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# **SUSTAINABILITY STATEMENT**

**PROJECT NAME**

74 Air Balloon Road

**DATE**

29<sup>th</sup> April 2021

**ASSESSOR**

Katrina Humphris



## Sustainability Statement

**Project:** 4102KJ - 2021.04. SS (74 Air Balloon - Matthew Deering Architects Ltd)

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### Executive Summary

This Sustainability Statement has been compiled to demonstrate compliance with the following Bristol City Council Policies from the Development Framework Core Strategy:

- BCS13 – Climate Change
- BCS14 – Sustainable Energy
- BCS15 – Sustainable Design and Construction
- BCS16 – Flood Risk and Water Management

The proposal is for the conversion of a two bedroomed cottage into three dwellings, at 74 Air Balloon Road, Bristol.



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### Climate Change and Sustainable Energy

#### Energy Efficiency

The thermal elements and fenestration have been designed to meet and exceed the standards set out in Approved Document L1B. Well specified thermal elements with low U-values help to reduce energy demand and improve comfort levels within the property, while new, highly efficient systems will be installed to provide heating, hot water and ventilation to the building.

For more information, including details on the specification of the thermal elements and services, please refer to the Energy Strategy.

#### Decentralized, Renewable and Low-carbon Energy Supply Systems

The proposal for this site is to install photovoltaic panels to the south west dormer roof of the conversion. This will ensure that the placement of the panels does not negatively impact the appearance of the building yet maximise exposure to the sun.

For more information please refer to the Energy Strategy.

#### Site Layout and Design - Resilience to Climate Change

The building has been designed such that cross ventilation is possible from the south west-side to the northeast-side through openable windows for the ground and first floor flats. Whilst this is not possible for the top floor flat, the fenestration is large enough to allow for sufficient air circulation within the property to help prevent overheating. This will help to reduce the need for mechanical ventilation now and in the case of a potentially warmer future climate.

Furthermore, overheating can be avoided by using appropriate internal shading such as blinds and curtains and external shading.

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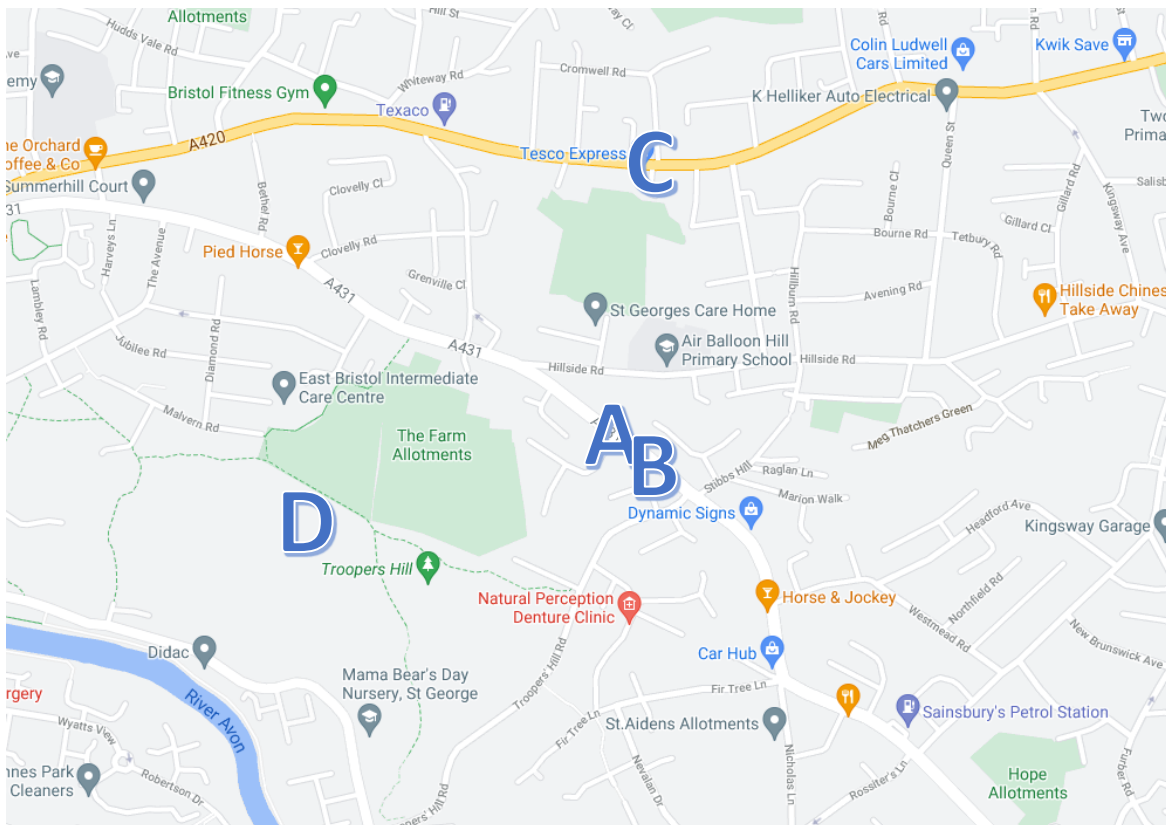
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### Encouraging Greener Transport Use

74 Air Balloon Road ('A' on the map below) is situated an approximate 1-minute walk away from the nearest bus stops on Troopers Hill Road (B). These stops are well served with buses travelling towards Bristol City Centre and other nearby centres, such as Cadbury Heath and Bath City Centre.

