

# **Sustainability Statement**

Land R/O 13 Calmont Road, BR1.

July 2015

## **Introduction**

This statement has been prepared to accompany the planning application for the above site:

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# **Sustainability Statement**

## **1.0 Scheme Description**

The proposal is for the construction of 1 new house. The proposal will meet Code Level 4 Sustainable Homes.

## **2.0 Background Objectives**

An assessment has been made at pre design and design stages as to how this development can be made more sustainable. The assessment has been made against a series of basic sustainability objectives. These are,

### **1. Carbon Dioxide Minimisation**

To minimise carbon dioxide production from all aspects of construction, management, occupation and demolition, including transport, and incorporate adaptation to climate change impacts.

### **2. Post Occupancy Flexibility**

To build in participatory design and post-occupancy evaluation to inform the design of future sustainable developments and enable the building to be used in different ways and by a different cross section of people.

### **3. Maximise Efficient Use of Land**

To maximise the efficient use of land and buildings in relation to infrastructure requirements and carbon emissions.

### **4. Maximise Sustainability of the Energy Supply**

Maximise sustainable energy supply and use i.e. renewable energy and energy efficiency.

### **5. Minimise Waste**

To minimise waste both during construction and after occupation, including design for deconstruction/easy alterations in the future.

### **6. Maximise Recycling**

To maximise recycling both during construction and after occupation, including design for deconstruction/easy alterations in the future.

### **7. Conserve Water**

To conserve water resources and minimise vulnerability to flood risk.

### **8. Minimise Polluting Emissions**

To minimise polluting emissions water, air and soil and minimise noise and light pollution

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### **3.0 Measures Taken to Achieve Objectives**

As with all sites, the extent to which effective measures can be taken to satisfy all of these objectives varies enormously. In the case of this site the measures taken (or to be taken) are.

#### **3.1 Embodied Energy and Transport Costs.**

All materials except kitchens, bathrooms and floor coverings will be sourced locally thereby minimising transport costs.

The use of timber is to be minimised and there will be very little new timber introduced to the works. Any that is will come from replenish able sources.

#### **3.2 Water Conservation**

It is not proposed that a water harvesting system be installed as there is little or no spare space on the plot. However it will be possible to use rainwater collection barrels and this measure will be implemented at the rear of the property

##### **3.2.1 WCS**

Each W.C. cistern will be fitted with an economy flush option. The favoured WC type is the Bristan dune close coupled WC which has been awarded the 'Waterwise marque' for water efficiency and which has a low volume dual flush system delivering 4 litres and 2.6 litres depending on choice.

Additionally - each WC will be fitted with an overflow alarm - such as the 'Dart Valley' Overflow Detection system. ([www.dartvalley.co.uk](http://www.dartvalley.co.uk)) This is a simple device built in to the wall next to the WC that has an alarm indication which warns users of an overfull or overflowing concealed or exposed cistern. This discourages long standing overflows which waste large quantities of water each year.

##### **3.2.2 Showers**

In terms of showers, high volume power showers will not be included in the scheme. Instead all showers will be of the normal manual shower head type or combined bath / mixer tap sets. In the case of the shower heads, water saving shower heads will be utilised. Specifically this will entail the specification of shower heads that mix water and air, thereby reducing the amount of the former that is used. Alternatively (or quite possibly as well - shower heads that include a flow restrictor will be used).

As an additional measure each shower area / bathroom will be fitted with an ECO shower drop which is a small measuring device that informs the user of the amount of water that has been used for any given shower.

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### **3.0 Measures Taken to Achieve Objectives** (continued)

#### **3.2 Water Conservation**

##### **3.2.3 Kitchen**

In the kitchen the integrated dishwashers specified will be low water usage types. These use less than 10 litres per session and a good example is the Bosch LogiXX Express.

##### **3.2.4 Personal Washing**

The selection of taps for baths and hand basins has an important effect on the water consumption during personal washing. It is proposed that all taps will have a flow regulator which will control and eventually cut off the flow of water from individual taps or combined mixers. An example of the product to be used would be the Deva Tap 'Enviro-Klick' fittings.

##### **3.2.5 Outdoor**

Any grass areas will be seeded with Johnson's 'Easy lawn' the only grass seed product (that we know of) which has been proven to require much less watering than comparable lawns. This is only the case once the grass is established, but - because of its particularly long rooting system, it requires little or no watering except in extreme (for the UK) drought conditions.

In urban areas we will in any case avoid grass as an external covering.

A separate incoming mains supply will serve drinking water and bathroom facilities. 'Grey' water will not be recycled.

