HODKINSON

Baden Prop Ltd

Westminster House

Sustainability Statement

Final

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HODKINSON

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We are able to advise at all stages of projects from planning applications to handover.

Our emphasis is to provide innovative and cost-effective solutions that respond to increasing demands for quality and construction efficiency.

This report has been prepared by Hodkinson Consultancy using all reasonable skill, care and diligence and using evidence supplied by the design team, client and where relevant through desktop research.

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Executive Summary

The purpose of this Sustainability Statement is to demonstrate that the proposed development at Westminster House by Baden Prop Ltd in the London Borough of Richmond Upon Thames is considered sustainable, as measured against relevant local, regional and national planning policies.

The proposed development will comprise the upward extension of the existing Westminster House through creation of two additional storeys of residential accommodation comprising 7no. dwellings and alteration and part conversion of the existing Class E floorspace at basement, ground, first, second, and third floor levels to provide internal access and ancillary residential floorspace with associated external refurbishment and associated development.

Through the incorporation of sustainable design and construction methods, energy and water saving measures, sustainable transport methods, waste reduction techniques and measures to enhance the ecological value of the site, a good quality and sustainable development is proposed.

The key sustainability features outlined in this Sustainability Statement are listed below:

- **BREEAM**: The gym will be designed and built to achieve a BREEAM 'Excellent' rating under the BREEAM Refurbishment and Fit-out (2014).
- **Energy efficiency:** The development will target a 77.1% reduction in regulated CO_2 emissions for the dwellings, and 78.9% for the gym through the specification of energy efficiency measures and renewable and low carbon technologies.
- **Overheating:** The scheme has been designed to ensure overheating risk is reduced to acceptable levels in accordance with CIBSE TM59 and Part O requirements.
- **Water efficiency:** Flow control devices and water efficient fixtures and fittings will be installed in all dwellings to target a maximum internal daily water consumption of 105 litres/person/day.
- **Waste and recycling:** Adequate facilities will be provided for domestic and construction related waste, including segregated bins for refuse and recycling.
- **Materials:** Where practical, new building materials will be sourced locally to reduce transportation pollution and support the local economy. New materials will be selected based on their environmental impact and responsible suppliers will be used where possible.
- **Pollution:** The Noise Assessment concludes noise levels during the respective daytime and night time operation of all services will be managed to ensure minimal impact to surrounding areas.
- **Flood Risk and Sustainable Urban Drainage Systems (SuDS):** The proposed development site lies in a low flood risk zone and will benefit from SuDs such as a green roof.

- **Security:** Consultation with a Security Specialist will take place to ensure the development is safe and secure for its residents.
- **Sound insulation:** The dwellings are to target an improvement on Building Regulations Part E through party walls and floors.
- **Sustainable transport:** The site will benefit from a good existing public transport network and sustainable modes will be encouraged through the provision of cycle storage spaces.
- **Biodiversity and ecology:** Enhancements will be implemented through the provision of green roofs.
- **Sustainable construction:** The site will aim to achieve a Very Good score with the Considerate Constructors Scheme and will closely monitor construction site impacts.

CONTENTS

Appendix D Sustainable Construction Checklist – Non-Residential

1. INTRODUCTION

1.1 This Sustainability Statement has been prepared by Hodkinson Consultancy, a specialist energy and environmental consultancy for planning and development, appointed by Baden Prop Ltd.

1.2 This Statement sets out the sustainable design and construction measures included in the planning application for the proposed development at Westminster House in the London Borough of Richmond Upon Thames.

Sustainability Statement Structure and Methodology

1.3 The formulation of the Sustainability Strategy for the proposed development has taken into account several important objectives, including:

> To address all national, regional and local planning policies and requirements;

> To achieve a viable reduction in CO_2 emissions with an affordable, deliverable and technically appropriate strategy;

> To provide a high quality development that is adaptable to future changes in climate;

> To minimise the negative impact of the proposed development on both the local and wider climate and environment;

> To achieve the highest viable levels of sustainable design and construction;

> To minimise emissions of pollutants such as oxides of nitrogen and particulate matter; and

> To create a pleasant, safe and friendly living environment that will be flexible to its occupants' needs.

1.4 This Sustainability Statement does not duplicate the work of the technical reports prepared in support of the application, but presents the findings in the overall context of sustainability.

1.5 **Chapter 2** provides an introduction to the site and the proposed development.

1.6 **Chapter 3** sets out the relevant national, regional and local policy documents which have been used to guide and inform the sustainability strategy for the proposed development.

1.7 **Chapters 4 to 15** outline the sustainability strategy of the proposed development in relation to the policy documents listed in Chapter 3.

1.8 **Chapter 16** provides a summary of the key sustainability features associated with the proposed development.

2. DEVELOPMENT OVERVIEW

Site Location

2.1 The proposed development site at Westminster House in the London Borough of Richmond Upon Thames is located adjacent to Richmond Station as shown in Figure 1 below.

Figure 1: Site Location – Map data © 2023 Google

2.2 The site is currently occupied by Westminster House, which is a mixed-use building from the 1950s located next to the designated Art Deco Richmond train station.

Planning History

2.3 The site currently holds planning permission for a basement gym (with a floor area of 288.5sqm), granted in December 2022. This approval involved the creation of a new shopfront and access on the northern end of Westminster House, as documented in planning application reference 22/2962/FUL.

2.4 The new planning application proposes a two-storey upward extension to Westminster House to accommodate seven residential apartments. Given the residential element's cycle storage

requirements, adjustments are necessary for the basement gym area. Consequently, these modifications are incorporated into this application for completeness.

2.5 Despite these alterations, certain aspects from the previous gym application will remain unchanged. This includes the new pedestrian access on the northern side of the building and the pedestrian/cycle access on the eastern side.

2.6 The applicants attended a pre-application meeting with a planning officer from the London Borough of Richmond Upon Thames on 11th August 2023. This concluded that the development was appropriate to be car-free, all details of cycle parking are to be submitted with any forthcoming planning application and, all details of the refuse collection strategy are to be submitted with any forthcoming planning application.

Proposed Development

2.7 The proposed development is described as follows:

"Creation of two additional levels of Class C3 accommodation comprising 7no.units, conversion and excavation of the existing Class E basement and part conversion of existing floorspace at basement, ground, first, second, and third floor levels to provide internal access and ancillary residential floorspace with external alterations and associated development."

2.8 Figure 2 below illustrates the proposed site layout of the fourth floor, fifth floor and roof layout.

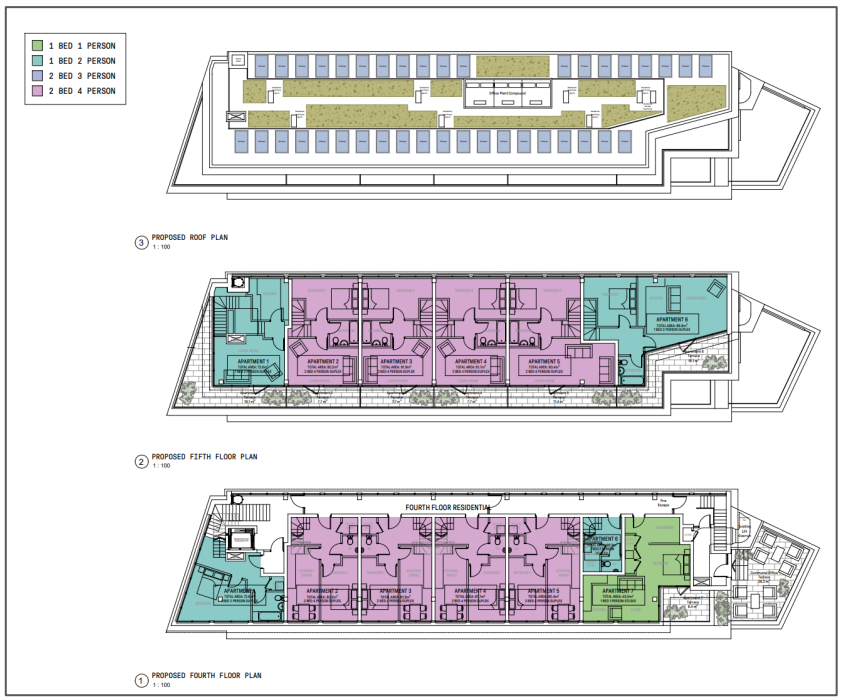


Figure 2: Proposed Site Layout – fourth, fifth and roof plans (Child Graddon Lewis, June 2022)

3. RELEVANT PLANNING POLICY

3.1 The following planning policies and requirements have informed the sustainable design of the proposed development.

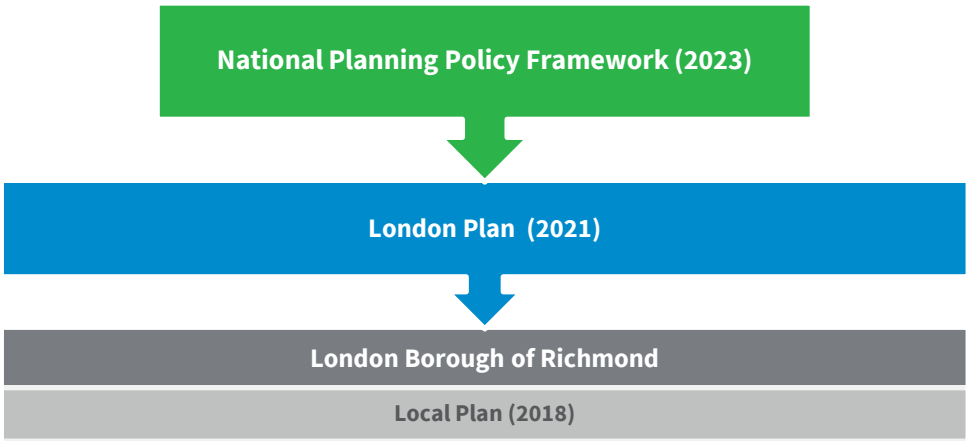


Figure 3: Relevant Planning Policy Documents

National Policy: NPPF

3.2 The revised National Planning Policy Framework (NPPF) was published on the 5th September 2023 and sets out the Government's planning policies for England.

3.3 The NPPF provides a framework for achieving sustainable development, which has been summarised as "*meeting the needs of the present without compromising the ability of future generations to meet their own needs*" (Resolution 42/187 of the United National General Assembly). At the heart of the framework is a **presumption in favour of sustainable development**.

3.4 The document states that the planning system has three overarching objectives which are interdependent and need to be pursued in mutually supportive ways:

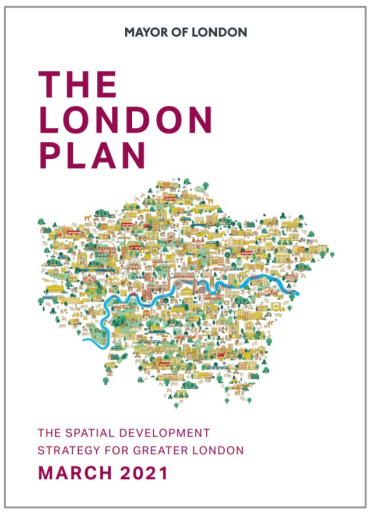
a) **An economic objective** – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;

b) **A social objective** – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and

c) **An environmental objective** – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

Regional Policy: The London Plan

The London Plan (2021)



3.5 The London Plan sets out an integrated economic, environmental, transport and social framework for the development of London. The following policies are considered relevant to the proposed development and this Statement:

3.6 **Policy SI1 Improving Air Quality** states that development should seek opportunities to identify and deliver further improvements to air quality. Where emissions need to be reduced to meet the requirements of Air Quality Neutral or to make the impact of development on local air quality acceptable, this is done on-site.

3.7 **Policy SI2 Minimising Greenhouse Gas Emissions** states that major development should be net zero-carbon. This means reducing greenhouse gas emissions in operation and minimising both annual and peak energy demand.

