

ATLAS

PLANNING GROUP

SUSTAINABILITY STATEMENT

Mulberry House, 1A Eldon Road, Reading, RG1 4DJ

JANUARY 2020

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INTRODUCTION

- 1.1 This statement is provided in support of the full planning application for residential development at Mulberry House, 1A Eldon Road, Reading.
- 1.2 This statement seeks to demonstrate how the proposed development meets national and local sustainability objectives. This statement has also been informed by the Sustainable Design Checklist included within Reading Borough Council's Sustainable Design and Construction Supplementary Planning Document (2019).

ACHIEVING SUSTAINABLE DEVELOPMENT

ENERGY EFFICIENCY, LAYOUT & DESIGN

- 1.3 The proposed development aims to provide a sustainable, high quality building which is energy efficient and incorporates measures to minimise the impacts of Climate Change.
- 1.4 Building Regulations, specifically Approved Document Part L, Conservation of Fuel and Power is the primary tool for reducing carbon emissions in new buildings. As such, these national regulations will inform and drive the energy efficiency and carbon reductions in the new building.
- 1.5 To limit heat loss, the building fabric will be designed to target the minimum requirements as established by Reading Borough Council Policy CC2: *'Sustainable Construction and Design and Construction'* and Policy H5 *'Standards for New Housing'*.
- 1.6 Following the feasibility assessment undertaken by JAW Sustainability into the use of Low and Zero Carbon (LZC) Technologies suitable for the proposed development, solar photovoltaic panels are considered the most appropriate and will be located on the flat roof of the building. The panels will be hidden from view by the roof parapet.
- 1.7 It is envisaged that the superstructure will be formed of a structural steel frame with cast-in-situ composite concrete decks; the decks of the building will act as thermal massing as well as providing a good quality acoustic construction when combined with other technologies.
- 1.8 The materiality of the external façade is proposed as stone, although to limit structural loading, extensive deliveries to site and amount of material, a veneered solution is proposed that acts as a rain screen but has

much improved sustainable characteristics over a standard solid stone / stone rain screen façade.

- 1.9 Overall, as set out in the supporting Energy Statement, following the energy hierarchy, passive design measures and energy efficiency equipment have shown an improvement of **35.14%** over the Building Regulations Part L 2013 Target Emissions Rate.

NATURAL DAYLIGHTING

- 1.10 The proposed building has been developed from the principles of the London Design Guide. This guidance makes it clear that for a comfortable and efficient apartment that is not benefitted from mechanical ventilation that suitable cross-ventilation is provided. All apartments have been designed as either dual or triple aspect to facilitate the use of natural ventilation.
- 1.11 The glazing strategy has been designed to maximise daylight whilst controlling excessive solar gains. Glazing will incorporate low emissivity coatings to limit overheating without compromising light transmittance.
- 1.12 The application is also supported by a Daylight, Sunlight and Overshadowing Impact Assessment prepared by Hawkins Environmental Ltd.

MATERIALS

- 1.13 There is a rich and celebrated use of Bath Stone in the locality, with the application site being surrounded by Grade II listed dwellings of Bath Stone forming part or all of the elevation treatment.
- 1.14 There has been a considerable amount of research and consideration into the materiality of the proposal with stone façade suppliers / manufacturers. It is currently proposed to use a stone veneer rainscreen. This system uses a 10mm natural stone veneer applied to a backing quartz / granite stone for robustness which is supported on a secret fix helping hands bracket system. This is then supported from a lightweight steel frame within a steel super-structure.
- 1.15 The whole system provides for a materiality and texture synonymous with the local context which has a rich character. The system amounts to a vast reduction in embodied carbon, environmental impact, superstructure scale and strength and an improvement in recycling of materiality over a traditional and typically modern approach to construction that would achieve similar results.

SUSTAINABLE TRANSPORTATION

CYCLE STORAGE

- 1.16 The proposal is located in a highly sustainable location, adjacent to the boundary of the Reading Central Area. Whilst the site is within easy walking distance to a range of services, facilities and public transport modes, in respect to cycling, there are also various National Cycle Routes in close proximity of the site. As such, cycle storage is integral to the scheme.
- 1.17 A total of 8 cycle spaces have been provided within the semi-open basement of the building in a secure area. The development is adjacent to the boundary of the Reading Central Area and benefits from local transport infrastructure where connections via cycle encourage a reduction in car use. As set out in the accompanying Transport Statement, the 8 proposed spaces exceed the cycle parking standards set out in the Council's Parking Standards and Design SPD (2011).

WATER EFFICIENCY

- 1.18 The development will aim to reduce water use and increase water efficiency through the incorporation of the use of water efficient fittings and equipment. The applicant will determine sanitary fixtures and maximum flow/rates of each fixture to determine water use per apartment and ensure it meets the requirement of 105 liters pp/pd.

