

Mr. John Hyland

96 Court Way
Twickenham
Middlesex TW2 7SW

**BREEAM Domestic Refurbishment
pre-assessment report**

21/2713/breem rev O

August 2021

Report prepared by:

Richard Child BA AaPS

AED Design

20 Marlow Crescent, Twickenham TW1 1DD

Tel: 07956 447933 e-mail: aeddesign@hotmail.com

OCDEA no. EES/020331

DEA no. L607-0001

Associate member association of Planning Supervisors

REVISIONS:

ISSUE 0 FIRST ISSUE

10/08/2021

BREEAM Refurbishment - pre-assessment

1.0 Introduction

To show the environmental performance of the proposed development as part of the London Borough of Richmond upon Thames sustainable construction checklist/sustainability strategy this BREEAM Domestic Refurbishment pre-assessment has been carried out for the development site at 96 Court Way, Twickenham TW2 7SW to form part of the planning submission to LB Richmond.

The application site is currently occupied by a single dwelling unit on two floors plus ancillaries.

The scheme consists of the sub-division of the existing property to form a new two-bedroom end-terrace dwelling and a new three-bedroom mid-terrace dwelling plus ancillary works on the development site and a full range of sustainability measures will be incorporated into the new development.

Site investigation as deemed necessary will be carried out prior to the commencement of works and any findings acted upon accordingly. Any hazardous waste that arises during the works will be suitably disposed of and recorded in the Health and Safety file.

2.0 Summary

The pre-assessment process has been carried out using the scheme drawings (listed below) prepared/issued by AJT Design Services Ltd, the SAP2012 calculations and other site related information.

During this pre-assessment process the report has been issued to AJT Design Services Ltd for comment prior to completion to form part of the planning application for the site.

- CW/96/01 - existing plans and elevations
- CW/96/02 - proposed plans and elevations
- CW/96/03 - proposed site plan and location plan
- CW/96/04 - proposed site plan

3.0 The BREEAM Refurbishment rating

The assessment has carried out to cover the formation of the two new dwellings (one three-bed and one two-bed) on the development site and is based upon the categories contained within BREEAM Domestic Refurbishment using the information available plus the SAP 2012 calculations.

The credits have been awarded based on the information provided, SAP2012 calculations and investigation into the site and its surrounding area to establish the details/information required.

Once the credits have been awarded the BREEAM Refurbishment weightings have been applied to the individual credit scores to achieve the overall score and BREEAM Refurbishment pre-assessment rating.

BREEAM Domestic Refurbishment

Category 1 – Management

Man01 – Home Users Guide

A home user guide will be prepared for each of the newly created dwellings and a copy provided to the new occupants for information/use.

It will cover all new works, energy efficiency, water use, transport facilities, emergency information and local amenities which together with the existing features of the structure which are not being upgraded or replaced.

Man02 – Responsible Construction Practices

The development works will be carried out professionally and in a courteous manner to the adjoining dwellings/occupants.

They will meet the mandatory criteria and +50% of the optional criteria in checklist A-4.

However, as a small development with restricted space to meet the requirements it will not be registered for the considerate constructors' or any similar scheme

Man03 – Construction Site Impacts

Steps will be taken to reduce the construction site impacts by dealing with site waste and monitoring usage of utilities during the construction works.

These will be for a minimum of two of the criteria listed in checklist A-6.

Man04 – Security

All windows and doors provided/installed in the new dwellings will comply with the minimum-security requirements set out in compliance note 6. All new external door-sets and windows will be appropriately certified.

Man05 – Protection and Enhancement of Ecological Features

The scheme consists of the formation of a pair of terraced dwellings with none or few ecological features to be affected. Any features of ecological value on the site or the boundary with adjacent properties will be suitably protected during the works.

Man06 – Project Management

The project team will be involved in the project decision and shared roles and responsibilities assigned in accordance with CN1 and CN2.

Sub-total	Max credits - 11	Credits awarded - 7
-----------	------------------	---------------------

Category 2 – Health and WellbeingHea01 – Daylighting

The dwellings have been designed to ensure that all rooms will achieve good levels of daylighting and result in a neutral impact on the day-lighting levels of the development particularly in the kitchens, living rooms, dining rooms and study areas (where provided).

