well as Local Flood Risk Management Strategies.

Policy SI13 – Sustainable drainage

Areas with particular surface wate management issues should be identified. Development proposals should aim to achieve greenfield run-off rates and drainage hierarchy should be followed (rainwater use as a resource, rainwater infiltration, rainwater attenuation, rainwater discharge direct to watercourse, controlled rainwater discharge to a surface water sewer or drain, controlled rainwater discharge to a combined sewer)

Policy G5 – Urban greening

Urban greening to be included as a fundamental element of the design. Residential developments should target a score of 0.4, commercial developments should target 0.3.

Policy G6 – Biodiversity and access to nature

Developments should support the protection of priority species and habitats and seek opportunities to enhance/create other habitats. Development proposals should aim to secure biodiversity net gain.

Policy T5 - Cycling

Appropriate levels of cycle parking should be provided, in accordance with the minimum standards set out in Table 10.2 and Figure 10.3 of the London Plan.

Policy T6 – Car parking

Developments to be car free, with the exception of disabled car parks.

4. SUSTAINABILITY STRATEGY

4.1. Overview

This report has been produced by Ridge & Partners LLP on behalf of Promontoria Battersea Limited (The Applicant) to outline the sustainability strategy for the Proposed Development at One Battersea Bridge.

The strategy first and foremost responds to the national and local policy which shape the baseline of performance. In light of this, the following themes have been utilised to help illustrate the varied and holistic approach to sustainability that aligns with the key themes from Wandsworth policy:

- Energy and carbon
- Water
- Ecology and Biodiversity
- Materials, Waste and Circular Economy
- Flood Risk and Drainage
- Pollution
- Transport

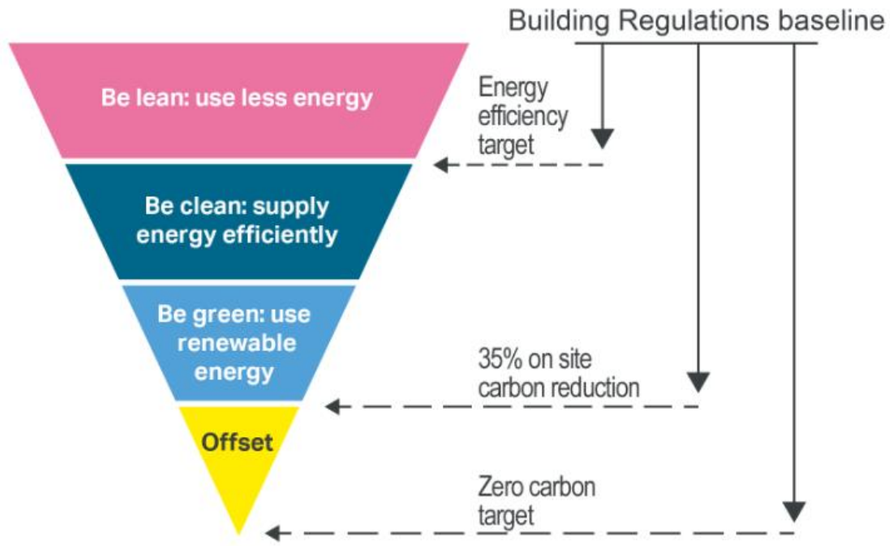
To determine compliance with the above outlined policies across these themes, the following documents have been reviewed:

- General arrangement drawings, Floor and Site Plans, Elevations
- Accommodation Schedule
- Air Quality Assessment
- Noise Impact Assessment
- Circular Economy Statement
- Design and Access Statement
- Preliminary Ecological Appraisal
- Biodiversity Net Gain Assessment
- Flood Risk Assessment
- Landscape Plans
- Energy Statement
- Transport Assessment
- Whole Life Carbon Assessment

4.2. Energy and Carbon

In line with the London and Wandsworth Local Plan, an Energy Assessment has been undertaken for the proposed One Battersea Bridge development. The Energy Strategy outlines how is the design expected to achieve net zero carbon following the Be Lean, Be Clean, Be Green, and Be Seen energy hierarchy, as per the Figure below.

Energy hierarchy



Source: Greater London Authority

Figure 3 - Energy hierarchy

Both domestic and non-domestic elements of the development implemented and adopted a fabric first approach to reduce energy demand, before introducing further measures such as energy efficient systems and on-site renewables.

The Proposed Development has optimised its building layout, glazing arrangement and façade design to reduce unnecessary solar gain and overheating risk, whilst ensuring daylight and view out have been maximised. A fully electric servicing strategy utilising air source heat pumps strategy are proposed for the development, serving both space heating and domestic hot water, with an MVHR system to provide additional ventilation to alleviate overheating risk.

The commercial spaces will be serviced by a VRF system, allowing for heating and cooling. This system is to be connected to an air source heat pump, while hot water demand will be met using point of use electric heaters.

In line with the Be green element of the energy hierarchy, 22 kWp PV panels have been proposed on the roof, to offset energy use within the non-domestic spaces.

The above proposals are responding to the AD-O. An initial TM59 Overheating Risk Assessments has been undertaken for the development which confirms that all dwelling will require mechanical ventilation with supplementary cooling to comply with requirements as there are noise constraints present on site.

The below figures summarise how the energy hierarchy requirements have been met and the site-wide regulated emission results and carbon offset payment expected.

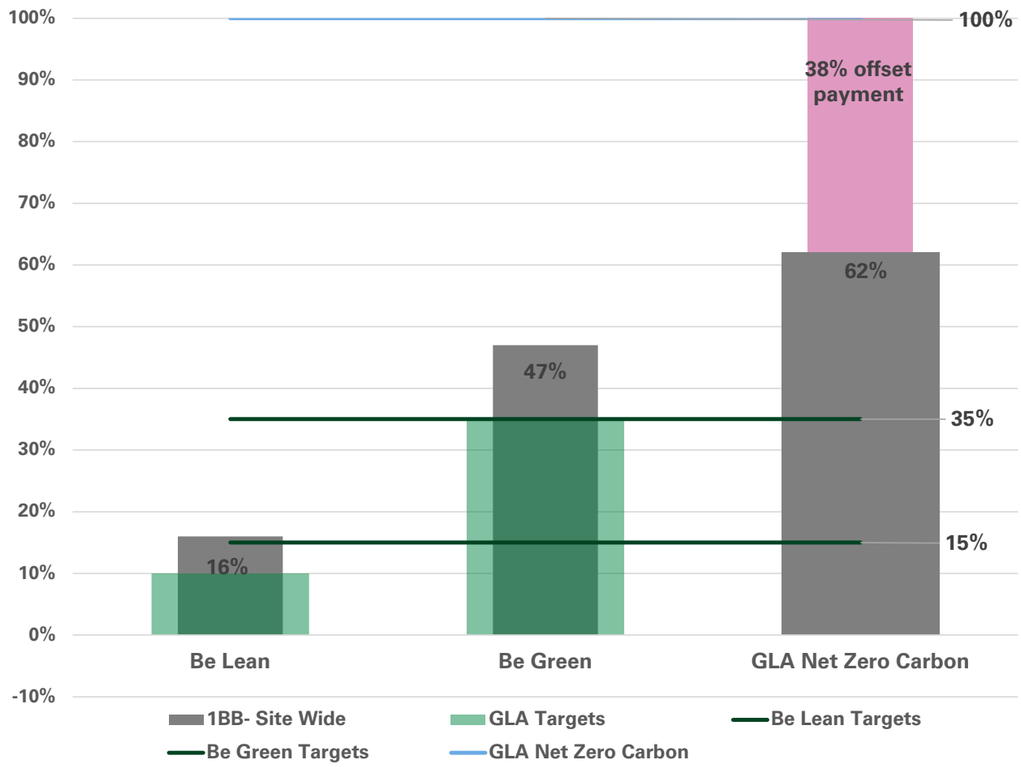


Figure 4 - Site-wide carbon reduction according to the energy hierarchy

	TOTAL REGULATED EMISSIONS (TONNES CO_2/YR)	CO_2 SAVINGS (TONNES CO_2/YR)	PERCENTAGE SAVINGS (%)
Part L 2021 baseline	147.7		
Be Lean	124.7	23	16%
Be Clean	124.7	-	0%
Be Green	55.5	69.2	47%
Total savings		92.2	62%
CARBON OFFSET			
Residual emissions for offset (tonnes CO_2/yr)		1,664.2	
Cash in-lieu contribution (£) *carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab		£158,102	

Table 2 - Site-wide regulated emissions results and carbon offset payment

As part of the Be Clean element of the energy hierarchy, it has been assessed, whether connection to existing/planned to heating or cooling networks is possible, however there is no heat network accessible to this site, therefore this element is not applicable.

Energy statement confirms that the Proposed Development achieves the following minimum carbon reduction targets

- 10% carbon reduction at Be Lean for residential elements
- 15% carbon reduction at Be Lean for non-residential elements
- 35% carbon reduction at Be Green for both residential and non-residential elements

Further results from the Energy Statement can be found in the relevant report.

CIBSE TM54 Assessment

Additionally to comply with the Be Seen energy reporting guidance developed as part of the London Plan, a CIBSE TM54 operational energy assessment has been undertaken, to analyse the energy use of the non-domestic elements.

The calculations undertaken predict that the total operational energy for the commercial aspects of the Proposed Development will be **287,443 kWh per annum**, which equates to **49.42 kWh/m²**. **This figure includes the landlord circulation areas such as the communal corridors and stairways.**

The Energy statement also confirmed, that the development is designed to comply with Building Regulations Part L1.

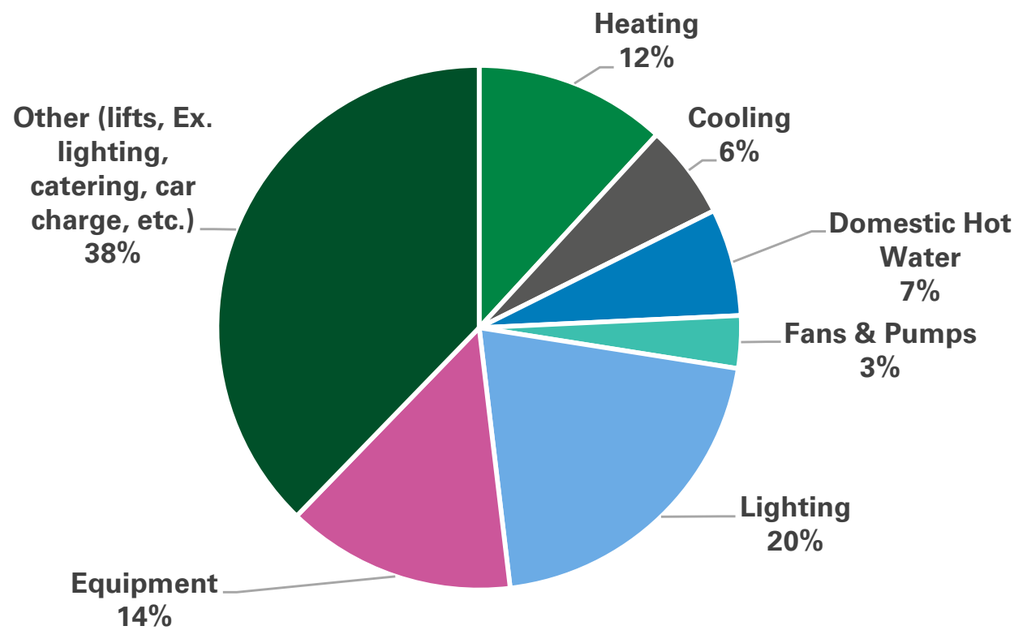


Figure 5 - Operational energy assessment breakdown. Source: Tate Consulting

Overheating Assessment

In line with Building Regulations Part O and London plan, the overheating strategy has been designed in accordance with the cooling hierarchy, in which the following two scenarios have been assessed:

- Scenario 1: Fully natural ventilated solution with openable windows
- Scenario 2: Mechanical ventilated solution with heat recovery and peak load lopping

The full results of the Overheating assessment can be found in the Overheating report, however the findings have been summarised below.

Where allowable occupied spaces benefit from opening windows with an external perforated shading screen having a free area of 50% alongside mechanical ventilation. The analysis confirms that all assessed bedrooms, living/ kitchens, and communal corridors with opening windows and designated as predominately naturally ventilated are shown to be compliant with regards to Building Part O and TM59 domestic Overheating criteria.

Those bedrooms, living and kitchen areas that are subject to noise constraints and therefore are designated as predominantly mechanically ventilated only pass the Building Part O and TM59 domestic Overheating criteria with the addition of supplementary cooling.

Whole Life Carbon Assessment

A Whole Life Carbon Assessment has been undertaken in line with the RICS Whole Life Carbon methodology, using the GLA approved OneClick software. The results of the study are presented in $kgCO_2e/m^2$ GIA (GHG emissions per unit of the development's gross internal area), and as per the guidance in the London Plan, these have been compared with the GLA performance benchmarks.

Emissions have been assessed across all life cycle modules, as per the Figure below:

Modules A1-A5 refer to the product stages, including raw material extraction, transport to manufacturing plant, manufacturing, transportation to site and installation processes. Modules B1 – B5 refer to the in-use emissions, representing the need to maintain, repair, refurbish and replace materials throughout their lifecycle. Modules C1 – C5 are assessing the end of life stages, as in deconstruction, demolition, and waste management. Module D on the other hand reviews benefits beyond lifecycle, such as potential to recycle, reuse, and recover.

The results of the assessment are as follows:

Table 3 - WLC results, Source: Temple

MODULES	EMISSIONS	2020 BENCHMARK	2030 (ASPIRATIONAL) BENCHMARK
A1 – A5 (excluding sequestration)	**616 $kgCO_2e/m^2$**	< 850 $kgCO_2e/m^2$	< 500 $kgCO_2e/m^2$
B – C (excluding B6 & B7)	**236 $kgCO_2e/m^2$**	< 350 $kgCO_2e/m^2$	< 300 $kgCO_2e/m^2$
A – C (Excluding B6 & B7, including sequestration)	**853 $kgCO_2e/m^2$**	< 1200 $kgCO_2e/m^2$	< 800 $kgCO_2e/m^2$

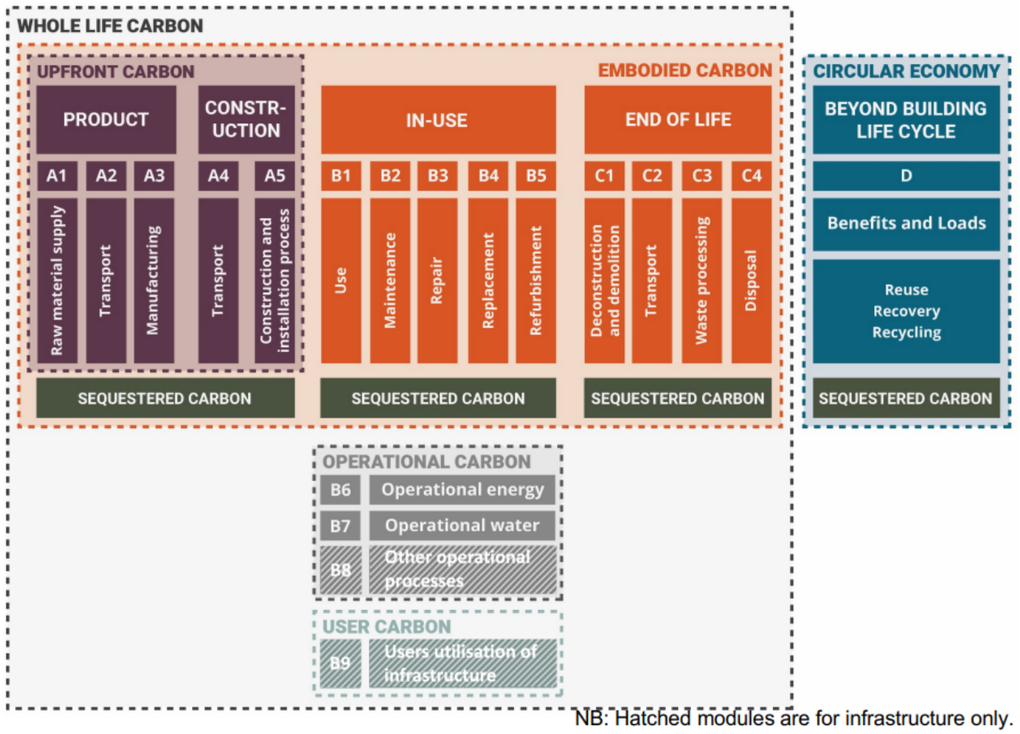


Figure 6 - Life-cycle stages - Source: WLCN Carbon Definitions for the Built Environment, Buildings and Infrastructure – Version 'A' - May 2021

Emissions have been estimated in line with the guidance for a study period of 60 years. The CIBSE TM54 analysis and the SAP results have been used to estimate operational energy emissions for module B6.

