

<b>Title:</b>	<b>Planning Application:</b>
<b>Request Date:</b>	24 September 2019
<b>Due:</b>	15 October 2019
<b>Issued:</b>	11 October 2019 <a href="#">UPDATED: 12 November 2019</a>
<b>Name of Cherwell Employee Requesting:</b>	Jenny Barker <a href="mailto:jenny.barker@cherwellandsouthnorthants.gov.uk">jenny.barker@cherwellandsouthnorthants.gov.uk</a> 01295 221828
<b>Details of Request:</b>	Assessment of compliance for condition discharge (renewable energy)
<b>Actions:</b>	See comments below

### Condition discharge application details

This relates to an outline application (15/01326/OUT) for the development of:

- up to 280 dwellings (including 30% affordable housing),
- introduction of structural planting and landscaping,
- formal and informal public open space and play areas,
- surface water flood mitigation and attenuation,
- new priority junction arrangements to White Post Road,
- creation of section of spine road to link Bloxham Road with White Post Road
- creation of 34 space car park
- and other associated ancillary works.

This application concerns the discharge of condition 26 for OS Parcels 6741 And 5426 West Of Cricket Field Nor Wykham Lane Bodicote.

The condition states that:

*~~'No development shall take place until details of the on-site renewable energy provision, pursuant to the submitted Energy Statement, to serve the dwellings hereby permitted have been submitted to, and approved in writing by, the local planning authority. No dwelling shall thereafter be occupied until it is being served by the on-site renewable energy measures and shall remain so thereafter'. No development shall take place within an approved phase until details of the significant on-site renewable energy provision to serve the dwellings within that phase have been submitted to and approved in writing by the local planning authority. No dwelling within that phase shall thereafter be occupied until it is being served by the approved on-site renewable energy generation measures and shall remain so thereafter.~~*

*~~Reason – In the interests of creating sustainable development in accordance with the requirements of Policy ESD3 of the Cherwell Local Plan 2011-2031 Part 1.~~*

### Assessment

The following documents, submitted to accompany the application for condition discharge, were reviewed:

- Energy Report
- Energy Statement

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The documents were reviewed to assess compliance with ESD Policies 3 and 5 (covering renewable energy) in order to determine whether the condition can be discharged. Full details of this assessment are presented in Table 1 below.

**Table 1:** Sustainability and energy requirements and applicant’s response

Item	Requirement	Response
Policy ESD 3: Sustainable Construction	<p>All development proposals will be encouraged to reflect high-quality design and high environmental standards, demonstrating sustainable construction methods including but not limited to:</p> <ul style="list-style-type: none"> <li>• Minimising both energy demands and energy loss</li> <li>• Maximising passive solar lighting and natural ventilation</li> <li>• Maximising resource efficiency</li> <li>• Incorporating the use of recycled and energy efficient materials</li> <li>• Incorporating the use of locally sourced building materials</li> <li>• Reducing the impact on the external environment and maximising opportunities for cooling and shading (by the provision of open space and water, planting, and green roofs, for example)</li> <li>• Making use of the embodied energy within buildings wherever possible and re-using materials where proposals involve demolition or redevelopment</li> </ul>	<p>The Energy Report states that it demonstrates that it achieves compliance by ensuring that the design carbon emissions:</p> <ul style="list-style-type: none"> <li>• Do not exceed CDC’s target carbon emissions (TER)</li> <li>• The fabric energy efficiency of the design is equivalent to or better than the target fabric energy efficiency, in line with Part L (2013) Regulations.</li> </ul> <p>It is unclear, however, what the TER limits are that they are working to. It also states that it follows the principles set out by the government’s Zero Carbon Hub. However, this ceased to operate in 2016. It also refers to the Communities and Local Government Department; it is assumed that this is the now Ministry of Housing, Communities &amp; Local Government.</p> <p>The Energy Report states that the following will be undertaken:</p> <ul style="list-style-type: none"> <li>• Upgraded heating and hot water controls (no further details provided)</li> <li>• Delayed start thermostat</li> <li>• Design air permeability of 5.01m<sup>3</sup>/hr/m<sup>2</sup> (an improvement of up to 50% on required standard)</li> <li>• Combination boilers that achieve an 89% efficiency (against the required 86% minimum set out in the Domestic Building Services Compliance Guide 2013)</li> <li>• Hot water cylinders (where installed) will have a higher level of insulation (no further details provided other than to state preferred manufacturer)</li> <li>• Low E-lighting fixtures to be installed throughout the development.</li> </ul>

