

Energy & CO2:

Following the detailed design stage and review of alternative technologies for the site, three scenarios for installing Solar Hot Water have been investigated in combination with a Gas Fired Central Heating Plant, all of which are compliant with the Cambridge City Council policies and reduce CO2 emissions by at least 10%:

- **Option 1** – SHW providing an 10.2% reduction in carbon dioxide emissions, in combination with a standard mains gas boiler providing the remainder of the DHW demand (and space heating demand);
- **Option 2** – SHW providing an 16.3% reduction in carbon dioxide emissions, in combination with a mains gas fired CHP unit meeting the remainder of the DHW demand and space heating being met by mains gas boilers;
- **Option 3** – SHW providing a 10.1% reduction in carbon dioxide emissions, with electrical space heating within the student accommodation building and gas space heating in all private residential units.

In order to meet Code for Sustainable Homes Level 3, all private residential units will employ additional measures to reach a 25% reduction in their overall carbon dioxide emissions over and above the Building Regulation Part L target emissions. The solar water heating will connect into a centralised thermal store for use by all residential units.

Details of the Renewable Energies Strategy for Brunswick can be found in the Sustainability Statement.

Water & Suds:

AS DISCUSSED ON PHONE THIS MORNING.

Materials & Waste (Construction & Operation):

The following extract from the Preliminary Assessment under the Code for Sustainable Homes (under which BHSEL is committed to achieving a Code Level 3 Rating) illustrates the types of measures that will be employed to reduce the overall levels of waste produced on site.

Waste			
Was1	<p>Household Waste Storage</p> <p>Mandatory Requirement: The space provided for waste storage should be sized to hold the larger of either all external containers provided by the Local Authority or the minimum capacity calculated from BS 5906.</p> <p>Tradable Credits are awarded for adequate internal and/or external recycling facilities.</p> <p>Assumptions made: The waste storage area would be of an adequate size to hold the necessary Local Authority storage containers. In addition, full provision for internal and external recycling bins will be made: 3 internal recycling bins with a minimum combined storage capacity of 30l will be provided (Cambridge City Council requires some pre-collection sorting); 3 external recycling bin with a combined storage capacity of 180l will be provided; Cambridge City Council operates a recycling collection scheme for households.</p>	4	4 (max 4)
Was2	<p>Site Waste Management Plan (SWMP)/Construction Waste</p> <p>Mandatory Requirements: A SWMP plan including the monitoring of waste generated on site and the setting of targets to promote resource efficiency must be produced and implemented.</p> <p>Tradable Credits: The SWMP should also include procedures and commitments for minimising waste and/or commitments to sort, reused and recycle construction waste.</p> <p>Assumptions made: A comprehensive SWMP will be produced and adhered to.</p>	1-2	2 (max 2)
Was3	<p>Composting</p> <p>One credit is awarded where individual home composting facilities are provided, or where a community/communal composting service, either run by the Local Authority or overseen by a management plan is in operation.</p> <p>Assumptions made: Cambridge City Council has a collection for kitchen and garden waste. Confirmation will be required that this service will be extended to the Proposed Development, however 1 credit is assumed at this stage.</p>	1	1 (max 1)
Total Number of Waste Credits Achieved			7 (max 7)

Land Use & Ecology:

The recent Habitats Survey/Biodiversity Report undertaken by SLR Consulting reached the following conclusions:

- None of the habitats or plant species mapped and recorded on site is of any particular conservation importance. The grasslands are not species-rich but, in mitigating for the loss of these, grassland of increased biodiversity value could be established.
- The trees on site are protected by virtue of being within the Cambridge Conservation Area. As such, they are protected due to their amenity value and hold no conservation importance in their own right.
- Proposals are made to incorporate habitat creation/replacement into the design of the proposed development. These include **JPP1346- R-002h Cambridge Regional College 29 RPS 20 July 2006 Cambridge Regional College, Newmarket Road: Phase 1 Habitat and Scoping Survey Report** particular provision for bats, House Sparrow and Song Thrush. In addition to linking into the River Cam County Wildlife Site and Midsummer Common City Wildlife Site, these proposals also support the Cambridgeshire BAP.

Overall therefore, the biodiversity potential of the site will be greatly increased through the improved landscaping strategy and increased variety of tree species that are currently being advanced as an integral part of the Brunswick redevelopment proposals.

Lighting:

The Draft Lighting Strategy submitted with the application has been prepared in accordance with principals set out in the Sustainable Design and Construction, Supplementary Planning Document (SPD) of June 2007. Section 2.7 (2.7.1 through 2.7.7) specifically addresses issues relative to the Berkeley Homes Brunswick, Cambridge project.

The Brunswick, Cambridge development is an important development in the local area and lighting is integral to the success of the scheme. It is necessary to balance the lighting with local conditions, which include residential properties in neighbouring roads and on the opposite river bank, as well as landmarks such as the River Cam & Midsummer Common. The development also includes infrastructure such as public, adoptable road ways, the riverside walk and privately managed road ways / car parking.

The document conveys the key aspects and lighting design concepts, including approximate equipment locations and types. It does not include full detailed design and is subject to design development and further agreement with the relevant local authorities regarding the public art and public realm schemes, following scheme design stage.

Pollution & Emissions:

An assessment of the potential impacts on local air quality from construction activities on the proposed development has been carried out. This showed that during site activities, good site practice and the implementation of suitable mitigation measures will ensure that the impact of dust and PM₁₀ releases will be reduced and excessive releases prevented. The residual effects of the dust deposition during the construction phase are considered to range from **minor adverse** to **insignificant**.

Any adverse effects resulting from emissions of PM₁₀ (Vehicle Emissions) during the construction period are likely to be temporary, short to medium term and **minor adverse to insignificant**.

Concentrations predicted for the proposed development site itself, once fully occupied, are below the relevant AQS objectives. Therefore, the proposed development will not give rise to an increase in exposure to pollution concentrations in excess of the current AQS objectives.

The full Air Quality Assessment Report undertaken by WSP is available on this website to download.

Health & Wellbeing:

The provision of high quality public and private open spaces within the site and the proximity to existing recreational spaces within the city will ensure that occupants of the completed development have access to a range of leisure activities within easy reach.

Ventilation, choice of building materials, orientation of amount of natural daylight within individual dwellings all play a part in successful living environments. The scheme has been designed to ensure the maximum amount privacy is retained whilst allowing appropriate levels of natural surveillance into public areas.

Management & Maintenance:

It is the intention of Berkeley Homes that all public and semi-public open spaces on site shall remain as private property with appropriate public or private rights of way established throughout the site where necessary to ensure that the overarching urban design principle of improved pedestrian permeability is established and maintained in perpetuity.

Whilst all necessary estate roads will be built to adoptable standards in order to accommodate service, refuse and emergency vehicles, we have responded to concerns raised by both the Police Architectural Liaison Officer and local residents by undertaking to retain overall control of access points within and around the site.

We believe that the quality of our public realm is paramount to the scheme's success and will seek to enshrine that quality within any management structure that is decided upon for this site. Details of typical management structures are outlined in the Draft Estate Management Strategy and illustrate some of the measures employed by BHSEL to ensure successful urban environments for both our residents and the general public alike.