

Redcliffe Homes Limited

Site at Badminton Road, Old Sodbury

## SUSTAINABILITY STATEMENT

Revision No: A    Date: Nov 2021



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## INTRODUCTION

The statement has been prepared to respond to South Gloucestershire Council's sustainability policy and will accompany the planning application submitted by Redcliffe Homes to the Council.

The assessment of energy efficiency and sustainability is a requirement of planning policy and guidance at the national, regional and local level.

The proposed development comprises of 35 dwellings. A single vehicular access will be taken off A432 - Badminton Road into the Site and the proposal will include landscaping and parking. The site area is 1.41 hectares (3.49 acres). A full description of the proposed development is contained within the Design and Access statement.

## LEGISLATIVE AND POLICY BACKGROUND

At the national level the NPPF objectives and guiding principles of this guidance have been taken into consideration in the design of the proposal.

Set out below, is how we have addressed the sustainable development aims under the headings of;

- Site
- Energy
- Waste and Recycling
- Water
- Pollution
- Materials
- Environmental Assessments
- Design

## SITE

The Site is located at the western extent of the settlement of Old Sodbury; it is within walking distance of the Village and is well placed to encourage alternative means of travel to the private vehicle.

The site lies in a sustainable location being in close proximity to everyday facilities and services which development can help support increased patronage. The service station, which includes a small convenience store, lies approximately 400m away from the centre of the site and the church, pub, community hall and primary school all lie within an easy walking distance of the site with pavements providing safe and secure access to them. Further more extensive facilities lie within Chipping Sodbury, just 1.2km to the west of the site, which is considered to be an easy walking or

cycling distance. As such new residents will be able to utilise non-car forms of transport in accordance with the requirements of the NPPF.

Regular bus service operates along this corridor as covered within Consultant's Transport Assessment which accompanies the planning application, the latest bus stop data, the information is as follows

- The journey time to Chipping Sodbury is between 3 and 10 minutes, to Yate 6 to 11 minutes, and 46 minutes to Malmsbury
- Including school services, there are 12 services a day westbound and 13 eastbound and eight on a Saturday. Excluding the school services there are eight services a day.
- There are two services arriving before 09:00 for westbound and three eastbound. After 17:00 there is three services westbound and three eastbound.

#### *Car and cycle parking*

Parking will be accommodated in a variety of forms, with appropriate visitor provision. Private parking will be provided in garages, driveways next to dwellings or plot frontage. Visitor parking has been shown at 1 space per 7 dwellings, as such 5 spaces have been provided and distributed evenly throughout the site.

All open market dwellings will have EV charging points to futureproof the development and private bicycle storage is provided within garages (where relevant), or in secure sheds located in rear gardens as per the 'Cycle Infrastructure Design - July 2020' document.

#### *Efficient use of land and buildings*

The Site although none developed land, has been used by the railway.

The overall proposed density of the whole development of 35 dwellings on the Site equates to some 23 dwellings per hectare. It is considered that 23 dwelling to the hectare complies with the setting.

The proposed development will provide a much needed mix of housing types comprising: 1 to 4 bedroom houses, both open market and affordable, the affordable dwellings make up 35% of the dwellings. A full schedule of the proposed development is provided in the Design and Access Statement

Given the requirement of houses in the area the development will provide a varied residential environment. In addition, the proposal will provide a percentage of affordable dwellings.

Overall the proposal will make dwellings available in this location to different sectors of the community and hence it will promote a more sustainable community in accordance with current best practice in planning

*Mobility*

Mobility access to all dwellings will comply with Part M of the Building Regulations around the site. Internal access will ensure height of switches and controls are easily accessible.

The site accommodates:

- Mobility standard 4 bedroom unit
- two single storey bungalows
- two ground floor maisonettes

ENERGY

The proposed development does not incorporate energy intensive services such as lifts or air conditioning to the dwellings. The scheme proposes maisonettes, semi and terraced dwellings, forming 45% (16) of the dwellings, which will minimise the external wall areas and reduce heat loss.

The application incorporates an Energy Statement dated 11.11.21 which confirms the scheme will improve energy consumption between 20-30%.