		<ul style="list-style-type: none"> <li>• An enhanced building fabric will be installed throughout, meeting the following specifications [minimum specifications in square brackets]:             <ul style="list-style-type: none"> <li>○ Walls: 0.27 W/m<sup>2</sup>/k [0.30 W/m<sup>2</sup>/k]</li> <li>○ Roof (loft space): 0.11 W/m<sup>2</sup>/k [0.20 W/m<sup>2</sup>/k]</li> <li>○ Roof (flat): 0.17 W/m<sup>2</sup>/k [0.20 W/m<sup>2</sup>/k]</li> <li>○ Floors: 0.14-0.15 W/m<sup>2</sup>/k [0.25 W/m<sup>2</sup>/k]</li> <li>○ Doors: 1.00-1.70 W/m<sup>2</sup>/k [2.00 W/m<sup>2</sup>/k]</li> <li>○ Glazing: 1.41 W/m<sup>2</sup>/k [2.00 W/m<sup>2</sup>/k]</li> </ul> </li> <li>• Thermal bridging to reduce heat loss between rooms using Hi-Therm Lintels which achieve 0.05 W/mK</li> <li>• Wastewater Heat Recovery Systems are proposed for 25 houses</li> </ul> <p>The report states that the energy efficiency created equates to 4.4% above the Part L requirements, while the reduction in energy demand based on the proposed specifications is 11.4%.</p> <p><b>There is no mention of opportunities to maximise passive solar lighting or natural ventilation, or of incorporating recycled, demolition or locally sourced construction materials. It is not known how the external environment can contribute to the reduction in energy demand – e.g. shading, open space, etc.</b></p> <p><b>The report only considers regulated emissions and there is no mention of unregulated emissions, and how they may be reduced or met through renewable energy sources.</b></p> <p><b>On this basis, there is insufficient information to discharge the condition.</b></p>
Policy ESD 5: Renewable	Where feasibility assessments demonstrate that on-site	The Energy Report covers a number of potential renewable

Energy	renewable energy provision is deliverable and viable, this will be required as part of the development unless an alternative solution would deliver the same or increased benefit.	<p>energy sources that could be incorporated into the development. Of those, it refers to solar hot water as being a suitable option but there is no commitment to using it nor calculations of the amount of carbon savings it can provide. Other technologies – namely air source and ground source heat pumps, biofuels and wind – are discounted on the basis of cost and unsuitability of location. It is noted that PV panels are not required as there are sufficient gains from building fabric proposals.</p> <p>There are no calculations presented to support these findings.</p> <p><b>On this basis there is insufficient information to discharge the condition.</b></p>
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## Assessment

The Energy Report submitted to discharge the condition discusses the proposed building fabric specifications that will be met, which are an improvement on the minimum requirements. However, there is no information presented to address the other requirements in ESD Policy 3, namely: use of recycled/demolition and locally sourced construction materials, the use of solar lighting and natural ventilation, maximisation of opportunities for cooling and shading through open space and shading provision. While the calculations presented show that energy efficiency is improved by 4.4% and energy demand is reduced by 11.4%, this only relates to regulated energy; no consideration is made for unregulated energy emissions.

**We would like to see further details on how these elements have been considered in the overall design and how unregulated energy demand can be reduced and met, how the overall energy calculations are affected as well as the potential carbon savings which could be achieved.**

On renewable energy provision, there is only mention of the suitability of solar hot water but no commitment to include it, to what extent and what the carbon savings would be. It is also noted that solar hot water works best with hot cylinders rather than combi boilers and it is unclear what percentage of homes will be fitted with each. Finally, no other renewable technology is considered and while solar PV is deemed suitable it is noted that it is not necessary.