Lawrence Hill Station is an estimated 10 minute bike ride. This station receives regular trains to Bristol Temple Meads which serves national travel, as well as Bristol Parkway and Weston Super Mare.



Other amenities also within a convenient walking distance include shops (C), restaurants, allotments and public open spaces(D).

As confirmed in the access statement, cycle storage is proposed. This storage will allow bicycles to be accessed and taken directly to the nearest highway without the need to carry the bikes through the dwellings.

The proximity of these amenities and the proposed facilities should discourage car journeys for potential future residents. This should help to reduce emissions and congestion associated with motorised transport.



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### Sustainable Design and Construction

#### Green Infrastructure and Biodiversity Enhancement

This development is a conversion of a two-bedroom dwelling to create three dwellings within the current site, so the concern of contributing to heating the urban environment is not significant.

There is some scope to enhance biodiversity on this project. While some of the existing garden will be lost to the conversion, the majority will be retained, allowing opportunities for infill planting.

#### Avoiding Responses to Climate Impacts that Lead to Increases in Energy Use and CO<sub>2</sub> Emissions

There are no proposals to include artificial cooling as part of these works. Cross ventilation and appropriate internal shading such as blinds and curtains will be used to mitigate against the effects of overheating from the sun.

Although well specified, the thermal envelope is not designed so as to require mechanical ventilation and cooling.

#### Waste and Recycling - During Construction

A Site Waste Management Plan (SWMP) will be developed for this project. Waste groups to be monitored will be identified and targets set in order to identify how waste will be reduced, diverted from landfill, reused or recycled wherever possible. If waste is unavoidable, it will be disposed of responsibly.

#### Waste and Recycling - In Operation

Adequate waste and recycling storage will be developed from the existing provision to cater for this change in use for the building.

Both the internal and external provision will comply with the Bristol City Council recycling and waste collection requirements, ensuring that recyclables and waste can be separated before collection.



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### Building Materials - Type, Life Cycle and Source

All materials specified for the new construction will be at least 'B' rated or higher under the BRE's Green Guide to Specification, in-line with guidance in the Climate Change and Sustainability Practice Note. This will ensure that construction is more sustainable and environmentally friendly.

Where feasible, the most local suppliers of materials will be selected to minimise the environmental impact of transportation. Only suppliers with a certified chain of custody showing responsible sourcing will be used to source materials, including ensuring that 100% of timber is legally sourced.

### Site Layout and Design - Flexibility and Adaptability

74 Air Balloon Road was originally built as a two-bedroom house, but the proposal is for it to be converted into three flats. Depending on the future needs of the local area, the building could be converted into a smaller number of larger flats or back into one house.

### High Speed Internet Connectivity

High speed broadband internet will be provided to each property, as extended from the existing provision to the surrounding area. This will have to be confirmed by a survey prior to installation.

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### Flood Risk and Water Management

#### Water Conservation Measures

Internal potable water will be conserved by installing flow restrictors to taps and showers, installing dual flush toilets and a low capacity bath.

The following schedule provides a suggested specification which has been proven to exceed building regulations requirements for water conservation (Regulation 36 Compliance).

Table 1 - Water Consumption

Internal Potable Water Fixing	Flow Rate / Capacity
Toilet	Dual Flush 6 and 4 litres
Basin Taps	6 litres / minute
Bath	180 litres (capacity to overflow)
Shower	10 litres / minute
Kitchen Taps	8 litres / minute



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### Minimising Flood Risk

The site lies within Flood Zone 1, according to the Bristol City Strategic Flood Risk Assessment.



As the works will build on existing structures and hardstanding, there is unlikely to be any impact on the flood risk of this site. There will be minimal increase in hardstanding as a result of these works.



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### Summary

This proposed dwelling has been well designed to cope with and mitigate against the effects of climate change. The energy strategy proposes the installation of photovoltaic panels to help offset some of the carbon dioxide emissions associated with the property, whilst the proximity of local amenities and public transport links should help to reduce car journeys associated with the development. Additionally, as the works are a conversion to an existing building, flood risk at the site will not be affected.

The likely impact on the local environment as a result of this proposed conversion works will be minimal.

### References

[Approved Document L1B](#)

[Bristol City Strategic Flood Risk Assessment](#)

[SWMP – WRAP](#)

[Green Guide to Specification](#)

[Climate Change and Sustainability Practice Note](#)

[Bristol City Council Recycling and Waste Collection Requirements](#)