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| **Title:**  | **Planning Application: 18/01333/F: Launton – Bicester Heritage, Buckingham Road, Bicester** |
| **Request Date:**  | 3 September 2018 |
| **Due:**  | 24 September 2018 |
| **Issued:**  | Updated: 10 December 2019 |
| **Name of Cherwell Employee Requesting:** | Jenny Barkerjenny.barker@cherwellandsouthnorthants.gov.uk 01295 221828   |
| **Details of Request:**  | Assessment for compliance with ESD policies |
| **Actions:**  | See comments below  |

**Planning application:**

This application is for an extension to the existing Technical Site at the former Bicester RAF base, to provide new employment units comprising:

* flexible B1(c) light industrial, B2 (general industrial), B8 (storage or distribution) uses
* ancillary offices
* storage
* display and sales
* associated access and parking
* landscaping

The total GIA is 6530m2 and there are 125 car spaces, 14 bicycle sheds, and 15 cycle spaces proposed.

**Assessment:**

The planning application documents were reviewed and considered against Cherwell’s Local Plan and in particular the ESD policies 1-5 and Strategic Development: Bicester 8. Compliance with policy requirements was considered and findings are set out below.

The documents reviewed included:

* Planning Statement
* Heritage Impact Assessment
* Flood Risk Assessment (this covered the hotel application on this site only)
* Design and Access Statement

**Updates**

An Energy Strategy was submitted by the applicant and this was reviewed for compliance and the assessment updated as appropriate.

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

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| **Item** | **Requirement**  | **Response**  |
| Policy ESD 1: Mitigating and Adapting to Climate Change  | Measures will be taken to mitigate the impact of development within the District on climate change. At a strategic level, this will include:* Designing developments to reduce carbon emissions and use resources more efficiently, including water (see Policy ESD 3 Sustainable Construction)
* Promoting the use of decentralised and renewable or low carbon energy where appropriate (see Policies ESD 4 Decentralised Energy Systems and ESD 5 Renewable Energy).
 | **From Energy Strategy** The Be Lean, Be Clean, Be Green hierarchy has been used with the following recommendations made: * Reducing heat demand through improved building fabric
* Using natural ventilation where possible
* Use air-source heat pumps to reduce carbon emissions
* Explore the possibility of installing PV panels with the Civil Aviation Authority (CAA)

It was also recommended that efficient energy, lighting and hot water systems are put into place by end users.**With the implementation of these measures, some of which may have to be conditioned for end users to implement, the application complies with this policy requirement.**  |
| Policy ESD 2: Energy Hierarchy and Allowable Solutions  | In seeking to achieve carbon emissions reductions, we will promote an ‘energy hierarchy’ as follows:* Reducing energy use, in particular by the use of sustainable design and construction measures
* Supplying energy efficiently and giving priority to decentralised energy supply
* Making use of renewable energy
* Making use of allowable solutions.
 | **From the Design & Access Statement**Sustainable design and construction and renewable solutions will be implemented for the proposals wherever possible. **From Energy Strategy**The Energy Strategy proposes to reduce energy demand through building fabric improvements which in certain cases exceed requirements (see ESD 3). Renewable energy sources are proposed in the form of air-source heat pumps. Additionally, the installation of PV panels is feasible and advice should be sought from the CAA regarding their application on this site. A decentralised energy supply was considered but is not suitable for this site due to the distance from any local district heating systems. **Based on the information provided in the Energy Strategy, this application now complies with this policy’s requirements. If appropriate, early engagement with the CAA could be encouraged to finalise the feasibility of PV panels as well, which could further reduce carbon emissions.**  |
| Policy ESD 3: Sustainable Construction  | All new non-residential development will be expected to meet at least BREEAM ‘Very Good’ with immediate effect, subject to review over the plan period to ensure the target remains relevant. The demonstration of the achievement of this standard should be set out in the Energy Statement.All development proposals will be encouraged to reflect high quality design and high environmental standards, demonstrating sustainable construction methods including but not limited to:* Minimising both energy demands and energy loss
* Maximising passive solar lighting and natural ventilation
* Maximising resource efficiency
* Incorporating the use of recycled and energy efficient materials
* Incorporating the use of locally sourced building materials
* 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); and
* Making use of the embodied energy within buildings wherever possible and re-using materials where proposals involve demolition or redevelopment.
 | **From the Design & Access Statement**Sustainable design and construction and renewable solutions will be implemented for the proposals wherever possible.Section 5.5 discusses materials in a heritage context but also notes that the siting of the buildings is such that they take advantage of maximum natural daylight and control of solar gain. It also notes that internal spaces have been designed to consider their requirements for design efficiency, practicality and user comfort/well-being. **However, no evidence is provided to support this.** **Sustainability section within the DAS** Sustainability measures that are integrated in the building design from the outset, will provide significant energy and carbon savings over the life of the building.A holistic approach will be taken as sustainability encompasses more than just energy reduction; the proposed approach will be to consider means of meeting the internal conditions whilst providing sustainable design associated with the buildings’ energy use, carbon dioxide emissions, material selections and methods of construction respectively. The following list is provided to demonstrate compliance with ESD 1, 3, and 5 including BREEAM “Very Good” as a minimum:* Natural ventilation, daylighting occupant controls, air quality
* Process heat recovery where possible
* Investigate solar thermal hot water generation and other renewable solutions wherever possible
* **High-efficiency plant**
* **Water-efficient sanitary fittings**
* **Enhancing ecological value of external areas by increasing biodiversity**
* **Using native and adaptive species**
* **Use of locally sourced and/or recyclable materials wherever possible**
* **Pre-fabrication of materials to reduce on-site waste wherever possible**

