

Energy Statement

Park Lane Stables
Park Lane, Teddington
TW11 0HY
March 2023

Introduction

An Energy Report has been requested to accompany the application for Park Lane Stables RDA, contrary to what we believe is required for a non-residential conversion of an existing building. Architecture WK Ltd are undertaking this report on behalf of the Trustees.

The following text is the guidance contained in the adopted Richmond upon Thames 2018 Local Plan, Policy LP22:

A. Developments will be required to achieve the highest standards of sustainable design and construction to mitigate the likely effects of climate change. Applicants will be required to complete the following:

1. Development of 1 dwelling unit or more, or 100sqm or more of non-residential floor space (including extensions) will be required to complete the Sustainable Construction Checklist SPD. A completed Checklist has to be submitted as part of the planning application.
2. Development that results in a new residential dwelling, including conversions, change of use, and extensions that result in a new dwelling unit, will be required to incorporate water conservation measures to achieve maximum water consumption of 110 litres per person per day for homes (including an allowance of 5 litres or less per person per day for external water consumption).
3. **New** non-residential buildings over 100sqm will be required to meet BREEAM 'Excellent' standard.
4. Proposals for change of use to residential will be required to meet BREEAM Domestic Refurbishment 'Excellent' standard (where feasible).

It is clear that the Park Lane Stables application does not warrant an Energy Report, as outlined in the voluntarily submitted Sustainability Checklist and in the Design and Access Statement. An outline Energy Report is provided here to meet the request by LBRuT Planning Department.

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The existing residential unit was granted **residential use in 1989**, application ref **89/1050/FUL**, in the following terms "Extension of end stable and use of part of the premises as ancillary residential accommodation. Internal alterations and alteration to front elevation."

A consent was granted for an **extension to the element in residential use in 1993**, application ref **93/0993/FUL** in the following terms "Extension of existing dwelling attached to stables to form two bedrooms and a dining room". The property was did not benefit from any insulation to roof, walls or floors, although the roof was entirely rebuilt following a fire in 2008.

Despite the above guidance Architecture WK have still undertaken an informal Energy Report/Assessment to check the feasibility of achieving the required rating on this project

From undertaking the assessment it is apparent, that many of the credits are not suited to a scheme of this nature. With such minimal alterations and the building being classified as non-residential, and being under the 100 sq.m. area, with little outdoor space, the availability of credits is greatly diminished. Ultimately you would create a situation where you generate more work on the project to just receive credits with no sustainability benefits.

The Energy Assessment process can be very expensive and disproportionately so for small developments. The cost isn't just in the assessment fees, but in the additional meetings, specialists and extra reports. Unfortunately BREEAM does not make allowances for size and scale of developments and the consultant fees associated remain fairly constant.

Architecture WK have undertaken a review of the proposed development and it is our view that it is not feasible for this project to be assessed under the BREEAM methodology.

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APPENDIX

Maximum design flow rates & capacities: Taps (other than kitchen taps)

Taps (other than kitchen taps)	6.00 (litres/min)
Kitchen Tap	10.00 (litres/min)
WCs (Flush Volume)	Full flush – 4.00 litres
	Part flush – 2.60 litres

Please note that dual flush toilets must be specified with maximum flush capacities as specified. Single flush toilets with a maximum flush volume complying with the maximum 'full flush' volume specified above may result in non-compliance with Part G.

Dishwasher (Where Specified) 1.25(litres/place setting)

- The following are not present in this proposal;
- Showers/baths
- Washing machines
- Water softener
- Waste disposal units
- There is nominal rainwater harvesting, no provision for grey water harvesting.

The estimated consumption of water usage based on this, and the average usage/target usage is estimated at around **44 litres per person per day**.¹

¹ Thames Water Calculator used to estimate usage based on estimated flow rates and available equipment above. Appendix attached at end of document.

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This assessment will use the BREEAM headings and the submitted Sustainability Checklist to map out where the property can obtain credits.

	Section Weighting	Indicative Section Score	Rationale
Innovation	10%	10%	Conversion from un-insulated residential unit, not meeting Space Standards to well insulated, light and low energy use identified Community Use to support well being, disabled use and well-being support.
Management	12%	10%	User's Guide A user's guide would be provided for solar panels use and an app to manage this.
			Responsible Construction Practices The building works will be carried out by a Considerate Constructor or alternatively compliant scheme.
			Construction Site Impacts Most of the building envelope will be retained and insulated.
			Security External windows and doors to meet minimum standards and appropriately certified
			Protection and Enhancement of Ecological Features n/a
			Project Management Where all the of the project team are involved in the project decision making.
Health & Wellbeing	17%	14%	Where the refurbishment results in a neutral impact on daylighting or where minimum daylighting standards are met. The refurbishment results in achieving minimum daylight levels to all spaces Sound Insulation – N/A. Volatile Organic Compounds – N/A Ventilation – well ventilated. Safety – appropriate smoke detection system. There will be no gas at the property and a CO detector is not required.
			Inclusive Design: The space is very specifically being designed to better serve disabled riders and their carers. A suitable DDA compliant w.c. is being provided and a counselling room and cuddle horse for carers and other visitors. The reception area is to accommodate carers waiting for their charges to complete their riding session.
Energy	43%	20%	Improvements in Energy Efficiency Rating: The property is not insulated, heated with gas, and has nominal natural daylight. It is intended to use Solar Photovoltaics to meet 100% of the buildings' relatively low usage of electricity for heating and hot water. All new lighting will be LED. Insulation to the new roof, floor and existing walls will improve energy efficiency throughout.
			Renewable Technologies

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			<p>Full credits will be given when the solar photovoltaics are installed as the main source of heating and lighting for the property.</p> <p>White goods are envisaged to be a kettle, space heaters and a dishwasher. All will be A+ rated.</p> <p>Drying Space – n/a</p> <p>Lighting – energy efficient space lighting will be used.</p> <p>Cycle Storage – n/a</p>
Water	11%	11%	<p>Good or Excellent kitchen tap and w.c. to be fitted, meeting a BREEAM Outstanding rating.</p> <p>External Water Use – some rainwater to be collected for washing down the courtyard.</p> <p>Water Meter – installed.</p>
Materials	8%	4%	<p>Thermal Performance of new and existing elements; Roof will meet A+ rating as it will now be insulated. Walls will meet A/B rating where existing and internally insulated. Windows to meet A+ rating as double glazed.</p> <p>Responsible Sourcing of Materials. The mandatory pre-requisite of ensuring all timber is legally harvested and sustainable will be met</p>
Waste	3%	3%	<p>Site Waste Management Household 'type' waste; There will be compliant recycling containers provided for the dwelling.</p> <p>Refurbishment Site Waste Management. Full credits can be achieved, assuming the value of the work is less than £100k. The waste will need to be taken away by a licensed carrier among other requirements.</p>
Pollution	6%	4%	<p>Nitrogen oxide emissions. The existing boiler specification is not known, but two credits are predicted by removing the gas boiler and using an electric boiler.</p> <p>Surface Water Runoff. Minimal credit here as there is little space for water butts although one is proposed in the courtyard.</p> <p>Flooding The dwelling is in a low flood risk zone</p>