3.8 **Policy SI3 Energy Infrastructure** states that energy masterplans should be developed for large-scale development locations which establish the most effective energy supply options.

3.9 **Policy SI4 Managing Heat Risk** states that major development proposals should demonstrate through an energy strategy how they will reduce the potential for internal overheating and reliance on air conditioning systems in accordance with the cooling hierarchy.

3.10 **Policy SI5 Water Infrastructure** states that in order to minimise the use of mains water, water supplies and resources should be protected and conserved in a sustainable manner. Development proposals should minimise the use of mains water in line with the Optional Requirement of the Building Regulations (residential development) achieving mains water consumption of 105 litres or less per head per day (excluding allowance of up to five litres for external water consumption). Commercial development should achieve at least the BREEAM excellent standard for the 'Wat 01' category.

3.11 **Policy SI7 Reducing Waste and Supporting the Circular Economy** states that referable applications should promote circular economy outcomes and aim to be net zero-waste.

3.12 **Policy T2 Healthy Streets** states that development should deliver patterns of land that facilitate residents making shorter, regular trips by walking or cycling. Development Plans should demonstrate the application of the Mayors Healthy Streets Approach.

Local Policy: London Borough of Richmond Upon Thames Local Plan

3.13 The London Borough of Richmond Upon Thames' Local Plan was adopted in July 2018, which replaced the previous policies within the Core Strategy and Development Management Plan. The Plan sets out policies and guidance for the development of the borough until July 2033. The following policies are considered relevant to this Statement:

3.14 **Policy LP8, Amenity and Living Conditions** outlines the requirement for developments to ensure the design and layout of buildings enables good standards of daylight and sunlight to be achieved in new development and in existing properties affected by new development; where existing daylight and sunlight conditions are already substandard, they should be improved where possible.

3.15 **Policy LP 10, Local Environmental Impacts, Pollution and Land Contamination**, states the Council will seek to ensure that local environmental impacts of all development proposals do not lead to detrimental effects on the health, safety and the amenity of existing and new users or occupiers of the development site, or the surrounding land. These potential impacts can include, air pollution, noise and vibration, light pollution, odours and fumes, solar glare and solar dazzle as well as land contamination.

3.16 **Policy LP 17 Green Roofs and Walls** outlies the requirement for developments to incorporate green roofs and/or brown roofs into new major developments with roof plate areas of 100sqm or more where technically feasible and subject to considerations of visual impact. The aim should be to use at least 70% of any potential roof plate area as a green / brown roof.

3.17 **Policy LP 20, Climate Change Adaption** requires developments to minimise the effects of overheating as well as minimise energy consumption in accordance with the following cooling hierarchy through their layout, design, construction, materials, landscaping and operation.

3.18 All developments should avoid, or minimise, contributing to all sources of flooding, including fluvial, tidal, surface water, groundwater and flooding from sewers, taking account of climate change and without increasing flood risk elsewhere as noted in **Policy LP 21, Flood Risk and Sustainable Drainage.**

3.19 Developments will be required to achieve the highest standards of sustainable design and construction to mitigate the likely effects of climate change in accordance with **Policy LP 22, Sustainable Design and Construction**. This will also require developments that results in a new residential dwelling, including conversions, to incorporate water conservation measures to achieve

maximum water consumption of 110 litres per person per day for homes. Non-residential buildings over 100sqm are also required to meet BREEAM 'Excellent' standard.

3.20 The Council will ensure that waste is managed in accordance with the waste hierarchy in line with **Policy LP 24 Waste Management.** The Council will require the following:

> Provision of adequate refuse and recycling storage space and facilities, which allows for ease of collection and which residents and occupiers can easily access, in line with the guidance and advice set out in the Council's SPD on Refuse and Recycling Storage Requirements.

> The location and design of refuse and recycling facilities is sensitively integrated in the development design.

> The development to make use of the rail and the waterway network for the transportation of construction, demolition and other waste.

> Developments that are likely to generate large amounts of waste, are required to produce site waste management plans to arrange for the efficient handling of construction, excavation and demolition waste and materials.

3.21 The London Borough of Richmond upon Thames mandates that the **Sustainable Construction Checklist** is completed, which forms part of the assessment for planning applications for new build, conversion and retrofit properties.

4. BREEAM SUMMARY

4.1 In accordance with Policy LP 22 of the London Borough of Richmond Upon Thames Local Plan (2018), the gym will be assessed under the BREEAM Refurbishment and Fit-out (2014) with a target of achieving the required 'Excellent' rating.

4.2 A full BREEAM Pre-Assessment has been presented in **Appendix A** and provides an illustrative route to achieving the 'Excellent rating. The predicted score at this stage is 71.87%, where a 'Very Good' score is ≥55% and an 'Excellent' score is ≥70%. This represents a high level of sustainable design and construction.

4.3 The principles and requirements of many of the individual credits feature throughout this Sustainability Statement, where appropriate, however the mandatory credits for BREEAM 'Excellent' are listed as follows:

> **Man 03: Responsible Construction Practices** – A minimum of one credit is to be achieved, requiring a Considerate Constructors Scheme score of between 25 and 34.

> **Ene 01: Reduction of energy use and carbon emissions** – Energy Performance ($EPR_{NC} \geq 0.4$).

> **Mat 03: Responsible Sourcing** – All timber used on the project must be sourced in accordance with the UK Government's Timber Procurement Policy.

> **Wst 03: Operational Waste** – The provision of a dedicated storage facility for the building's operational-related recyclable waste streams.

4.4 The London Plan Policy SI5 requirement for commercial development to achieve at least the BREEAM 'Excellent' standard for the 'Wat 01' water category or equivalent is not applicable to Westminster House as the gym is not being built to a fit-out standard. Wat 01 is only applicable where sanitaryware is being specified.

4.5 Whilst this has been determined as the most appropriate route to certification, the actual route to certification may vary as the detailed design progresses.

5. ENERGY AND CO_2 REDUCTION

Energy Strategy

5.1 An Energy Statement has been prepared by Hodkinson Consultancy (December 2023) and is submitted as part of this planning application. A summary of this statement has been outlined below, however this document should be referred to for greater detail.

5.2 The energy strategy has been formulated following the current London Plan Energy Hierarchy: ***Be Lean, Be Clean*** *and* ***Be Green***. The overriding objective in the formulation of the strategy is to maximise the reductions in Regulated CO_2 emissions through the application of this Hierarchy with a cost-effective, viable and technically appropriate approach.

5.3 The proposed development has been assessed under Part L 2021.

5.4 A range of Be Lean energy efficiency measures have been proposed to reduce energy demands. This includes U-values better than those required for Part L 2021 and the specification of energy efficient equipment.

5.5 In line with the London plan, the feasibility of decentralised energy production as a Be Clean measure has been assessed. This is a low-density development which is not located near existing heat networks. Therefore, it is more appropriate to have an individual heating systems to be proposed for this development.

5.6 An appropriate range of Be Green renewable and low carbon technologies has been considered. Solar photovoltaics and heat pumps have been concluded to be the most suitable technologies for this development.

5.7 The proposed development is predicted to achieve an overall reduction of onsite regulated CO_2 emissions of 78.1%. This goes significantly beyond the 35% reduction in regulated CO_2 emissions required by the London Plan policy and London Borough of Richmond Upon Thames Local Plan. This represents a high level of sustainable design and construction.

Lighting

5.8 All external lighting, and any security lighting, will be energy efficient and adequately controlled using PIR sensors, daylight cut-off sensors or time switches where possible. This will ensure the conservation of energy when the lighting is not in use.

Appliances

5.9 Where provided, energy efficient white goods will be provided. The purchasing of energy efficient white goods will also be promoted through the provision of information on the EU Labelling Scheme contained within the Home Information Manual.

Energy Monitoring

5.10 Energy display devices, which can monitor electricity and primary heating fuel consumption, will be provided to each of the dwellings. This can empower the occupants to be more aware of their usage and therefore make energy and cost savings, where possible.

Overheating

5.11 Minimising the risk of summer overheating and high uncontrollable temperatures is important so as to ensure that homes are comfortable for their occupants and remain comfortable in the future. Baden Prop Ltd commits to ensuring that all dwellings will not have a high risk of summer overheating and will adopt appropriate measures to ensure this is delivered.

5.12 An initial Part O assessment using the dynamic method of compliance has been undertaken for this development (Hodkinson Consultancy, December 2023).

5.13 Whilst not a major planning application, the development has followed the cooling hierarchy in the London Plan. The following passive design measures have been incorporated in order to reduce the risk of overheating to an acceptable level, as determined by CIBSE TM59:

> High performance solar control glazing with a g-value of 0.4, optimised to mitigate overheating risk whilst achieving fabric energy efficiency targets and natural daylight provision.

> External shading is provided to all windows in the form of external blinds.

- External shading is provided to some windows in form of balconies.
- Highly efficient fabric envelope and high efficiency building services heating system, lighting and appliances are proposed in all dwellings to reduce internal gains.
- A concrete floor slab within the apartment blocks provides some thermal capacity to absorb excessive heat within the building.
- Openable areas of windows have been maximised, to ensure adequate natural ventilation:
  - Window casements open inwards to allow maximum openability.
  - Guarding heights are 1.1m from finished floor level, enabling windows to be fully open without the need for safety restrictors.

5.14 Without any window restrictions the development complies with Part O passively. However, due to window opening limitations highlighted by Hann Tucker Associates (2023), it is not possible to demonstrate compliance with passive measures. Mechanical cooling will be required to mitigate against the residual risk of overheating as a result of external noise constraints. Therefore, active cooling is proposed to provide comfort to occupants acoustically and thermally for the apartments.

6. WATER REDUCTION

Internal Water Efficiency

6.1 Increased frequency of drought across Europe lines up with climate change projections and water companies in the UK capture much less rain for our use than people assume.

6.2 The Environment Agency updated their determination of areas of water stress in 2021[1]. The water stress method takes a long-term view of the availability and the demand for public water supply, rather than a snapshot of shorter or peak periods. It accounts for future population growth, climate change, environmental needs and increased resilience. As of 2021, 15 out of the 23 water companies operating in areas of England were classified as being under 'serious'

[1] https://www.gov.uk/government/publications/water-stressed-areas-2021-classification

stress, including Thames Water where the site is located. This indicates the need to reduce internal water use where possible and specify water efficient fixtures and fittings in new development.

6.3 Reducing water consumption will not only help to preserve our water sources but will also save energy. Approximately 15% of a typical gas-heated household's heating bill is from heating water for showers, baths and taps and the energy used to heat water for devices and appliances emits an average of 875 kg of CO_2 per household per year (Energy Saving Trust, 2013). As such, internal water consumption will be significantly reduced through the use of practical and hygienic water saving measures.

Residential Water Use

6.4 All new dwellings will target a minimum water efficiency standard of **105 litres/person/day** in accordance with Policy S15 of the London Plan (2021) and the optional tighter Building Regulations Approved Document G requirement (110 litres/person/day). An evaluation of the proposed fixtures and fittings will be undertaken during the detailed design however an illustrative strategy to achieve this water target is set out in the Water Efficiency Calculator in **Appendix B.**

6.5 The development also meets The National Policy Statement for Water Resources Infrastructure (April 2023) validation list which states the development should demonstrating water consumption of 110 litres per person per day (including an allowance of 5 litres or less per person per day for external water consumption).

7. WASTE MANAGEMENT

7.1 Waste reduction and recycling is another key challenge of sustainable development and something which is strongly encouraged in the London Plan (Policy SI7). The waste hierarchy, illustrated in Figure 4 below, prioritises those waste management options which are best for the environment.