**This is partly compliant with policy as it does not demonstrate how the requirements in bold in the above list will actually be achieved. Further detail is required. The remainder are addressed in the Energy Strategy – see below for details.** **From Energy Strategy**The Energy Strategy has taken a Be Lean, Be Clean, Be Green approach and sets out a series of measures to be taken to reduce energy demand, meet demand through more efficient and renewable energy systems, and reduce carbon emissions. This will be achieved through: * Implementation of passive measures to reduce the building’s energy demand, including:
	+ Reduced U-values
	+ Improved air permeability (meeting RIBA stage 2 target requirements)

The performance of external walls, roof, and windows will exceed Part L2A design limits, while that of floors in contact with the ground and vehicle access doors will meet them. * Inclusion of roof-lights to increase the proportion of natural daylight and reduce demand for artificial light
* Provision of natural ventilation through openable windows and roof-lights. The final design of these is still to be determined and will take pollution and noise considerations into account

Active design measures are proposed to further reduce energy demand. It is, however, acknowledged that these are not all implementable until end users are in place who will specify fit-out requirements. **With the implementation of these measures, some of which may have to be conditioned for end users to implement, the application partly complies with this policy requirement. Further information is sought on the use of recycled and locally sourced construction materials and how the external environment may be used to reduce heating and cooling demands – e.g. through the use of open space, planting, etc.**  |
| Policy ESD 4: Decentralised Energy Systems  | The use of decentralised energy systems, providing either heating (District Heating (DH)) or heating and power (Combined Heat and Power (CHP)) will be encouraged in all new developments.A feasibility assessment for DH/CHP, including consideration of biomass fuelled CHP, will be required for all applications for non-domestic developments above 1000m2 floorspace.Where feasibility assessments demonstrate that decentralised energy systems are deliverable and viable, such systems will be required as part of the development unless an alternative solution would deliver the same or increased benefit. | **From the Design & Access Statement**Sustainable design and construction and renewable solutions will be implemented for the proposals wherever possible.**From Energy Strategy** There is no district heating system in the proximity of this site, therefore, this is not a viable option. **This application now complies with policy as it demonstrates that this option has been considered, even though it is ultimately not viable.**  |
| Policy ESD 5: Renewable Energy  | A feasibility assessment of the potential for significant on site renewable energy provision (above any provision required to meet national building standards) will be required for all applications for non-domestic developments above 1000m2 floorspace.Where feasibility assessments demonstrate that on site 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. | **From the Design & Access Statement**Sustainable design and construction and renewable solutions will be implemented for the proposals wherever possible.**From Energy Strategy**A Be Green assessment has been carried out considering the feasibility of different types of renewable energy technologies. This concludes that air-source heat pumps are viable and suitable, while PV panels are feasible. Further assessment is required for the implementation of the latter as consultation with the CAA is necessary due to the location of the site. The implementation of air-source heat pumps would result in carbon savings of 41%. Ground-source heat pumps were also deemed feasible in technological terms, however, their space requirements, high cost, and nature of the shell and core approach of this application do not make them a viable option. **While zero carbon is not shown to be achievable, based on the information provided in the Energy Strategy, this application now complies with policy requirements to reduce carbon emissions. If appropriate, early engagement with the CAA could be encouraged to finalise the feasibility of PV panels as well, which could further reduce carbon emissions.**  |