As it can be seen, the results expected are meeting the current, and future (aspirational) benchmarks.

POLICIES AND TARGETS ADDRESSED	
National Planning	Building Regulations Part L Building Regulations Part O
London Plan	Policy SI2 Policy SI3 Policy SI4
Wandsworth Local Plan	LP 10 A-2, C, D, E, F, H LP11

4.3. Water

Water efficiency measures have been incorporated into the design with fittings and appliances proposed to achieve a daily water consumption rate of 110l per person per day, including an allowance for any external use. As part of this, drought resistant plants have been proposed where possible, and the need for irrigation has been reduced as much as possible.

Water consumption and efficiency measures are also assessed as part of the BREEAM and HQM Assessments undertaken for the commercial and residential elements.

Under the BREEAM assessment, water is reviewed as part of the Wat01 issue. The BREEAM Pre-Assessment attached in Appendix A demonstrates 2 credits have been targeted, which equates to a 25% improvement over the baseline building water consumption. The assessment includes the following domestic-scale water using components:

- WCs
- Urinals
- Taps
- Showers
- Baths
- Dishwashers
- Washing machines

As part of the HQM assessment, section 8.1 looks at water efficiency of the residential elements. In line with the London plan and Wandsworth Local Plan, this also require a consumption of 110l/p/day modelled water consumption. The targeted score for this element is demonstrated in Appendix B.

POLICIES AND TARGETS ADDRESSED	
London Plan	Policy SI5
Wandsworth Local Plan	LP10, A-7

4.4. Ecology and Biodiversity

Temple undertook a Preliminary Ecological Appraisal (PEA), comprising a Phase 1 habitat survey, protected species assessment and ecological valuation for the Proposed Development.

The PEA confirmed that the existing site comprises of the existing building and hard standing, therefore there are no habitats present on site, only small areas of shrubs and native/non-native scattered trees. There are no statutory or non-statutory designated sites or conservation areas found. As part of the PEA, measures have been proposed to enhance biodiversity on site, these include the provision of biodiverse green roods, wildlife planting and bird nesting opportunities.

As confirmed by the assessment, there are negligible/low potential for any protected species on site, such as bats, peregrine falcons, black redstart or breeding birds. There were also no invasive species recorded on site. The following measures have been recommended by the report:

- The integrity of the River Thames SMINC should not be impacted
- If there is any habitat suitable for nesting /breeding birds, measures must be taken to avoid harming these
- Mature and semi-mature trees are to be protected and retained where possible
- Ecological enhancement to be aligned with planning policies

The study also outlined recommendations, to minimise indirect impacts from artificial lighting, such as the avoidance of flood lighting, lighting design to be in line with ILP guidance notes, utilisation of LED or low-pressure sodium lights, light spillage to be avoided. This is also assessed as part of the BREEAM Assessment, under the Pol04 section.

Also as part of the BREEAM Assessment, the maximum number of credits available have been targeted in the Ecology section, ensuring that all negative impacts from the works are minimised, whilst ecological enhancement is maximised, with a potential to achieve 10% Biodiversity Net Gain for an exemplary credit.

The landscape plan confirmed that the target Urban Greening Factor is 0.4. The landscape strategies are designed for long-term resilience for future proofing, to respond to the climate and ecological crisis, whilst integrating a holistic design approach, creating functional spaces that are multi-dimensional.

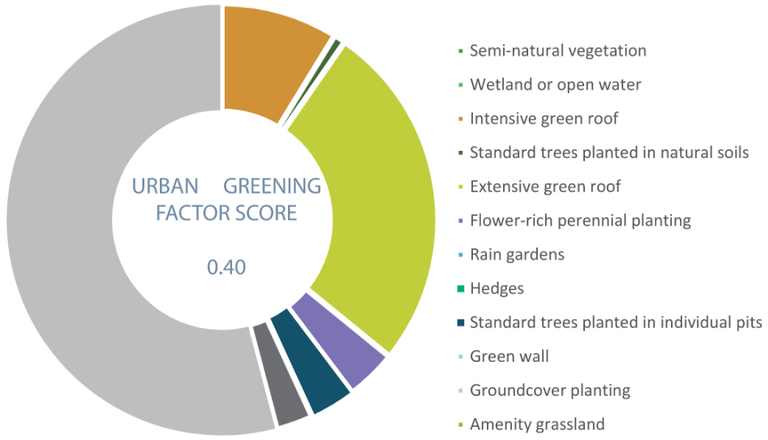


Figure 7: Illustration of UGF. Source: Landscape strategy by Exterior Architecture.

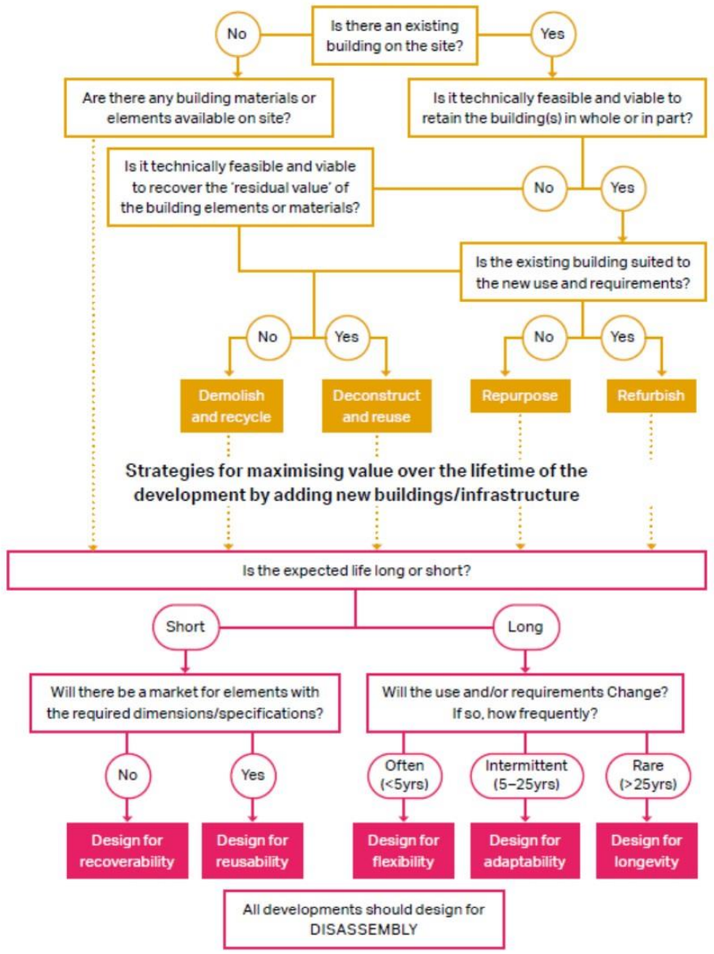
The Biodiversity Net Gain Assessment confirmed, that subject to appropriate planting plans and management plans being developed, a 39.24% BNG can be achieved on site.

POLICIES AND TARGETS ADDRESSED	
London Plan	Policy G5 Policy G6
Wandsworth Local Plan	LP10, A-8, B, G LP14, F LP55 LP57

4.5. Materials, Waste and Circular Economy

As part of the Circular Economy Statement and Whole Life Carbon Assessment, materiality and waste have been reviewed and assessed in detail.

A decision tree has been followed to assess the potential to avoid demolition, however it is not technically feasible to fully retain these. As confirmed by the Circular Economy Statement, the existing structures on site are of poor quality, and they would limit the energy efficiency potentials of the new development.



Mayor of London Circular Economy Statement Guidance

Figure 8 - Circular Economy decision tree

The circular economy approach for the existing site is as follows:

- The development is aiming for net-zero import/export of soil
- Any residual excavation waste is to be diverted from landfill (min.95%)
- Reusing demolition waste and hardcore where this is possible
- A pre-demolition audit is to be completed to ensure material efficiency and waste reduction is minimised

The circular economy approach for the new development is as follows:

Structure – Design for longevity and deconstruction

- Reducing impact of concrete where possible through GGBS replacement or concrete substitutes where possible.
- Embodied carbon target of ≤625 kgCO2e/m² for Residential and Retail and ≤750 kgCO2e/m² for offices in line with RIBA 2030 guidelines.
- All materials responsibly sourced using a sustainable procurement plan, prioritise materials with EPDs and cradle to cradle certification
- Report on percentage materials with EPDs.
- Achieve a total EPD points score of at least 20, according to the BRE calculation methodology.
- Prioritise materials that can be reused at end of life. Prioritise locally sourced materials where possible.
- Skin – Design for ease of refurbishment
- Windows and retail fascia to be removable and replaceable independent of building frame.
- Ensure is robust and minimalist, incorporating lean design principles void of superfluous materials.
- Investigate opportunities for offsite modular construction of brick and pre-cast concrete cladding.
- Design for deconstruction; modular, lime mortar for brickwork where possible.
- Prioritise materials with a lower carbon impact (i.e., higher recycled content, concrete GGBS content to be optimised)

Services – Design for long life, loose fit

- Water targets 105 l/p/d (litres/person/day) for residential and 10 l/p/d for commercial.
- Adopting all-electric air source heat pump and PV's to minimise energy use.
- Drainage system to be future proofed with additional capacity.
- Use of nature-based solutions to reduce attenuation requirements.
- Ease of access to services to promote easy maintenance and replacement without disturbing fabric of building.
- Maximise recycling opportunities of services, pipes and cables.

Space – Design for flexibility & adaptability

- Designs include modular principles allowing for future adaptability, e.g. residential apartments have flexible floorplates to allow tenants to reconfigure the space however needed.
- Minimise the impact of insulation by considering lower carbon alternatives to Rockwool.
- Stuff – Design for service and sharing
- Limited provisional commercial fit out to allow flexibility for the tenant fit out.

Site – design for remediation, integrated infrastructure and longevity

- Aim for 95% diversion form landfill for any demolition or construction waste.
- Use of precast elements where possible to reduce waste, offsite production with industry-controlled material use and waste standards
- Contractor to produce a site waste management plan.
- SUDs to reduce flood risk and enable reduction in surface water run-off by at least 30%.
- Circular economy approach for municipal waste during operation
- Space allowance within apartments, for segregated domestic waste including, dry-mixed recycling, food and general.
- Target 65% diversion from landfill for household municipal waste.

- Space allowance within residential building common areas for domestic waste.
- Space allowance within commercial building common areas for commercial waste segregation.

Materials and waste are also reviewed as part of the BREEAM and HQM assessments, ensuring that all timber used throughout construction and in the design is legally harvested and traded, materials are responsibly sourced with valid certification available (such as ISO14001, BES6001, FSC and PEFC). As part of the BREEAM targets a credit has also been targeted to ensure that the vulnerable parts of the building are protected from damage, and exposed parts are protected from environmental factors, such as solar gain, high winds, and other severe weather patterns, therefore ensuring that the development is future proofed against climate change and adverse weather. A credit has been targeted for a Climate Change Risk Assessment study to be undertaken, which also review how the design addresses the impact of climate.

POLICIES AND TARGETS ADDRESSED	
London Plan	Policy SI7
Wandsworth Local Plan	LP10, A-1, 4, 5, 6, B, G LP13 B, C

4.6. Flood Risk and Drainage

The Flood Risk Assessment (FRA) confirms that the Site is currently within Flood zone 3, due to the tidal and fluvial risks from the River Thames. The Site however is protected by the Thames Tidal Defences (TTD) until 2100 as a minimum, although due to the implementation of the TE2100 plan it is considered likely, that it would be protected beyond 2100.

As per local requirements, a Sequential and an Exception test have been undertaken. Applying the sequential approach, the ground floor will not be used for residential purposes, only commercial, furthermore the development has been aligned with the requirements of the Exception test, which states that the development must provide wider sustainability benefits to the community that outweigh flood risk, and a site specific FRA must also demonstrate that the development will be safe for its entire lifetime, without increasing flood risk elsewhere, and where possible, will reduce flood risk overall.

The development will ensure, that the structural integrity of the flood defences will not be impacted throughout construction, and a structure survey and ongoing monitoring will be undertaken as appropriate. Residential use will be from the second floor above; therefore the internal floor levels are above the flood levels, specifically from any flood levels that may occur due to a potential Thames tidal breach. Safe access/egress can be provided via the raised elevation of Battersea Bridge Road.

The FRA also states, that to address the local policy, a Sustainable Drainage Strategy will be drafted, which will include an allowance for climate change to account for future increases in rainfall. Infiltration of surface water is unlikely to be possible due to ground conditions, however as confirmed by the local plan, it is acceptable to discharge either directly to the tidal Thames, or via a connection to a surface water sewer and/or combined sewer, following attenuation and treatment via a SuDS train. It is therefore confirmed that the sequential test has passed, and the Proposed Development support the requirements to provide wider sustainability benefits by providing more housing opportunities and employment space.

POLICIES AND TARGETS ADDRESSED	
London Plan	Policy SI12 Policy SI13
Wandsworth Local Plan	LP10, A-3 LP12, A, G, Flood zone 3a requirements

4.7. Pollution

An Air and Nosie Impact Assessment have been prepared for the development to assess the proposals' impact in terms of pollution. More detailed results can be found in these reports, however this section summarises the findings of these studies.

The Air Quality Assessment confirmed, that Wandsworth Borough has been declared as an Air Quality Management Area (AQMA), due to exceedances of the annual and hourly mean NO_2 and 24-hour mean Particulate Matter (PM_{10}) AQOs. Existing air quality in the area has been deemed poor, predominantly due to the traffic volumes on Bridge road (A3320).

