



# SUSTAINABILITY STATEMENT

PROJECT:  
**MEADOWS HALL, RICHMOND**

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**P2197**

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## 1.0 INTRODUCTION

QuinnRoss Energy were commissioned to develop a sustainability statement for the proposed *Meadows Hall* development, on Church Street in the London Borough of Richmond (LBR), that will outline how the development has been designed with sustainability considerations being a key driver and the project team has fully considered all sustainability issues throughout the design and construction process to maximise the inclusion of these features and practices wherever possible. This approach will help to mitigate the impact of the development on both the local and wider environment.

The site is located on Church Road, in the London Borough of Richmond. The development will involve the erection of a new 4 storey block of 1 no. Support Accom, 7 no. apartments and a series of 5 no. duplex town houses at the rear.

## 2.0 PLANNING POLICY AND LEGISLATION

This section describes the planning policies and regulations that will affect the proposed development's sustainable credentials. These are outlined below:

- London Plan 2021.
- Richmond Local Plan 2018.
- Richmond Residential Development Standards 2010.

Policy	Description / Summary
London Plan 2021	
GG4, Delivering the homes of Londoners needs	Developments must ensure more homes are delivered.
GG6, Increasing efficiency and resilience	Development must seek to improve energy efficiency and support a move towards a zero carbon city.
H1, Increasing housing supply	Developments should identify sites suitable for residential or mixed-use development.
H2, Small sites	Developments that increase contribution of small sites to meeting London's housing needs are encouraged.
E2, Providing suitable business space	Developments should support the provision of business space.
SI1, Improving air quality	Developments should use design solutions to prevent or minimise air pollution and aim to be air quality neutral.
SI2, Minimising greenhouse gas emissions	All retro-fit development should aim to reduce CO <sub>2</sub> emissions as much as possible.
	All development should monitor verify and report on energy performance.

SI3, Energy infrastructure	Developers should establish future energy requirements, potential for connection to heat networks and the use of CHP.
SI4, Managing heat risk	Major development should minimise overheating through the use of the “cooling hierarchy”.
SI5, Water infrastructure	Water supplies must be conserved and BREEAM excellent standard achieved.
SI7, Reducing waste & supporting circular economy	Developments should improve resource efficiency, minimise waste, avoid waste to landfill and recycle site waste.
SI12, Flood risk management	Development must comply with flood risk assessment requirements.
SI13, Sustainable drainage	Development proposals should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible.
T1, Strategic approach to transport	All development should make use and encourage existing and future public transport, walking and cycling routes, and ensure that any impacts on London’s transport networks are mitigated.
T2, Healthy streets	Developments should have plans that facilitate residents making shorter, regular journeys by walking or cycling.
T5, Cycling	Developments should provide appropriate levels of cycle parking & facilities for cyclists.
T6, Car parking	Car parking should be restricted, and a car free development should be the starting point.

Table 1: London Plan 2021 policies

Policy	Description / Summary
Richmond Local Plan 2018.	
LP 10	Development should be air quality neutral.
	Noise pollution should be minimised.
	Light pollution should be minimised.
	Construction should minimise its impact on the environment.
LP 20	New development should be resilient to climate change by minimising the effects of overheating by following the London Plan’s cooling hierarchy.
LP 21	Development should avoid surface and ground water flooding.
LP 22	Development should reduce CO <sub>2</sub> emissions in line with the London Plan and seek to connect to district heating networks where possible.
LP 23	Development should not pose a threat LBR’s rivers through surface water and ground water quality.

LP 24: Waste management	Waste should be managed in accordance with the waste hierarchy and encourage waste reduction and recycling.
LP 30: Health & Wellbeing	The council will encourage development that promotes sustainable modes of transport.
LP 34: New Housing	RBC aims to build 3,150 new homes by 2025.
LP 44: Sustainable Travel Choices	The council will support development that encourages walking and cycling and is located with good public transport options.
LP 45: Parking Standards and Servicing	Development should be car free if local public transport is sufficient.

