

38 Folly View Road
Faringdon
Oxfordshire
SN7 7DH



Property and Energy
Services Ltd.

Sustainability Statement for Site to the rear of 209 - 219 Henley Road, Caversham, RG4 6LJ



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Introduction.

Property and Energy Services Ltd.,
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Site to the rear of 209 - 219 Henley Road, Caversham, RG4 6LJ

The site is a back garden development off Henley Road on the Eastern edge of Caversham. The proposed development will create 9 new houses plus associated access for vehicles and pedestrians. The site is gardens, with no significant buildings (sheds and greenhouses). There is good road access from another development off the Henley Road, and the site is 1.1 miles from Caversham centre and 1.9 miles from Reading town centre with a footpath available for the whole route to Caversham and Reading. Henley Road is on a regular bus route into Caversham and Reading with a bus stop on the Henley Road at the edge of the proposed site.

The site lies within Reading Borough Council and the purpose of this report is to deliver the sustainability strategy in a format suggested within Reading Sustainable Design and Construction SPD planning policy (2011).

The proposed sustainability development framework

Energy

Our current estimate from the choice of building materials and method of heating is that the houses will be better than the building regulations requirements. The proposed construction will use standard cavity walls, with a u value of 0.21. The floors and roof will also have u-values of 0.15 or less. With the addition of a glazing system that is at least 1.4 u-value, the houses will be very efficient from a thermal perspective. This follows the councils policy and NPPF guidance of reducing energy demand as the primary route to energy reduction.

The main heating will be from a high efficiency gas boiler for each house, with a well insulated hot water cylinder.

As part of the proposal, the client plans to have solar photo voltaic systems fitted to provide over 10% of the energy required by the dwellings during an average year from local sources.

The combination of thermally efficient houses and solar PV to generate energy locally will greatly reduce the energy required to heat and run these houses. A separate Energy Demand Assessment is provided with this document to set out all the locally generated energy options.

Water Usage

The properties will have rain water butts fitted, principally to the rear of the houses and the water will be mainly for garden irrigation. Naturally, these rainwater butts also act as attenuation (when not full) during periods of rain. The water fittings within the houses will be chosen for low usage rates. The dish washer and clothes washing machines to be fitted will be specified to ensure the water usage is lower than the reduced 105 lpppd target.

Flood risk

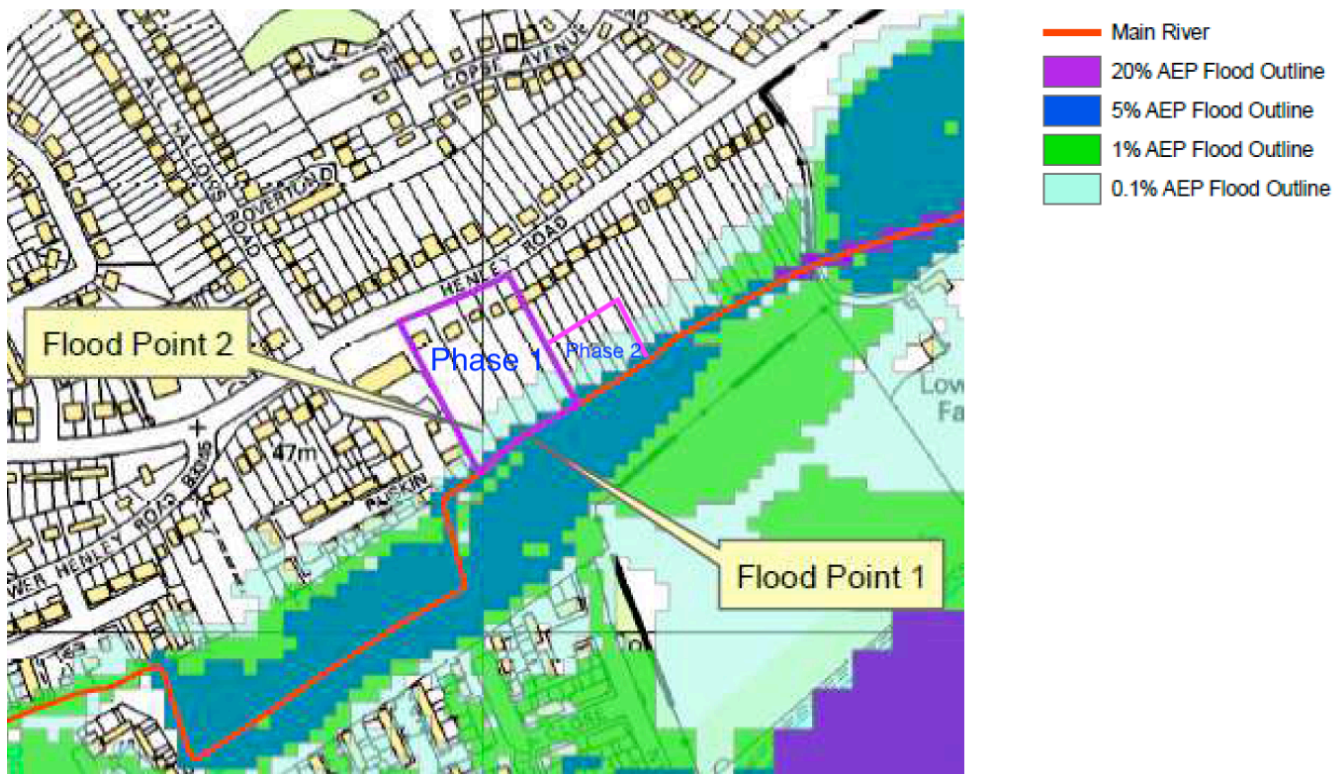
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A review of the Environment Agency web site shows the lowest part of the site is located in a known area of flood risk (Zone 2). site and Zone 3 100 year flood is limited to the lower area close to the southern boundary (Berry Brook).