| Policy ESD 15: The Character of the Built and Historic Environment | Consider sustainable design and layout at the masterplanning stage of design, where building orientation and the impact of microclimate can be considered within the layout.Incorporate energy efficient design and sustainable constructiontechniques, whilst ensuring that the aesthetic implications of green technology are appropriate to the context (also see Policies ESD 1 - 5 on climate change and renewable energy).Use locally sourced sustainable materials where possible. | **From the Planning Statement** Paragraph 7.33 states that in accordance with ESD15 the proposed development will deliver a high-quality design in the vicinity of heritage assets and will be sensitively sited and integrated in accordance with national planning policy and guidance.Paragraph 7.36 states that in accordance with Policy ESD15 the siting of the new buildings respects the traditional pattern of routes, spaces, blocks and plots. Central to the layout of the site is the reinstatement of the historic alignment of Skimmingdish Lane that will be a key internal access route and will create a central vista. **From Energy Strategy** See ESD 1-5 above. **From the Design & Access Statement** The design will be of high quality, with massing, building forms and materials that respect their context. The proposals will enhance this area of the Bicester Heritage site by taking this degraded edge and tying it back with the existing Technical Site.**From Energy Strategy**See ESD Policies 1-5 above. **The Energy Strategy addresses the energy demand and renewable energy provision for this site and, as such, is partly in compliance with policy requirements. However, it does not address requirements regarding use of recycled and locally sourced materials, or how the external environment may be used to further reduce energy demand.**  |
| Strategic Development: Bicester 8 – Former RAF Bicester | The whole of the site is a conservation area, which was reviewed and extended in 2008, and most of the buildings and structures are protected by listing and scheduling.Policy Bicester 8 seeks to secure appropriate uses for a long-lasting 'conservation-led' approach to the technical site and flying field. It aims to establish uses that will be complementary to, and help enhance, the character and appearance of the conservation area and the nationally important heritage value of the site. It seeks to encourage a mix of uses that will best preserve the sensitive historic fabric and layout of the buildings and the openness of the grass airfield. However, the need to allow some flexibility in the interests of securing an economically viable future for the site is recognised.The Council will encourage conservation-led proposals to secure a long-lasting, economically viable future for the Former RAF Bicester technical site and flying field. It will support heritage tourism uses, leisure, recreation, employment and community uses. The development of hotel and conference facilities will also be supported as part of a wider package of employment uses.They must maintain and enhance the character and appearance of the conservation area, protect listed, scheduled and other important buildings, their setting, and protect the sensitive historic fabric of the buildings and preserve the openness of the airfield. Opportunities for improving access to the countryside will be encouraged. Proposals should be considered against Policy ESD 15. | **From the Planning Statement:** It is stated that design has been addressed through pre-application discussions and these are summarised at various sections within the document; it is also stated that the proposals are now in accordance with ESD 15. **From Energy Strategy** See ESD Policies 1-5 above.  |

**Assessment**

This is a full planning application which includes a number of statements regarding sustainability, energy efficiency, and renewable energy options. Originally it did not provide sufficient detail to assist in determining how the ESD policy requirements are to be met and what considerations have been made before determining the final shape of the proposals. However, a recently submitted Energy Strategy goes some way towards addressing those issues.

**On the basis of information provided in the Energy Strategy and with the implementation of air-source heat pumps and energy demand reduction through the building fabric the application complies with ESD Policies 1 and 2. Please note that some of the proposals made regarding end user implementation to achieve the full reductions may have to be conditioned.**

Originally, reference was made to complying with ESD 3 requirements for sustainable construction, however, no details were provided to demonstrate how this would be achieved. While the commitment to consider these is a positive step, it fell short of demonstrating compliance. The provision of the Energy Strategy goes a long way towards addressing some of these issues. Measures are to be implemented to reduce the building’s energy demand through its fabric – including exceeding U-values for walls, roofs, and windows. Natural ventilation is to be provided through openable windows and roof-lights, although it is acknowledged that further detail is necessary to consider potential sources of noise and pollution. Carbon emissions will be reduced by 41% through the provision of air-source heat pumps – a renewable energy technology. Further reductions can be made through the installation of PV panels, however, advice from the CAA should be sought due to the site’s location.