Table 2: Richmond Local Plan 2018 policies

Policy	Description / Summary
<b>Richmond Residential Development Standards 2010</b>	
Section 3.1: Neighbourliness	No loss to adjoining dwellings of sunlight and daylight
Section 4.1: Garden and play space	Sufficient on site outdoor amenity space must be provided in new residential developments. Front gardens are also encouraged.
Section 4.3: Parking, landscaping, and recycling	Designs should not compromise highway safety. Bins and recycling boxes should be provided and hidden behind the building line.
Section 5.1.2: Sustainable design	Efforts should be made to reduce water consumption.
Section 5.1.4: Sustainable design	New dwellings should aim to achieve energy and CO <sub>2</sub> reductions beyond Build Regs.
Section 5.1.5: Micro-renewables	The use of renewable technology is expected.
Section 5.1.10: Flood risk	All developments need to consider river, surface water, groundwater, and sewer flooding.
Section 5.1.12: Sustainable Drainage	Development should minimise surface water runoff.
Section 5.1.13: Energy saving for windows	New windows should comply with thermal insulation standards, set out in the Building Regulations.

Table 3: Richmond Residential Development Standards 2010 policies

## 2.0 ENERGY

**Energy Efficiency:** The design of this development has utilised the fabric first approach, as encouraged by the *London Plan*, by maximising energy efficiency through passive measures (Be Lean) with low U-values and low air permeability well beyond building regulations, having the latest most highly efficient heat pump heating and hot water with zoned temperature control, energy efficient Low Energy Lighting (L.E.L). Low and zero carbon technologies have been included, heating and hot water from heat pumps and solar panels on roofs, to aim to meet the zero-carbon policy of the *London Plan 2021* and show only site constraints, not design or costs, has limited this building's zero CO<sub>2</sub> credentials. Further energy efficiency measures are achieved through provision of energy efficient white goods, providing information on EU labelling and energy efficient external lighting with daylight control.

Planning Policies Satisfied		
London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
SI2	LP 22	Section 5.1.4
SI3		Section 5.1.5
		Section 5.1.13

Table 4: Energy planning policies satisfied.

## 3.0 WATER

The potable water consumption of the building will be reduced through the specification of low water consuming fittings and water efficient appliances. The target water consumption for the development is less than 105 litres/person/day.

Planning Policies Satisfied		
London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
SI5	-	Section 5.1.12

Table 5: Water conservation planning policies satisfied.

## 4.0 MATERIALS

Although no planning policies outline material requirements specifically, the materials selection has been considered to maximise the selection of materials with low embodied energy that score highly in the BRE Green Guide for Building Specification. It is anticipated most of the materials will achieve an A+ and A rating due to the form of lightweight construction and the windows shall score an A-D rating.

The Contractor shall be required to responsibly source all construction materials, in particular timber based products, and this will be included in the Employers Requirements.

## 5.0 SURFACE WATER

**Flooding:** The site topographical levels demonstrate that the site is located in Thames's flood zone 1, indicating a 1 in 1000 year flood level risk, therefore river flooding is predicted to not be an issue.

**Surface Water Drainage:** As the site is currently 100% hard standing the proposed development will not increase the rate of run-off or volume of water from the site. The rainwater will have appropriate treatment to ensure the first 5mm of rainfall will not discharge direct into the watercourses.

Planning Policies Satisfied		
London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
SI12	LP 21	Section 5.1.10
SI13	LP 23	Section 5.1.12

Table 6: Surface water planning policies satisfied.

## 6.0 WASTE

RBC have a coloured bin policy for recycling and refuse which is as follows:

- Blue recycling box: Clean paper, card and cardboard, envelopes, junk mail & cartons.
- Black recycling box: Plastic bottles, pots, tubs, trays, unbroken glass bottles and jars, food tins, drink cans, foil & empty aerosol cans.
- Green recycling box Cardboard: All cooked and raw food waste.
- Black bin: Anything that cannot be recycled including polyester, plastic bags, nappies, used kitchen towels, sanitary products, pet excrement, cotton wool, broken crockery.