**We would like to see the calculations behind the analysis of renewable energy technologies. We would also like to see commitment on which technologies will be incorporated, to what extent and what the carbon savings will be. ~~The condition requires a 'significant on-site renewable energy provision' and it is not clear whether this can be achieved.~~**

**On the basis of the above, there is insufficient evidence with which to discharge the condition.**

### Assessment against outline application Energy Statement

The Energy Statement submitted with the outline application (15/01326/OUT) sets out a number of aims to be achieved. The Energy Strategy, submitted to discharge this condition, is designed to address the points set out above and an assessment is set out in bold. These are summarised at 2.4.1 of that report; in brief, they include the following:

1. Designing the development to reduce carbon emissions and use resources more efficiently, including water, by the incorporation of suitable adaptation measures in new development to ensure that the development is more resilient to climate change impacts. This will be done comprehensively at the detailed design stage.

Insufficient information is provided in both the Energy Statement and the Energy Strategy to demonstrate how this will be achieved. For example, there is no mention of how water will be used more efficiently. No measures are put forward to improve resilience to climate change impacts. Only regulated emissions are taken into account and no consideration has been made of unregulated emissions and how they affect the demand calculations. It is expected that the energy demand, and subsequent carbon emissions, will be higher once unregulated emissions are included in the calculations, thus reducing the savings shown in Appendix B of the Energy Strategy.

2. To use the Energy Hierarchy within the detailed design to reduce the amount of energy consumption on site.

An energy hierarchy is adopted, although the specific one referred to is that promoted by the Zero Carbon Hub which is no longer in operation. The hierarchy followed is that of energy efficiency, on-site low-carbon energy generation and connected heat, and allowable solutions. A building fabric approach is taken, identifying solutions to improve energy efficiency and reduce energy demand. Details of this are provided in the table above.

3. The developers will look to incorporate renewable energy technologies and sustainable construction methods on site to reduce the amount of carbon emissions in line with the current regulations.

Section 3.11.2 (Energy Statement) states that low and zero carbon technologies for domestic use will include consideration of photovoltaics, solar thermal panels, ground and air source heat pumps, and a biomass boiler. Ground and air source heat pumps are rejected on the basis of their high cost and lower reduction of carbon emissions (as they typically replace demand for gas rather than electricity). Similarly, biomass boilers are not considered further on the basis of their output which is considered excessive for the proposed use and the vehicle movements that would be necessary for fuel deliveries and their environmental impacts.

Consideration of all renewable energy technologies is demonstrated in the Energy Strategy. It sets out solar hot water as the only viable option to be implemented; while photovoltaic panels are considered they are not put forward as it is stated that 'fabric performance is sufficient to meet the required targets'. Strictly speaking, this is true. However, the condition relates to the incorporation of renewable energy. Also, without incorporating unregulated energy it is unknown whether the proposed combination of building fabric and renewable measures will meet Part L regulation requirements. Furthermore, the calculations presented in Appendix B do not appear to take into account solar hot water provision (values are set as zero).

4. Meeting Building Regulations Part L 2013.

*This is proposed to be achieved by taking a fabric first approach to reduce energy demand and increase energy efficiency, by: increasing insulation, reducing the effects of thermal bridging, effective air tightness, improved controlled ventilation, and energy efficient lighting.*

**See point 3 above.**

5. Consider the options available to reduce water consumption to the target level of 110 litres/person/day. This would include installation of low use water fittings, grey water recycling systems and rainwater collection.

**No mention is made of how this is to be achieved.**

Appendices A-C set out the calculations undertaken to demonstrate how energy savings can be achieved. Appendix C shows solar domestic hot water input calculations as zero (section 4: water heating energy requirement). Therefore, it is not possible to determine the level of carbon savings from domestic solar hot water.