

ENERGY AND SUSTAINABILITY STATEMENT

NORTHCOURT LODGE, 65 NORTHCOURT AVENUE, READING, RG2 7HF.

**APPLICATION FOR REMOVAL OF CONDITIONS 15 + 16 FOLLOWING CONSENT 220218
(CONSTRUCTION OF A 13 BEDROOM BUILDING (C2 USE) WITH ANCILLARY
ACCOMMODATION AND ASSOCIATED WORKS).**

Ref: 2685/ESS

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Prepared by:

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1. Introduction

- 1.1 This Energy and Sustainability Statement has been prepared by Ian Sullivan Architecture Ltd on behalf of the applicant, in respect of the site known as Northcourt Lodge, 65 Northcourt Avenue, Reading, RG2 7HF.
- 1.2 The site benefits Planning Consent (Ref: 220218) proposing construction of a 13-bedroom care building (Class C2) with ancillary accommodation and associated works (granted 21st December 2022).
- 1.3 This Energy and Sustainability Statement is submitted in support of a S.73 Application which seeks to remove planning conditions 15 + 16 associated with Consent 220218.

Condition 15 states:

[Pre-commencement] No development shall commence on site until a copy of an Interim BREEAM Certificate in accordance with the BREEAM Sustainability Standard demonstrating compliance with a minimum standard of BREEAM Very Good rating has been submitted to and approved in writing by the Local Planning Authority.

REASON: These details are required due to insufficient information being contained within this submission and in order to ensure that the development is carried out in accordance with sustainable building standards in accordance with Policy CC2 of the Reading Borough Local Plan 2019.

Condition 16 states:

Prior to first occupation of the development hereby approved, a copy of a Final BREEAM Certificate in accordance with the BREEAM Sustainability Standard following a post-construction stage review carried out by a licensed assessor has been submitted to and approved in writing by the Local Planning Authority, demonstrating that the development has attained as a minimum the standard set out in the Interim BREEAM Certificate referred to in condition 15.

REASON: To ensure that the development is carried out in accordance with sustainable building standards in accordance with Policy CC2 and H5 of the Reading Borough Local Plan 2019.

- 1.4 Although a Breeam Assessment was submitted previously to satisfy planning condition 15 under discharge of conditions application ref: 230089 and subsequently approved by the LPA, it is now proposed to remove condition 15, in addition to condition 16.
- 1.5 SBEM Calculations (BRUKL0031 – L2A Compliance Report – As-Designed and BRUKL0031 – Output Document) – Prepared by EPC Ltd are also submitted to accompany this S.73 Application.
- 1.6 The report is in response to Reading Borough Council's adopted Supplementary Planning Document (SPD) and the National Planning Policy Framework (NPPF).
- 1.7 The report discusses areas of renewable use as well as recycling and more sustainable practices.

2. Planning Framework

The strategy for the proposed development has been considered with the following policies in mind: -

- 2.1 The NPPF has relevant paragraphs with regards to meeting the challenge of climate change and flooding and places a reliance on the use of renewable infrastructure where viable.
- 2.2 There is also a desire to encourage design features which will reduce the requirement for mechanical heating and ventilation solutions.
- 2.3 For full planning applications, the Sustainability Statement need not provide full details, but should set out an explanation in broad terms how the proposed development will meet the requirements of policy framework.
- 2.4 To reduce carbon emissions and secure sustainable energy solutions, all new developments over 100 square metres gross or one or more dwellings should incorporate the generation of energy from renewable or low carbon sources equivalent to at least 10% of predicted energy requirements, unless it has been demonstrated that this would make the development unviable.
- 2.5 The Supplementary Planning Document (SPD) explains planning requirements with regard to energy, climate change, water management and waste reduction. It is intended to supplement the policies of the Local Plan, particularly: -
 - CC2: Sustainable Design and Construction
 - CC3: Adaptation to Climate Change
 - CC4: Decentralised Energy
 - CC5: Waste Minimisation and Storage
 - EN18: Flooding and Drainage
 - H5: Housing Standards

3. Building Regulations

- 3.1 The 2013 (with additional 2016 + 2018 + 25th of February 2022) changes to the approved document L of the Building Regulations was introduced with similar aims of reducing carbon dioxide emissions.
- 3.2 This document takes into account the buildings orientation, fabric, layout, design and energy use and assesses the building on a pass/fail model.
- 3.3 Given the rigorous nature of the approved document of the Building Regulations standards, this is relevant with regards to this proposal.