Current and future baseline has been established, and the report found neither annual mean PM_{10} concentrations, nor Annual mean $PM_{2.5}$ concentrations exceed the AQOs (Air Quality Objectives). Further reviewal of annual mean NO_2 concentrations confirmed, that the air quality at the Site and surrounding environments is generally good when considering annual mean PM_{10} and $PM_{2.5}$, 24-hour mean PM_{10}, and 1-hour mean NO_2 concentrations.

The proposals' impact has been reviewed during construction and operation phase. The dust risk from site works has been found to me a maximum of medium, mainly due to demolition works, earthworks and construction activities. Mitigation measures have been proposed to ensure the risk is reduced, until they are low or negligible.

The predicted pollutant concentrations suggested, that the development would not exceed the annual mean AQOs at any of the modelled sensitive receptors. Therefore the air quality impact of the development associated with its operation are classed as negligible for all modelled receptors. In terms of transport emissions, the development is considered to be air quality neutral.

The report outlined measures to mitigate impact specifically associated with the construction process, when it comes to the operational phase, it has been confirmed that the development is unlikely to impact local air quality. As such, there are no mitigation measures required for this element.

A Noise Impact Assessment was also undertaken, to assess the noise pollution as a result of the development. A practical design approach has been developed, to ensure that the development is comfortable to live in from a noise perspective. Where windows must be closed due to noise levels, MVHR or similar will be provided in line with the overheating assessment.

Generally the assessment concluded, that compliant noise levels in accordance with BS 8233, ProPG and WHO's guidelines can be achieved by good acoustic design.

The practical design approach for the north, east, south and west façades of the Proposed Development may be summarised as follows:

- Specific calculated assessment required of sound insulation for all elements of the building envelope;
- Moderate sound insulation for non-vision areas and roof;
- Moderate acoustic performance windows of minimum sound insulation with minimum sound reduction index of up 31dB Rw+Ctr (which may typically be achieved using glazing with a 6/12/6 configuration) for the north, west and south façades;
- Standard acoustic performance windows of minimum sound insulation with minimum sound reduction index of up 25dB Rw+Ctr (which may typically be achieved using glazing with a 4/12/4 configuration) for the east façade, and
- An alternative means of ventilation should be designed capable of performing to the same acoustic specification as associated glazing to remove the need to ventilate the building using openable windows.

As the plant equipment is not finalised at this stage, external noise impacts could not be modelled. It has been proposed, that any plant equipment proposed must be in line with the guidance provided in BS4142, and not to exceed 54 dB during daytime, 49 dB during nighttime near U1 receptor and 47 dB during the daytime and 44 dB during the night-time near U2 receptor, when assessed at 1m from the nearest noise sensitive receptor. However, further BS4142 assessment should be completed.

POLICIES AND TARGETS ADDRESSED	
London Plan	Policy SI1
Wandsworth Local Plan	LP14 – C, D, E

4.8. Transport

A Transport Assessment has been undertaken for the Proposed Development, to ensure that the travel environment is in line with local and regional policies. The existing site is in an area with moderate public transport connection, with a PTAL of 3. The development's impact have been assessed on different scales, such as London wide and local borough level.

In terms of pedestrian access points, two separate access will be provided, for the affordable, and private housing elements. Both of these can be accessed via the A3320, Battersea Bridge road – shown on the below Figure.

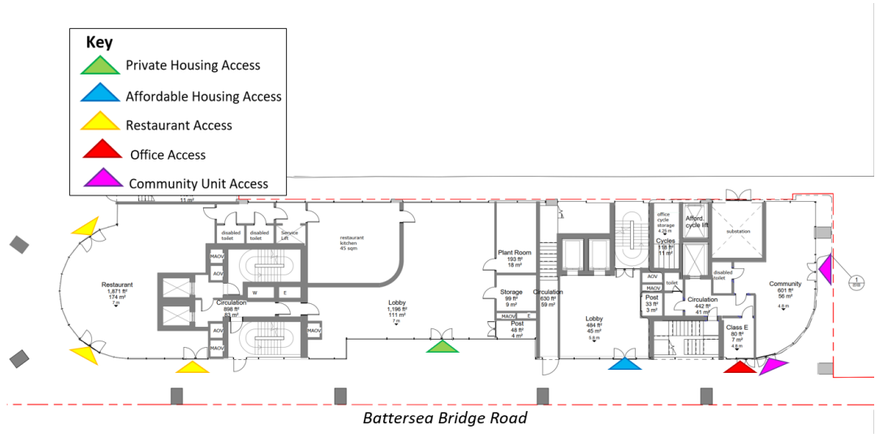


Figure 9 - Pedestrian access strategy, Source: Velocity

Non-residential access to the restaurant and the office unit are also proposed via Battersea Bridge Road, while the Community unit is accessed via Hester Road.

The cycling access strategy is shown on the below Figure:

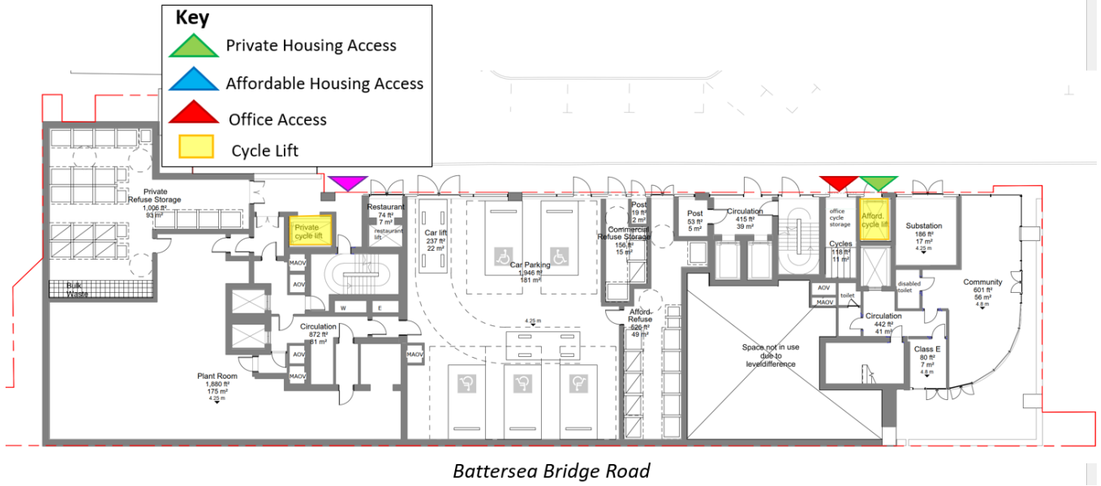


Figure 10 - Cycling access strategy, Source: Velocity

As it can be seen, two access points and a cycle lift are provided via the eastern site boundary at lower ground floor level, with a separate access point for the office unit.

Vehicles would also access via the rear of the Site via Hester Road, this is in line with the existing arrangements. Emergency vehicle access and waste collection will continue to be provided along the service road.

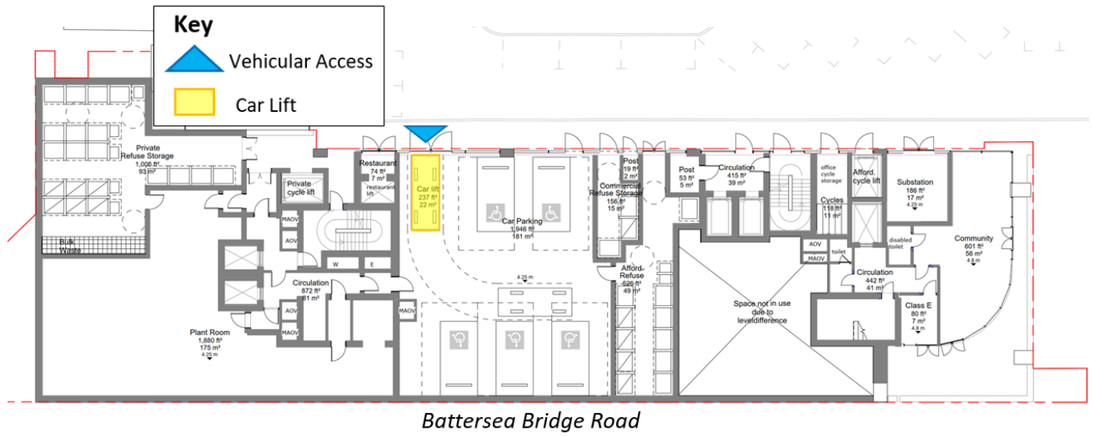


Figure 11 - Vehicular access strategy, Source: Velocity

This has confirmed that 18 of car parking spaces are proposed, including 5 Blue Badge spaces, in line with the local policy, serving 3% of the residential dwellings. The non-residential elements are car-free. In line with Table 10.3 of the London Plan, the development can provide 0.25 car parking spaces per unit, which would permit a total of 38 spaces. Wandsworth Local Plan on the other hand allows 'low-car- in policy LP51 due to the PTAL being 3, therefore some general parking is allowed. It can be summarised, that the car park provision is in line with both local and regional plans.

In accordance with the London plan, both long- and short-stay cycle parking spaces are proposed, additionally the proposed cycle parking is also in line with the London Cycle Design Standards (LCDS). The development would provide 268 long-stay cycle storages in total, and 5 short-stay spaces. Additionally, for the non-residential elements, the Proposed Development will provide 8 long-stay and 10 short-stay cycle parking spaces.

The development is expected to generate 16 two-way vehicular trips in the AM and PM peak hours – as there are 18 car park spaces provided as part of the proposals, this is deemed sufficient to accommodate this level of vehicular trips. The Site is generally surrounded by good walking footways, and the Site is connecting to the existing infrastructure, therefore encouraging the uptake of walking. The cycle parking provision further seeks to encourage sustainable transport methods. The modelling exercise confirmed, that there will be negligible impact on the existing public transport network.

It is expected, that the provision of public realm and landscaping will also create an attractive space for residents.

Therefore it is considered, that both Wandsworth Local Plan and London Plan requirements have been adhered to and met, further details can be found as part of the Transport reports provided by Velocity.

POLICIES AND TARGETS ADDRESSED	
London Plan	Policy T5 Policy T6
Wandsworth Local Plan	LP49 A, B LP50 B LP51 A

5. CONCLUSIONS

Ridge & Partners LLP undertook a Sustainability Assessment, on behalf of Promontoria Battersea Limited (The Applicant) to ensure the development complies with national, regional and local planning requirements.

The Proposed Development has been assessed across a wide variety of sustainability principles, these are as follows:

Energy and Carbon

- **16%** carbon reduction achieved at Be Lean site wide
- **47%** carbon reduction achieved at Be Green site wide
- Carbon offset payment in amount of £158K required
- Residential units have been assessed against Part O and CIBSE TM59 for thermal comfort and complies with requirements via a **mechanical ventilation strategy with supplementary cooling.**
- Non-domestic spaces have been assessed against CIBSE TM54 and predicts a total operational energy of **49.42 kWh/m2 per annum.** ***This figure includes the landlord circulation areas such as the communal corridors and stairways.***
- Whole life carbon assessment confirms developments embodied carbon emissions (Modules A to C) are **853 kgCO2e/m2.**

Water

- Water efficiency measures have been incorporated into the design with fittings and appliances proposed to achieve a daily water consumption rate of **110l per person per day,** including an allowance for any external use.
- Two credits targeted for BREEAM Wat 01, which equates to a **25% improvement** over the baseline building water consumption

Ecology and Biodiversity

- Preliminary Ecological Appraisal (PEA) confirms there are **no habitats present on site**, only small areas of shrubs and native/non-native scattered trees. There are n**egligible/low potential for any protected species** on site and there were also no invasive species recorded on site.
- Maximum number of BREEAM Land Use and Ecology credits are targeted
- Urban Greening Factor **(UGF) of 0.4** is anticipated.
- Biodiversity Net Gain **(BNG) of 39.24%** is anticipated on Site.

Materials, Waste and Circular Economy

- Circular economy statement has been produced which confirms the following
    - The development is aiming for net-zero import/export of soil
    - A **pre-demolition audit** is to be completed to ensure material efficiency and waste reduction is minimised
    - All materials responsibly sourced using a **sustainable procurement plan**, prioritise materials with EPDs and cradle to cradle certification
    - Water targets **105 l/p/d (litres/person/day) for residential and 10 l/p/d for commercial**.
    - Adopting **all-electric air source heat pump and PV's to minimise energy use**.
    - Aim for **95% diversion form landfill** for any demolition or construction waste.
    - Use of precast elements where possible to reduce waste, offsite production with industry-controlled material use and waste standards
    - Contractor to produce a **site waste management plan.**
    - **SUDs** to reduce flood risk and enable reduction in surface water run-off by at least **30%**.
- Ensure all **timber** used throughout construction and in the design is **legally harvested and traded,**
- **Materials are responsibly sourced** with valid certification available (such as ISO14001, BES6001, FSC and PEFC).

Flood Risk and Drainage

- The Flood Risk Assessment (FRA) confirms that the Site is currently within **Flood zone 3**
- A Sustainable Drainage Strategy will be drafted, which will include an allowance for climate change to account for future increases in rainfall.

Pollution

- Air Quality Assessment confirms the development would not exceed the annual mean AQOs at any of the modelled sensitive receptors. Therefore, the **air quality impact are classed as negligible for all modelled receptors**. In terms of transport emissions, the development is **air quality neutral.**
- Noise Impact Assessment confirms that internal noise levels in accordance BS 8233, ProPG and WHO's noise guidelines can be achieved with good acoustic design. Report recommends alternative means of ventilation to remove the need to ventilate the building using openable windows.

Transport

- The existing site is in an area with moderate public transport connection, with a **PTAL of 3.**
- Two separate pedestrian access will be provided, for the affordable, and private housing elements.
- **18 of car parking spaces are proposed, including 5 Blue Badge spaces.**
- The development would provide **212 long-stay cycle storages i**n total, and **4 short-stay spaces**.
- For the non-residential elements, the Proposed Development will provide **8 long-stay and 10 short-stay cycle parking spaces.**

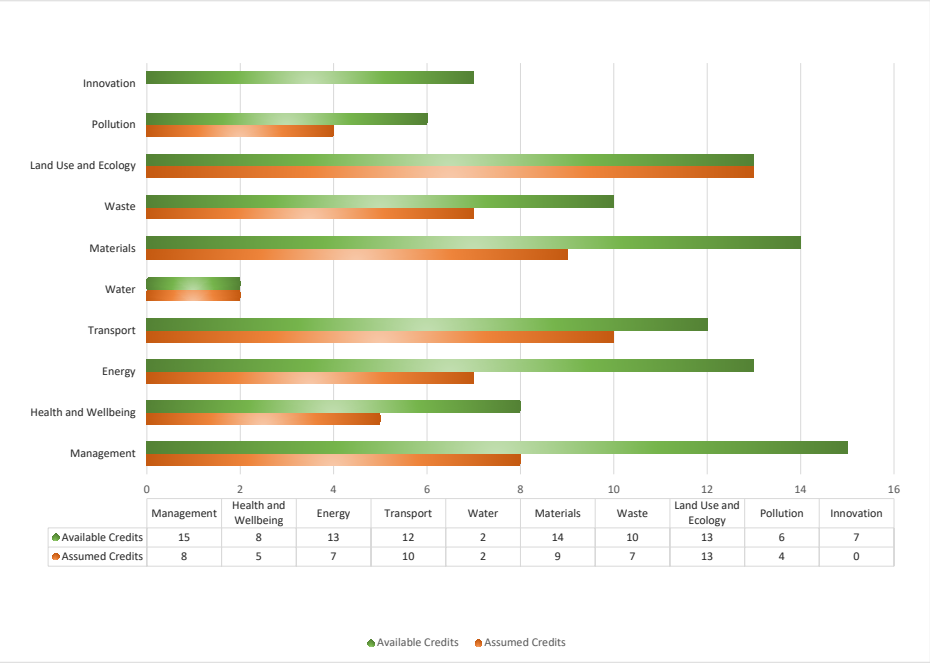
As a result of this assessment, it has been determined, that the Proposed Development fully complies with the relevant sustainability policies and targets, on national, regional and local level.