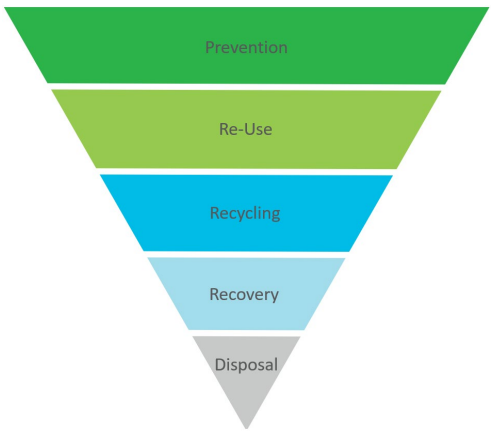


Figure 4: Waste Hierarchy

7.2 The waste hierarchy establishes waste management options according to what is best for the environment. It places great importance on preventing waste in the first place. When waste is created it prioritises preparing it for re-use, then recycling, recovery and lastly disposal (e.g. landfill).

Construction Waste

7.3 The reduction of construction waste not only minimises environmental impacts through ensuring the responsible use of resources and waste disposal but can also significantly reduce construction costs for the developer.

7.4 Prior to construction, Baden Prop Ltd will develop a Site Waste Management Plan which will establish ways of minimising waste at source, assess the use, reuse and recycling of materials on and off-site and prevent illegal waste activities. This plan will then be disseminated to all relevant personnel on and off-site.

7.5 The following waste minimisation actions will be considered:

> Consider opportunities for zero cut and fill to avoid waste from excavation or groundworks;

> Design for standardisation of components and the use of fewer materials;

> Design for off-site or modular build;

> Return packaging for reuse;

> Consider community reuse of surplus materials or offcuts; and

> Engage with supply chains and include waste minimisation initiatives and targets in tenders and contracts.

7.6 As part of their commitment to divert construction waste from landfill, Baden Prop Ltd will regularly monitor and record the site's waste reduction performance. This will be compared against a target benchmark where at least 95% (by volume) of non-hazardous waste is to be diverted from landfill.

Household Waste

7.7 Baden Prop Ltd is committed to following the above waste hierarchy and reducing waste sent to landfill. As such, adequate storage is to be provided. The basement will continue to hold the offices' refuse and recycling storage, for collection via the rear roller-shuttered door where both recyclable and non-recyclable waste can be stored in accordance with Richmond's waste collection service (Figure 5).

7.8 The residential apartments will have their own dedicated bin store at ground level adjacent to the new residential entrance.

7.9 Figure 5 below identifies the bin stores on the ground floor and basement, highlighted in red.

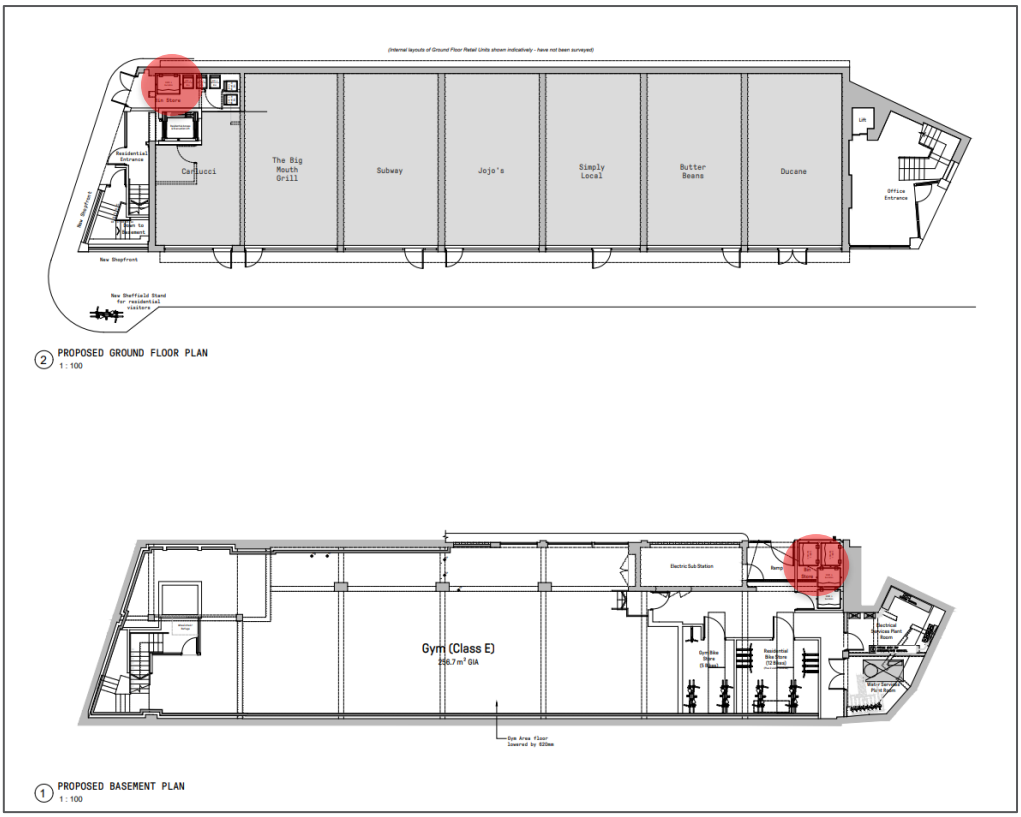


Figure 5: Proposed Basement and Ground Floor Plans (Child Graddon Lewis, June 2022)

7.10 In addition, space will be provided for segregated recycling waste bins within the kitchen areas. This will involve the installation of recycling bins, where waste can be segregated into paper, glass, cans, plastic and cardboard, if necessary.

Organic Waste

7.11 All of the apartments will be provided with individual compost bins for both food and garden waste. Internal kitchen bins, with a minimum capacity of 7 litres, will also be provided.

7.12 Communal composting facilities will be provided within the development, to allow residents to compost their food and garden waste.

7.13 Adequate internal and external food and garden waste storage will be provided in accordance with the London Borough of Richmond Upon Thame's collection service.

Commercial Waste

7.14 Adequate space for the segregation and storage of commercial waste and recycling will be provided. This space will meet the following BREEAM requirements:

> Bins will be clearly labelled to assist with waste segregation, storage and collection;

> The stores will be accessible to building occupants and facilities operators; and

> The storage will be of a capacity that is appropriate to the building's type, size and predicted volumes of waste.

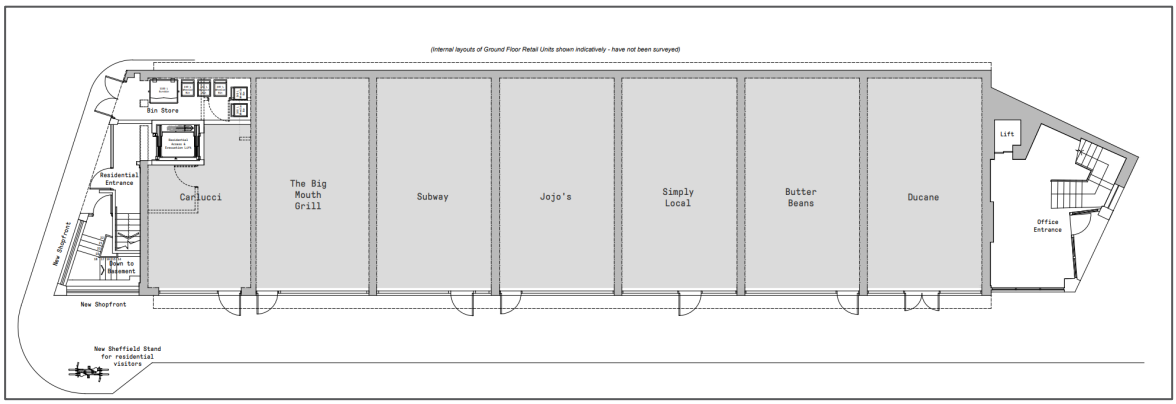


Figure 6: Proposed Basement Bin Storage Location for current offices' (Child Graddon Lewis, June 2022)

8. MATERIALS

Environmental Impact

8.1 New building materials will be selected, where possible, to ensure that they minimise environmental impact and have low embodied energy – from manufacture, transportation and operational stages, through to eventual demolition and disposal.

8.2 All insulation materials will have an Ozone Depleting Potential (ODP) of zero and a Global Warming Potential (GWP) of less than 5. In addition, all decorative paints and varnishes will meet the relevant standards in order to reduce the emission levels of volatile organic compounds (VOCs).

Local and Responsible Sourcing

8.3 Preference will be given to the use of locally sourced materials and local suppliers, where viable. This will benefit the local economy as well as having environmental benefits through reduced transportation.

8.4 The main building materials will be responsibly and legally sourced from manufacturers with environmental management systems and/or responsible sourcing credentials, such as BES 6001.

8.5 Timber used on site, including timber used in the construction phase, such as hoarding, fencing and scaffolding, will be sourced from sustainable forestry sources (e.g. PEFC and FSC) where possible.

Recycled Materials

8.6 Where feasible, Baden Prop Ltd will commit to using materials that have been recycled. The use of recycled materials (e.g. crushed concrete from waste, used for hard-standing) has less embodied energy impact, other than that expended in their processing or transport.

8.7 Only the existing roof over run structure and basement concrete slab when broken and replaced with new slab will be sent off-site to be recycled as aggregate fill used on other building projects. This represents a small fraction of the overall volume of building materials used on the project, around 4%.

9. POLLUTION

Noise Pollution

9.1 Baden Prop Ltd are committed to reducing noise disturbance to internal and external areas of dwellings to improve the health and wellbeing of the occupants and to help protect community cohesion.

9.2 Hann Tucker Associates have undertaken an environmental Noise Survey and Noise Impact Assessment Report (November 2023), noting the main existing noise sources affecting the site will come from bin lorries using the access road to load/unload, along side a car-park at the rear of the development which is open 24 hours.

9.3 The assessment recommends appropriate mitigation measures are incorporated into the design of proposed dwellings to control noise from emptying the bins to a suitable level.

9.4 Furthermore, based on the prevailing noise climate at the site, open windows as a means of background ventilation would not be suitable on any façade across the development. As such, alternative ventilation measures would be required. Please see the report for further details.

9.5 The proposed development will also include items of fixed plant, which has the potential to generate noise that could influence the prevailing external background noise. It is likely that the following

noise control techniques would be implemented as part of the inherent design of the development to meet these requirements:

> Enclosing noisy plant within the building envelope.

> Selecting suitably quiet 'low noise' plant.

> Positioning air intake/discharge louvres away from noise sensitive receptors.

> Orientating air intake/discharge louvres away from noise sensitive receptors.

> Attenuation of air intake/discharge louvres with duct-mounted attenuators and/or acoustic louvres.

> Sound insulating plant housings/enclosures/rooms.

> Anti-vibration mounts to control structure-borne noise and vibration.

Air Quality

9.6 Poor air quality is the greatest environmental risk to public health in the UK and is known to exacerbate the impact of pre-existing health conditions. It is not only a major risk to human health, but it also has significant damaging impacts on both plants and animals.

9.7 Between 1990 and 2017, the UK's estimated emissions of nitrogen oxides reduced by 70%, and the estimated emissions of PM_{10} particulate matter reduced by 55% (DEFRA, 2018). This must continue to fall in future years. Baden Prop Ltd are committed to reducing the proposed development's negative impact on air quality during construction and operation.

9.8 Delta Simons Air Quality Assessment (December 2023) concludes the following points:

> The residual effects of dust and PM10 generated by construction activities, construction vehicles, and plant on air quality are considered to be not significant.

> Operational phase road traffic exhaust emissions are considered to be not significant as the proposed development is car free.

> The Proposed Development is considered to be air quality neutral.

Air Tightness and Ventilation

9.9 Air leakage is to be minimised and an air permeability rate from $8m^3/hr/m^2$ to 4.0 $m^3/h.m^2$ will be achieved to further reduce the space heating requirements.

