# BNE Team (Sustainability)

**Consultation Response Form**

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| **Reference Number:** | 21/00953/FUL |
| **Application Type:** | Full |
| **Proposal:** | Demolition of existing buildings and erection of a care home (Use Class C2) with external amenity space, access, parking, landscaping and other associated works |
| **Site Address:** | Former Hotel Felix Whitehouse Lane Cambridge |
| **Sustainability Officer:** | Tracy Martin |
| **Case Planning Officer:** | Mary Collins |
| **Date:** | 04.05.21 |

**Updated Comments – 24.06.2021**

The applicant has now provided an amended version of their Energy Strategy for consideration with this application.

The applicant has removed reference to the inclusion of solar PV and the associated BRUKL Output report now demonstrates the following carbon emissions reduction via the use of Combined Heat and Power (CHP):

| | kgCO2/m2/annum | % Reduction |
|---|---|---|
| Building Regulations compliant Target Emissions Rate | 38.2 | / |
| Building Emissions Rate (fabric improvements) | 41.5 | 8.64% increase |
| Building Emissions Rate (CHP unit) | 34.2 | **10.47%** |

The scheme is supported from a sustainable construction point of view, but the applicant will need to provide the following if the development is granted permission:

- Detailed design stage SAP calculations to evidence the carbon emissions reductions achieved
- Information on the size and specification of the solar PV systems they intend to install
- Site plan showing where these will be located
- A maintenance programme to ensure the systems achieve the suggested efficiencies

In order to secure these standards, I suggest the following conditions:

1. **Carbon Emissions**

   **The approved renewable/low carbon energy technologies (as set out in the Energy Strategy Report, Version P2, May 2021) shall be fully installed and operational prior to the occupation of the development and thereafter maintained in accordance with a maintenance programme, details of which shall have previously been submitted to and approved in writing by the local planning authority.**

   **Where grid capacity issues subsequently arise, written evidence from the District Network Operator confirming the detail of grid capacity and a revised Energy Statement to take**

**account of this shall be submitted to and approved in writing by the local planning authority. The revised Energy Statement shall be implemented development and thereafter maintained in accordance with the approved details**

Reason: In the interests of reducing carbon dioxide emissions and to ensure that development does not give rise to unacceptable pollution (South Cambridgeshire District Council Local Plan 2018, policy CC/3 and Greater Cambridge Sustainable Design and Construction SPD)

2. **Water Efficiency**

**No dwelling(s) shall be occupied until a water efficiency specification for the proposed development, based on the Water Efficiency Calculator Methodology or the Fitting Approach set out in Part G of the Building Regulations 2010 (2015 edition), has been submitted to and approved in writing by the local planning authority. This shall demonstrate that all dwellings are able to achieve a design standard of water use of no more than 110 litres/person/day and the development shall be carried out in accordance with the agreed details.**

Reason: To ensure that the development makes efficient use of water and promotes the principles of sustainable construction (South Cambridgeshire District Council Local Plan 2018 policy CC/4 and the Greater Cambridge Sustainable Design and Construction SPD 2020).

## Original Comments (04.05.21)

**Energy & Carbon Emissions**

The applicant has provided an Energy Strategy in support of this application which suggests a 'fabric first' approach to reducing the energy demand of the development via:

- High fabric efficiency
- Efficient building services
- Targeted performance parameters better than the notional Building Regulations Part L
- Mechanical ventilation with heat recovery
- Low energy lighting throughout

A Combined Heat and Power (CHP) unit was found to be the most feasible low/zero carbon technology for this project based on the findings of a feasibility study. The carbon savings of this technology have been referenced in two sections of the document (page 10 and page 17), shown below:

***"6.1 Results – Be Clean (New Build Elements including CHP) The figures were determined as follows:***

***TER 38.2 kg.CO2/m² per annum***
***BER 41.5 kg.CO2/m² per annum***

***Given the already included improvements to fabric design and building construction, appropriate technologies are considered in section 7 to achieve the further reduction required to attain compliance."***

And;

***"7.9 Results – Be Green (New Build Elements with PV) The figures were determined as follows:***

***TER 38.2 kg.CO2/m² per annum***
***BER 34.2 kg.CO2/m² per annum"***

A copy of the BRUKL output document is provided in Appendix A for information – this appears to reference the use of a CHP unit but fails to mention PV.

I am more than happy with the applicant taking a fabric first approach to the development and both solar PV and CHP are policy compliant technologies for achieving the 10% carbon reduction required by the Local Plan. But, the energy strategy for this development seems a little confused so I would like the applicant to provide some clarification as to the renewable or low/zero carbon technology they intend to use, (CHP, solar PV or both?), and the accurate BER associated with the installation of this, before I would offer support for this scheme from a sustainable construction point of view. This is because we would normally condition the contents of this report, along with detailed design stage carbon calculations, and at present I am not confident that the scheme proposed offers compliance with Local Plan Policy CC/3.

**Overheating Risk**

The development consists of a large number of single-aspect dwellings which can be prone to overheating. I am aware that the developer intends to use a mechanical ventilation system but would strongly recommend that overheating analysis be undertaken for a sample of dwellings (including west facing), using current and future climate scenarios.

**Water Efficiency**

The applicant has provided a Water Management & Conservation Statement which details how water efficient fixtures, fittings and appliances will be used to ensure a maximum internal water consumption of 110 litres/person/day.

Building Regulations Part G calculations have been carried out, which demonstrate a total water consumption of 105.85 litres/person/day can be achieved based on the targeted specifications. This would make the development compliant with Local Plan Policy CC/4 and if the application is approved, this strategy would be made a condition of the development

**Construction Management Plan**

The applicant suggests that a 'Resource Management Plan' (RMP) will be produced for the Proposed Development for each phase of construction to define measures for how to minimise the volume of waste arising from demolition and construction activities, which is sent to landfill.

The RMP will provide detail on:

- Procedures and practices that will be enforced during the demolition and construction phases to divert waste from landfill
- How waste arising from demolition and landfill will be sorted and stored effectively to allow materials to be reused and recycled on and/or off site where possible.

Although we would favour the reuse of buildings over demolition wherever possible, demolition and new construction may be proposed where the original structure is no longer fit for purpose, producing a more sustainable development. A detailed Construction Management Plan must be submitted to and approved by the local authority, detailing measures to limit demolition waste to landfill and ensure the new structure is low in embodied carbon.