

Technical Note.

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Project:	The Beehive Redevelopment
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Sustainability Consultation Response.

Audit sheet

Rev.	Date	Description of change / purpose of issue	Prepared	Reviewed	Authorised
01	22/11/2024	Response to the Sustainability consultation comments	W. D. M. Naismith	S. Stephenson	J. Nuttall

1. Introduction.

The sustainability strategy for the redevelopment of the Beehive Centre promotes a holistic, interdisciplinary approach, which is both planet-conscious and people-centric. This is recognised in the sustainability consultation response provided by the Sustainability Officer (*23_03204_OUT-SUSTAINABLE_CONSTRUCTION-6539409*, 17/10/2024) which raises no objection to the proposed development. It does provide, however, suggested additions and amendments to the Design Code and submission. The purpose of this technical note is to respond to those comments.

2. Response to additional comments.

The Sustainability Consultation Response includes additional comments on the sustainable design and construction aspects of the proposals for the Beehive Centre redevelopment. It starts by noting that “sustainability aspirations set out in the Sustainability Strategy, Energy Strategy and other documents are to be welcomed, and in a number of areas provide a significant improvement on current planning policy as set out in the Cambridge Local Plan 2018”. Further, specific comments and recommendations are responded to below.

Energy targets

Among the areas in which The Beehive Redevelopment is going beyond current policy, it is noted that the buildings are seeking to achieve an “operational energy consumption of less than 55 kWh/m²/year for the offices and 150 kWh/m²/year for the research facilities”. It should be clarified that these targets are for the base-build, i.e. landlord energy as per the NABERS definition.

Mitigating the urban heat island effect

The approach taken to mitigating the urban heat island effect has been welcomed by the sustainability officer, recognising the multi-faceted approach taken by the design team. There is a recommendation



that Design Code checklist be updated to include requirements that the detailed design of both buildings and landscape be informed by their cumulative impacts on urban heat.

This is not currently possible as the checklist appended to the Design Code is an example only, it includes a single section of each chapter to demonstrate how the final checklist will take form (an abridged checklist example is aligned to the recommendations of the urban design officer). Each reserved matters application will be supplied with a full compliance checklist that will describe which 'must' codes have been complied with justifications provided for non-compliance.

Diagrams showing solar shading design

The buildings will seek to minimise solar gain before the use of additional solar shading, which comes as a financial and carbon cost. Where it is required, this will respond to the sun position and elevation. The Design code will be updated to include indicative solar shading designs.

Glazing ratios

In addition, Emma Davies states that "with regards to 3.4.8 of the Design Code and glazing ratios, given the importance of getting the glazing ratios right from an environmental performance and comfort perspective, I would recommend changing this from a should to a must". Fixing glazing ratios in the Design Code is not supported by applicant team. Now, the proposed development's industry-leading energy and carbon targets will likely lead to those recommended in section 3.4.8 of the Design Code. However, it is preferred to retain flexibility at outline planning and not dictate a response, especially with the rate of change in the design of high performance buildings.

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