FLOODING & THE ENVIRONMENT

- 1.19 According to the Environment Agency's Flood Map for Planning the site is located in Flood Zone 1 where there is a low risk of flooding. The proposal retains a large amount of green landscape, and additional pathways are to be permeable due to the overlapping in areas of tree RPA's and to limit surface run-off.
- 1.20 Ambiantal Environmental Assessment have prepared a Surface Water Drainage Strategy to accompany the planning application. In summary, adequate control measures have been considered to ensure the surface water runoff is dealt with at source and the flood risk on/off site is not increased over the lifetime of the development.
- 1.21 The main building roof is proposed to drain to an underground infiltration device located within the site boundary to capture, store and infiltrate surface water into the subgrade. The proposals are for one soakaway

to the west of the property in the garden area. Given the nature of the site a geocellular soakaway is proposed for robustness.

1.22 As set out in the Surface Water Drainage Strategy, runoff from roof areas is considered to generally be uncontaminated, however, to prevent any potential sediment from impacting on the storage structures, Sediment Traps should be provided on the outlet to the storage structure to prevent sedimentation, with rodding access provided either side for cleaning and maintenance. The runoff from the basement car park should be routed to the foul system in accordance with best practice.

1.23 Overall, the Surface Water Drainage Strategy demonstrates that the proposed development can be satisfactorily accommodated without worsening the flood risk for the area and without placing the development itself at risk of flooding.

SUSTAINABLE CONSTRUCTION

WASTE

1.24 The development will aim to reduce waste during the construction of new building. Recycling will also be encouraged.

1.25 Construction waste will be disposed of in accordance with statutory regulations and in a way required by the manufacturers. Any material waste or surplus will be subject to recycling.

1.26 As part of the development, the main superstructure of the building is envisaged to be a steel frame which will be fabricated off site and brought to site for assembly.

1.27 The external facade treatment will be set-out as part of the developed design and pre-fabricated off-site reducing any on site-cutting.

1.28 The floors will either be pre-cast concrete or on site poured concrete slabs reducing any potential for onsite waste generation other than constructing the formwork.

1.29 Through use, communal recycle bins will be provided in accordance with Reading Borough Council's requirements. Separate intermediate stores will be located in the kitchen of each apartment with split

recyclable and waste in accordance with Reading Borough Council's policy guidelines.

POLLUTION

AIR AND NOISE

- 1.30 The application is supported and informed by an Air Quality Assessment and Noise Impact Assessment to ensure pollution is reduced to a minimum.

HEALTH & WELL-BEING

- 1.31 The proposed development aims to provide high quality accommodation, which is comfortable and functional. To reduce the likelihood of noise complaints and to provide private outdoor space, terrace sizes are typically integral to the apartments limiting overlooking and keeping noise well contained.
- 1.32 The terraces are set back within the building fabric to create privacy for the occupants and provide a screening function to adjacent apartments and dwellings. Any perceived overlooking is further mitigated by the inclusion of screens, reducing the visible splay from an occupant of the terrace and vice versa.
- 1.33 Any terraces are otherwise set back from the edge of the building removing perceived overlooking to the neighbouring properties.
- 1.34 Large expanses of glazing are proposed but are set back to allow for daylight deep into the plan in place of direct sunlight. Otherwise, window provision allows for a good quality of day lighting to the plan limiting artificial light uses.
- 1.35 The apartments have been designed as dual or triple aspect to provide for near day round exposure to natural daylighting.
- 1.36 Party walls / floors will be designed to a minimum standard expected from the Building Regulations and incorporate suitable measures to prevent flanking noise. It is not proposed to adopt Robust Details at this stage.

SAFETY & SECURITY

- 1.37 From a security perspective, the proposal benefits from being constrained by trees, adjacent buildings and

the dimensions of the site. This has led to a development with clear site lines to and from the main entry points of the development, in both occasions leading to a highway to the west and south.

- 1.38 The cycle and refuse storage areas are self-contained within the semi-open basement which will be appropriately lit for safety and security purposes.

ECOLOGY

- 1.39 The site comprises a large area of green space, with several trees either within the site or on adjoining boundaries. It is proposed to retain all trees on site apart from 1 unremarkable tree of limited merit. This tree will be replaced with a new mulberry tree that over time will make a positive contribution to the Conservation Area. Further information is set out within the Tree Report prepared by Hellis Solutions Limited.
- 1.40 The landscaping strategy is very similar to the approved scheme and provides a courtyard area to the front of the building. The proposed landscaping and tree planting not only provide some screening for the occupants of the low-level flats to Hanover House's house but also act as a feature in the landscape guiding path users to the main entrance of the proposed building.
- 1.41 Ground level planting beds are proposed as part of the soft-touch landscape strategy that will improve the biodiversity of the site from its current state.
- 1.42 A new hedgerow is also proposed, mimicking the typical Georgian style of threshold in the area, to the front of the plot along Eldon Road. Over time this will contribute to enhancing the ecological value of the site, playing host to birds and other wildlife.