9.10 It is proposed to install Mechanical Ventilation with Heat Recovery (MVHR). MVHR provides a constant supply of fresh air to dwellings which has been filtered to remove external pollutants. It operates regardless of external conditions and provides the additional benefit of incorporating boost modes for use during hot weather or when internal humidity levels increase beyond acceptable levels.

10. FLOOD RISK & SURFACE WATER RUN-OFF

Flood Risk

10.1 Developments in low flood risk areas are promoted to not only protect homes and local communities and reduce the cost implications if flooding occurs, but to protect the environment from the transfer of pollutants during flooding events.

10.2 According to the Environment Agency's Flood Map shown in Figure 7 below, the proposed development lies in a low risk flood zone (Flood Zone 1).

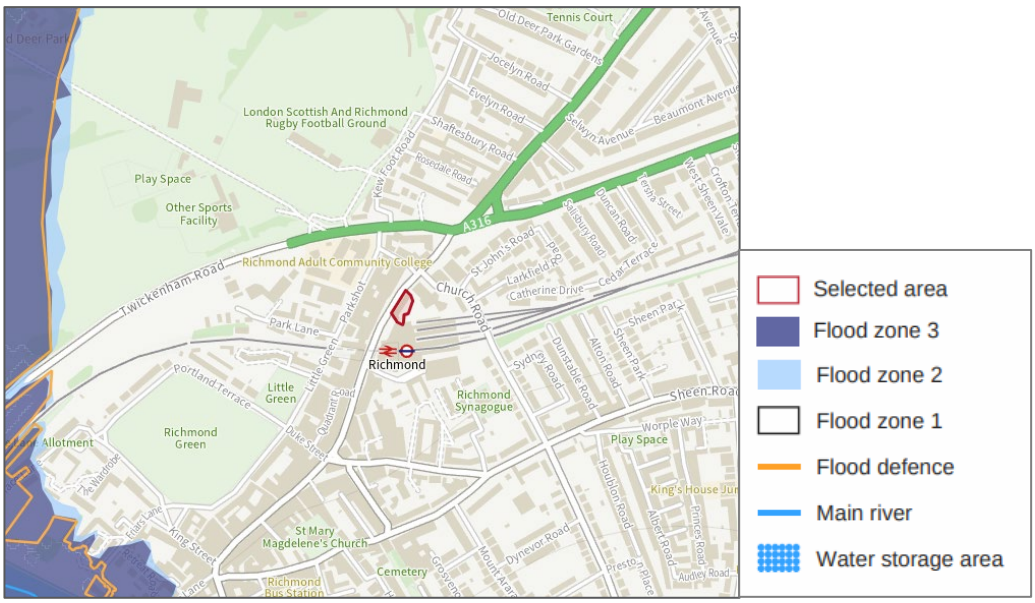


Figure 7: Environment Agency Flood Map – https://flood-map-for-planning.service.gov.uk

Sustainable Drainage Systems

10.3 Sustainable drainage systems (SuDS) can deliver multiple benefits which broadly fit into four categories: water quantity, water quality, amenity and biodiversity, shown in Figure 8 overleaf. The overarching principle of SuDS design is that surface water runoff should be managed for maximum benefit.

10.4 Long term environmental and social factors must be included in decisions regarding sustainable drainage. Sustainable drainage takes account of the quantity and quality of runoff, and the amenity and aesthetic value of surface water in the urban environment.

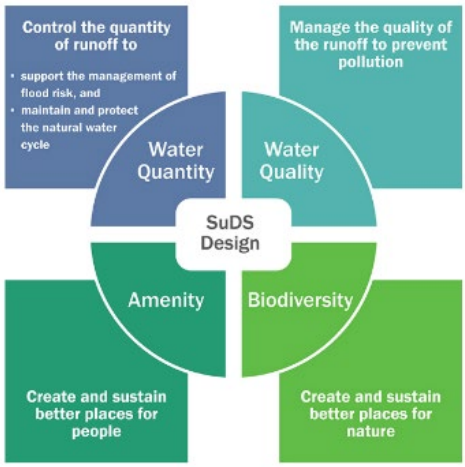


Figure 8: The four 'pillars' of SuDS – CIRIA SuDS Manual (2015)

10.5 The following listed SuDS are proposed. These will not only help to attenuate surface water but will provide the necessary water treatment.

> **Living roofs** will help to intercept and retain precipitation, reducing the volume of runoff and attenuating peak flows. This will provide betterment (in terms of surface water management) when compared with the existing situation.

10.6 The proposed drainage strategy carried out by Base Energy (December 2023) outlines that given the constraints of the site layout, and in line with the London Plan hierarchy, green roof and the surface water runoff to continue to drain as existing is proposed.

10.7 Furthermore, their report highlights that the BGS geology maps indicate that the site is underlain by Kempton Park Gravel Member (sand and gravel). The underlying bedrock is London Clay. As such, there may be a risk of rising groundwater in the upper gravel layers. A Basement Impact Assessment has been carried out by Lustre and the recommendations should be followed accordingly.

10.8 Operation and maintenance schedules have been provided for the proposed SuDS; these, or similar schedules, will be adopted by the management company.

11.BUILDING QUALITY

Security

11.1 Baden Prop Ltd are committed to ensuring the development is safe and secure for the occupants; reduce the risks and costs associated with crime; and improve occupiers' quality of life by reducing the fear of crime.

11.2 As such, the proposed development will be aiming to incorporate the principles of Secured by Design where appropriate. This may involve consultation with a Security Consultant during the detailed design stage.

Sound Insulation

11.3 In order to reduce the likelihood of noise complaints and to ensure a high quality development is created, the development will be aiming to achieve airborne sound insulation values that will improve upon the performance standards outlined within the Building Regulations for England and Wales, Approved Document E.

Inclusive Design

11.4 Baden Prop Ltd's commitment to inclusivity will ensure that the proposed development is scaled appropriately so as to respond to the needs of all its users. Baden Prop Ltd will endeavour to incorporate the requirements of the Equality Act (2010) into their design, making reasonable adjustments to enable disabled access, regularly reviewing whether the buildings are accessible and effective, and providing necessary design adjustments where it is practical to do so.

11.5 In addition, 90% of the new dwellings will be designed and built to Building Regulations Approved Document M4(2) standards in accordance with London Plan Policy D7. These standards will ensure accessible and adaptable accommodation for everyone; young families, older people, individuals with a temporary or permanent physical impairment, and allow residents to stay in their home despite developing disabilities. They also enable flexibility, visitability (facilitating ease of visiting access to the homes by everyone, regardless of mobility or disability) and future-proofing i.e. the accommodation will be adaptable and able to respond to changing technological and environmental conditions.

Daylight and Sunlight

11.6 The promotion of good daylighting levels contributes to sustainability through improving the occupant's quality of life and reducing the building's energy consumption by minimising the need for artificial lighting.

11.7 Schofield Surveyors (December 2023) conducted a thorough evaluation of the residential properties surrounding the development site, assessing their suitability for daylight and sunlight conditions undertaken using the recommended methodologies set out in the BRE Guidance "Site layout planning for daylight and sunlight: A guide to good practice" (2 he results of the tests show that whilst reductions will occur to individual windows, the amount

11.8 The report identifies that whilst reductions will occur to individual windows, the amount of residual daylight received to each dwelling will remain high and in line with recommendations set out in the BRE guide.

11.9 Furthermore, the results of the SDA assessment show that 100% of the rooms considered fully comply with BS 17037:2018 target levels for daylight. Please see the report for further details.

12. TRANSPORT AND LOCAL AMENITIES

Sustainable Transport

12.1 Sustainable transport links are central to the sustainability debate. They provide a positive contribution to environmental, societal and economic sustainability of the places they serve.

12.2 The provision of alternative sustainable transport options and associated facilities reduces dependency on traditionally fuelled cars and has the following benefits:

> Encourages active travel and helps improve people's health and wellbeing;

> Reduces congestion and encourages clean travel which helps to improve the air quality of the local area; and

> Provides cost savings compared with maintaining and running traditionally fuelled cars.

12.3 The site is located in Richmond town centre which provides an excellent pedestrian environment, as well as being near key public transport interchanges. Footways on A307 Kew Road and The Quadrant are wide, street lit, and provide pedestrian crossing facilities, with dropped kerbs and tactile paving, where appropriate.

12.4 Cycle infrastructure close to the site can also be considered to be of a good standard. Both signed and Quietway infrastructure is provided, facilitating safe journeys across both Richmond and Wimbledon Common and along the Thames path to Kingston. In total, over 50 miles of London Cycle Network is provided in Richmond, designed for both commuting and leisure use. Furthermore, existing cycle stands in the form of Sheffield Stands are located along the A307, within walking distance of the site.

Local Amenities

12.5 The proposed development has access to the following key amenities in the local area which will help to reduce dependency on private transport:

> Administrative services (e.g. post office, banks and cash points);

> Health services (e.g. GP practices, health centres and pharmacies);

> Small/large scale retail services (e.g. shops and restaurants);

> Recreation and leisure facilities (e.g. sports centres and cinemas); and

> Education and community facilities (e.g. nurseries, schools and community centres).

Public Transport

12.6 The site is well located within close proximity to a number of transport links, such as:

> **Richmond Rail Station** which provides District and London Overground trains, running frequently with trains every 3 to 5 minutes providing direct links to Hammersmith (District and Piccadilly Lines) Underground Station, and the Overground trains providing regular links to Stratford Rail Station.

> **Local bus services** within the immediate vicinity of the site, providing frequent trips in all directions. The Central bus route serves Richmond, with frequent buses every few minutes. Routes 65, 110, 190, 371, 419, 490, H37, N22 N65 and R70 all stop at Richmond Station.

12.7 The Transport for London Public Transport Accessibility Level (PTAL) map for the site is presented in Figure 9 overleaf. The site's PTAL rating of 6b represents a very good level of transport accessibility.

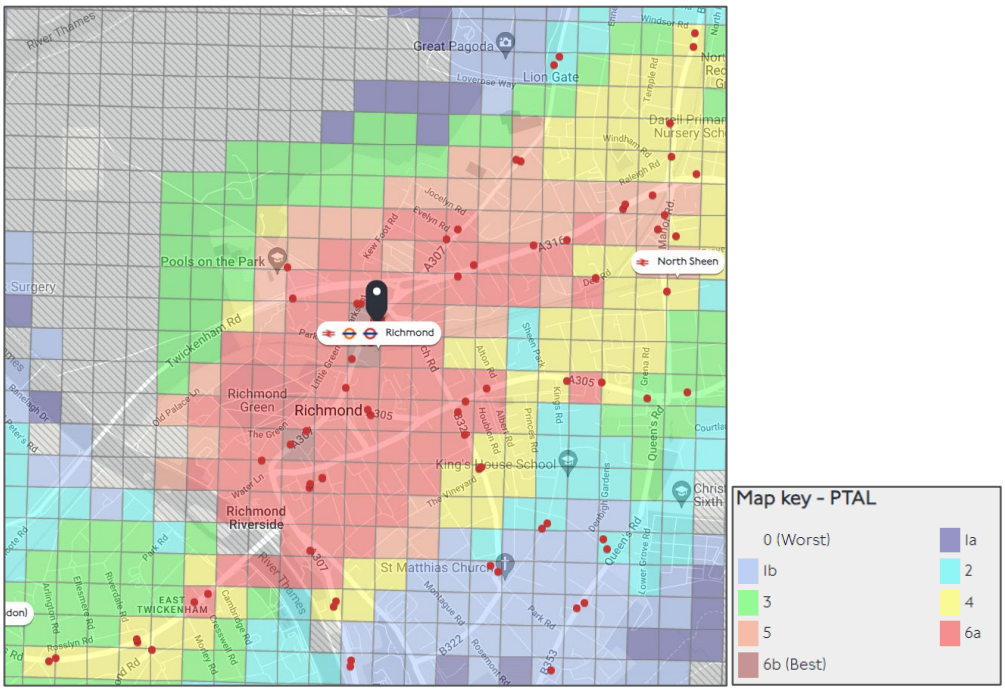


Figure 9: PTAL Map – www.tfl.gov.uk

Cycle Parking

12.8 Encouraging cycling not only makes a positive contribution to health and well-being, but also reduces pressure on existing transport systems in accordance with Policy T5 of the London Plan.