4. Design Solution

The evaluation of our proposal will be in several stages:

- Design of the fabric
- Thermal bridging
- Passage of air / ventilation
- Energy requirement
- Energy mitigation
- Water conservation
- Energy efficient appliances
- Landscaping
- Sustainable drainage systems (SuDS)
- Waste reduction

5. Fabric Design

5.1 Walls

Wall construction will be full cavity construction with 50mm Celotex or equivalent rigid insulation to the cavity with the intention to better the current u value requirement at around $0.16\text{W/m}^2\text{K}$.

5.2 Floors

The ground floor is a key part of the strategy and the intention is to use 150mm rigid insulation to reduce downwards heat loss through the fabric from the heat source, rated at around $0.11\text{W/m}^2\text{K}$.

5.3 Roof

The roof will be constructed using traditional methods with quilt insulation and therefore the insulation value will relate to the thickness of product used. A 400mm layer will better the current value for a pitched roof at $0.11\text{W/m}^2\text{K}$ (100mm laid within joists and 300mm laid over).

5.4 Windows – Natural Day Lighting

The windows are to be UPVC frame with double glazed units low E/Argon filled, rated at around $1.4\text{W/m}^2\text{K}$.

Coupled with solar gain, natural day lighting can reduce the energy demand for new buildings through the controlled entry of natural light through windows, skylights and other building envelope components. The day lighting benefits of large areas of glazing need to be considered against the thermal and other properties of glazing.

External doors are to be composite frame, rated at around $1.5\text{W/m}^2\text{K}$.

5.5 Ventilation

Maximising natural ventilation is appropriate in the design and construction and is considered a more sustainable option than air conditioning systems, albeit that the building will be able to be made airtight to reduce energy demand for heating or cooling in extreme weather. The method is to create opportunities for cross ventilation. Openings on opposing (or even adjacent) walls can draw air through a space. Windows and patio doors are to be openable and trickle vents will be installed to provide controllable background ventilation.

6. Thermal Bridging

- 6.1 E2 – keystone Hi-Therm Lintels with a Psi-value of 0.05W/mK + 50mm Celotex or equivalent for partial fill cavity.

7. Passage of Air

- 7.1 Detailing
The project will be constructed using the 'Robust Standard Detail' suite of details ensuring a good level of design and workmanship.
- 7.2 The building will require air-testing and the above details will ensure that the design meets the air leakage requirements. This is controlled through the SBEM energy predicted assessment and post assessment.

8. Energy Requirement

- 8.1 Central Heating. This will be via Air Source Heat Pump (ASHP) to provide heating.
- 8.2 Hot water. Hot water system is controlled through the installation of ASHP and it is proposed to drastically reduce energy requirements for the hot water usage within the building.
- 8.3 Vehicle charging points to be installed, type: Wallpod.EV 32A Type 2 Tethered cable charging unit to be specified.

9. Energy Mitigation

- 9.1 The building has very good access to natural light and the building is well within the width at which natural light becomes less effective. This means that the building can, when possible, use natural light in lieu of artificial light.
- 9.2 When artificial light is required, the building will rely on led fittings which use up to 70% less energy than normal fittings. It is our standard policy to design for all fittings to be low energy, which exceeds the current building control requirement of four in ten being low energy.

- 9.3 The building will be well ventilated locally with openable windows. The only mechanical ventilation envisaged is in the wc and bathrooms which as a requirement under the Building Regulations is unavoidable.

10. [Water Recycling](#)

- 10.1 This is addressed within the Building Regulations.
- 10.2 Water use per person per day not to exceed 110 litres.
- 10.3 Hot water heating – 150 litre cylinder. Maximum storage losses of 1.70KW per person per day.
- 10.4 Water butt to collect rainwater for use in the garden to be installed.