All dwellings will be provided with a supply of the above boxes and bins, in a dedicated refuse space in each garden hidden behind/below a line of fencing.

London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
SI7	LP 24	Section 4.3

Table 7: Waste planning policies satisfied

## 7.0 POLLUTION

**Greenhouse gas emissions** - CO<sub>2</sub> pollution mitigation measures are outlined in section 2.0 above. Other greenhouse gas emissions associated with the development will be in line with the project's aim for materials and pollution which enforces strict non-polluting construction, plant, and material selection for the project.

**Air Quality Assessment** - The site is located in an Air Quality Management Area (AQMA) which has exceedances of Nitrogen Dioxide (NO<sub>2</sub>). Dust and pollution from construction will be reduced through

minimal/strategically timed vehicle travel, dust reduction methods and Considerate Construction Scheme (CCS) conformity and the site will instigate NO<sub>2</sub> filtering on inlets.

**Noise Pollution** - A variety of noise insulating materials have been specified to mitigate any issues. Bedrooms & balconies have also been positioned away from noise intense facades where possible to bring them as far a distance as possible from the road. The development will also consider the impact of noise pollution by installing quiet operating equipment externally and providing acoustic treatment to ensure the plant noise is imperceptible at the nearest noise sensitive location.

**Lighting Pollution** - Light pollution will be mitigated using time clock controlled operation and hooded luminaires that eliminate uplight and use narrow light distribution. These will also be in line with BREEAM requirements.

London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
SI1	LP 10	

Table 8: Pollution planning policies satisfied.

## 8.0 HEALTH & WELLBEING

The development will provide 1 no. support accommodation & 12 no. residential units which is important for resident population. The apartments will have a range of tenures, will exceed internal space standards, and provide amenity spaces for its residents.

The development has considered the creation of a safe environment in which residents feel secure. The site is located in the middle of adjacent similar dwellings with residential balconies to provide natural surveillance.

Access to nature and biodiversity can contribute to health and wellbeing, and this development will provide a series of gardens and green space for the residents.

Local health and education services have been calculated to be more than sufficient for the proposed population of the site, which will be only marginally more than before, and the area already has sufficient food shops and social interaction opportunities to comfortably cope with the development's small number of residents.

London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
	LP 44	Section 4.1
		Section 3.1

Table 9: Health & Wellbeing planning policies satisfied



## 9.0 MANAGEMENT

**Building User Guide (BUG)** - A simple non-technical BUG will be produced which will provide information on the energy efficient design of the development, along with 'How To' guides on the operation of the services and equipment. The document would also provide important information about the remainder of the site and its surroundings.

**Considerate Constructors Scheme (CCS)** - The Contractor shall be required to register with the CCS and achieve a Beyond Best Practice score of more than 32. They shall also be required to set targets, monitor, and report on their site energy consumption & associated CO<sub>2</sub> emissions, water consumption, adopt best practice policies for air and water pollution and responsibly source all site timber.

London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
SI7	LP 10	-
SI8	-	-

Table 10: Management planning policies satisfied

## 10.0 ECOLOGY

The site is currently all hard surfacing; therefore, the land is of low / no ecological value. Post-development the site shall be buildings with hard surfacing, and additional gardens and green space to increase the ecological value of the site. Therefore, the proposal should result in a small net improvement in the ecological value of the site.

London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
G5	-	Section 4.1
SI4	-	-

Table 11: Ecology planning policies satisfied.

## 11.0 TRAVEL & TRANSPORTATION

**Access:** The site already has very good access with an established network of footways. These will be retained and improved by resurfacing. The site already has good access to existing cycle routes being adjacent to a number of popular cycle routes. These will not be altered.