Hea02 – Sound Insulation

As the proposed dwellings are-terraced sound testing is not possible between the new mid-terrace unit and the adjacent property, sound testing will be carried out to the party wall between the new units. In addition, soundproofing will be provided around the kitchens and bathrooms to reduce sound transmittances (in accordance with the building regulations).

Hea03 – Volatile Organic Compounds

All decorative paints and varnishes to be used in the development will avoid the use of VOC's and meet the requirements of table 14.

Hea04 – Inclusive Design

The dwellings have been designed and will be constructed to provide/meet the criteria of advanced accessibility ideals for the development site

Hea05 – Ventilation

Individual extract fans will be provided to all wet areas (kitchens and bathrooms) on the development; background ventilation and purge ventilation will be provided by windows to these rooms.

Hea06 – Safety

A compliant fire and carbon monoxide (CO) detection and alarm system will be installed to each of the new dwellings.

Sub-total	Max credits - 12	Credits awarded - 8
-----------	------------------	---------------------

Category 3 – EnergyEne01 – Improvement in Energy Efficiency Rating

The new dwellings will meet the requirements of the building regulations AD part L 2013 (where possible and practicable) and provide an improvement in the building's energy efficiency rating post-construction dwellings over the pre-development building.

Ene02 – Energy Efficiency Rating Post Refurbishment

The new dwellings will meet the minimum energy efficiency rating criteria as a result of the upgrades.

Ene03 – Primary Energy Demand

Primary energy demand targets caused by the refurbishment will meet the requirements of BREEAM and the building regulations.

Ene04 – Renewable Energy Technology

An energy study has been carried out to show how a minimum of 15% of the development's annual energy requirement (solar PV) could be provided from a renewable source.

Ene05 – Energy Labelled White Goods

All new white goods specified/installed in the new dwellings (fridge/freezer, washing machines/dryers and dishwashers) will be from the range recognised by the Energy Savings Trust and EU energy efficiency labelling scheme.

Ene06 – Drying Space

Fixed external drying provision/space to meet the assessment criteria will be provided for the dwellings located in the rear gardens of each dwelling.

A minimum line length of 6m+ will be provided for each of the new dwellings.

Ene07 – Lighting

All new (fixed) space and security lighting to the new dwellings will have dedicated energy efficient fittings/max wattage bulbs of 150w all to be controlled by PIR's with daylight cut-off sensors.

A minimum of 100% of the internal lights will be low energy lights installed in accordance with the building regulations part L.

Ene08 – Energy Display Devices

As a sub-division of the existing building to form two new terraced dwellings the existing services will be re-used where possible.

However, data display units will be provided for the main energy to each of the dwellings.

Ene09 – Cycle Storage

Secure cycle storage for a minimum of two cycles per dwelling will be provided in a dedicated store (to rear garden) which will be accessible direct from the public highway.

Ene10 – Home Office

The dwellings have been designed to provide space for a study area for use as a home office which will have enough space, electric sockets, BT telephone points and adequate ventilation.

Sub-total	Max credits - 29	Credits awarded - 23
-----------	------------------	----------------------

Category 4 – WaterWat01 – Internal Water Use

Any new internal fittings provided (brassware + sanitaryware) will be of low water usage or capacity to ensure that the development will achieve a max. daily consumption of ≤ 105 l/p/ day.

Wat02 – External Water Use

The proposed development is for the sub-division of the existing building to form a pair of terraced dwellings (one three-bed and one two-bed).

As the new dwellings will be provided with external amenity space (private gardens), external water storage will be provided using a 150litre water butt (per dwelling) located to one rwp and fitted with overflow to main drainage to the dwellings.

Wat03 – Water Meter

As the new dwellings are being created by the sub-division of the existing dwelling on the development site a new water supply will be required for one of the units with the existing supply being re-used for one of the newly created dwellings on the development.