EA Detailed Flood Map



The Environment Agency (EA) has provided flood levels at two nodes on the site (Figure 2.2) with the 100 year flood level of 36.37m OD and with climate change this increases to 36.58m OD (Table 2.3). The 1000 year flood level is 36.82m OD. A letter from the EA on another application (12 August 2003) states the 1947 flood level was 36.90m OD. As for Phase 1 of the site, the minimum OD height for the underside of a ground floor will be 37.2m. There will be a path from the house to the road that will also remain above 37.2m OD. The road is already above this level on the plan, so if needed a simple means of escape is available to the residents. (Reference Flood Risk Assessment for 199 to 207 Henley Road.)

The development will include SUDS soak aways for the houses to reduce rain water run off. Appropriate Surface Water Runoff calculations will be made to ensure these are sized correctly for the nature of the sub soil. Assuming the site is developed as proposed, the whole estate will have very low impact from flooding and surface water run off.

Shading and solar gain

The orientation of the site is almost to SE, which means that all 9 houses can have a South East facing back. This means the houses will benefit from solar gain during the Spring to Autumn periods, with

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minimal gain in Winter. The design of the houses will allow for the sun to heat up the thermal mass in the floor and internal walls on the ground floor will be block-work, to improve absorption of heat.

Recycling

Naturally in any new development, locations for the standard size bins and garden waste bin will be provided within the curtilage of each property. In the kitchen, a multi bin unit will be located to encourage waste separation and therefore increase recycling. Garden waste can be composted on site in a standard compost bin. (Leaflets to be provided) or owners can use the council garden waste collection scheme. All houses will receive a standard grey bin and a red recycling bin will be ordered for each property. A leaflet showing the collection times and what can be recycled, plus the location of the nearest recycling centre and local bottle banks.

Biodiversity

The site is currently grass with a few trees on the borders. The development will have lawns to the front and rear of the houses and a planting scheme will be introduced to develop the biodiversity of the site. Native species will be used where possible to provide a natural habitat for birds, insects and small mammals. A full scheme will be presented under an anticipated planning condition. The developers will include an ongoing support plan for maintenance of communal areas around the entrance road and any open spaces provided. The trees at the Berry Brook section of the site will be retained and tree management will be outsourced to specialist providers.

Light pollution

As the properties are in a semi urban area, there is low light pollution. The road in the estate will be lit as required by highways authorities standards. All houses will be fitted with low energy outside security lights, which will have daylight sensors and PIR sensors to minimise false illumination.

Noise pollution

During the construction process, building will only be done during commonly held hours. The houses are for domestic use only, so they will not add to the noise levels within the surrounding area.

Insulation materials

These will be selected from manufacturers who declare a GWP of less than 5. All insulation materials will also be zero Ozone Depletion Potential (ODP). It should be noted that the manufacturers of most insulating materials are outside the locally sourced materials zone. These materials are usually distributed to more local sources (trade warehouses), where they are sourced from.

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NOx pollution

As the properties will be heated by a mains gas boiler, it will be specified to have a Class 5 rating, thus minimising NOx pollution. The use of solar panels will further reduce all emissions by reducing energy demand.

Cycle storage

All houses with garages will have a two bike cycle rack fitted to a wall of the garage. For those houses without a garage (allocated parking spaces only) a secure hoop will be provided within the rear garden of each property.

Responsibly sourced and recycled materials

All timber will be sourced with approved certification, which are primarily FSC and PEFC marked. Where possible, all materials will be sourced within a 35 mile radius of the development. Any material that can not be obtained within this radius (like insulation) will be sourced from local distribution centres. Any particular material required from outside this area will have a brief justification note added to the project management files.

A minimum of 25% of materials for the roads, paving, parking spaces and public open spaces will make use of locally recycled materials

Site Waste

All site waste will be separated and sent for recycling. There will be a target of recycling of a minimum 75% of all waste for the site, which the developer has met on previous occasions. A full site waste management plan will be provided to the council before building work starts.

Construction Pollution

The site will implement a Site Construction Environmental Management Plan and include this in the full planning application.