12.9 The London Plan requires a minimum of 14 cycle parking spaces in total (12 long-stay and 2 short-stay) for the proposed residential units and 5 cycle parking spaces (4 long-stay and 1 short-stay) for the gym in the basement.

12.10 Two separate cycle stores will be located on the lower ground floor for the gym use and long-stay spaces for the residential apartments.

12.11 The short-stay spaces associated with the residential apartments are likely to be located outside on the kerb build out on Kew Road, immediately north of the Richmond Station westbound bus stops.

Car Free Development

12.12 There are no car parking spaces are to be provided across the development as the scheme is car-free. Subsequently, there are no disabled spaces or electric vehicle charging spaces.

12.13 However, the London Plan recognises and encourages the use of car clubs as a mode to facilitate sustainable travel. There are six car club sites within 500m of the site. These are detailed in the transport assessment (i-Transport, December 2023).

13.BIODIVERSITY AND ECOLOGY

Protection of Ecological Value

13.1 To protect existing biodiversity, a series of measures will be implemented to reduce any impact on local wildlife. These include the following:

> All site operatives to be made aware of current legislation, including the protection of certain species.

> Suitable fencing should be erected to reduce the possibility of any damage to established vegetation.

Enhancement of Ecological Value

13.2 Enhancing a site's ecological value not only helps to reduce a development's environmental impact but improves the health and wellbeing of the occupants through their interaction with the natural environment.

13.3 The proposed development will include bat, bird and swift boxes around the development to increase biodiversity.

Green Roofs

13.4 71.1sqm of green roof is to be provided in order to meet Policy G5 of the London Plan. Green roofs have demonstrable sustainability benefits, including:

> Reduction in urban heat island effect (localised cooling through increased evaporation);

> Provision of ecological habitats for fauna and flora, particularly where these roofs can replicate pre-existing ecological conditions; and

> Reduction in surface water run-off.

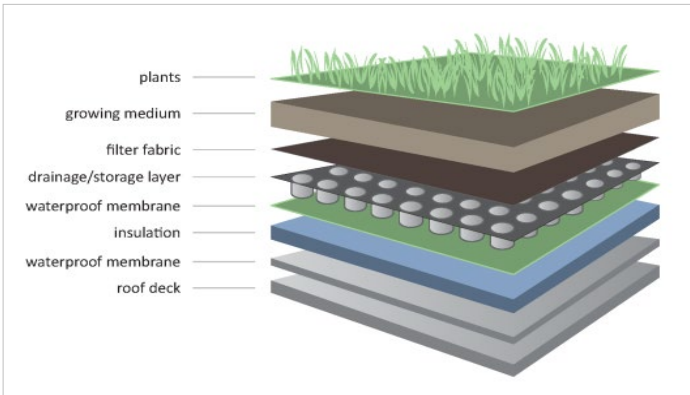


Figure 10: Indicative Build-up of Green Roofs

14. SUSTAINABLE CONSTRUCTION

14.1 Sustainable construction involves the prudent use of existing and new resources and the efficient management of the construction process. This includes the following measures:

> Reducing waste during construction and demolition and sorting waste on site where practical;

> Reducing the risk of statutory nuisance to neighbouring properties as much as possible through effective site management;

> Controlling dust and emissions from demolition and construction; and

> Complying with protected species legislation.

Considerate Constructors Scheme

14.2 The development site will be registered with the Considerate Constructors Scheme. This is designed to encourage environmentally and socially considerate ways of working, to reduce any adverse impacts arising from the construction process. As commonly known, the Considerate Constructors Scheme aims are as follows:

> Respecting the community (includes appearance)

> Care for the environment;

> Value their workforce (includes site safety).

14.3 The site will target a Very Good score of at least 33 out of 45, with all three sections scoring at least eleven points.

Monitoring Construction Site Impacts

14.4 During the construction processes, control procedures will be put in place to minimise noise and dust pollution and roads will be kept clean. The management systems will generally comprise procedures and working methods that are approved by the development team together with commercial arrangements to ensure compliance.

14.5 Further to the above, additional measures will be adopted to minimise the impact on the local area during construction. This will include the limiting of air and water pollution in accordance with best practice principles, as well as the recording, monitoring and displaying of energy and water use from site activities during construction.

14.6 In terms of construction traffic, this will be minimised by restricting deliveries and arrival times in order to manage potential impacts on existing and future occupants. Work will be limited to appropriate hours to be agreed with the Council, and suppressors will be used to reduce noise from machinery.

14.7 ECP Partnership's Construction Management Statement (December 2023) outlines the working hours for the site will be limited to:

> Monday – Friday: 08:00 – 18:00

> Saturdays: 08:00 – 13:00

> Sundays & bank Holidays: No working

14.8 This is in line with the London Borough of Richmond upon Thames Construction Code of Practice.

14.9 Furthermore, a booking in system for deliveries will be implemented with all deliveries/collections to/from site provided with timed delivery slots to avoid vehicles waiting to enter the site. Deliveries will be scheduled during the working hours of the site. Deliveries and collections to/from site will be restricted to the hours of 10:00 to 14:00, to ensure that this avoids rush hour traffic, and all deliveries/collections will be booked to be undertaken during these hours and will not be accepted outside of these times.

14.10 Should two or more vehicles arrive at the site at the same time, any vehicle not attending within their agreed timeslot will be turned back from the site with an instruction to agree a new timeslot before undertaking the delivery. No waiting on local roads will be permitted.

14.11 Materials will be procured from stockists as close to the site as possible. This will reduce lorry travel distances and therefore congestion and emissions will be minimised. Please see the report for further detail.

15.SUSTAINABLE CONSTRUCTION CHECKLIST

15.1 The Sustainable Construction Checklist describes the key principles of sustainable design and construction which the London Brough of Richmond Upon Thames expect all applicants to follow. It reflects the Council's climate emergency declaration and the ambition to seek the highest standards of design and construction to improve the environmental performance of developments.

15.2 In accordance with this, the proposed development has scored 36.5 for the residential and 39.5 for the gym on the matrix; therefore both achieving the minimum requirement for a pass. The checklist is appended to this report in **Appendix C and D**.

16. CONCLUSION

16.1 The issue of sustainable development has been considered throughout the design of the proposed development at Westminster House by Baden Prop Ltd in the London Borough of Richmond Upon Thames. In particular, the incorporation of sustainable design and construction methods, energy and water saving measures, waste reduction techniques as well as measures to enhance the ecological value of the site, a good quality and sustainable development is proposed.

16.2 The key sustainability features outlined in this Sustainability Statement are listed below:

> **BREEAM**: The gym will be designed and built to achieve a BREEAM 'Excellent' rating under the BREEAM Refurbishment and Fit-out (2014).

> **Energy efficiency:** The development will target a 77.1% reduction in regulated CO_2 emissions for the dwellings, and 78.9% for the gym through the specification of energy efficiency measures and renewable and low carbon technologies.

> **Overheating:** The scheme has been designed to ensure overheating risk is reduced to acceptable levels in accordance with CIBSE TM59 and Part O requirements.

> **Water efficiency:** Flow control devices and water efficient fixtures and fittings will be installed in all dwellings to target a maximum internal daily water consumption of 105 litres/person/day.

> **Waste and recycling:** Adequate facilities will be provided for domestic and construction related waste, including segregated bins for refuse and recycling.

- **Materials:** Where practical, new building materials will be sourced locally to reduce transportation pollution and support the local economy. New materials will be selected based on their environmental impact and responsible suppliers will be used where possible.
- **Pollution:** The Noise Assessment concludes noise levels during the respective daytime and night time operation of all services will be managed to ensure minimal impact to surrounding areas.
- **Flood Risk and Sustainable Urban Drainage Systems (SuDS):** The proposed development site lies in a low flood risk zone and will benefit from SuDs such as green roof.
- **Security:** Consultation with a Security Specialist will take place to ensure the development is safe and secure for its residents.
- **Sound insulation:** The dwellings are to target an improvement on Building Regulations Part E through party walls and floors.
- **Sustainable transport:** The site will benefit from a good existing public transport network and sustainable modes will be encouraged through the provision of cycle storage spaces.
- **Biodiversity and ecology:** Enhancements will be implemented through the provision of green roofs.
- **Sustainable construction:** The site will aim to achieve a Very Good score with the Considerate Constructors Scheme and will closely monitor construction site impacts.

17.REFERENCES

> Greater London Authority (2021) The London Plan

> Ministry of Housing, Communities & Local Government (2021) National Planning Policy Framework. MHCLG: London

> HM Government (2016) The Building Regulations Approved Document L1A: Conservation of Fuel and Power. NBS: London

> Energy Saving Trust (2013) *At home with water*

> Department for Environmental Food and Rural Affairs (2018) *Air Pollution in the UK 2017*

APPENDICES

Appendix A
BREEAM Refurbishment and Fit-Out 2014 'Excellent' Pre-Assessment

Appendix B
Water Efficiency Calculator

Appendix C
Sustainable Construction Checklist – Residential

Appendix D
Sustainable Construction Checklist – Non-Residential

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Appendix A

BREEAM Refurbishment and Fit-Out 2014 ‘Excellent’ Pre-Assessment

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BREEAM Refurbishment and Fit-out (2014)
PLANNING PRE-ASSESSMENT - GYM

BREEAM®

71.87%	Total Predicted Score	Development Description	Completed by
Pass Good Very Good **Excellent** Outstanding	30% 45% 55% **70%** 85%	Conversion of the existing basement into Class D2 gym use (381 sqm), together with associated external refurbishments to refresh the appearance of Westminster House.	**Kate Paxton** **KP17**

	Issue	Credits Available	Credits Predicted	Credit Requirements	Notes
Management	**MAN 1** Project brief and design	4	2	A sustainability brief will be developed. Roles and responsibilities will be established for all key stages of the project. Third party consultation will be undertaken with relevant stakeholders.	
	MAN 2 Life cycle cost and service life planning	4	1	The capital cost for the refurbishment works (£k/m^2) will be reported to the BREEAM Assessor.	
	MAN 3 Responsible construction practices	6	5	All timber and timber-based products used on the project will be 'Legally harvested and traded timber'. The main contractor will achieve 'compliance' with the Considerate Constructors Scheme (CCS). Responsibility will be assigned to an individual for the monitoring, recording and reporting of energy and water consumption and transport information resulting from all on-site refurbishment processes throughout the refurbishment programme.	
	MAN 4 Commissioning and handover	1	1	The building fabric will be quality assured through completion of a thermographic survey as well as airtightness testing and visual inspection at appropriate times during the refurbishment.	
Total Management Category Predicted Score		**15**	**9**		
Health & Wellbeing	**HEA 1** Visual Comfort	5	0		
	HEA 2 Indoor air quality	3	2	An Indoor Air Quality Plan will be produced. Ventilation systems will be designed to avoid recirculation of polluted air.	
	HEA 4 Thermal Comfort	2	2	Thermal modelling will be undertaken to ensure thermal comfort can be achieved including for a projected climate change scenario.	
	HEA 5 Acoustic Performance	2	2	A suitably qualified acoustician will be appointed to ensure the building meets the appropriate acoustic performance standards and testing requirements for sound insulation and indoor ambient noise levels.	
	HEA 6 Safety and security	1	1	A Suitably Qualified Security Specialist will conduct an evidence based Security Needs Assessment during or prior to Concept Design.	
Total Health & Wellbeing Category Predicted Score		**13**	**7**		
Energy & Carbon Dioxide Emissions	**ENE 1** Reduction of energy use and carbon emissions	15	8	Where possible, the refurbishment will incorporate measures to reduce energy use and carbon emissions.	
	ENE 4 Low carbon design	2	0		
Total Energy & CO2 Category Predicted Score		**17**	**8**		
Transport	**TRA 1** Public transport accessibility	5	5	The building has a PTAL rating of 6b and an Accessibility Index of 40.66	
	TRA 2 Proximity to amenities	1	1	The building is located within close proximity of, and accessible to, local amenities.	
	TRA 3 Cyclist facilities	2	2	Cycle spaces will be provided in addition to showers and changing facilities. 1 cycle space per 20 building users required and 1 shower per 10 cycle spaces.	
	TRA 4 Maximum car parking capacity	2	2	Car parking will not be provided, to encourage sustainable modes of transport.	
	TRA 5 Travel plan	1	1	A Travel Plan will be provided, based on a site specific transport assessment.	
Total Water Category Predicted Score		**11**	**11**		