In addition to the new service company supply, water meter installed by the utilities company; a new water meter that is compliant with BREEAM Domestic Refurbishment will be provided to the new dwelling on the development.

Sub-total	Max credits - 5	Credits awarded - 4.5
-----------	-----------------	-----------------------

Category 5 – MaterialsMat01 - Environmental Impact of Materials

Any new construction materials will be to the green guide for specification; elsewhere the existing will be re-used/improved upon where possible.

The number of credits awarded is determined by the 'BREEAM Domestic Refurbishment Mat1 calculator'

Mat02 – Responsible Sourcing of Materials

All new materials (basic building elements) and all new materials (finishing elements) used on the development will be responsibly sourced.

Mat03 – Insulation

All new insulating materials specified for use on the development (to external walls, ground floor, roof and building services) will be assessed using the 'BREEAM Domestic Refurbishment Mat3 Insulation Calculator' for both embodied impact and responsible sourcing.

In addition, all new insulation products used on the development will be responsibly sourced, preferably from local suppliers.

Sub-total	Max credits - 45	Credits awarded - 30
-----------	------------------	----------------------

Category 6 – WasteWas01 – Household Waste

Internal (recycling) storage of the required capacity will be provided in the kitchens in each of the proposed new dwellings.

External storage will be provided to a location within the site curtilage (as shown on the ground floor/site plan, which in conjunction with the LB Richmond kerbside scheme will meet the requirements of this item

Was02 – Refurbishment Site Waste

Steps will be taken to reduce construction site impacts of the project by dealing with site waste and monitoring usage of utilities during the works

This will ensure that all waste generated by the development is managed in accordance with checklist A-9 - 'refurbishment site waste management – [development cost] up to £100k value'.

Sub-total	Max credits - 5	Credits awarded - 3
-----------	-----------------	---------------------

Category 7 – PollutionPol01 – Nitrogen Oxide Emissions

The dwellings will be fitted with highly efficient gas fired condensing combination boilers and radiator system with delayed start thermostat and flue-gas heat recovery system; The boilers will be NO_x class 5 or better. The heating system will be controlled by room stat, programmer + TRV's.

Pol02 – Surface Water Run-off

The dwellings will be provided with an individual water butt to the rear garden of each of the houses. The water butts will be fitted with lockable lids and tap; it will be connected to one of the down pipes and be fitted with an overflow device into the conventional drainage system. they will also be detachable from the down pipe to provide ease of access for cleaning.

Pol03 – Flooding

The proposed development site is shown on the EA website as being in zone 1; defined by the Environment Agency as having a low probability of annual flooding. Therefore, no flood risk assessment is necessary for the application.

Sub-total	Max credits - 8	Credits awarded - 5
-----------	-----------------	---------------------

Category 8 – InnovationInn91 – Project Management

Early Design Input – a BREEAM assessor will be appointed at an early stage of the project and prior to the production of a refurbishment specification to oversee key stages within the project.

Sub-total	Max credits - 10	Credits awarded - 1
-----------	------------------	---------------------

Appendix 1

	Max credits	Credits awarded
Management	11	7
Health and Wellbeing	12	8
Energy	29	23
Water	5	4.5
Materials	45	30
Waste	5	3
Pollution	8	5
Innovation	10	1
Sub-total	115	81.5

BREEAM Domestic Refurbishment (rating percentage)		76.75%
---	--	--------

BREEAM rating		
Pass	≥ 30%	
Good	≥ 45%	
Very good	≥ 55%	
Excellent	≥ 75%	
Outstanding	≥ 85%	

4.0 Conclusion

Appendix 1 of the 'BREEAM Domestic Refurbishment' pre-assessment shows that the proposed development will achieve a BREEAM Domestic Refurbishment rating of 'excellent'.

Although this meets the aspirations/requirements of the LB Richmond planning policy, as the sub-division of an existing structure/new construction a number of items contained within the BREEAM Domestic Refurbishment scheme cannot be carried out and as such the rating achieved is considered to be the best that could be achieved by the proposal given the limitations of the existing structure.

Despite this, efforts will be made during the detailed design and construction phases of the project to further improve upon the score achieved.