*Efficient use of energy*

Fabric first demand-reduction measures to aid energy reduction:

- Energy-efficient building fabric and insulation to all heat loss floors, walls and roofs;
- Quality of build will be confirmed by achieving good air-tightness results throughout.
- Efficient-building services including high-efficiency heating systems
- Use of high insulation will all aid the reduction of carbon emissions.
- Low-energy lighting throughout the building
- External lighting will have PIR, daylight cut off and energy fittings.
- Where installed all appliances will be A rated i.e. fridges, freezers and washing machines.
- Renewable and low-carbon energy technologies:
  - Air Source Heat Pumps to all dwellings;
  - High-efficiency double-glazed windows throughout;
  - EV charging points to all dwellings.

WASTE AND RECYCLING*Recycled or easy access to recycling facilities?*

Houses will have the following recycling facilities;

Wheelie Bins and hard standings.  
Compost bins are provided to all houses

*Re-use demolition, construction or other reclaimed wastes*

Removal of trees etc will be chipped and re-used for gardens off site.

*Waste of new construction materials during construction*

Site waste from construction material will be minimised. Redcliffe Homes recycle both wood, plastic and plasterboard through our suppliers.

WATER

Water butts will be provided to the houses to collect rainwater for garden watering. The incorporation of surface water management through the creation of the pond, green spaces and gardens throughout the proposed development will also help to minimise rainwater run-off from the Site.

*Current or future flooding is minimised?*

The site was indicated to be within Flood Risk Zone 1 as indicated by the EA, therefore low probability of flooding from watercourse.

*Water conservation and discharges of waste water*

Consideration is being given to the following:

6/4 dual flush toilets

Water meters to plots

Flow reducing/aerating taps

6-9 litres per minute shower

Baths capacities to limit demand

18 litres maximum volume dishwasher (where provided)

60 litres maximum volume washing machine. (where provided)

The scheme will comply with the new part G of the building regulations.

Storage of storm water will be incorporated into the drainage system attenuation.

*Discharges of polluted waters be minimised*

We will be incorporating a SUD's system, which will ensure any water dissipating into the ground will be cleansed through a suitable filtering layer.

During the construction phase best practise environmental measures will be undertaken.

*Amenity and biodiversity*

The site has an existing water course, and all surfaces is intended to be taken to the water course.

POLLUTION*Contamination*

Redcliffe Homes will carry out a ground investigation prior to any development.

Should any contamination be detected RHL will mitigate and remove the risk to public.

*Pollution during construction*

This will be managed through our Construction Environmental Management Plan, which adopts best practice. During the demolition and construction, the contractors were required under the terms of their contract to minimise dust, fumes, noise, discharges and other forms of pollution. Redcliffe Homes also has an obligation under the Health and Safety Act to ensure this is minimised.

*Impact on external air quality*

Please refer to the above, no impact is envisaged. Dust will be suppressed through use of water.

The use of air source heat pumps will provide a reduction in Co2 emissions.

*Noise pollution from external sources*

Noise between dwellings at party walls etc will be controlled through design using Robust Details.

Double glazing and good quality sealed windows and doors will reduce noise.

The selection of plant and specification of sound attenuation measures will be incorporated to minimise noise pollution.

The noise from Badminton Road the adjoining railway line will be mitigated through design which will likely to incorporate.

- Upgraded glazing, mechanical ventilation and acoustic vents
- Improvement to external fabric

For full details refer to the noise report by Acoustic Consultants Ltd  
Reference: 8866/RD

*Light pollution*

The street lighting needs to meet the council's acceptable standards. Directional light will be looked at. Private lighting will be PIR/daylight sensitive.

MATERIALS*Materials - local character and ensure long life*

The design in the main has been based upon stone which is durable and maintenance free. Render has been limited, although the colour has been specified to retain its appearance. Roof finish is slate and profiled concrete tiles. All materials specified have a good lifetime.