6. APPENDIX A – BREEAM PRE-ASSESSMENT

One Battersea Bridge
BREEAM Pre-Assessment

RIDGE

Section	Per Credit	% Credits Assumed	Assumed Credits	Potential Credits	Available Credits	% Weighting	Proven credits	Proven percentage
Management	0.80%	53.33%	8	5	15	12.00%	0.00	0%
Health and Wellbeing	0.88%	62.50%	5	3	8	7.00%	0.00	0%
Energy	0.73%	53.85%	7	6	13	9.50%	0.00	0%
Transport	1.21%	83.33%	10	2	12	14.50%	0.00	0%
Water	1.00%	100.00%	2	0	2	2.00%	0.00	0%
Materials	1.57%	64.29%	9	5	14	22.00%	0.00	0%
Waste	0.80%	70.00%	7	3	10	8.00%	0.00	0%
Land Use and Ecology	1.46%	100.00%	13	0	13	19.00%	0.00	0%
Pollution	1.00%	66.67%	4	5	6	6.00%	0.00	0%
Innovation	1.43%	0.00%	0	7	7	10.00%	0.00	0%
Total		**70.55%**	**65**	**36**	**100**		**0.00**	0%



	Management	Health and Wellbeing	Energy	Transport	Water	Materials	Waste	Land Use and Ecology	Pollution	Innovation
Available Credits	15	8	13	12	2	14	10	13	6	7
Assumed Credits	8	5	7	10	2	9	7	13	4	0

This Schedule should be read in conjunction with the BREEAM New Contruction 2018 Manual which you can access by clicking the link below.

Please refer to the BREEAM Manual for the full description of each issue and any additional information such as assessment methodology, relevant definitions and tables. Please note that this schedule is only a brief overview of the criteria and is used for the purpose of tracking the targeted score.

The Schedule operates in a simple traffic light system as outlined in the key below. If you have any queries please call 01962 834400 and ask to speak to a member of the Ridge Sustainability Team.

BREEAM NC 2018 Manual

Schedule Key	
	Evidence Outstanding
	Some evidence received - being assessed or further details required
	Evidence submitted is compliant
	Mandatory requirements

Assessment Assumptions

This tool has been set up based on One Battersea Bridge building being assessed under BREEAM NC V6. BREEAM issues have been filtered in/out based on discussion with the early design team input. These may change as the scheme evolves so this document should be seen as a live document for the purpose of tracking the assessment. **The target for the scheme is currently BREEAM Excellent (score of at least 70) following discussions with the deisgn team.**

Important Dates

Pre Assessment Comments	The pre-assessment is based on comments and information which is available at the time of the plannig application
Design Stage Assessment Submission	A preliminary target for design stage submission is understood to be around the end of RIBA Stage 3.
Post Construction Assessment Submission	To be defined as scheme evolves.

One Battersea Bridge
BREEAM Evidence Schedule

RIDGE

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits	Potential Credits	% Weighting	To be provided by		Design Stage Evidence Status	Final Evidence Status	Notes	Proven Score
Man 01	Project Brief & Design	**Project Delivery Planning**												
		1 to 2	Meeting minutes or other documentary evidence confirming that all relevant parties (**1a - 1c**) have met and discussed **points 2.a to 2.h)** prior to the end of RIBA Stage 2.	RIBA Stage 2	1	1	1	0.80%	Client	PM				
		3	Documentation confirming defined roles, responsibilities and contributions and how they have influenced/ changed project brief, PEP, Communications Plan and Concept Design (**3.a to 3.d**)						Client	PM				
			Man 01 Total		4	1	4	0.80%						0
Man 02	Life Cycle Cost & Service Life Planning	**Capital Cost Reporting**												
		6	Documentary evidence indicating capital cost in pounds per square meter		1	1	0	0.80%	Cost Consultant					
			Man 02 Total		4	1	0	0.80%						0
Man 03	Responsible Construction Practices	1	Documentary evidence confirming that all timber will be legally harvested and traded sourced from suppliers capable of providing certification required - a policy document or letter of confirmation is acceptable at design stage but not post construction (view relevant definitions in manual)	**Pre Requisite**					Contract / Contractor					
		Environmental Management												
		3	Confirmation that principal contractor will have 14001 certification or equivalent. A copy of the principal contractors EMS/ EMAS certificate will be required for final assessment. Note requirement covers all parties that at any stage manage the site e.g. demolition contractor may be applicable.		1	1	0	0.80%	Contract / Contractor					
		4	Confirmation that principal contractor will implement best practice pollution prevention policies in line with PPG6. As above this requirement covers all parties that at any time manage the site e.g. demo contractor.						Contract / Contractor					
		BREEAM Advisory Professional Credits		**Pre Requisite**					Contract / Contractor	Client				
		5	The Client and the Contractor formally agree performance targets. Meeting minutes.											
		BREEAM AP (Site)												
		6	Confirmation Advisory Professional appointed to monitor BREEAM throughout Construction, Handover & Close Out. Documentary evidence will be required that AP makes frequent site visits and has authority to require actions to be taken to tackle any compliance issues.		1	1	0	0.80%	Contract / Contractor	Client				
			Meeting minutes confirming Advisory Professional present at relevant project meetings						Contract / Contractor	Client				
		Responsible Construction Management												
		7 to 9	Documentary evidence confirming responsible construction management requirements for the site. **View Table 4.1 in the Manual** For **one** credit: Considerate Constructors Scheme (CCS) score of >25 plus prove items a), f), g), h), n), o), r) For **two** credits: CCS score of >35 plus prove item g) Note: CCS scheme does not have to be used but will facilitate the production of evidence for this issue.		2	2	0	1.60%	Contract / Contractor					
		Monitoring of Construction-Site Impacts												
		10	Documentary evidence confirming who will be / is responsible for monitoring construction site impacts		2	2	0	1.60%	Contract / Contractor					
		11 to 14	Confirmation that the relevant person will set targets, monitor and record energy consumption in kWh											
		16 to 18	Confirmation that the relevant person will set targets, monitor and record water consumption m3											
		20 to 22	Confirmation that the relevant person will set targets, monitor and record transport movements and impacts. View manual for minimum content.											
			Man 03 Total		6	6	0	4.80%						0
Hea 01	Visual Comfort	**View Out**												
		5 to 7	Confirmation that view out criteria is achieved for 95% of floor area in occupied spaces - mark ups are acceptable as evidence.		1	1	0	0.88%	Architect					
		Internal and External Lighting Levels, Zoning and Control												
		8 to 10	A copy of the specification, relevant room schedules and other confirmation confirming; a) the internal / external maintained illuminance levels and b) the standards that the illuminance levels are specified to		1	1	0	0.88%	M&E				Only external lighting will be assessed for Shell Only.	

One Battersea Bridge
BREEAM Evidence Schedule

RIDGE

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits	Potential Credits	% Weighting	To be provided by	Design Stage Evidence Status	Final Evidence Status	Notes	Proven Score
		11 to 13	Confirmation of how the internal lighting is zoned and controlled in line with criteria **12.a to 12.l**.										
			Hea 01 Total		4	2	2	1.75%					0
Hea 05	Acoustic Performance	All	Confirmation from a suitably qualified acoustician that the building meets or has the potential to meet the required acoustic performance standards and testing requirements for indoor ambient noise level – professional report and calculations from the acoustician should be provided View **Tables 5.14 to 5.19** for criteria for different buildings. Acoustician can define bespoke set of performance requirements using BREEAM principles.		1	1	0	0.88%	Acoustician				
			Hea 05 Total		1	1	0	0.88%					0
Hea 06	Security	**Security of Site and Building**											
		1 to 3	Security Needs Assessment and associated recommendations from a suitably qualified security consultant confirming a) the scope of their advice, b) the stage of design their advice was sought and c) summary of their recommendations	RIBA Stage 2	1	1	0	0.88%	Architect / Client				
			Confirmation that recommendations will be implemented / how they are implemented - ideally this should be manufacturer's literature / marked-up copy of site / design plans highlighting examples						Architect / M&E				
			Hea 06 Total		1	1	0	0.88%					0
Hea 07	Safe and Healthy Surroundings	**Outside Space**											
		7	Drawing or other documentary evidence demonstrating provision of a compliant outdoor space (view **Definitions**)		1	1	0	0.88%	Landscape Architect				
					2	1	1	0.88%					0
Ene 01	Reduction of Energy Use & Carbon Emissions	**Energy Performance**											
		1	Copy of Building Regulations Output Document from approved software. Output must be based on 'as designed' or "as built" stage of analysis (BRUKL) as relevant to stage of assessment.		9	4	5	2.92%	M&E			4 credits are mandatory for Excellent	
			Ene 01 Total		9	4	5	2.92%					0
Ene 03	External Lighting	All	Drawings and / or specification confirming the proposed external lighting and their controls and average initial luminous efficacy of 70 luminaire lumens per circuit Watt. View **Methodlogy**.		1	1	0	0.73%	M&E				
			Ene 03 Total		1	1	0	0.73%					0
Ene 04	Low Carbon Design	**Passive Design Analysis**											
		1	The first Hea 04 Credit is achieved		1	1	0	0.73%	M&E				
		2 to 4	Design teams analysis of possible passive design solutions covering all required criteria in **the Methodology (1 to 12)** and confirmation of what solutions are selected and what the subsequent reduction in CO2 emissions is - this requires a calculation to be undertaken.	RIBA Stage 2					M&E				
		Low Zero Carbon Feasibility Study											
		7	Copy of feasibility study undertaken by Energy Specialist covering criteria **1 to 10 in Methodology.**	RIBA Stage 2	1	1	0	0.73%	M&E				
		8	Confirmation that an LZC technology has been specified for the building in line with the findings of feasibility study and confirmation of what the subsequent reduction in CO2 emissions is.						M&E				
			Ene 04 Total		3	2	1	1.46%					0
Tra 01	Transport Assessment & Travel Plan	**Travel Plan**											
		1 to 5	Undertake a site specific Transport Assessment and develop a draft Travel Plan based on this (or Transport Statement) covering all criteria from **2.a to 2.g** and **Methodology. View Table 7.1 for applicable amenities**	Stage 2	2	2	0	2.42%	Transport Consultant				
			Demonstrate that the Travel Plan will be implemented and supported by the building's management in operation. This may be the inclusion of physical items in line with recommendations e.g. cycle storage or the building operator confirming they will follow any "soft" recommendations e.g. appoint a Travel Plan Co-ordinator.						Transport Consultant / Client				
			Tra 01 Total		2	2	0	2.42%					0

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits	Potential Credits	% Weighting	To be provided by	Design Stage Evidence Status	Final Evidence Status	Notes	Proven Score
Tra 02	Sustainable Transport Measures	All	Confirmation that Tra 01 is achieved and the site's accessibility index has been calculated.		10	8	2	7.50%	Transport Consultant				
		Option 1	The existing AI calculated in Tra 01 achieves the following: ≥ 4 for prison or MOD sites, rural location sensitive buildings, and other building group 3 ≥ 8 for all other building types						Transport Consultant				
		Option 2	Confirmation that future accessibility index will be higher and evidence that services will be in place as applicable (bus, tram, train etc)						Transport Consultant				
		Option 3	Documentary evidence confirming the public transport information service that is proposed						Client				
		Option 4	Documentary evidence confirming that sufficient number of compliant electric recharging stations will be provided						Architect				
		Option 5	Car share documentary evidence covering all requirements						Architect / Client				
		Option 6	Evidence that early consultation has taken place with local authority re pedestrian and cycle routes and confirmation that one proposition will be implemented by the scheme	Stage 1 (option 6 only)					Architect / Client				
		Option 7	Documentary evidence confirming that compliant cycle storage will be provided						Architect			When the building occupancy is confirmed we can provide confirmation on the number of cycle storage spaces required.	
		Option 8	Documentary evidence confirming that compliant cycle facilities will be provided (showers, change, lockers, drying space). Option 7 must be achieved for this to be awarded.						Architect				
		Option 9	Evidence confirming at least three existing compliant amenities (500m)						Transport Consultant / Client				
		Option 10 & 11	Evidence confirming provision of new compliant amenity(ies) (500m)						Architect / Client				
		Option 12	Evidence confirming implementation of one site specific improvement measure not recognised under BREEAM in line with recommendations of Travel Plan. This must be reviewed by BRE.						Architect / Client				
			Tra 02 Total		10	8	2	7.50%					0
Wat 02	Water Monitoring	1	Documentary evidence (specification clause and/or design drawing or schematic) confirming the specification and type of **mains** water meter location. Including confirmation of connection to BMS where applicable.		1	1	0	1.00%	M&E				
		2 to 5	Documentary evidence (specification clause and/or design drawing or schematic) confirming the specification and type of water meter(s) and sub-meter(s) and their locations. Including confirmation of connection to BMS where applicable. Sub-meters are required where any plant or building area will consume >10% of total demand.				0						
			Wat 02 Total		1	1	0	1.00%					0
Wat 03	Water Leak Detection	1 to 2	Documentary evidence (specification clause / design drawings / manufacturer's product information) confirming details of leak detection system. Leak detection to meet criteria **2a to 2e**.		1	1	0	1.00%	M&E				
			Wat 03 Total		1	1	0	1.00%					0
		Superstructure Comparison with Benchmark (offices, industrial & retail only)											
		1 to 2	Detailed documentary evidence confirming Life Cycle Assessment of super structure of building. This can be either BREEAM Simplified Tool or IMPACT compliant tool. Results to be submitted by assessor to BRE prior to end of Stage 2. Further credits are available for repeating this at Stage 4.										
		Superstructure Options Appraisal (all building types)			6	4	2	6.29%					