Finally, measures are recommended for further energy demand reductions through the implementation of building systems. However, it should be noted that the application is for the construction of the buildings only, not for the internal fit-out as this will be something that future end users will be responsible for. The following measures are recommended for implementation by end users, which may be able to be a condition of consent:

* Provision of high-efficiency internal and external lighting
* Implementation of an efficient lighting control strategy to include (where applicable):
	+ photoelectric (daylight) sensing
	+ occupancy presence detection
	+ external lighting to be linked to daylight sensors with a timer only for provision of lighting when required
* Use of variable speed drives on pumps and fans, where applicable
* Insulation of all duct work and pipework
* Development of a metering and sub-metering building services strategy to monitor energy used within all units
* Use of highly-efficient heat recovery ventilation systems, where applicable
* Consideration of instantaneous domestic hot water (DHW) systems to reduce system standby/storage losses, given the low DHW demand anticipated within the proposed units
* Ensuring that energy-efficient white goods are installed within the proposed technical units

**Zero carbon is not achieved through the proposals put forward in the Energy Strategy. However, a 41% reduction can be achieved through building fabric and natural ventilation measures to reduce energy demand and air-source heat pump renewable technology implementation, and there is further scope to improve this through the addition of PV panels; this requires further consultation with the CAA. They may be further reduced through building orientation but no detail is provided for this. The measures put forward for end users are also not confirmed, although they may be subject to planning conditions.**

Reference is made to achieving BREEAM ‘Very Good’ within the Design and Access Statement, however, no evidence is submitted to demonstrate how the necessary credits will be achieved. The sustainability statement section (8.1) within the Design & Access Statement lists a number of principles and commitments that the applicant will implement (see table above). However, there is no analysis submitted to demonstrate that these measures can and will meet ESD policy requirements. The recently submitted Energy Strategy goes some way towards addressing this. **This does not fully comply with the requirements of policy ESD 3. The Energy Strategy goes some way towards demonstrating how energy demand and carbon emissions will be reduced, however, we would like to see further detail of how BREEAM ‘Very Good’ will be met.**

The Energy Strategy outlines the measures taken to determine the application site’s suitability for district heating and shown that it is not viable. It has also presented the analysis for the application of renewable energy technologies and makes recommendations of those that are deemed feasible and viable. **The application complies with the requirements of policies ESD 4 and 5.**

The focus of the Planning Statement in relation to policy ESD 15 is around the heritage elements – i.e. character and massing in relation to the existing buildings. However, there is no reference to how the proposals will comply with the requirements for orientation in relation to microclimate or sustainable construction methods, although the Energy Strategy does address energy efficiency and renewable energy. No reference is made to using locally sourced building materials. While there is much discussion throughout the application documents around compliance with ESD 15 regarding form and character, it is also recognised that this is constraints-led rather than with a view to sustainability and energy efficiency. This is due to the heritage and conservation importance of the site. The feedback during pre-application discussions encouraged a conservation-led approach to design and this is what has been followed and presented. When it comes to scale, form, and massing, the proposals follow the Heritage Partnership Agreement with regard to materials to be used. This includes red brickwork, corrugated panels, and glass for windows, openings and skylights. Orientation is considered in line with the existing grain of the site and retention of its conservation character. **These commitments are very positive, although there is still some evidence lacking that will demonstrate full compliance with ESD 15. The Energy Strategy addresses the energy demand and renewable energy provision for this site and, as such, is partly in compliance with ESD 15’s requirements. However, it does not address requirements regarding use of recycled and locally sourced materials, or how the external environment may be used to further reduce energy demand.**

On the basis that the relevant policy requirements for Strategic Development: Bicester 8, Former RAF Bicester, centre around compliance with Local Plan policies ESD 1-5 and ESD 15, **this application largely complies but there are still some areas where insufficient information is available.**