The choice of materials is based on the following criteria:

- Existing context;
- Preferring materials which are grown over highly processed materials (timber, natural paints, flooring and underlay, insulation etc);
- Using sustainable sourced timber and timber products (softwoods, temperate hardwoods, tropical hardwoods);
- Through design (off-site fabrication, modularisation, standard sizes, etc. reduce building complexity and avoid irregular spaces which are difficult to construct, finish and furnish);
- Use recycled materials where appropriate, particularly secondary aggregate;
- Retain soil and excavation waste on site for use in landscaping;
- Using low maintenance materials
- Avoiding ozone depleting chemicals CFCs and HCFCs

*Low environmental impact and good internal air quality*

In the selection of materials Redcliffe Homes will seek to avoid the use of HCFC, CFC and ozone depleting substances. Dwellings constructed from materials obtained from sustainable sources promoting the efficient use of natural resources together with materials from specific sources and suppliers thus reducing transport movements by consolidating deliveries. All timber specified within the development will be 60% FSC or else recycled and all materials will be appropriately graded under the Building Research Establishment's Green Guide (or subsequent replacement).

The proposals will make use of materials with a low embodied energy whenever possible.



Environmentally friendly materials and products will be specified to the maximum possible extent, particularly with regard to minimising the release of pollutants internally or externally. For example natural materials such as timber and stone are generally non-toxic. Stainless steel is inert and sterile and can be easily recycled. Materials that do not produce 'off gassing' or water pollution will be specified where possible.

### ENVIRONMENTAL ASSESSMENTS

Redcliffe Homes has a high standard of environmental policy and initiatives in place with environmental performances from their developments.

The design rationale behind the proposed development has taken into account the principles of sustainable design and considered ways to minimise the impact on the environment.

#### *Building Research Establishment (BRE) SAP Rating?*

It is anticipated we will exceed a rating over 85 on (BRE) SAP Rating. This is subject to a full assessment once the buildings have been fully designed.

#### *Ecology and Biodiversity*

Where possible ecology features trees and hedgerows are retained, and bird/ bat boxes have been incorporated into the wider scheme. The final choice of vegetation will encourage habitats, insects and butterfly.

The scheme proposal in the application retains and enhances the landscape character and structure though strengthening vegetation forming the field and site boundaries. The scheme also delivers.

- Creating a SUDs pond:
  - preventing water pollution
  - slowing down surface water run-off and reducing the risk of flooding
  - reducing the risk of sewer flooding during heavy rain
  - recharging groundwater to help prevent drought
  - providing valuable habitats for wildlife
  - creating green spaces for people
- Creating a pedestrian friendly environment:
  - the development will have links to other pedestrian and cycle routes throughout the village to help provide safe and attractive routes to local facilities, open spaces, local transport connections and nearby settlements.
- Creating spaces which are safe and secure with surveillance provided by overlooking adjoining properties.

## DESIGN

The proposed layout responds to the context of the Site to minimise the impact on the environment. Emphasis has been given to :

- The layout optimises orientations for solar
- The layout optimises natural surveillance, and the design respects the character and appearance of the existing area.
- Overlooking of the existing PROW

The layout and design include the provision of solar shading where necessary to balance the potential for overheating arising from passive solar gain and natural lighting to habitable rooms. The existing trees help to achieve this to some dwellings, whilst also ensuring PV panels are not shaded. This will assist in minimising energy consumption. It should be noted that in addition to the passive design strategy the scheme includes complimentary measures such as energy efficient electrical appliances and lighting.

### *Natural heating, cooling, daylight and ventilation*

Constraints of access location and overlooking of the PROW has affected the number of dwellings that can achieve solar gain.

Cooling and ventilation will be achieved naturally via windows and trickle vents.

Good day lighting standards within rooms will omit the need for artificial lighting

### *Internal design*

The designs optimise space within the homes. Services and appliances have been made accessible for maintenance and repair

### *Building fabric*

Low air tightness will be achieved through good site practices. Good insulation is proposed to reduce energy requirements.

### *Well being*

Good sound installation levels will be achieved through the robust details by the BRE. Gardens spaces are provided together with open space.

The buildings create active frontages to roads and spaces which provide interest and a sense of security.

CONCLUSION

The proposed development of 35 dwellings at a density of 29/hectare, complies with all applicable guidance and adopted policy regarding land use and density. Energy efficiency and sustainability have been considered and the scheme has incorporated appropriate measures.

Redcliffe Homes will implement measures to increase energy efficiency of the proposed dwellings; the proposed layout makes the most efficient use of the Site. Materials will be from sustainable sources, where possible.

End