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Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits	Potential Credits	% Weighting	To be provided by		Design Stage Evidence Status	Final Evidence Status	Notes	Proven Score
Mat 01	Environmental Impacts from Construction Products - Building Life Cycle Assessment	3 to 5	Detailed documentary evidence demonstrating that 2 - 4 significantly different superstructure design options have been considered using an Life Cycle Assessment tool recognised by the BRE. These considerations should be shown to influence the wider design decision making e.g. described in an options appraisal summary report which explains the reasons for selecting the preferred option. Results to be submitted by assessor to BRE prior to end of Stage 2. Further credits are available for repeating this exercise at Stage 4.	RIBA Stage 2 (for some)					Project team					
		Substructure and Hard Landscaping Options during Concept Design (all types)											
		7	Options appraisal must be complete as criteria 3-4 above, then further credit available for carrying out Life Cycle Assessment options appraisal of a combined total of 6 significantly different substructure or hard landscaping design options (at least 2 of each). Results to be submitted to BRE prior to end of RIBA Stage 2		1	1	0	1.57%	Project team					
			Mat 01 Total		7	5	2	7.86%						0
Mat 02	Environmental Impacts from Construction Products - Environmental Product Declarations	1	Documentary evidence confirming the construction products that have Environmental Product Declarations (EPDs) together with a copy of their certificates. **View Methodology for points score.**		1	1	0	1.57%	Structures	Landscape Architect				
			Mat 02 Total		1	1	0	1.57%						0
Mat 03	Responsible Sourcing of Construction Products	1	Copy of relevant responsible sourcing scheme certificate (for timber where certification not provided written confirmation from supplier that all timber is 'legally harvested and traded'), if these are not available then confirmation that products will be sourced from suppliers capable of providing certification can be used at design stage – include this as specific clauses if possible as more robust	**Pre Requisite**					Architect	Contract / Contractor				
		Enabling Sustainable Procurement												
		2	Sustainable Procurement Plan covering criteria **2.a to 2.e.** This document should set targets and will need to be in line with BS ISO 20400 if it is adopted at organisation level.	RIBA Stage 1	1	1	0	1.57%	Client					
		Responsible Sourcing of Materials												
		3	Using the Materials categories in **Table 9.13,** compile a list of construction products used (**Table 9.11 and 9.12)** and categorise them accordingly. Following this, please provide the appropriate certification, this must match up to the product and the material category specified. If quantity information can be provided this will help to improve the acheived score.		3	1	2	1.57%	Architect	Contract / Contractor				
			Completed Mat 03 Calculator						Assessor					
			Mat 03 Total		4	2	2	3.14%						0
Mat 05	Designing for Durability & Resilience	**Protecting Vulnerable Parts of the Building from Damage**												
		1	Design drawings marked up to illustrate vulnerable internal and external areas/ parts of the building (**Measures 1.a to 1.d**) See examples of protection measure under **Methodology**		1	1	0	1.57%	Architect	Landscape Architect				
			Design drawings and/ or specification confirming the durability measures specificed											
		Protecting Exposed Parts of the Building from Material Degradation												
		2	Confirmation of applicable building elements and environmental factors from those listed View key exposed elements under **Definitions** Confirmation of design and specification measures put in place to limit degradation effects						Architect	Structures				
		3 to 4	Drawing or photos that show convenient access to the roof and façade for cost-effective cleaning, replacement and repair in the building's design. Drawings and professional narrative show that the roof and façade is designed to prevent water damage, ingress and detrimental ponding.						Architect	Structures				
			Mat 05 Total		1	1	0	1.57%						0
		Pre-demolition Audit												

RIDGE

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits	Potential Credits	% Weighting	To be provided by	Design Stage Evidence Status	Final Evidence Status	Notes	Proven Score
Wst 01	Construction Waste Management	1 to 3	Copy of the pre demolition audit of any existing buildings, structures or hard surfaces being considered for demolition. The audit must cover criteria **1.a to 1.d** and be carried out by a suitably qualified person prior to the end of RIBA Stage 2. **View Methodology** for the scope of the audit.	RIBA Stage 2	1	1	0	0.80%	Project team				
		Construction Resource Efficiency											
		4 to 5	Copy of the Resource Management Plan (RMP) covering **3.a and 3.b.** **View Definitions** for requirements of a compliant RMP. The Resource Management Plan MUST reference the pre-demo audit. Confirmation of targeted / achieved resource efficiency for the site - please refer to **Table 10.1**.		3	1	2	0.80%	Contract / Contractor				
		Diversion of Resources from Landfill											
		6 to 7	Confirmation of the amount of waste that will be diverted from landfill (refer to table 10.2) and waste materials will be sorted into key waste groups. View **Definitions**		1	1	0	0.80%	Contract / Contractor				
			Wst 01 Total		5	3	2	2.40%					0
Wst 03	Operational Waste	All	Documentary evidence confirming the types of waste that will be generated by the assessed building e.g. will large amounts of compostable or packing / compactable waste be generated?		1	1	0	0.80%	Architect / Client				
		All	Documentary evidence confirming: -The location of the dedicated recyclable storage area; -Storage area for general waste; -The area (m2) of the storage space(s); - Description of the labelling - Provision of composting facilities / compactor if required View **Criteria 1.a to 2.c, additional requirements for healthcare and multi residential units**						Architect / Client				
			Wst 03 Total		1	1	0	0.80%					0
Wst 05	Adaptation to Climate Change	1 to 3	Copy of Climate Change Adaptation Strategy Appraisal detailing recommendations / solutions that aim to mitigate identified impacts. Original report to be produced during RIBA Stage 2 and then up dated at RIBA Stage 4 with any omissions justified to assessor. Cross reference elements in the **Methodology; Hazard Identification with Risk Estimation, then Evaluation and Management**	RIBA Stage 2	1	1	0	0.80%	Project team				
			Wst 05 Total		1	1	0	0.80%					0
Wst 06	Design for Disassembly and Adaptability	**Recommendations**											
		1 to 2	Copy of building specific study reviewing the ease of disassembly and functional adaptation potential of different design scenarios by end of Concept Stage - must include a set of recommendations **View Methodology**	RIBA Stage 2	1	1	0	0.80%	Project team				
		Implementation											
		3 to 5	Provide an update during RIBA Stage 4 that confirms how recommendations of study have been implemented, any omissions to be formally justified in writing to assessor. Provide a guide to communicate characteristics to prospective tenants / building users (include in BUG?) **View Methodology**	RIBA Stage 4	1	1	0	0.80%	Project team				
			Wst 06 Total		2	2	0	1.60%					0
Le 01	Site selection	**Previously Occupied Land**											
		1	Design drawings, report and/or photos or overlay confirming the type and duration of previous land use and the areas before and after development (including areas of any temporary works to facilitate the development) View **Definition**		1	1	0	1.46%	Architect				
		Contaminated Land											
		2	A copy of specialist land contamination report including drawings showing contaminated areas and areas that are to be remediated		1	1	0	1.46%	Project Team				
		3	Confirmation of remediation strategy and implementation plan – if this is yet to be confirmed then a letter from client or representative confirming will be undertaken is acceptable at design stage.										
			Le 01 Total		2	2	0	2.92%					0
		Statutory obligations											

One Battersea Bridge
BREEAM Evidence Schedule

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Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits	Potential Credits	% Weighting	To be provided by		Design Stage Evidence Status	Final Evidence Status	Notes	Proven Score
Le 02	Identifying and Understanding the Risks and Oppertunities for the Project	1	Confirmation from Client or Contractor that compliance is monitored against all relevant UK and EU or International legislation relating to ecology of site	RIBA Stage 2	**Pre Requisite**				Client	Ecologist				
		Survey and Evaluation							Ecologist					
		2	**Route 1:** Copy of the BREEAM Ecological Risk Evaluation Checklist with supporting documentary evidence as appropriate. View **Methodology.**											
		3	**Route 2:** An appropriate ecologist is appointed early enough to ensure early involvement in site configuration and can influence strategy planning decisions						Ecologist					
		4	The ecologist determines the site's ecological baseline, including; Current and potential ecological value and condition of the site and related areas within the Zone of Influence. Direct and indirect risks to current ecological value from the project. Capacity and feasibility for enhancement of the site's ecological value and, where relevant, areas within the Zone of Influence.		1	1	0	1.46%						
		5	The data collated by ecologist is shared with the project team to inform the site preparation, design and construction works											
		Determining the Ecological Outcomes for the Site												
		6	Survey and evaluation criteria followed for the relevant route											
		7	An optimal ecological outcome for the site is selected after liaising with representative stakeholders and the project team. The outcome should be in line with the mitigation hierarchy of action, **see Methodology**.		1	1	0	1.46%	Ecologist					
			Le 02 Total		2	2	0	2.92%						0
Le 03	Managing Negative Impacts on Ecology	**Identification & Understanding the Risks and Opportunities for the Site**												
		1	Le 02 has been achieved		**Pre Requisite**				Client	Ecologist				
		Planning, Liaison, Implementation and Data												
		2	Documentary evidence confirming roles and responsibilities for managing negative impacts on ecology have been clearly defined, allocated and implemented early enough to influence concept design or design brief.	RIBA Stage 2	1	1	0	1.46%	Ecologist	Project Team				
		3	Documentary evidence confirming that the potential impacts of site preparation and construction works on ecology have been identified at an early project stage to optimise benefits and outputs.											
		4	Project team have proposed solutions and selected measures to be implemented during site preparation and construction works. These should be based on the liaison and collaboration undertaken for Le 02.						Ecologist	Project Team				
		Managing Negative Impacts of the Project												
		5 to 8	Evidence to confirm that either there has been no loss in ecological value or that this has been limited as far as possible in accordance with hierarchy. View **Hierarchy in Methodology**		2	2	0	2.92%	Ecologist	Project Team				
			Le 03 Total		3	3	0	4.38%						0
Le 04	Change & Enhancement of Ecological Value	**Managing negative impacts on ecology**												
		1	Criterion 8 of Le 03 has been achieved		**Pre Requisite**				Ecologist	Project Team				
		2	Confirmation from Client or Contractor that compliance is monitored against all relevant UK and EU or International legislation relating to ecology of site (as per criteria 1 of Le 02)						Client	Ecologist				
		Enhancement of Ecology												
		4	Documentary evidence that the recommended solutions and measures (from Le 03) have been or will be implemented and this will result in an enhancement of the ecological value of the site.		1	1	0	1.46%	Ecologist	Project Team				
		5	Data collated are analysed and where potentially valuable be provided to the local environmental records centres nearest to, or relevant for, the site.						Ecologist	Project Team				

One Battersea Bridge
BREEAM Evidence Schedule

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Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits	Potential Credits	% Weighting	To be provided by	Design Stage Evidence Status	Final Evidence Status	Notes	Proven Score
		Change and Enhancement of Ecology											
		6	**Route 2** Ecologists confirmation of change in ecological value (should be done in line with **GN36**).		3	3	0	4.38%	Ecologist / Project Team				
			Le 04 Total		4	4	0	5.85%					0
Le 05	Long Term Ecology Management and Maintenance	**Roles & Responsibilities, Implementation & Stat Obligations**											
		1	Confirmation from Client or Contractor that compliance is monitored against all relevant UK and EU or International legislation relating to ecology of site (as per criteria 2 of Le 02 and criteria 1 of Le 04)		**Pre Requisite**				Client / Ecologist				
		2	Criterion 8 in Le 03 has been achieved, and at least one credit under Le 04 for 'Change and Enhancement of Ecology' has been awarded.						Ecologist / Landscape Architect				
		Planning, Liaison, Data, Monitoring and Review Management & Maintenance											
		3	Documentary evidence confirming that the solutions and measures developed by collaboration under previous issues have been implemented to: a) monitor and review effectiveness for implementation b) develop and review management and maintenance solutions, actions or measures Criteria **4a) - f)** should be considered as part of this		1	1	0	1.46%	Ecologist / Project Team				
		4	The building owner information that is supplied should include a section on ecology and biodiversity to inform the owner of local ecological features, value and biodiversity on or near the site.						Ecologist				
		Landscape and Ecology Management Plan Development			1	1	0	1.46%	Ecologist / Client				
		5 to 6	A landscape and ecology management plan is produced in line with BS 42020:2013 and cover at least the first five years after project completion. View **5.a to 5.e -** Plan to be kept up to date to support maintenance of ecological value of the site.										
			Le 05 Total		2	2	0	2.92%					0
Pol 03	Flood & Surface Water Management	1	Documentary evidence from appropriately consultant confirming they are qualified in line with BREEAM requirements		**Pre Requisite**				Civils			**Flood Zone 3**	
		Flood Resilience											
		1 to 3	Copy of site specific Flood Risk Assessment and supporting documentation confirming flood risk and resilience and resistance of the development where applicable.		2	1	1	1.00%	Civils				
		Surface Water Run-Off											
		5	Surface water run-off solutions must be bespoke i.e. take into account site specific requirements etc. Priority levels in methodology should be followed.		**Pre Requisite**				Civils				
		6 to 9	Documentary evidence confirming peak rate of run-off requirements are met - typically included in consultant's report and appendices. Relevant maintenance agreements should also be provided to indicate long term operation and maintenance of all SUDs will be in place.		1	1	**0**	1.00%	Civils				
		10 to 15	Documentary evidence confirming volume of run-off requirements are met - this must also confirm no flooding of property in event of local drainage system failure. Relevant maintenance agreements are required for achievement of this credit too.		1	1	0	1.00%	Civils				
			Pol 03 Total		5	3	2	3.00%					0
Pol 04	Reduction of Night Time Light Pollution	1	Design drawings and correspondence confirming that external lighting is not required for the site however does not adversely affect safety and security of site and users		1	1	0	1.00%	M&E				
		2 to 5	OR External lighting design data / calculations / drawings confirming compliance with required standards, locations and controls. There is a specific requirement for illuminated advertisements that must be achieved.						M&E				
			Pol 04 Total		1	1	0	1.00%					0

7. APPENDIX B – HQM PRE-ASSESSMENT

One Battersea Bridge
HQM Evidence Schedule

RIDGE

Section	Assumed Score (3 Star)	Potential Score (4 Star)	Available Credits	Proven Score
Our Surroundings	91	99	153	0.00
My Home	93	100	261	0.00
Delivery	29	29	86	0.00
Totals	213	228		0.00

	1 Star	2 Star	3 Star	4 Star	5 Star
Credits	Min req only	100	150	240	400
%		20	30	48	80

This Schedule should be read in conjunction with the HQM One Manual (v6) which you can access by clicking the link below.

Please refer to the BREEAM Manual for the full description of each issue and any additional information such as assessment methodology, relevant definitions and tables. Please note that this schedule is only a brief overview of the criteria and is used for the purpose of tracking the targeted score.

The Schedule operates in a simple traffic light system as outlined in the key below. If you have any queries please call 01962 834400 and ask to speak to a member of the Ridge Sustainability Team.

HQM One Manual (2018)

Schedule Key	
	Evidence Outstanding
	Some evidence received - being assessed or further details required
	Evidence submitted is compliant
	Mandatory requirements

Assessment Assumptions

This tool has been set up to summarise the evidence requirements for the assessment of 142 residential units being assessed at the same time under HQM One (v6). **The target for the scheme is currently HQM 3 star (score of at least 150) following discussions with the project team.**

Important Dates

Pre Assessment Comments	The pre-assessment is based on comments and information which is available at the time of the plannig application
Design Stage Assessment Submission	A preliminary target for design stage submission is understood to be around the end of RIBA Stage 3.
Post Construction Assessment Submission	To be defined as scheme evolves.