#### **3.3 Healthy Building.**

All rooms will have adequate natural light and fully opening windows for adequate natural ventilation. Bathrooms and kitchens will be fitted with mechanical extract fans as required by Building Regulations part F.

Health and safety legislation updated in 2007 calls for designers to actively avoid certain toxic materials. The guidelines set out in this legislation will be followed.

#### **3.4 Wind Turbines**

The use of a rooftop wind turbine has been considered and dismissed on this site. The site is not 'open' enough and being a relatively dense urban site, wind turbines would be considered intrusive.

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### **3.0 Measures Taken to Achieve Objectives** (continued)

#### **3.5 Construction Waste.**

Substantial volumes (approx. 80%) of the rubble accruing from the removal of the existing building will be retained on site for use as hardcore under the ground floor slab and terraces.

No topsoil will be exported from the site, but roof coverings, timbers, windows and old fittings will be.

The demolition contract will call for the removal and salvage of copper pipe, lead and any other material having a realistic commercial re sale value. As the proceeds of this salvage will pass directly to the demolition contractor, they will have the best possible incentive to re-claim as much as possible.

In common with all our projects, an asbestos survey will be commissioned to identify any toxic materials in the existing building. A licensed sub contractor will then be made responsible for suitable disposal.

#### **3.6 Insulation and Conservation of Energy**

It is not proposed to insulate the building(s) to any higher standard than that which current building regulations require. The exception to this will be the roof which will have a 'U' value some 20% better than that required. In any event, the old house had levels of insulation falling far below the standard currently expected. This position will be reversed by the current scheme.

##### **3.6.1 Light Fittings**

All new light fittings will be low energy fittings having an efficacy greater than 40 lumens per circuit watt. All spot lights will be the low energy transformed type.

##### **3.6.2 Radiators**

All radiators will be the energy saving type which means they will have thermostatic controls to allow local shut down. Additionally all radiators will be fitted with radiator boosters which are small fan units placed behind the radiator and which enhance the air circulation thereby raising room temperatures quicker and allowing thermostats to shut down boilers quicker. (As optimum temperature is reached quicker).

Finally, the wall behind the radiators will be lined with a 'Heatkeeper' reflective panel - which greatly reduces the loss of heat through external walls.

##### **3.6.3 Boilers**

The unit will have a low energy (building regulations compliant) condensing boiler with a SEDBUK rating better than the minimum required by Building Control. The fuel will be gas and the model chosen will be a high efficiency product. This is defined by one which converts at least 90 per cent of consumed fuel energy into heat. There are plenty on the market - Vaillant being perhaps the market leader.

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### **3.0 Measures Taken to Achieve Objectives** (continued)

#### **3.7 Solar Energy**

It is not intended that the property will be provided with solar panels.

#### **3.8 Access to Public Transport**

This item is covered in more detail in the Design and Access Statement pertaining to the site.

The site has a low PTAL of 1a/1b, however a car parking space is provided as part of the proposal and cycle storage. The site is well served by public transport, indeed there are numerous buses available in close proximity to Bromley Hill, including 208 and 136 which lead onto Catford and Bromley Town Centres. Ravensbourne and Beckenham Hill Stations are also in close proximity to the site, roughly 10-15 minutes walk. Cycle storage facilities will be provided. Ultimately the use of bicycles can only be a choice of future occupants.

#### **3.9 Waste Disposal**

The dwelling will be provided with a dedicated waste storage area with a split between recyclable and non recyclable waste.

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### **4.0 The Benefits of Going Beyond the Building Regulations.**

The Building Regulations are approved by Parliament and deal with the minimum standards of design and building work for the construction of domestic, commercial and industrial buildings.

They are minimum legal standards so they do not represent best practice - only the standard acceptable and safe practice.

For a developer or architect to say to a potential client that they design buildings to minimum legal standards will do very little to promote their services.

Going beyond Building Regulations standards in some areas can differentiate quality sustainable design from mediocre off the shelf development. Building users are increasingly conscious of running costs such as:

- maintenance and repair costs.
- energy costs.
- water and sewage costs.

Good sustainable design can deliver buildings with low running costs - an attribute that is highly attractive to both householders and businesses. There are also an increasing number of commercial organisations, public bodies and individuals who want to do their bit by being demonstrably socially and environmentally responsible. They want to show that they are minimising greenhouse gas emissions, recycling and re-using buildings and materials, and using renewable energy technologies. But ultimately the biggest selling point of good quality sustainable design is that it creates buildings that are healthy, comfortable, attractive and exciting places for people to live and work in.