Tybalds Estate, Camden - Underbuilds

Sustainability Plan
December 2022

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Document Revision Control

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1.0 Introduction

1.1 General

Harley Haddow have been appointed to undertake a pre-implementation design-stage review and to work with the project team to deliver the energy strategy for the underbuilds at Tybalds Estate, Camden. This report has been compiled in line with the TGA Energy and Sustainability Statement revision four, dated January 2022. The proposed development comprises of 3 new residential blocks of flats, 2 blocks of mews houses and underbuild flats beneath 3 existing residential blocks. Harley Haddow have prepared this report for the 10 underbuild dwellings, created by change of use, proposed within the Tybalds Estate. These conversion plots are to be created within the under-builds of three buildings which currently comprise a mixture of unheated storage, temporary office spaces and communal areas. The additional dwellings have been proposed across the three buildings as follows:

- Richbell – 2 additional under-build dwellings
- Falcon – 3 additional under-build dwellings
- Blemundsbury – 5 additional under-build dwellings

Harley Haddow have been appointed to undertake a pre-implementation design-stage review and to work with the project team to deliver the sustainability measures for the underbuilds. Harley Haddow are an appropriately qualified and recognised independent professional in respect of the underbuilds development to undertake this role.

This Sustainability Report has been produced to demonstrate that the proposed underbuild development incorporates measures in the design that are achievable within the development and that the aims and objectives of the Camden Council Local Plan, CC1 and CC2 strategic policies on sustainability have been satisfied.

This version of the Sustainability Report will focus on how the measures in the TGA report associated with the underbuilds will be delivered. This is a live document, that will be updated when subsequent blocks are delivered to address the measures associated with their delivery, as envisaged by the TGA report.

2.0 CC1 Climate Change Mitigation

The proposed development sits within the Camden Council jurisdiction and falls within the requirements of the Camden Local Plan (2017). The local plan requires all new developments to limit carbon dioxide emissions and ensure existing buildings are supported in sensitive energy efficiency improvements.

The council requires all developments to minimise the effects of climate change and all developments are encouraged to meet the highest feasible environmental standards.

Under the Camden Local Plan Policy CC1 the underbuilds will demonstrate a number of improvements and inclusions within the design to adhere to the local requirements.

2.1 The Energy Hierarchy

New developments within Camden should aim to be zero carbon. The energy hierarchy is used to minimise energy and carbon dioxide in operation. The energy hierarchy is a sequence of steps that minimised the energy consumption of a building and will also be the applied methodology for the underbuilds.

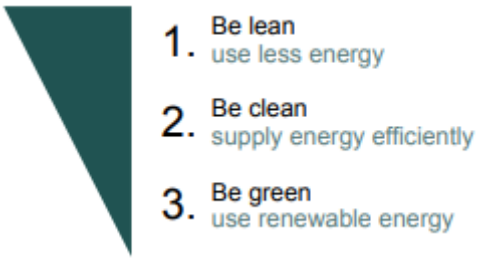

Figure 2.1.1 Energy Hierarchy

The accompanying energy strategy details how the underbuilds will reduce operational energy and through lean, clean and green strategies.

2.2 Resource Efficiency

Camden local plan requires materials and resources to be used efficiently and materials on site to be reused where technically feasible. The construction process and new materials involved in developing buildings are major consumers of resources and can produce large quantities of waste and carbon emissions. The underbuilds development will employ the following strategies:

- reduce material waste during construction and material selection will have the sustainability goals in mind.
- Reducing energy and water use during construction
- Using materials with low embodied carbon content: and
- Designed for low energy and water use when the building is in use.

The underbuilds will have low flow appliances fitted throughout to reduce on site water usage and limit this to 105 litres/person/day.

2.3 Embodied Carbon

Embodied Carbon: The re-use and adaptation of the structure will reduce the amount of new embodied carbon in the complete building. Further, only minor adaptation of the existing structure is proposed to reduce waste removal. Where new materials are added, these are chosen to minimise embodied carbon where possible for example the specification of mineral wool insulation.

2.4 Decentralised Energy Generation

The underbuilds will be designed to connect into the existing district heating network on site via a plate heat exchanger. Decentralised energy plays a key role in the borough-wide carbon dioxide reduction strategy. Allowing for the systems within the underbuilds to connect to a decentralised energy system allows for future connection to a low carbon network in future.

3.0 CC2 Adapting to Climate Change

Climate change adaption involves changing the way we do things to prepare for the potential effects of climate change. Ensuring that buildings and people can adapt to weather and temperature extremes is more important than ever. The underbuilds will be designed to ensure that occupant comfort is a priority and that the proposed development does not negatively impact the existing site and surroundings.

3.1 Climate Change Adaption Measures

To minimise the risks to the occupants of the development the design of the development considers the anticipated changes to local climate. Whilst the scope of mitigation is limited within the context of the underbuilds the development will be designed to reduce the risk of overheating within the developments and limit the use of cooling following the Approved Document O methodology. If comfort cooling is required to be adopted, it will be designed in a manner where it will not contribute to the urban heat island effect through mitigation measures.

3.2 Sustainable Design and Construction

The proposed development has a number of constraints due to the nature of the existing building whereby maximising passive sustainable measures may not be possible. However, the Energy Strategy which accompanies this report details the full measures in place to reduce the energy demand and carbon emissions from the proposed development. The scheme demonstrates sustainable principles have been considered throughout the design process.

4.0 Maintenance and Post Construction Review

The sustanabile measures implemented within the Tybalds estate will be managed and maintained by the current facilities management team that oversee the site maintenance and management currently.

Harley Haddow will incorporate measures to secure a post construction review of the development by an appropriately qualified recognised and independent professional in respect of the underbuilds (including a written report, photographs and installation contracts) certifying that the measures incorporated in this Sustainability Report, associated with the underbuilds and associated underbuilds landscaping, have been achieved in the development and will be maintainable in the development's future management and occupation.

5.0 Conclusions

The underbuilds proposed within Tybalds estate will have sustainability at the centre of the design. The key sustainable strategies will be maximised to ensure efficiency is met in all areas of the underbuild development.

This document is a live document and will be updated and re-submitted to the Council for approval should there be any changes to the sustainability strategy and in advance of delivery of any further buildings on the Estate.

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