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
1.1	Public Transport Availability	**Accessibility Index**			12	8		Transport Consultant			
		1 to 3	Details of compliant local bus stops or railway stations confirming distance from the home and average number of services an hour during peak and off peak times								
			Completed HQM Transport calculator					Assessor			
		Home Information						Home User Guide			
		2	Home information is provided for local transport networks or nodes								
		Improved Local Services	An increase in local service provision has been negotiated with transport companies which has increased the AI by at least 1.00 and will be inplace for at least 5 years		3	0		Transport Consultant			
			Total		15	8	0				0
1.2	Sustainable Transport Options	**Home Information**			**Pre requisite**			Home User Guide			
		1	Home Information to be provided to confirm the details of criteria claimed here								
		Cycle Storage			6	6		Architect / Landscape Architect			
		2 to 4	Detailed documentary evidence confirming that compliant cycle storage is provided either for individual homes or communal storage. Cycle storage to be within close proximity to home with a safe pedestrain route from the storage to the home. Drawings and specifications can be provided to confirm this.								
		Cycle Networks		RIBA Stage 2	4	0		Architect / Landscape Architect			
		5 to 6	Evidence that design team consulted with local authority about the state of local cycling networks and identified and implemented an agreed improvement that was not part of existing local plans.								
		7	Documentary evidence confirming that the home is connected to a safe cycle route via a safe pedestrian route								
		Electric Vehicle Charging Points									
		8 to 9	Documentary evidence confirming that private or communal electric car charging points are provided or infrastructure is provided to allow this to be installed in the future. Communal car charging spaces must be clearly marked and a management system must be in place.		4	0		Client Team			
		Car Clubs			3	3		Transport Consultant			
		10 to 11	Evidence that a compliant car club is in place within 650m of the home via a safe pedestrian route. If at least 60% of the vehicles available are hybrid or electric then a further credit can be achieved								
			Total		17	9	0				0
		Key Local Amenities								Coop - Grocery store	

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
1.3	Local Amenities	1	Confirmation that three or more of the listed local amenities are within walking distance of the home via a safe pedestrian route. Includes; post office, 24 hour cash, bank, GP surgery, pharmacy, supermarket or grocery store.		11	11		Transport Consultant		Coop - Access to cash Postal facility	
		2 to 3	The above is achieved and at least two of the additional amenities are located within 1.5 miles of the home via a safe pedestrian route or 30 minute public transport journey; recreation or leisure facility for fitness or sports, childcare facility or school, large scale retail and community facility.		5	0		Transport Consultant			
			Total		16	11	0				0
2.1	Identifying Ecological Risks and Opportunities		**Assessment Route Selection**								
		1	Assessment route for the project is determined using Guidance Note 34 Ecology Risk Evaluation Checklist			**Pre requisite**		Assessor with input from team			
		2	Client or Contractor confirms that compliance has been, or will be, monitored against all relevant UK and EU or International legislation relating to ecology of the site.					Client / Contractor			
			Survey and Evaluation								
		4 to 5	Suitably qualified ecologist's survey report and documentaton confirming that they were involved early enough to review the site and consider value pre development. Report to outline risks to site and capacity to incorporate enhancements	RIBA Stage 1 or 2	3	3		Ecologist			
		6	Documentation demonstrating that information and data collated by the ecologist was shared with the project team to inform site preparation, design and construction works					Project Manager			
			Determining Ecological Outcomes								
		9 to 10	Achievement of 4 to 6 demonstrated plus evidence that the project team have liaised and collaborated with representative stakeholders to agree actions for the project to achieve the optimal ecological outcomes in line with mitigation of hierarchy of actions.	RIBA Stage 2	3	3		Ecologist / Project Manager			
			Wide Site Sustainability								
		11 to 12	Achievement of 9 and 10 demonstrated plus evidence that the wide site sustainability activites and potential for ecosystem service related benefits have been considered. There is a minimum list of considerations that the ecologist must demonstrate		1	1		Ecologist			
			Total		7	7	0				0
2.2	Managing Impacts on Ecology		**Ecological Risks & Opportunities**								
		1	Survey and Evaluation and Determining Ecological Outcomes criteria above are achieved			**Pre requisite**		Ecologist			
		2	Client or Contractor confirms that compliance has been, or will be, monitored against all relevant UK and EU or International legislation relating to ecology of the site.					Client / Contractor			
			Liaison, Implementation and Data	RIBA 2	3	3					
		3	Evidence that roles and responsibilites are clearly defined, allocated and implemented to succesfully deliver the actions required for achieving the optional ecological outcomes agreed above. This should be early enough to influence the concept design and design brief					Ecologist / Project Manager			
		4	Evidence that site preparation and construction works have been planned for and implemented early enough to deliver the actions identified above.					Ecologist / Contractor			
		5	Documentation demonstrating that the project team liaised and collaborated with representative stakeholders taking into consideration data collate and shared and implemented actions during site preparation and construction works					Ecologist / Project Manager			
		7 to 9	Evidence that negative impacts from site preparation and construction works have been managed in line with the hierarchy and no overall loss of ecological value has occurred (6 credits) if the loss has been limited as far as possible 3 credits can be awarded		6	6		Ecologist / Contractor			
			Total		9	9	0				0
			Previously Occupied Land								

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
2.3	Ecological Change and Enhancement	1	Documentary evidence confirming that at least 75% of the proposed development's footprint is on land that was previously occupied. Mark ups can be useful here demonstrating the before and after site areas with m2 clearly shown.		2	2		Architect			
		Ecological Risks & Opportunities			Pre requisite			Ecologist			
		2	Survey and Evaluation and Determining Ecological Outcomes criteria above are achieved								
		3	Client or Contractor confirms that compliance has been, or will be, monitored against all relevant UK and EU or International legislation relating to ecology of the site.					Client / Contractor			
		6	Evidence that the project team have liaised and collaborated with representative stakeholders taking into account data collated and shared to determine and implement actions that enhance the ecological value of the site. If on site enhancement is not possible then off site within the zone of influence.		2	2		Ecologist / Project Manager			
		7	Data collated are provided to the local environmental records centrers nearest to or most relevant for the site					Ecologist			
		Measuring the Change in Ecological Value									
		8	Evidence confirming the change in ecological value; - 2 credits for minimising loss of ecology - 4 credits for not net loss - 6 credits for net gain - 8 credits for exceeding net gain		8	8		Ecologist		Over 10% BNG assumed based on PEA	
			Total		12	12	0				0
2.4	m Ecological Management and Maintenance	**Roles & Responsibilities, Implementation & Stat Obligations**			Pre requisite			Client / Contractor			
		1	Client or Contractor confirms that compliance has been, or will be, monitored against all relevant UK and EU or International legislation relating to ecology of								
		2	Compliance with Ecological Change and Enhancement criteria 6 and 7 and at least 2 credits for criteria 8					Ecologist			
		Home Information			Pre requisite			Home User Guide			
		3	Information is provided to the Home Owner detailing the long term ecological management actions and requirements part of the Home Information Guide								
		Liaison, Review and Management			Pre requisite			Ecologist / Project Manager			
		4	The project team liaise and collaborate with representative stakeholders taking into consideration data collated and shared, to determine and implement the actions made and structures required for Landscape and ecology management plan (below) and monitoring and updat criteria (also below)								
		Landscape and Ecology Management Plan			4	4		Ecologist / Project Manager			
		5	Management Plan in place for lansdcape and ecology accessible to the assessed home. This should be appropriate to the site and build on actions during project delivery. At design stage confirmation is sufficient but the final plan will be required for final assessment								
		Monitoring and Update									

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by		Design Stage Evidence Status	Notes	Proven Score
	Long Ter	6 to 7	Criteria 3 and 5 to be achieved, then require confirmation that formal commitments are in place (or will be) for the following; - monitor and report the actions implemented during the project for protecting and enhancing ecology and the outcomes from these actions. - ongoing management of landscape and ecology in place (on or off site depending on what has been assumed) - Maintain the ecological value of the site and its relationship or connection to its zones of influence - Maintain the site in line with any sustainability linked activities - Remedial or other management actions are carried out which related to those identified in 2.1		4	4		Ecologist	Project Manager			
		8	Confirmation that the landscape and management plan is updated as appropriate to support maintenance of the ecological value of the site					Ecologist	Project Manager			
			Total		8	8	0					0
2.5	Recreational Space		**01 Home Information**									
		1	Home Information to be provided as part of the criteria for this issue		Pre requisite			Home User Guide				
			02 Accessible Recreational Space		4	4		Transport Consultant				
		2	Evidence that the home is within walking distance of a compliant recretational space									
			03 Private Space		6	0		Architect / Landscape Architect				
		3	Confirmation that compliant private external space is provided that is clearly associated with the home.									
			04 Communal Space		7	0		Client Team				
		4 to 5	Confirmation that the home is within close proximity of a compliant communal space, requires suitable management and maintenance arrangements to be in place before practical completion of the scheme (can be part of Ecology Management Strategy)									
			05 Growing Space		3	0		Architect / Landscape Architect				
		6	Confirmation that a compliant growing space will be provided in close proximity to the home. Credits awarded depending on whether this is private or communal. Space to be in addition to space used to achieve private space credits above.									
		7	If growing space is in communal area suitable management and maintenance arrangements need to be put in place.									
		8 to 9	Evidence that the local authority and local growing initiatives or groups (where present) have been consulted to determine the demand for, and suitable types of growing space. The outputs from this consultation should be shown to feed into the provision of the growing space.									
			06 Expert Input		2	0		Architect / Landscape Architect				
		10 to 12	Criteria 6 to 9 have been achieved and a growing space is being provided. Expert input is sought at design stage to inform the design of the growing space, and their advice feeds into the provision of the space. The space must be planted with low maintenance species in part of the area in accordance with expert input	Design Stage								
			Total		22	4	0					0
			01 Flood Risk									

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
3.1	Flood Risk	1	A copy of compliant site specific flood risk assessment		Pre requisite			Civil Engineer			
		2	Confirmation that the flood risk of the new home is communicated to the purchaser of the home before they make a deicision on whether or not to buy the home								
		Home Information			Pre requisite			Home User Guide			
		6	Home information to be provided for homes in a medium or high flood risk area								
		02A Low Flood Risk			19	17		Civil Engineer		Flood zone 3a	
		5	If the FRA confirms low flood risk then up to 19 credits can be achieved for a compliant report. Must take into account all risks of flooding including future flooding.								
		02B Medium or High Flood Risk									
		7 to 8	If the FRA confirms medium or high flood risk then up to 17 credits can be achieved if the resilience and resistance of the development to flooding is proven via one of the outlines methods.								
			Total		19	17	0				0
3.2	Managing Rainfall Impacts	**Home Information**			Pre requisite			Home User Guide			
		1	Home information to be provided as part of the criteria in this issue								
		02 Managing the rate and volume of run off			14	14		Civil Engineer		London Plan requires greenfield run-off rates, therefore max credits assumed here	
		2	Evidnece from project team demonstrating a reduction in impermeable area of the development site in line with methodology that achieves; >25% - 1 credit >50% - 3 credits								
		3	OR Report by appropriately qualified professional confirms the sites compliance with criteria 4 and 5								
		4	Report by professional confirms that the peak rate of run off is either; - same as pre-development site - 3 credits - an equivalent to greenfield site run-off rate - 5 credits					Civil Engineer			
		5	Report by professional confirms that the volume of run off due to drainage measures will be (for the 100-year 6 hour storm event) no greater than; - the pre-development site - 6 credits - greenfield site volume of run-off - 9 credits								
		03 Water Quality			3	0		Civil Engineer			
		6 to 8	These credits are only available when an appropriate professional is appointed and at least 3 credits achieved above for 02. Their professional report must demonstrate that appropriate pollution prevention and treatment measures are designed and installed in surface water drainage systems in accordance with C753 The SuDS Manual.								
		04 Designing for Maintenance and Operation			2	0		Civil Engineer			
		9	Confirmation that agreements are in place for the ownership, long term operation and maintenance of all SuDS for the design life of the development								
			Total		19	14					0
		01 Home Information			Pre requisite			Home User Guide			
		1	Home information to be provided as part of Home User Guide								
		03 Security Needs Assessment									

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
3.3	Security	3	A compliant Security Needs Assessment (SNA) undertaken by a Suitably Qualified Security Specilaist - this should be produced during RIBA 2 typically	RIBA Stage 2		Pre requisite		Security Consultant			
		04 Security Features									
		4 to 5	Confirmation of how the recommendations from the SNA will be implemented; 50% implemented - 4 credits 100% implemented - 9 credits		9	0		Security Consultant			
					9	0	0				0
4.1	Indoor Pollutants	**01 Home Information**				Pre requisite		Home User Guide			
		1	Home information to be provided as part of Home User Guide								
		02 Minimising Emissions from Space & Water Heating				Pre requisite		M&E			
		2	Documentation confirming that all combustion appliances within the home have flues that discharge outdoors								
		03 Minimising the Effects of Cooking									
		3 to 5	Confirmation that in each kitchen a cooker hood is provided that is extractive (discharge air outdoors). For mechanically ventilated homes re-circulating cooker hoods are acceptable but details must be included in the Home User Guide.		1	1		M&E			
		6	Confirmation that only cooking appliances with zero emissions from fuel are specified (e.g. electric appliances)		1	1		M&E			
		04 Minimising Emissions from Building Product Types									
		7	Evidence that building product types meet the requirements of emission limits, testing etc as stated in Table 17. Covers interior paints and coatings, wood based products, flooring materials, ceiling, wall and acoustic and thermal insulation materials and interior adhesives and sealants. Credits are awarded as follows; One product - 1 credit 3 products - 2 credits All products - 4 credits		4	2		Architect		3 building product types to coply	
		05 Minimising Airborne Formaldehyde from all sources									
		8 to 9	Confirmation that formaldehyde concentration will be measured post construction and won't exceed stated performance. If the levels are in exceedance of this then measures will be undertaken to reduce them.		3	0		Arhitect			
		06 Minimising Airbourne TVOCs from all sources									
		10 to 11	Confirmation that total volatile organic compound concentration will be measured post construction and won't exceed stated perfornance. If the levels are in exceedance of this then measures will be undertaken to reduce them.		3	0		Architect			
			Total		12	4	0				0
		01 Average Daylight Factor Kitchens									

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
4.2	Daylight	1	Calculations that confirm that all kitchens achieve an average daylight factor of at least 2%		5	0		Architect			
		02 Average Daylight Factor Living Spaces									
		2	Calculations that confirm the minimim average daylight factor achieved for all living rooms, dining rooms and studies. Credits are awarded as follows; 1.5% - 1 credit 1.8% - 3 credits 2.0% - 5 credits		5	0		Architect			
		03 View of Sky									
		3	Calculations that confirm that 80% of the working plane in each kitchen, dining room and study receives direct light from the sky		3	0		Architect			
			Total		13	0	0				0
4.3	Noise Sources	**01 Internal Noise Levels**			2	2		Acoustician			
		1 to 2	Confirmation that a Suitably Qualified Acoustician is appointed and their report confirming that the dwellings are designed to achieve internal noise requirements at outlined in Table 20. (35dB for most rooms with 30dB for bedrooms at night) Test results will be required for the final certificate.								
		02 External Noise Levels			2	2		Acoustician			
		3 to 4	Confirmation that a Suitably Qualified Acoustician is appointed and their report confirming that the noise levels of external functional spaces do not exceed requirements in Table 21. Test results will be required for the final certificate. 55dB - 1 credit 50dB - 2 credits								
			Total		4	4	0				0
4.4	Sound Insulation	**01 Sound Insulation Between Homes**			5	3		Acoustician			
		1	Confirmation that the home achieves the targets set out in Table 22 for airborne and impact sound insulation through either pre-completion testing via a compliant test body or Robust Details.								
		02 Sound Insulation Levels for Internal Walls & Floors			4	2		Acoustician			
		2	Confirmation that the targets set out in Table 23 for airborne sound insulation are achieved and this is demonstrated via testing.								
		3	The Suitably Qualified Acoustician must pass on key issues that have the potential to reduce sound insulation during the construction process including; - How to ensure sockets, switches, down lights and other services or perforations maintain the acoustic performance - Guidance relating to junction details at the head, foot and perimter of the partition or floor								
			Total		9	5	0				0
		01 Home Information			Pre requisite			Home User Guide			
		1	Home information to be provided as part of Home User Guide								
		02 Temperature Analysis									