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	Issue	Credits Available	Credits Predicted	Credit Requirements	Notes
Water	N/A	N/A	N/A		
Total Water Category Predicted Score		**N/A**	**N/A**		
Materials	**MAT 1** Life cycle impacts	6	5	Materials will be specified to have a low environmental impact and elements reused in situ where possible.	
	MAT 3 Responsible Sourcing of Materials	4	3	Materials will be sourced in accordance with a sustainable procurement plan and will be responsibly sourced wherever possible.	
	MAT 4 Insulation	1	1	The Insulation Index for the building fabric and services insulation will be ≥2.5.	
	MAT5 Design for robustness	1	1	The building will incorporate suitable durability and protection measures to prevent damage to vulnerable areas. Exposed parts of the building will be protected from material degradation.	
	MAT6 Material efficiency	1	1	Opportunities will be identified, and appropriate measures investigated and implemented within the scope of refurbishment works, to optimise the use of materials through building design, procurement, refurbishment, maintenance and end of life.	
Total Materials Category Predicted Score		**13**	**11**		
Waste	**WST 1** Construction waste management	7	5	A pre-refurbishment audit will be undertaken. A resource management plan will be produced with the aim of minimising waste, recording and reporting accurate data on waste arising's. At least 85% (by volume) of refurbishment/fit-out waste and 90% (by volume) of demolition waste will be diverted from landfill.	
	WST 3 Operational waste	1	1	Waste storage provision to be provided to cater for recyclable waste streams during operation.	
	WST 5 Adaption to Climate Change	1	1	A climate change adaptation strategy appraisal for structural and fabric resilience will be conducted by the end of Concept Design.	
	WST 6 Functional Adaptability	1	1	A building-specific functional adaptation strategy study will be undertaken by the client and design team by Concept Design.	
Total Waste Category Predicted Score		**10**	**8**		
Land Use and Ecology	N/A	N/A	N/A		
Total Land Use and Ecology Category Predicted Score		**N/A**	**N/A**		
Pollution	**POL 3** Surface water run-off	5	4	The building is located in a low flood zone. There will be no increase in the impermeable surfaces as a result of the refurbishment works.	
Total Pollution Category Predicted Score		**5**	**4**		
Innovation	**INN 1** Innovation	10	1	An exemplary level credit is targeted for the achievement of a CCS score of 40 or more.	
Total Innovation Category Predicted Score		**10**	**1**		

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Appendix B

Water Efficiency Calculator

Water Efficiency Calculator
Westminster House

	Internal Water Consumption			
Installation Type	**Unit of Measure**	**Capacity / Flow Rate**	**Litres/person/day**	**Notes**
WC	Full Flush Volume (Litres)	**6**	8.76	Low flush WCs will be installed to reduce the volume of water consumed during flushing. All WCs will have dual flush cisterns which will provide both part (4L) and full (6L) flushes.
	Part Flush Volume (Litres)	**4**	11.84	
Basin Tap	Flow Rate (Litres/minute)	**4**	7.90	All taps (excluding kitchen taps) will be reduced to 4 litres/minute using flow restrictors. Where multiple taps are to be provided the average flow rate will be used.
Bath	Capacity (Litres to overflow)	**160**	17.60	All baths will have reduced capacities of 160 litres (excluding displacement). The bath taps are not included in this calculation as they are already incorporated into the use factor for the baths.
Shower	Flow Rate (Litres/minute)	**8**	34.96	Shower flow rates will be reduced to a maximum of 8 litres/minute using flow restrictors fixed to the shower heads. These contain precision-made holes or filters to restrict water flow and reduce the outlet flow and pressure.
Kitchen Tap	Flow Rate (Litres/minute)	**5**	12.56	Kitchen taps will be reduced to 5 litres/minute using flow restrictors which will be fitted within the console of the tap or in the pipework.
Washing Machine	Water Consumption (Litres/kg)	**8.17**	17.16	Water efficient washing machines or washer-dryers will be specified. The make and model numbers of the appliances are unknown at this stage therefore a default figure of 8.17 litres/kg has been assumed.
Dishwasher	Water Consumption (Litres/place setting)	**1.25**	4.50	All dishwashers will be water efficient. The make and models numbers are unknown therefore a default figure of 1.25 litres/place setting has been assumed at this stage.
		Net Internal Water Consumption (Litres/person/day)	**115.3**	
		Normalisation Factor	**0.91**	
		Total Internal Water Consumption (Litres/person/day)	**104.9**	The total *internal* water consumption target of ≤105 litres/person/day will be achieved in accordance with Regulation 36 para (2)b optional requirement Approved Document G.
		Allowance for External Water Consumption (Litres/person/day)	**5**	
		Total Water Consumption (Litres/person/day)	**109.9**	The *total* water consumption target of ≤110 litres/person/day will be achieved in accordance with Regulation 36 para (2)b optional requirement of Approved Document G.

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Appendix C

Sustainable Construction Checklist - Residential

LBRUT Sustainable Construction Checklist - June 2020

This document forms part of the Sustainable Construction Checklist SPD. This document **must** be filled out as part of the planning application for the following developments: all residential development providing **one or more new residential units (including conversions leading to one or more new units)**, and all other forms of development providing **100sqm or more of non-residential floor space**. Developments including new non-residential development of less than 100sqm floor space, extensions less than 100sqm, and other conversions are strongly encouraged to comply with this checklist. Where further information is requested, please either fill in the relevant section, or refer to the document where this information may be found in detail, e.g. Flood Risk Assessment or similar. **Further guidance** on completing the Checklist may be found in the Justification and Guidance section of this SPD.

Property Name (if relevant): Westminster House

Application No. (if known):

Address (include. postcode): Kew Road, Richmond TW9 2ND

Completed by: Hodkinson Consultancy

For Non-Residential
Size of development (m2)

For Residential
Number of dwellings: 7

1 MINIMUM COMPLIANCE (RESIDENTIAL AND NON-RESIDENTIAL)

Energy Assessment

Has an energy assessment been submitted that demonstrates the expected energy and carbon dioxide emissions saving from energy efficiency and renewable energy measures, including the feasibility of CHP/CCHP and community heating systems? If yes, please select TRUE. **TRUE**

Carbon Dioxide emissions reduction

What is the on site carbon dioxide emissions reduction against a Building Regulations Part L (2013) baseline: 77.1 %

Policy LP 22 B. and Draft London Plan Policy 9.2.5 require a 35% onsite reduction in CO_2 emissions beyond Building Regulations 2013.

What is the percentage reduction from efficiency measures alone: 78.1 %

Policy LP 22 C. and Draft London Plan Policy 9.2.6 require a 10% onsite reduction in CO2 emissions beyond Building Regulations 2013 from efficiency measures for residential and 15% for non-residential.

Percentage of **total** site CO2 emissions saved through renewable energy installation? 77.1 %

What is the total remaining carbon to be offset: 0 Tonne

Policy LP 22 B. and Draft London Plan Policy 9.2.4 require Major developments to achieve Zero Carbon after offsetting.

Are remaining emissions going to be offset through offset fund payment in accordance with current guidelines issued for the cost per tonne of CO2? **Please Select:**

What is the total predicted cost of offset? 0 £

The London Plan sets this as £95/tonne per year over 30 years, this should be updated based on As Build calculations.

1A MINIMUM POLICY COMPLIANCE (NON-RESIDENTIAL AND DOMESTIC REFURBISHMENT)

Please check the Guidance Section of this SPD for the policy requirements

Environmental Rating of development:

Non-Residential new-build (100sqm or more)
BREEAM Level: **Please Select** — Have you attached a pre-assessment to support this? **Please Select:**
Excellent required under Policy LP22 A 3

Extensions and conversions for residential dwellings
BREEAM Domestic Refurbishment: **Please Select** — Have you attached a pre-assessment to support this? **Please Select:**
Excellent required under Policy LP22 A 4

Extensions and conversions for non-residential buildings
BREEAM Level: **Please Select** — Have you attached a pre-assessment to support this? **Please Select:**
Excellent required under Policy LP 22

Score awarded for Environmental Rating:
BREEAM: Good = *0*, Very Good = 4, Excellent = *8*, Outstanding = *16*

Subtotal 0

1B MINIMUM POLICY COMPLIANCE (RESIDENTIAL)

Water Usage

	Score	
Internal water usage after gray/rainwater systems limited to 105 litres person per day. (Excluding an allowance 5 litres per person per day for external water consumption). Calculations using the water efficiency calculator for new dwellings have been submitted. *110l/p/d Required for new dwellings under Policy LP22 A 2 105l/p/d required under Draft London Plan Policy SI5*	*1*	**TRUE**

Subtotal 1

2. ENERGY USE AND POLLUTION

2.1 Need for Cooling

		Score	
a.	How does the development incorporate cooling measures? Tick all that apply:		
	Energy efficient design incorporating specific heat demand to less than or equal to 15 kWh/sqm	6	FALSE
	Reduce heat entering a building through providing/improving insulation and living roofs and walls	2	TRUE
	Reduce heat entering a building through shading	3	TRUE
	Exposed thermal mass and high ceilings	4	FALSE
	Passive ventilation	3	FALSE
	Mechanical ventilation with heat recovery	1	TRUE
	Active cooling systems, i.e. Air Conditioning Unit	0	TRUE
	See Draft London Plan SI4		

2.2 Heat Generation

		Score	
b.	How have the heating and cooling systems, with preference to the heating system hierarchy, been selected (defined in London Plan policy **SI3)** Tick all heating and cooling systems that will be used in the development:		
	Connection to existing heating or cooling networks powered by renewable energy	6	FALSE
	Connection to existing heating or cooling networks powered by gas or electricity	5	FALSE
	Site wide CHP network powered by renewable energy	4	FALSE
	Site wide CHP network powered by gas	3	FALSE
	Communal heating and cooling powered by renewable energy	2	FALSE
	Communal heating and cooling powered by gas or electricity	1	FALSE
	Individual heating and cooling	0	TRUE
	See Draft London Plan SI3		

2.3 Pollution: Air, Noise and Light

a.	Does the development plan to implement reduction strategies for dust emissions from construction sites?	2	TRUE
b.	Does the development plan to include a biomass boiler?		FALSE
	If yes, please refer to the biomass guidelines for the Borough of Richmond, please see guidance for supplementary information. If the proposed boiler is of a qualifying size, you may need to complete the information request form found on the Richmond website.		
c.	Has an air quality impact assessment been provided		TRUE
	If yes, has 'Emissions Neutral' been achieved	1	TRUE
	If yes, have occupants of new development been protected from existing pollution	1	TRUE
	If no to any of the above are there any sensitive receptors as defined in Policy LP 10 present?	-1	Please Select:
	see Policy LP 10		
d.	Please tick only one option below		
	Has the development taken measures to reduce existing noise and enhance the existing soundscape of the site?	3	Please Select:
	Has the development taken care to not create any new noise generation/transmission issues in its intended operation?	1	TRUE
	see Policy LP 10		
e.	Has the development taken measures to reduce light pollution impacts on character, residential amenity and biodiversity?	3	TRUE
	see Policy LP 10		
f.	Have you attached a Lighting Pollution Report?	-	

