



CREATIVE DESIGN & STRUCTURE

Henson House, Newtown Road
Henley-on-Thames, RG9 1HG

E: info@creativedesignandstructure.co.uk
W: www.creativedesignandstructure.co.uk
T: 01491 411922

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SUISTANABILITY STATEMENT
Land to rear of 58 Kings Road, READING,
RG1 3AA.



Land to rear of 58 KINGS ROAD

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1. INTRODUCTION

EXECUTIVE SUMMARY

This Sustainability Statement has been prepared in support of a Planning Application at Land to rear of 58 Kings Road, Reading.

The proposal is for the erection of a 4-storey building comprising 3 x 2-bed flats and 1 x 1-bed flat at the rear of the existing building. Single storey rear extension, third storey extension with associated internal alterations to the existing building.

In respect of sustainability and energy efficiency these are core elements of the proposed design. Issues such as location, layout and materials have been described previously on Design & Access Statement, however this documents will highlight other measures included within the scheme, that are not externally visible.

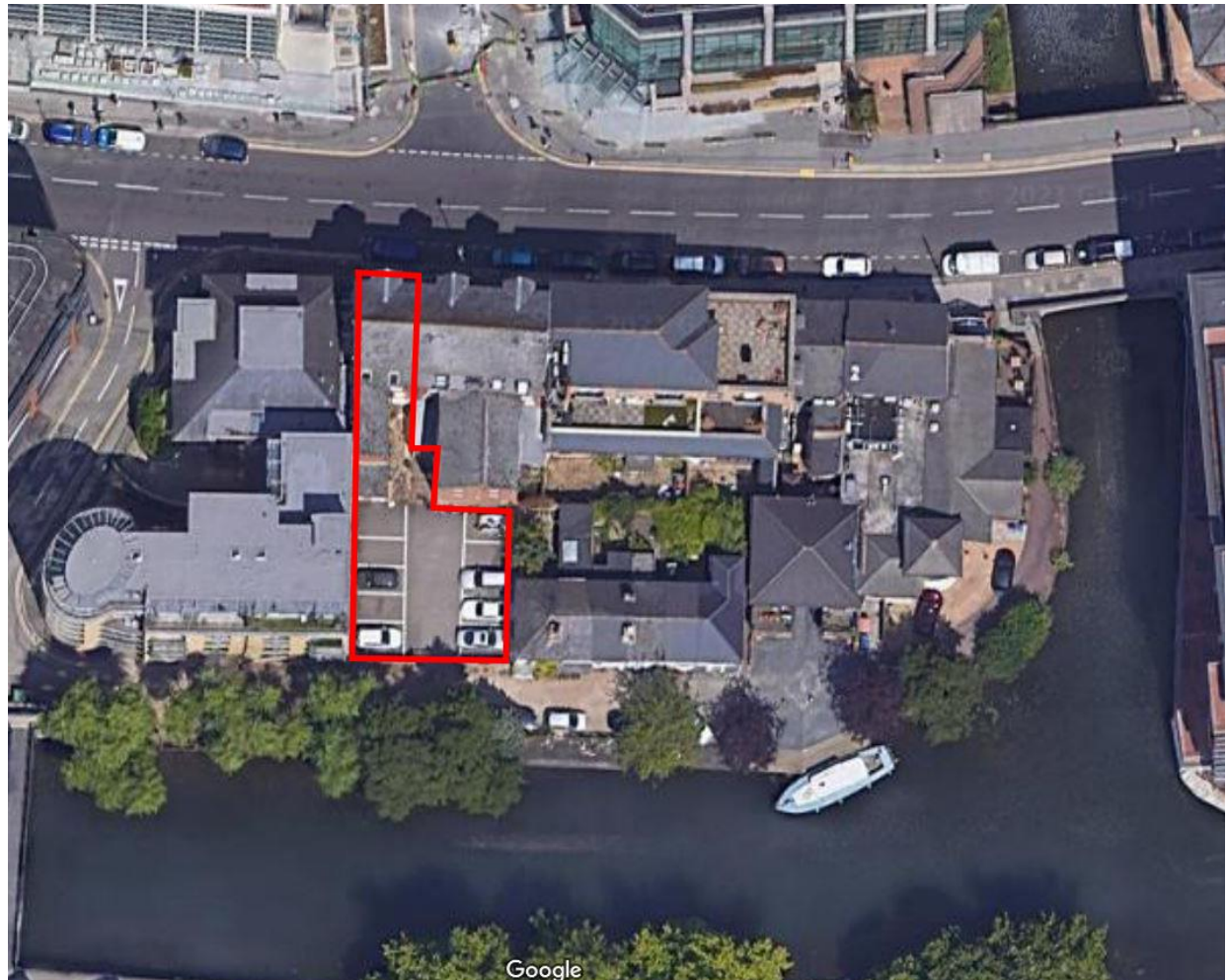


Figure 1 – Aerial View of the Application Site

2. LOCAL POLICIES CONTEXT

The application site is located in Central Reading and fronts Crane Wharf immediately adjacent the River Kennet at the rear and Kings Road at the front.

The site falls within the requirements of Policy H5 (Standards for New Housing), which seeks that all new build housing is built to high standards (e.g. achieving a min. 19% improvement in the dwelling emission rate over the target emission rate), and Policy CC2 (Sustainable Design and Construction) and Policy CC3 (Adaption to Climate Change) which seek that proposals should incorporate measures which take into account the climate change.

3. BUILDING FABRIC & CHOICE OF MATERIAL

In general, all materials have been selected for their appropriateness, sustainability, robustness and longevity, and where possible will be obtained locally.

Materials will be selected for their environmental rating and preference will be given to those materials, which score an A+, A or B rating in the 'Green Guide to Specification'.

The house will be constructed using highly insulated elements in order to maximise energy efficiency whilst retaining thermal mass. This will include insulation standards and air tightness which exceeds the requirements of the current Building Regulations.

Brick has been chosen as the primary material for the building to promote a robust and lasting material. Also, aluminum cladding has been used for details around windows.

Green roofs are designed to minimise rainwater run-off, provide additional habitats to improve local biodiversity and create a roof fabric with excellent thermal massing qualities that can help to reduce heating costs.

Externally, the careful use of permeable paved areas located adjacent to green spaces minimises the amount of surface water caused by rainfall.