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
4.5	Temperature	2	Detailed report confirming that thermal analysis has been undertaken via either foundation or comprehensive route. A summary of the thermal analysis results and recommendations on the control of internal temperature is provided to home occupant in line with home user guide requirements			Pre requisite		Energy Modeller			
		03A Foundation Route - HQM Temperature Tool			17	10					
		3	Online assessment tool completed based on HQM high temperature tool and GQM SAP XML outputs where a threshold temperature less than 22°C is achieved. Up to 11 credits - Current weather data files - 7 credits Projected climate change data files - 4 credits plus above					Enegy Modeller			
		03B Comprehensive Route									
		4 to 6	Detailed report confirming that thermal modelling has been carried out in accordance with CIBSE TM59, software must provide full dynamic thermal analysis and the following must be demonstrated (11 credits); Air conditioned buildings - CIBSE Guide A Table 1.5 Natural Ventilation - CIBSE TM59 Section 4.2 Mechanical Ventilation - CIBSE TM59 Section 4.3					Energy Modeller			
		7 to 9	Confirmation that criteria 4 to 6 above are achieved and the thermal modelling requirements are achieved for the projected climate change scenario. If thermal comfort is not achieved for the projected climate change scenario the project team must demonstrate how it could be easily adapted in the future to allow compliance to be achieved (6 credits)					Energy Modeller			
			Total		17	10	0				0
4.6	Ventilation	**01 Information Sign**				Pre requisite		Contractor			
		1	Confirmation that a compliant information sign will be securely fixed to the rear of a boiler, meter or airing cupboard door covering items a) to f)								
		02 Ventilation Air Intakes			4	0		M&E			
		2 to 3	Confirmation that the homes ventilation air intakes avoid drawing in pollution in accordance with CIBSE TM21								
		03 Ventilation Rates				Pre requisite		M&E			
		4	Evidence that the minimum requirements in Table 25 are met - related to minimum ventilation rate and boost flow volumes								
		5 to 6	Evidence that the credit requirements in Table 25 are met - requirements vary for different systems - relates to background venilators size / rate and boost flow rate.		5	0					
		7	For systems 3 and 4 - confirmation that the ventilation system achieves an internal noise of 35dB or less in non bedroom spaces and 30dB or less in all bedrooms in line with ANC Guidelines.								
		04 Maintenance and Controls				Pre requisite		M&E			
		8	Confirmation that the minimum maintenance and controls requirements are achieved as per Table 28. Different requirements for different systems but mostly related to wet rooms having a boost function (mechanical vent) or humidity sensor (natural vent)								
		9 to 11	Criteria 1 to 8 are achieved and any maintenance activity intended to be carried out by the occupier or a building services engineer can be safely undertaken by that individual (see Safe and Accessible Maintenance Systems)		4	0					
		12	For mechanical continuous venilation systems (MVHR, MEV) confirmation that controls are provided that enable sufficient control of background continuous ven rates to meet varying occupancy levels without having to enable boost								
					13	0	0				0
		01 Home Information				Pre requisite		Home User Guide			

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
5.1	Energy and Cost	1	Home information to be provided as part of Home User Guide			Pre requisite		Home User Guide			
		02 Energy Performance									
		2	Outputs from approved SAP Software - HQM SAP XML file is required and must be done by accredited energy assessor. This is fed into online HQM tool which will generate number of credits		40	20		Energy Modeller			
		03 Towards Carbon Negative									
		3	Confirmation that the home achieves a HEPR >0.9 and zero net regulated CO2 emissions		6	0		Energy Modeller			
		4	Confirmation of % of the building's unregulated operational energy consumption as outlined in Table 30. Requires the use of energy bolt-on inputs in the SAP calculation.								
		04 Cost									
		5	Confirmation of outputs scored for cost in line with Table 31		14	0		Energy Modeller			
			Wat 03 Total		60	20	0				0
5.2	Decentralised Energy	**01 Home Information**				Pre requisite		Home User Guide			
		1	Home information to be provided as part of Home User Guide								
		02 Feasibility Study				Pre requisite		M&E			
		2	Independent assessment produced by a suitably qualified professional confirming the most feasible LZC for the homes or development as well as any suitable infrastructure of future retrofit								
		03A Implementation of Feasibility Study Findings			8	8		M&E			
		3	If the study confirms the installation of LZCs is not viable, require confirmation that appropriate infrastructure is installed to allow future retrofit of at least one LZC in accordance with Table 33. Up to 4 credits can then be achieved								
		03B Installation						M&E			
		4	Confirmation that LZCs are designed and installed (or will be installed) in line with feasibility study's findings and there is a direct supply of energy produced to the home under assessment and the requirements of Table 34 (MCS, CHPQA) are satisfied. 8 credits can be achieved.								

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
			Total		8	8	0				0
5.3	Impact on Local Air Quality		**01 Impact on Local Air Quality**		15	15		M&E			
		1	Confirmation that all heating and hot water is supplied by non combustion appliances such as electricity.								
		2	Where combustion appliances are used only 10 credits can be achieved depending on the emission levels meet in Table 35. This requires confirmation of whether the home is located in high or low pollution area as detailed in methodology.								
					15	15	0				0
6.1	Responsible Sourcing		**01 Legally Harvested and Traded Timber**			Pre requisite		Contract / Contractor			
		1	Confirmation that all timber and timber based products used in the building meet the requirements of this as outlined in definitions.								
			02 Product Procurement Policy								
		2	A copy of Product Procurement Policy produced before the end of RIBA Stage 2 by client or developer. This should cover a) to d) to encourage the specification of products with responsible sourcing certificates over similar products for the scheme. This must be included in the construction contract.	RIBA Stage 2	2	0		Client			
			03 Responsible Sourcing of Construction Products Assessment								
		3	Detailed documentary evidence confirming responsible sourcing for all materials included in the scope of the assessment (see Table 38) and quantities where available. This should be summarised in HQM Materials Tool with copies of all claimed certificates provided, at design stage intent can be used but the formal certificate will be required for the final assessment.		23	13		Contract / Contractor QS			
			Mat 01 Total		25	13	0				0
6.2	Environmental Impact of Materials		**01 Product Procurement Policy**								
		1	A copy of Product Procurement Policy produced before the end of RIBA Stage 2 by client or developer. This should cover a) to d) to encourage the specification of products with Environmental Product Declarations over similar products for the scheme. This must be included in the construction contract.	RIBA Stage 2	2	0		Client			
			02 Product Environmental Information								
		2	Confirmation of the products that have verified EPDs - only two EPDs per material type can be counted. 4 EPDs - 1 credit 6 EPDs - 2 credits 8 EPDs - 3 credits 10 EPDs - 4 credits		4	0		Architect			
			03 Building Life Cycle Assessment								
		3	Foundation Route - Home assessed using HQM Environmental Impact of Construction Products tool up to 7 credits can be achieved based on homes impact benchmark achieved in Table 41.		19	0		Architect Embodied Carbon			

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
		4	Comprehensive Route - Home assessed using an IMPACT compliant tool in accordance with methodology. Up to 19 credits awarded based on the homes impact benchmark achieved in Table 41.					Consultant			
			Total		25	0	0				0
6.3	Life Cycle Costing		**01 Occupants Life Cycle Cost Report**								
		1	Copy of compliant Life Cycle Cost Analysis completed before the end of RIBA Stage 2 by suitably qualified cost consultant. Must be updated at detailed design (typically RIBA Stage 4) in order to achieve the credits. Study must be in accordance with PD 156865:2008.	RIBA Stage 2	6	**0**		Cost Consultant			
		2	Copy of Occupants Report, based on the above, is available to potential occupants prior to commitment to purchase. This report must include summary which requires no expert knowledge to understand include specific items as listed in methodology and summary of significant findings of LCC analysis including planned maintenance.								
		3	A final version of the Occupants Report is included in the Home Information and must be updated based on the final LCC analysis at the end of detailed design								
			02 Compontent Level Life Cycle Cost Optimisation								
		4	Copy of component level LCC appraisal by the end of detailed design (typically RIBA Stage 4) carried out by suitably qualified cost consultant. Design team to provide appropriate examples to demonstrate how this has been used to influence the building and systems design or specification to reduce the overall maintenance and operational costs to the occupant. The analysis should be provided as a report to the client. Study must be in accordance with PD 156865:2008.		6	0		Cost Consultant			
			Total		12	0	0				0
6.4	Durability		**01 Integral Elements**								
		1	Confirmation that appropriate measures have been incorporated into the design and specification of the integral building elements at risk of severe material degregation		5	0	5	Architect			
			02 Finishing Elments								
		2	Criteria 1 achieved, an confirmation that appropriate measures to limit degradation have been incorporated into the design and specification of surfaces of building elements at risk of cosmetic material degradation		2	0	2	Architect			
			Total		7	0	7				0
7.1	Drying Space		**01 External Drying**								
		1	Confirmation that compliant external drying facilities are provided e.g. a rotary drier in a secure space of a minimum length as per Table 48 (30m for house with private external space, 20m all others)		1	0		Architect			
			02 Internal Drying								
		2	Confirmation that a tumble drier or washer dryer that is energy efficient and has an acceptable level of condensation is installed prior to handover. Table 49 outlines the requirements.		2	2		Architect			

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
			Total		3	2	0				0
7.2	Access and Space		**01 Home Information**			Pre requisite		Home User Guide			
		1	Home information to be provided as part of Home User Guide								
			02 Nationally Described Space Standards								
		2	Confirmation that the home meets the Technical Housing Standards - Nationally Described Space Standards		5	0		Architect			
		3	Confirmation that the above is met and that the storage provided shows an improvement over the requirement stated by 0.5m2								
			03 Accessible and Adaptable Design								
		4	Confirmation that internal functional space and external space meet the requirements of Part M Category 2 (or 3 where required by local authority)		3	0		Access Consultant			
		5 to 6	Confirmation an Accredited Access Consultant has been appointed at RIBA Stage 2 or equivalent and have conducted a compliant assessment and provided advice at both concept and detailed design stage. Any necessary changes have been agreed with the design team.	RIBA Stage 2							
			04 Accredited Access Consultant Confirmation								
		7	Confirmation from the Accredited Access Consultant that the homes have been built following advice given for criteria 6 - this can be a site inspection or review of as built informaton of a letter of confirmation from developer. The consultant should confirm based on the nature of the development.		3	0		Access Consultant			
			Total		11						0
7.3	Recyclable Waste		**01 Home Information**			Pre requisite		Home User Guide			
		1	Home information to be provided as part of Home User Guide								
			02 Consultation with Waste Collection Authority								
		2	Confirmation that the local waste collection authority has been consulted with to determine the waste collection patterns and identifying the number of recyclable waste streams and the type and size of waste collection containers		2	2		Architect			
			03 Internal Waste Storage								
		3 to 4	Confirmation that compliant dedicated internal storage is provided with fixed units to store recyclable waste which should reflect the number of waste streams the local authority collects. Each individual bin to be 10 litres in volume and the min internal recyclable facilities should be as follows; - 30 litres for 1 - 2 bedrooms - 40 litres for 3+ bedrooms - All homes to have dedicated internal space with fixed units to store food waste minimum of 10 litres in volume		5	5		Contractor			
			04 Composting Facilities and Management								

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
		5	Confirmation that all homes are provided with composting facilities for garden or food waste, in the form of one of the following; - Individual home composting facilities - Local communal facilitites within 50m of main entrance via safe route - Composting collection service run by waste collection authority		3	0		Architect			
			Total		10	7	0				0
8.1	Water Efficiency		**01 Water Efficient Fittings**								
		1	Confirmation that modelled water consumption of the unit meets the requirements in Table 50 awarding 5, 8 or 11 credits depending on performance. Fittings meet optional or advanced performance standards. Covers WCs, showers, baths, basin taps, kitchen sink taps, dishwashers, washing machines and washer dryers		11	5		Architect			
			02 Water Recycling								
		2 to 3	Criteria 1 achieved and confirmation that a rainwater or greywater system is specified and there is sufficient water supplied to offset the WC flushing in accordance with Approved Document G Appendix A; >50% of flushing - 3 credits 100% of flushing - 6 credits		6	0		M&E			
			Total		17	5	0				0
9.1	Project Preparation		**01 Feedback from Previous Projects**								
		1	Demonstrate that lesssons learnt from previous projects have been incorporated into the assessed home following process in Methodology. Requires a specific individual to be appointed to facilitate lessons learnt activities.		**4**	**0**		Project Manager			
		2	Demonstrate that during Design Brief (RIBA 1) an outline delivery plan was developed that has been (and will be) kept up to date as the project progresses	RIBA Stage 1							
			02 Project Delivery Plan								
		3	Demonstrate that before detailed design has started (RIBA Stage 3 usually) the project delivery stakeholders have met to discuss; - project design and client requirements ref HQM compliance - Roles, responsibilities and contributions to meet the above - HQM performance targets to be achieved	RIBA Stage 3		Min Requirement		Project Manager			
		4	Demonstrate that before any activities have started on site (including clearance) criteria a) to e) have been formalised including; - set of actions for construction processes - schedule of commissioning and testing and include in programme - target for air permeability - handover requirements			Min Requirement		Contractor			
			03 Product Procurement and Substitution Policy								
		5	Confirmation that contractor or client have a product procurement policy that covers a) to c) reference encouraging best practice and high build quality and confirms allowance of substitutions			Min Requirement		Contractor			
			04 Dissemination of Information								
		6	Confirmation that processes are in place to encure communication of criteria 3 and 4 as appropriate e.g. Toolbox talks etc. Information should be communicated in a clearway and cover a) to e) as a minimum			Min Requirement		Contractor			
			05 Site Worker Feedback								