Subtotal 14

Please give any additional relevant comments to the Energy Use and Pollution Section below

An energy statement, noise impact assessment, air quality assessment and dalylight and sunlight assessment are provided in support of the planning application

3. TRANSPORT

3.1 Provision for the safe efficient and sustainable movement of people and goods

a. Does your development provide opportunities for occupants to use innovative travel technologies? — **Please Select:**

Please explain:

A transport statement is provided in support of the planning application

		Score	
b.	Does your development provide for 100% active provision for electric vehicle charging point(s) and have you successfully demonstrated that it would be able to operate satisfactorily in the future expectation of all vehicles being electrically powered?	*2*	**Please Select:**
c.	**For major developments ONLY**: Has a Transport Assessment been produced for your development based on TfL's Best Practice Guidance?		
	If you have provided a Transport Assessment as part of your planning application, please tick here and move to Section 3 of this Checklist.	*5*	**Please Select:**
	See policy LP44		
d.	**For smaller developments ONLY**: Have you provided a Transport Statement?	*5*	**TRUE**
e.	Does your development provide cycle storage? (Standard space requirements are set out in the Council's Parking Standards - Local Plan Appendix 3)	*2*	**TRUE**
	If so, for how many bicycles?	**14**	
	Is this shown on the site plans?		**TRUE**
	See Local Plan Appendix 3		
f.	Will the development create or improve links with local and wider transport networks? If yes, please provide details.	*2*	**Please Select:**
		Subtotal	**7**

Please give any additional relevant comments to the Transport Section below

4 BIODIVERSITY

4.1 Minimising the threat to biodiversity from new buildings, lighting, hard surfacing and people

a.	Does your development involve the loss of an ecological feature or habitat, including a loss of garden or other green space? (Indicate if yes)				-2	FALSE
	If so, please state how much in sqm?				sqm	
b.	Does your development involve the removal of any tree(s)? (Indicate if yes)					FALSE
	If so, has a tree report been provided in support of your application? (Indicate if yes)					Please Select:
c.	Does your development plan to add (and not remove) any tree(s) on site? (Indicate if yes)					Please Select:
d.	Please indicate which features and/or habitats that your development will incorporate to improve on site biodiversity:					
	Pond, reedbed or extensive native planting	*6*	Area provided:		sqm	Please Select:
	An extensive green roof	*5*	Area provided:	71.1	sqm	TRUE
	An intensive green roof	*4*	Area provided:		sqm	Please Select:
	Garden space	*4*	Area provided:		sqm	Please Select:
	Additional native and/or wildlife friendly planting to peripheral areas	*3*	Area provided:		sqm	Please Select:
	Additional planting to peripheral areas	*2*	Area provided:		sqm	Please Select:
	A living wall	*2*	Area provided:		sqm	Please Select:
	Bat boxes	*0.5*				TRUE
	Bird boxes	*0.5*				TRUE
	Swift boxes	*0.5*				TRUE
	Other	*0.5*				Please Select:
e.	Does your development use at least 70% of available roof plate as green/brown roof *Policy LP 17 requires 70%*				1	Please Select:
					Subtotal	**6.5**

Please give any additional relevant comments to the Biodiversity Section below

A green roof is proposed alongside Bat, Bird and Swift boxes will also be included around the development to increase biodiversity. Further information is provided in the sustainability statement submitted alongside this application.

5 FLOODING AND DRAINAGE

5.1 Mitigating the risks of flooding and other impacts of climate change in the borough

a.	Is your site located in a high flood risk zone (Zone 3)? (Indicate if yes)		-2	Please Select:
	Have you submitted a Flood Risk Assessment? (Indicate if yes)			TRUE
b.	Which of the following measures of the drainage hierarchy are incorporated onto your site? (tick all that apply)			
	Store rainwater for later use		5	Please Select:
	Use of infiltration techniques such as porous surfacing materials to allow drainage on-site		3	Please Select:
	Attenuate rainwater in ponds or open water features		4	Please Select:
	Store rainwater in tanks for gradual release to a watercourse		3	Please Select:
	Discharge rainwater directly to watercourse		2	Please Select:
	Discharge rainwater to surface water drain		1	TRUE
	Discharge rainwater to combined sewer		0	Please Select:
	Have you submitted a Drainage Statement (Indicate if yes)			TRUE
	See Policy LP 21 and Draft London Plan SL 13			
c.	Please give the change in area of permeable surfacing which will result from your development proposal:	0	sqm	
	Please provide details of the permeable surfacing below	*please represent a loss in permeable area as a negative number*		
			Subtotal	1

Please give any additional relevant comments to the Flooding and Drainage Section below

There is a SUDs Statement and Flood Risk Assessment provided in support of this application.

6 IMPROVING RESOURCE EFFICIENCY

6.1 Reduce waste generated and amount disposed of by landfill though increasing level of re-use and recycling

a.	Will demolition be required on your site prior to construction? *[Points will only be awarded if 10% or greater of demolition waste is reused/recycled]*		1	FALSE
	If so, what percentage of demolition waste will be reused in the new development?		%	
	What percentage of demolition waste will be recycled?		%	
b.	Does your site have any contaminated land?		1	FALSE
	Have you submitted an assessment of the site contamination?		2	FALSE
	Are plans in place to remediate the contamination?		2	FALSE
	Have you submitted a remediation plan?		1	FALSE
	Are plans in place to include composting on site?		1	FALSE
c.	Will a waste management plan and facilities be in place in line with Policy LP24	Yes		

6.2 Reducing levels of water waste

a.	Will the following measures of water conservation be incorporated into the development? (Please tick all that apply):			
	Fitting of water efficient taps, shower heads etc		1	TRUE
	Use of water efficient A or B rated appliances		1	TRUE
	Rainwater harvesting for internal use		4	FALSE
	Greywater systems		4	FALSE
	Fit a water meter		1	TRUE
			Subtotal	3

Please give any additional relevant comments to the Improving Resource Efficiency Section below

Prior to construction, Baden Prop Ltd will develop a Site Waste Management Plan. There is also a target of 95% diversion from landfill set.

7 ACCESSIBILITY

7.1 Ensure flexible adaptable and long-term use of structures

a. **If the development is residential,** will it meet the requirements of the nationally described space standard for internal space and layout? *1* **TRUE**

If the standards are not met, in the space below, please provide details of the functionality of the internal space and layout

AND

b. **If the development is residential**, will it meet Building Regulation Requirement M4 (2) 'accessible and adaptable dwellings'? *2* **TRUE**

If this is not met, in the space below, please provide details of any accessibility measures included in the development.

For major residential developments, are 10% or more of the units in the development to Building Regulation Requirement M4 (3) 'wheelchair user dwellings'? *1* **TRUE**

OR

c. **If the development is non-residential,** does it comply with requirements included in Richmond's Local Plan LP1, LP28.B, LP30 & LP45 *2* **FALSE**

Please provide details of the accessibility measures specified in the Local Plan that will be included in the development

Subtotal 4

Please give any additional relevant comments to the Design Standards and Accessibility Section below

Design and Access Statement

LBRUT Sustainable Construction Checklist- Scoring Matrix for *New Construction* **(Non-Residential and domestic refurb)** ***TOTAL*** ***36.5***

Score	Rating	Significance
84 or more	*A+*	Project strives to achieve highest standard in energy efficient sustainable development
75-83	*A*	Makes a major contribution towards achieving sustainable development in Richmond
56-74	*B*	Helps to significantly improve the Borough's stock of sustainable developments
40-55	*C*	Minimal effort to increase sustainability beyond general compliance
39 or less	*FAIL*	Does not comply with SPD Policy

LBRUT Sustainable Construction Checklist- Scoring Matrix for New Construction **Residential new-build**

Score	Rating	Significance
85 or more	A++	Project strives to achieve highest standard in energy efficient sustainable development
68-84	*A+*	Project strives to achieve higher standard in energy efficient sustainable development
59-67	*A*	Makes a major contribution towards achieving sustainable development in Richmond
39-58	*B*	Helps to significantly improve the Borough's stock of sustainable developments
24-38	*C*	Minimal effort to increase sustainability beyond general compliance
23 or less	*FAIL*	Does not comply with SPD Policy

Authorisation:

I herewith declare that I have filled in this form to the best of my knowledge

Signature _____ **Date** _____

HODKINSON

Appendix D

Sustainable Construction Checklist – Non-Residential

LBRUT Sustainable Construction Checklist - June 2020

This document forms part of the Sustainable Construction Checklist SPD. This document **must** be filled out as part of the planning application for the following developments: all residential development providing **one or more new residential units (including conversions leading to one or more new units)**, and all other forms of development providing **100sqm or more of non-residential floor space**. Developments including new non-residential development of less than 100sqm floor space, extensions less than 100sqm, and other conversions are strongly encouraged to comply with this checklist. Where further information is requested, please either fill in the relevant section, or refer to the document where this information may be found in detail, e.g. Flood Risk Assessment or similar. **Further guidance** on completing the Checklist may be found in the Justification and Guidance section of this SPD.

Property Name (if relevant): Westminster House

Application No. (if known):

Address (include. postcode): Kew Road, Richmond TW9 2ND

Completed by: Hodkinson Consultancy

For Non-Residential
Size of development (m2): 256

For Residential
Number of dwellings:

1 MINIMUM COMPLIANCE (RESIDENTIAL AND NON-RESIDENTIAL)

Energy Assessment

Has an energy assessment been submitted that demonstrates the expected energy and carbon dioxide emissions saving from energy efficiency and renewable energy measures, including the feasibility of CHP/CCHP and community heating systems? If yes, please select TRUE. — **TRUE**

Carbon Dioxide emissions reduction

What is the on site carbon dioxide emissions reduction against a Building Regulations Part L (2013) baseline — 78.9 %

Policy LP 22 B. and Draft London Plan Policy 9.2.5 require a 35% onsite reduction in CO_2 emissions beyond Building Regulations 2013.

What is the percentage reduction from efficiency measures alone — 78.9 %

Policy LP 22 C. and Draft London Plan Policy 9.2.6 require a 10% onsite reduction in CO2 emissions beyond Building Regulations 2013 from efficiency measures for residential and 15% for non-residential.

Percentage of **total** site CO2 emissions saved through renewable energy installation? — 77.1 %

What is the total remaining carbon to be offset — Tonne

Policy LP 22 B. and Draft London Plan Policy 9.2.4 require Major developments to achieve Zero Carbon after offsetting.

Are remaining emissions going to be offset through offset fund payment in accordance with current guidelines issued for the cost per tonne of CO2? — **Please Select:**

What is the total predicted cost of offset? — £

The London Plan sets this as £95/tonne per year over 30 years, this should be updated based on As Build calculations.