11. [Energy Efficient Appliances](#)

- 11.1 Appliances providing heat, light and other essential services are major consumers of energy. The careful choice of appliances will reduce energy demand and therefore costs, significantly. The building proposed should as far as possible use the most energy efficient appliances, in particular energy and water efficient white goods.

12. [Landscaping](#)

- 12.1 Landscaping has been carefully considered in the design of garden space. If solar gain is needed, any trees that need to be retained as part of the development should ideally be sited in relation to the development so that they are not overshadowing the new development.
- 12.2 New planting will help avoid overheating in the afternoon. If solar gain is not needed, trees can provide important cooling benefits and help the building to adapt to a warming climate.

13. [Sustainable Drainage Systems \(SuDS\)](#)

- 13.1 Implementation of a SuDS approach, as opposed to conventional drainage systems will provide several benefits and is a requirement for new development. This will be appropriately designed, constructed and maintained SuDS to improve the sustainable management of surface water on site by reducing peak flows to the sewer and reducing the risk of flooding downstream.
- 13.2 SuDS are made up of one or more structures built to manage surface water runoff and are a mandatory requirement for new development according to national guidance. Used in conjunction with good site management, these systems will prevent flooding and pollution.

- 13.3 The SuDS design will ensure that development does not result in any additional surface water run-off when compared to the site pre-development. SuDS improve water quality and can provide other social, environmental and economic benefits for the owner (as outlined in Policy EN18: Flooding and Sustainable Drainage Systems of the Local Plan) and in line with the Government's Technical Standards.

14. [Waste Reduction](#)

- 14.1 Policy CC5 of the Local Plan requires that development will demonstrate measures to minimise the generation of waste in the construction, use and life of buildings. The proposals are to promote a more sustainable approach to waste management, including re-use and recycling of construction waste and promotion of layouts and designs that provide adequate space to facilitate waste storage, re-use, recycling and composting.
- 14.2 Low-impact building materials include timber, earth, straw, secondary aggregates and recycled products. Plastic, steel and aluminium, for example, are higher-impact materials. Where possible, materials should be produced locally and from sustainable or certified sources.

[Waste hierarchy](#)

- 14.3 There are three basic strategies for dealing with waste: reduce (i.e. avoid or prevent), re-use, recycle and only as a last resort, dispose.

15. [Conclusion](#)

- 15.1 Where energy is used, it is minimised by the layout and design of the building and the use of technologies designed to use less energy.
- 15.2 Water use to be minimised, heat is localised and provided efficiently, and lighting is of a low energy type.
- 15.3 Above all, the requirements enforced by building control will insist on good building fabric, good technology and renewable energy sources, which we fully embrace.
- 15.4 The building will achieve a 25% improvement over the Target Emission Rate, which shows compliance with ENE1 - Level 4 of Code for Sustainable Homes.
- 15.5 To be read in conjunction with BRUKL0031 – L2A Compliance Report – As-Designed and BRUKL0031 – Output Document – Compliance Part L 2013.
- 15.6 The development is to be carried out with sustainable building standards in accordance with the Building Regulations document and compliance with the BRUKL0031 Output Document and BRUKL0031 – L2A Compliance Report – As-Designed – Prepared by EPC Ltd.

- 15.7 A Breeam Assessment is not a mandatory requirement of all buildings and the proposals are not considered a large commercial building or public building. SBEM Calculations and Energy & Sustainability Statement are provided to satisfy this element.
- 15.8 Supporting Construction Method Statement (CMS) approved under condition 6 (Application ref: 230089). This includes elements in connection with this application as listed below: -
- f) A scheme for recycling waste resulting from the construction works.*
 - g) Measures for controlling the use of site lighting whether required for safe working or for security purposes;*
 - h) Required measures to control the emission of dust, dirt and other airborne pollutants during demolition and construction;*
 - i) Provisions to be made for the control of noise coming from the site during demolition and construction;*
 - j) Full details of pest control measures following any demolition required. Where necessary, capping of drains/sewers and baiting arrangements. The measures within the approved Statement shall be adhered to throughout the demolition and construction period unless otherwise agreed in writing by the Local Planning Authority.*

Ian Sullivan

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