**Public transport:** Given the site's central location and proximity to a London Underground tube station and major overground rail hub, public transport access is already excellent. It achieves a high PTAL rating, and the TIM map shows it is less than 15 mins travel to all major transport hubs. All these will remain unchanged under the proposed development.

**Parking:** All developments are being provided with a built in cycle park and the site is intended to be car free.

London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
T1	LP 30	Section 4.3
T2	LP 44	
T5	LP 45	
T6		

Table 12: Travel & Transportation planning policies satisfied

## 12.0 METERING

Extensive metering and monitoring devices will be installed on site. Separate energy sub metering will be installed to cover the space heating, domestic hot water, small power, and lighting. The meters will have a pulsed output to enable connection to an energy monitoring system.

A mains water meter will be installed to the site and separate sub-meters on each dwelling's supply.

London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
SI2		

Table 13: Metering policies satisfied

## 13.0 LOCAL ENERGY GENERATION

**Local heat networks:** All existing and proposed heat networks are many km from the site and associated pipework and excavation would be too excessive to justify a connection for this development. DH is therefore not considered.

**CHP:** Although it is not unfeasible to install a CHP engine for this development it must be noted that the development is relatively small, and a smaller / micro CHP would be the only feasible option. Smaller CHP engines are much less efficient than larger ones, having a worse heat to power ratio. This means that they do not enable as large a CO<sub>2</sub> reduction as they would for a larger development. Furthermore, the GLA published guidance in April 2015 stating that it is not expected for smaller sites (less than 500 dwellings) to carry out a full feasibility analysis for the use of CHP. It also widely accepted future building regulations are expected to move away from natural resource consumption, such as natural gas, making gas consuming units like CHP obsolete. CHP is therefore not considered.

London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
SI2	LP 22	Section 5.1.4
SI3		

Table 14: Travel & Transportation planning policies satisfied.



## 14.0 ADAPTION TO CLIMATE CHANGE

Adaption to climate change has been at the forefront of this development’s design and the following measures are incorporated into the design:

- The current site contains no greenery whatsoever, whereas this development will incorporate gardens and green space.
- The current site is 100% impervious surfaces, and this design will not increase that ratio, seeking to use more pervious materials where possible.

London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
	LP 10	Section 4.1
	LP 20	Section 5.1.10
	LP 21	Section 5.1.12
	LP 23	

Table 15: Climate change adaptation planning policies satisfied.

## 15.0 OVERHEATING

All spaces are designed to be naturally ventilated via opening windows with cross flow where possible. The building will also use a low g-value glass to reduce solar gains as far as possible.

London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
SI4	LP 20	

Table 16: Overheating adaptation planning policies satisfied

## 16.0 DEVELOPMENT MANAGEMENT

The proposals are not larger in footprint or disproportionate to the current buildings on site or surrounding buildings, and therefore new land will not be required.

The proposed development involves replacing like-for-like uses, i.e., all residential therefore the proposals are not expected to cause employment issues for nearby businesses.

London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
GG4	LP 34	
H1		
H2		
E2		

Table 17: Development management planning policies satisfied.

## 17.0 CONSTRUCTION MANAGEMENT

The site processes will conform to the following:

- The contractor achieving a high standard CCS standard for its site (as outlined above).
- At least 95% of site waste will be diverted from landfill.
- An air quality plan for the site works will be developed (as outlined above).
- A pre-demolition audit will be produced prior to works commencing outlining what materials can be re-used and/or recycled.

London Plan 2021	Richmond Local Plan 2018	Richmond Residential Development Standards 2010
SI1	LP 10	
SI7		

Table 18: Construction management planning policies satisfied.

## 18.0 CONCLUSION

When analysing all sustainability measures this development will likely cause little to no impact on the local area and environment and will enhance them in a number of areas. It will also comply with all national and local planning policies applicable to the site, reducing CO<sub>2</sub> emissions and contributing to the neighbourhood.