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
		7 to 9	Confirmation that the client or principal contractor has a documented policy and procedure in place to enable staff to make protected disclosures. The policy needs to cover a) to i) and be prominently displayed on site and all staff should be made aware of it.		2	0		Contractor			
			Total		6	0	0				0
9.2	Commissioning & Handover		**01 Commissioning Building Services & Controls Systems**								
		1	Confirmation that appropriate project team members have been appointed to conduct and manage commissioning activities								
		2	Documentation confirming that all building systems listed below that are present and commissioned in line with the manufacturer's guidance and appropriate industry best practice by individuals who were not involved in the installation process; - hot water - heating - ventilation - comfort cooling - LZC technology			Min Requirement		M&E			
		3	Where complex building services and systems are present a specialist commissioning manager is appointed to conduct and manage commissioning acitvities. They must be appointed during design stage and undertake the following; - design reviews giving advice on ease of commissioning - commissioning management input into programming and during installtion stages - management of commissioning, performance testing, handover and post handover stages								
			02 Fabric Pre Testing								
		4 to 5	Confirmation that an appropriate professional will be appointed to; - Determine appropriate inspection and pre-testing methods for the site using their professional discretion in line with methodology section - Provide QA of the assessed homes fabric performance including continuty of insulation, through inspection and air permeability testing after the primary air barrier is complete and while it is still accessible - outline recommendations to meet the designed fabric performance standards at post construction - Broaden the sample size and carry out additional pre-testing if there is evidence of potential causes for the air test targets not to be met Recommendations from the professional must be carried out, credits awarded based on the % of homes tested for each dwelling type.		4	0		Contractor			
			03 Post Construction Testing								
		6	Copy of the post construction testing and inspection results, credits are awarded based on the aspects that are tested in line with Table 54. To achieve the credits any remedial works must be carried out before handover as applicable.		7	3		Contractor			
			Total		11	3	0				0
			01 Visual Defects Inspection								
		1	Confirmation that an appropriately qualified person, independent from the site activities has completed the following; - Carried out a visual defects inspection of all listed aspects - Identified and monitored any remedial works needed - Ensured the home is finished and habitatable including i) to vi)			Min Requirement		Client (Clerk of Works)			
		2	Confirmation that the results from the visual defects inspection and any outstanding remedial works are reported and given to occupants before they move in								
			02 Construction Inspections								

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
9.3	Inspections & Completion	3	Confirmation that an appropriately qualified person, is / will be based on site and has undertaken the following as part of their role; a) outlined agreed strategy, roles and responsibilites for achieving 02 Construction Inspections criteria as part of the activities in project delviery plan for 9.1 Project Preparation b) Carried out scheduled inspections of build quality at key stages throughout construction to ensure they meet design specification, warranty standards and building regs etc c) Ensure any design variation or materials substitution are managed and approved by appropriate member of design team or client If this person is independent on project team 5 credits available for 06 below.			Min Requirement		Client (Clerk of Works)			
		03 Construction Record									
		4 to 5	Confirmation that an appropriately qualified person appointed to ensure a Construction Record is kept throughout the construction stages that demonstrates quality assurance measures taken. Record must be available to site operatives and occupants on request			Min Requirement		Client (Clerk of Works)			
		04 Right to Inspect									
		6	Confirmation that potential owners are given the right to carry out their own non invasive visual inspection or snagging check. This may be carried out up to one month before committing to buy the home or before completion of the build and purchase if the home is a new build. The notification of this right mist be prominently given within the sales materials.		2	0		Client (Clerk of Works)			
		7 to 9	Confirmation that the homes specifiction and construction record is available to the potential owner or their representative carrying out the inspection. Any snagging issues or defects or inconsistencies with the documentation that are identified during visual inspection are resolved within 28 days of completion of property purchase. Any activities referred to in occupants right to inspect do not impact statutory rights owed by developer to purchaser in any way								
		05 Feedback Dissemination									
		10	Confirmation that the appropriately qualified personfor 02 Construction Inspections will provide feedback on any lessons learnt and examples of good practice regarding QA from activities on assessed site to the developer, client, consultants and designers to inform future projects via recorded meetings or an easily accessible platform		1	0		Client (Clerk of Works)			
		06 Third Party Verification									
		11	Confirmation that the appropriately qualified third party is appointed to carry out the role in 02 Construction Inspections is an independent third party.		5	0		Client (Clerk of Works)			
		07 Early Inspection Visit									
		12	Confirmation that there is a contracted commitment in place for a visit to be made between 4 and 6 weeks after occupants have moved in. This must include an inspection of active systems (as covered in 11.1 Aftercare 02 Handover) to ensure they are functioning properly. If needed the following actions are taken to ensure the systems are functioning; repairs, remedial works, recommissioning, replacement or guidance to occupants. Any problems regarding the home to be rectified (e.g. fixtures and fittings) and adapt any systems to reflect occupant usage patterns and individual preferences as appropriate		4	0		Contractor			
		08 Seasonal Inspection Visit									

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
		13	Confirmation that there is a contracted commitment in place for a visit to be made between 8 and 12 months after occupants have moved in. This must include the same checks as 07 above with a view to making any adjustments or provide occupants with guidance to ensure the home and its systems are performing as expected throughout the year allowing for seasonal variations. Must include checking the heating bills and taking action to investigate if the homes are performing as expected. Must offer to align any inspection visits required for meeting 11.4 Post Occupancy Evaluation as appropriate.		4	0		Contractor			
			Total		16	0	0				0
10.1	Responsible Construction Practices	**01 Responsible Construction Management**									
		1 to 5	Confirmation of the number of items from Table 57 that will be met for the site. This covers a range of construction site issues including; - vehicle movement - pollution mangement - health and wellbeing - security processes - training, awareness and feedback - monitoring and reporting		5	5		Contractor			
			Total		5	5	0				0
10.2	Construction Energy Use	**01 Contractors Energy Efficiency Checklist**									
		1	Confirmation that the checklist will be completed with a full record of decisions, actions or justifications for all points. Where Contractor not yet appointed the client should appoint an appropriate person to assume responsibility for completing the checklist and handing over to Contractor when they come on board.		2	2		Contractor			
		02 Energy Monitoring and Reporting									
		2	Confirmation that targeting, monitoring and reporting data on the principal contractor's and subcontractors metered energy consumption as a result of the use of construction plant, equipment and site accommodation will be undertaken.		2	2		Contractor			
		03 Weekly Detailed Monitoring & Reporting									
		3	If it can be demonstrated that the above is done weekely then a further credit is achieved		1	0		Contractor			
			Total		5	4	0				0
	r Use	**01 Contractors Water Efficiency Checklist**									
		1	Confirmation that the checklist will be completed with a full record of decisions, actions or justifications for all points. Where Contractor not yet appointed the client should appoint an appropriate person to assume responsibility for completing the checklist and handing over to Contractor when they come on board.		2	2		Contractor			
		02 Water Monitoring and Reporting									

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
10.3	Construction Wate	2	Confirmation that targeting, monitoring and reporting data on the principal contractor's and subcontractors potable water consumption (m3) as a result of the use of construction plant, equipment and site accommodation will be undertaken.		2	2		Contractor			
		03 Weekly Detailed Monitoring & Reporting			**1**	**0**		Contractor			
		3	If it can be demonstrated that the above is done weekely then a further credit is achieved								
			Total		5	2	0				0
10.4	Site Waste Management	**01 Product Procurement Policy**									
		1 to 3	Confirmation that client or developer has a documented policy and procedure in place by end of RIBA Stage 2 which sets out procurement requirements relating to opportunites for minimising construction waste on site for all suppliers and trades. Must be disseminated to all relevant personnel and be included in construction contract. Must encourage specification of products that can help to minimise waste arisings.	RIBA Stage 2	1	0		Client			
		02 Construction Resource Efficiency									
		4	Pre-demolition audit of any existing buildings, structures or hard surfaces		8	4		Contractor			
		5 to 6	Resource Management Plan covering non hazardous waste related to on site construction and any dedicated off site manufacting or fabrication including demolition and excavation waste. Credits are achieved depending on the waste generated per 100m2 GIFA as stated in Table 60								
		03 Diversion of Construction Waste from Landfill			4	4		Contractor			
		7 to 8	Confirmation that waste materials will be sorted into key waste groups as per Table 62. Credits awarded for performance of diversion from landfill as per benchmarks in Table 61.								
		04 Diversion of Excavation Waste from Landfill									
		9 to 10	Confirmation that 8 is achieved, and then confirmation that at least 95% of excavation waste (either by volume or tonnage) is diverted from landfill		3	3		Contractor			
			Total		16	11	0				0
		01 Building Warranty									
		1	Confirmation that the home is covered by a building warranty from a compliant warranty provider		Min Requirement			Client			
		02 Handover Visit									

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
11.1	Aftercare	2	Confirmation that there is a contractural commitment in place for a handover visit to take place as agreed with the first occupants before or after they move in (within 4 weeks); - Introduction to the home information - Demonstrate how to operate and maintain installed systems (ventilation, heating, hot water, LZC, smart devices) - Provisionally agree dates for 4-6 week and 8-12 month aftercare visits where targeted for 9.3 Inspections and Completion - Where POE has been committed to (11.4) details about the POE should be provided and provisional date agreed		Min Requirement			Contractor			
		03 On Call Support									
		3	Confirmation that there is a contracted commitment in place to provide on call support to the occupants of the homes being assessed. This must cover the following; - Cover all parts of the home (fabric, systems and services) - Be available for the whole duration of the time specified in the criteria - Free for occupants - Available to whoever occupies the home during the time the support is available. Credits depend on how long support is available; - 3 credits for two years - 4 credits for three years		4	4		Contractor			
			Total		4	4	0				0
11.2	Home Information	**01 Home Information**									
		1	Confirmation that all applicable home information will be provided to occupants of all homes from the first day of moving in and the home information must be available in an accessible format and in hard and soft copy		Min Requirement			Home User Guide / Contractor			
			Home Information must be written in plain English and contain the contents outlined in Table 63 and 64 as applicable to the assessed building.								
			Total		0	0	0				0
11.3	Smart Homes	**01 Home Information**									
		1	Home information to be provided as part of Home User Guide		Pre requisite			Home User Guide			
		02 Connectivity to the Home									
		2 to 3	Confirmation that a network provider is contacted during planning stage and the following achieved; - Connection from the street for broadband, telecoms and cable TV are installed in ductwork provided by service provider to support future changes as defined in PAS 35491: 2017 Section 5.2.2 - Any other appropriate infrastructure is implemented on site during construction in line with network operators guidance - Connection to broader network via network terminating equipment by post construction stage - Cabled connected available to occupants when they move in Credits awarded depending on the download speed of the broadband available in the home; - 1 credit for superfast broadband (24Mbit/s) - 2 credits for ultra-fast broadband (100Mbit/s)		2	1		M&E			
		03 Connectivitiy within the Home									

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
		4 to 9	Confirmation that there is a primary home distribution space containing a patch panel which provides a central location for all wiring to be run including connections from incoming services and distribution of cabling around the home in line with PAS 35491:2017. Ethernet Cat 5e to be routed to all principal rooms within routing ducts and with the provision for pulling through new cables in the future Cable ducting provided in secondary rooms for future updgrades or to resolve poor wireless broadband in secondary rooms Ducts must either have curved inside or outer corners if they have 90 degree angles or must be greater than 90 degrees Installation and commissioning to be in accordance with PAS 35491:2017. Installed devices relating to this issue must not reduce the number of electrical sockets available to the occupants that are required legally or by design or impede the access or functioning of any other swtiches or control devices		1	0		M&E			
		04 Basic Smart Heating									
		10 to 11	Confirmation criteria 2 to 9 are achieved Smart Home Devices or systems installed that are accessible and no cost to the occupant (e.g. subscription fee). These should meet criteria a) to d); - monitor internal temp levels in main living room and keep it fixed within a set range for energy savings and comfort - Have a 12 month warranty - Use a smartphone app interface that displays internal temp levels over a week, month and annual basis, provides remote control of heating with abiltiy to change schedules, provides instant on/off override. - Any home over 150m2 must have a temp sensor in main bedroom as well as living room		1	0		M&E			
		05 Advanced Smart Heating									
		12 to 14	Confirmation criteria 10 and 11 are achieved Provide additional smart heating functionality that; - uses multi zone heating - ability to independently measure and control internal temp of multiple zones for all principal rooms - uses external temp sensing - allows away from home or geo-location control - allows active frost protection - uses stored environmental and behavioural data to tailor experience - occupancy sensing can be used to trigger heating schedules		1	0		M&E			
		06 Basic Smart Lighting									
		15 to 16	Confirmation that criteria 2 to 9 are achieved Smart Home Devices or systems installed that are accessible and no cost to the occupant (e.g. subscription fee) These should meet criteria a) to c); - monitor and control internal lighting in principal rooms using pre-set lighting controls for energy savings and comfort and have abiltiy to be controlled via app - Allow for remote dimming control of individual lighting in principal rooms - occupancy sensing that is used to trigger lighting schedules		1	0		M&E			
		07 Smart Energy Management									
		17 to 18	Criteria 15 to 16 are met and the device can; - monitor, control and report energy use of individual devices via a smartphone app in at least the principal room using smart plugs or sufficient energy disaggregation methods - provide additional lighting dunctionality that automatically senses ambient light levels and adjusts light levels to meet pre-set requirements - monitor and display the operational status and availabiltiy of LZCs where these are installed		1	0		M&E			
		08 Additional Smart Solutions									

Issue ID	Issue name	Criteria	Credit summary	Time Bound?	Available Credits	Assumed Credits Level 3	Additional Credits Level 4	To be provided by	Design Stage Evidence Status	Notes	Proven Score
			Confirmation that criteria 10 to 11 and 15 to 16 are achieved								
		19 to 20	Smart Home Devices or systems installed that are accessible and no cost to the occupant (e.g. subscription fee) that meet the following; - monitor air quality in all principal rooms and report info to a smart phone app or in home display unit - enable voice control of the smart heating and lighting devices, independent of smart phone - monitor and report humidity in kitchen, main bedroom and bathroom - smart ventilation of filtering, linked with air quality sensor that measures at least three of the following; carbon monoxide, carbon dioxide, humidity, particulates, vocs - gesture control for smart devices		1	0		M&E			
			Total		8	0	0				
11.4	Post Occupancy Evaluation		**01 Occupant Satisfaction Feedback & Bill Data**								
		1	Confirmation that an appropriately qualified person has been appointed to undertake a POE with occupants. This must cover the following; - within 6 weeks of occupation occupants formally offered POE in an accessible format or in person. Formal offer must cover i) to vi) and request occupant contact details - must contact occupants after the 6 week period, prior to when the POE is scheduled to be carried out, where the first offer has not been accepted or declined		2	0		Contractor			
		2	Between 12 and 18 months after occupation the appropriately qualified person must - collect occupant feedback (see methodology) - request annual energy and water bills for first year - analyse feedback and bills to evaluate performance of homes in practice and compare to design intent to improve future projects - Disseminate POE results and lessons learnt to key stakeholders - Send POE data to BRE								
			02 Energy & Temperature Monitoring								
		3 to 4	Criteria 1 and 2 are achieved Confirmation that appropriately qualified professional has also been appointed to collect and monitor the energy consumption and internal temperature data at least once a year, recorded hourly. They should compare actual to predicted energy costs using the homes EPC and anlyse results and outline future lessons as part of criteria 2 to improve the performance of future projects		3	0		Contractor			
			03 Advanced POE								
		5 to 6	Criteria 1 to 4 are achieved Confirmation appropriately qualified professional will also undertake at least one other POE method as part of of data being collected and analysed for criterai 1 to 4		2	0		Contractor			
			04 Independent Third Party								
		7 to 8	Criteria 1 and 2 are achieved Where an independent third party is appointed as the appropriately qualified professional and is contracturally obliged to fulfil and POE commitments referred to in criteria 1 to 6		3	0		Contractor			
			Total		10		0				0