All doors and windows will be high specification triple or double-glazed units, and in combination with high levels of insulation, we expect the building to deliver very good thermal performance with minimal heat loss.



The use of green façade on the east side of the building has not only aesthetic and biodiversity benefits but also provide opportunities for a more sustainable building by optimizing energy performance. Also, the presence of a green façade and a green roof will improve the air quality of the immediate area, they will help with dust suppression and contribute on the reduction of noise.

WATER EFFICIENCY AND ENERGY

Water consumption can be substantially reduced through the specification of water efficient fixtures and fittings, including low flow rate showers and taps and dual flush toilet, in order to achieve a water efficiency target of 105 litres/person/day.

The fenestration across the proposal has been developed to maximise views, daylight levels and also to minimise overheating. Large openings are covered with balconies where possible and low-e glazing could help with reduced risks of overheating.



4. NATURAL VENTILATION

Natural Ventilation

The proposed building will aim to utilise natural ventilation where possible, with open plan arrangements.

The building will be naturally ventilated through the inclusion of openable glazing and trickle ventilation to windows and doors which have been designed, sized, and positioned to take advantage of a typical prevailing wind from southwest to northeast. Large open spaces inside the proposed design facilitate passive cooling by allowing cool air to move freely through the building.

Natural Daylight

It is a key objective to maximise the use of natural light and form links to the outside. This is achieved by incorporating large expanses of glazing to principle social spaces overlooking the outdoor spaces.

5. SERVICES

Heating will be provided by high performance efficient Heat Pumps.

The building will be constructed with concrete floors and green roofs, which provides substantial thermal mass to the development. Concrete elements help keep the building cool during the day as the thermal mass absorbs the sun's heat, and warm during the night as the thermal mass slowly releases stored heat into the building.

We therefore expect the demand on mechanical heating and cooling systems to be significantly reduced.

All internal light fitting will be energy efficient and exceed the requirements of the current Building Regulations.

6. CONCLUSION

The applicant is committed to achieving high standards of sustainable development, using locally sourced materials wherever possible and achieving high levels of thermal efficiency as well as reducing energy demand – the proposal offers an opportunity to incorporate air source heating and green roofs and façade.

In accordance with the above it is expected that demand on mechanical systems and non-renewable energy resources will be substantially reduced compared to a dwelling constructed to minimum regulatory standards.