1A MINIMUM POLICY COMPLIANCE (NON-RESIDENTIAL AND DOMESTIC REFURBISHMENT)

Please check the Guidance Section of this SPD for the policy requirements

Environmental Rating of development:

Non-Residential new-build (100sqm or more)
BREEAM Level: **Please Select** — Have you attached a pre-assessment to support this? **Please Select:**
Excellent required under Policy LP22 A 3

Extensions and conversions for residential dwellings
BREEAM Domestic Refurbishment: **Please Select** — Have you attached a pre-assessment to support this? **Please Select:**
Excellent required under Policy LP22 A 4

Extensions and conversions for non-residential buildings
BREEAM Level: **Excellent** — Have you attached a pre-assessment to support this? **TRUE**
Excellent required under Policy LP 22

Score awarded for Environmental Rating: **Subtotal** 8

BREEAM: Good = *0*, Very Good = 4, Excellent = *8*, Outstanding = *16*

1B MINIMUM POLICY COMPLIANCE (RESIDENTIAL)

Water Usage

	Score	
Internal water usage after gray/rainwater systems limited to 105 litres person per day. (Excluding an allowance 5 litres per person per day for external water consumption). Calculations using the water efficiency calculator for new dwellings have been submitted.	*1*	**Please Select:**

110l/p/d Required for new dwellings under Policy LP22 A 2 105l/p/d required under Draft London Plan Policy SI5

Subtotal 0

2. ENERGY USE AND POLLUTION

2.1 Need for Cooling

		Score	
a.	How does the development incorporate cooling measures? Tick all that apply:		
	Energy efficient design incorporating specific heat demand to less than or equal to 15 kWh/sqm	6	FALSE
	Reduce heat entering a building through providing/improving insulation and living roofs and walls	2	TRUE
	Reduce heat entering a building through shading	3	TRUE
	Exposed thermal mass and high ceilings	4	FALSE
	Passive ventilation	3	FALSE
	Mechanical ventilation with heat recovery	1	TRUE
	Active cooling systems, i.e. Air Conditioning Unit	0	TRUE
	See Draft London Plan SI4		

2.2 Heat Generation

		Score	
b.	How have the heating and cooling systems, with preference to the heating system hierarchy, been selected (defined in London Plan policy **SI3)** Tick all heating and cooling systems that will be used in the development:		
	Connection to existing heating or cooling networks powered by renewable energy	6	FALSE
	Connection to existing heating or cooling networks powered by gas or electricity	5	FALSE
	Site wide CHP network powered by renewable energy	4	FALSE
	Site wide CHP network powered by gas	3	FALSE
	Communal heating and cooling powered by renewable energy	2	FALSE
	Communal heating and cooling powered by gas or electricity	1	FALSE
	Individual heating and cooling	0	TRUE
	See Draft London Plan SI3		

2.3 Pollution: Air, Noise and Light

a.	Does the development plan to implement reduction strategies for dust emissions from construction sites?	2	TRUE
b.	Does the development plan to include a biomass boiler?		FALSE
	If yes, please refer to the biomass guidelines for the Borough of Richmond, please see guidance for supplementary information. If the proposed boiler is of a qualifying size, you may need to complete the information request form found on the Richmond website.		
c.	Has an air quality impact assessment been provided		TRUE
	If yes, has 'Emissions Neutral' been achieved	1	TRUE
	If yes, have occupants of new development been protected from existing pollution	1	TRUE
	If no to any of the above are there any sensitive receptors as defined in Policy LP 10 present?	-1	Please Select:
	see Policy LP 10		
d.	Please tick only one option below		
	Has the development taken measures to reduce existing noise and enhance the existing soundscape of the site?	3	Please Select:
	Has the development taken care to not create any new noise generation/transmission issues in its intended operation?	1	TRUE
	see Policy LP 10		
e.	Has the development taken measures to reduce light pollution impacts on character, residential amenity and biodiversity?	3	TRUE
	see Policy LP 10		
f.	Have you attached a Lighting Pollution Report?	-	

Subtotal 14

Please give any additional relevant comments to the Energy Use and Pollution Section below

An energy statement, noise impact assessment, air quality assessment and dalylight and sunlight assessment are provided in support of the planning application

3. TRANSPORT

3.1 Provision for the safe efficient and sustainable movement of people and goods

a.	Does your development provide opportunities for occupants to use innovative travel technologies?		Please Select:

Please explain:

A transport statement is provided in support of the planning application
The BREEAM Pre-Assessment also includes consideration of many of these items

		Score	
b.	Does your development provide for 100% active provision for electric vehicle charging point(s) and have you successfully demonstrated that it would be able to operate satisfactorily in the future expectation of all vehicles being electrically powered?	*2*	Please Select:
c.	**For major developments ONLY**: Has a Transport Assessment been produced for your development based on TfL's Best Practice Guidance?		
	If you have provided a Transport Assessment as part of your planning application, please tick here and move to Section 3 of this Checklist.	*5*	Please Select:
	See policy LP44		
d.	**For smaller developments ONLY**: Have you provided a Transport Statement?	*5*	TRUE
e.	Does your development provide cycle storage? (Standard space requirements are set out in the Council's Parking Standards - Local Plan Appendix 3)	*2*	TRUE
	If so, for how many bicycles?	5	
	Is this shown on the site plans?		TRUE
	See Local Plan Appendix 3		
f.	Will the development create or improve links with local and wider transport networks? If yes, please provide details.	*2*	Please Select:
		Subtotal	7

Please give any additional relevant comments to the Transport Section below

4 BIODIVERSITY

4.1 Minimising the threat to biodiversity from new buildings, lighting, hard surfacing and people

a.	Does your development involve the loss of an ecological feature or habitat, including a loss of garden or other green space? (Indicate if yes)				-2	FALSE
	If so, please state how much in sqm?				sqm	
b.	Does your development involve the removal of any tree(s)? (Indicate if yes)					FALSE
	If so, has a tree report been provided in support of your application? (Indicate if yes)					Please Select:
c.	Does your development plan to add (and not remove) any tree(s) on site? (Indicate if yes)					Please Select:
d.	Please indicate which features and/or habitats that your development will incorporate to improve on site biodiversity:					
	Pond, reedbed or extensive native planting	*6*	Area provided:		sqm	Please Select:
	An extensive green roof	*5*	Area provided:	71.1	sqm	TRUE
	An intensive green roof	*4*	Area provided:		sqm	Please Select:
	Garden space	*4*	Area provided:		sqm	Please Select:
	Additional native and/or wildlife friendly planting to peripheral areas	*3*	Area provided:		sqm	Please Select:
	Additional planting to peripheral areas	*2*	Area provided:		sqm	Please Select:
	A living wall	*2*	Area provided:		sqm	Please Select:
	Bat boxes	*0.5*				TRUE
	Bird boxes	*0.5*				TRUE
	Swift boxes	*0.5*				TRUE
	Other	*0.5*				Please Select:
e.	Does your development use at least 70% of available roof plate as green/brown roof *Policy LP 17 requires 70%*				1	Please Select:

Subtotal **6.5**

Please give any additional relevant comments to the Biodiversity Section below

A green roof is proposed on the top floor of the development, Bat, Bird and Swift boxes will also be included around the development to increase biodiversity.

5 FLOODING AND DRAINAGE

5.1 Mitigating the risks of flooding and other impacts of climate change in the borough

a.	Is your site located in a high flood risk zone (Zone 3)? (Indicate if yes)		-2	Please Select:
	Have you submitted a Flood Risk Assessment? (Indicate if yes)			TRUE
b.	Which of the following measures of the drainage hierarchy are incorporated onto your site? (tick all that apply)			
	Store rainwater for later use		5	Please Select:
	Use of infiltration techniques such as porous surfacing materials to allow drainage on-site		3	Please Select:
	Attenuate rainwater in ponds or open water features		4	Please Select:
	Store rainwater in tanks for gradual release to a watercourse		3	Please Select:
	Discharge rainwater directly to watercourse		2	Please Select:
	Discharge rainwater to surface water drain		1	TRUE
	Discharge rainwater to combined sewer		0	Please Select:
	Have you submitted a Drainage Statement (Indicate if yes)			TRUE
	See Policy LP 21 and Draft London Plan SL 13			
c.	Please give the change in area of permeable surfacing which will result from your development proposal:		sqm	
	Please provide details of the permeable surfacing below	*please represent a loss in permeable area as a negative number*		
			Subtotal	1

Please give any additional relevant comments to the Flooding and Drainage Section below

There is a proposed green roof at the top of the development which will intercept rainwater. The BREEAM Pre-Assessment also includes consideration of many of these items through the assessment of flood risk and drainage.

6 IMPROVING RESOURCE EFFICIENCY

6.1 Reduce waste generated and amount disposed of by landfill though increasing level of re-use and recycling

a.	Will demolition be required on your site prior to construction? *[Points will only be awarded if 10% or greater of demolition waste is reused/recycled]*		1	FALSE
	If so, what percentage of demolition waste will be reused in the new development?		%	
	What percentage of demolition waste will be recycled?		%	
b.	Does your site have any contaminated land?		1	FALSE
	Have you submitted an assessment of the site contamination?		2	FALSE
	Are plans in place to remediate the contamination?		2	FALSE
	Have you submitted a remediation plan?		1	FALSE
	Are plans in place to include composting on site?		1	FALSE
c.	Will a waste management plan and facilities be in place in line with Policy LP24	Yes		

6.2 Reducing levels of water waste

a.	Will the following measures of water conservation be incorporated into the development? (Please tick all that apply):			
	Fitting of water efficient taps, shower heads etc		1	Please Select:
	Use of water efficient A or B rated appliances		1	Please Select:
	Rainwater harvesting for internal use		4	Please Select:
	Greywater systems		4	Please Select:
	Fit a water meter		1	TRUE
			Subtotal	1

Please give any additional relevant comments to the Improving Resource Efficiency Section below

The BREEAM Pre-Assessment also includes consideration of many of these items

7 ACCESSIBILITY

7.1 Ensure flexible adaptable and long-term use of structures

a. **If the development is residential,** will it meet the requirements of the nationally described space standard for internal space and layout? — *1* — **Please Select:**

If the standards are not met, in the space below, please provide details of the functionality of the internal space and layout

AND

b. **If the development is residential**, will it meet Building Regulation Requirement M4 (2) 'accessible and adaptable dwellings'? — *2* — **Please Select:**

If this is not met, in the space below, please provide details of any accessibility measures included in the development.

For major residential developments, are 10% or more of the units in the development to Building Regulation Requirement M4 (3) 'wheelchair user dwellings'? — *1* — **Please Select:**

OR

c. **If the development is non-residential,** does it comply with requirements included in Richmond's Local Plan LP1, LP28.B, LP30 & LP45 — *2* — **TRUE**

Please provide details of the accessibility measures specified in the Local Plan that will be included in the development

The development plans to date show space for a platform lift, increasing accessibility to the basement gym area. It also provides community space for amenity reasons, promoting the health and wellbeing of the area. The cycle store and lack of car park will encourage sustainable modes of transport.

Subtotal 2

Please give any additional relevant comments to the Design Standards and Accessibility Section below

Design and Access Statement

LBRUT Sustainable Construction Checklist- Scoring Matrix for *New Construction* **(Non-Residential and domestic refurb)**

TOTAL ***39.5***

Score	Rating	Significance
84 or more	*A+*	Project strives to achieve highest standard in energy efficient sustainable development
75-83	*A*	Makes a major contribution towards achieving sustainable development in Richmond
56-74	*B*	Helps to significantly improve the Borough's stock of sustainable developments
40-55	*C*	Minimal effort to increase sustainability beyond general compliance
39 or less	*FAIL*	Does not comply with SPD Policy

LBRUT Sustainable Construction Checklist- Scoring Matrix for New Construction **Residential new-build**

Score	Rating	Significance
85 or more	A++	Project strives to achieve highest standard in energy efficient sustainable development
68-84	*A+*	Project strives to achieve higher standard in energy efficient sustainable development
59-67	*A*	Makes a major contribution towards achieving sustainable development in Richmond
39-58	*B*	Helps to significantly improve the Borough's stock of sustainable developments
24-38	*C*	Minimal effort to increase sustainability beyond general compliance
23 or less	*FAIL*	Does not comply with SPD Policy

Authorisation:

I herewith declare that I have filled in this form to the best of my knowledge

Signature _____ **Date** _____