

Response to the Hoare Lea review of the Sustainability and Energy Statement prepared by Bluesky Unlimited dated 1st February 2022.

Dated 18th Oct 2022

RBC Requirements

The following table duplicates that in the consultation document but adds responses within the darker pink boxes;

SPD Sustainability Statement Minimum Requirements	Sustainability & Energy Statement (Bluesky Unlimited 1st February 2022)
Energy efficiency and carbon emissions of the building	Energy efficiency measures and carbon emissions have been provided
Water conservation	Some water conservation measures have been explored
Flood risk and drainage strategy	Further information should be provided on the whether this site falls within RBC strategic flood risk assessment
	<i>A separate Flood Risk Assessment has been prepared and accompanies the application.</i>
Community impacts	No mention of community impacts
Transport	No reference to transport
	<i>A separate Transport Statement has been prepared and accompanies the application.</i>
Health and Wellbeing including day-lighting analysis and thermal comfort	No daylight or thermal comfort analysis provided
	<i>A separate Daylight and Sunlight Impact Report has been prepared and accompanies the application. This considers the daylight factors achieved in the relevant rooms within the development.</i>
Material usage, wastage, responsible sourcing and environmental impact, including embodied carbon	Reference to specifying materials with low environmental impact, setting waste targets in line with best practice.
	No mention of how embodied carbon will be reduced.
Pollution issues, low NO _x , low global warming potential (GWP), reducing need for mechanical cooling	No reference to limiting pollution
	<i>The heating system consists of a communal air source heat pump system. No mains gas will be installed to the site. There will be no on-site NO_x or CO₂ emissions. Section 7 of the Sustainability and Energy Statement confirms all insulation materials will have zero ozone depleting potential.</i>
	No reference to ecology or landscaping proposals

Ecological aspects to enhance the proposed developments flora and fauna	<i>A separate Ecological Survey and Tree Survey have been prepared and accompanies the application.</i>
Best practice management of the site	Some mention of good site management around limiting construction waste
BREEAM Very Good/ Excellent	There are communal spaces, so a BREEAM Assessment is expected. Based on the modelling results a BREEAM Very Good rating should be targeted. A pre-assessment is required to demonstrate a route to the target. <i>The communal spaces within the buildings are ancillary to the residential accommodation and are not non-residential. A BREEAM Assessment is therefore not required.</i>
Energy efficiency of the building	Energy efficiency measures and carbon emissions have been provided
Baseline annual predicted energy demand of the development (regulated and unregulated)	No reference to unregulated energy demand. Residential demand is provided per dwelling, whereas the non-residential demand is provided per m2 making it unclear how the total is derived. The residential and non-residential performance should be set out separately. Example SAP and BRUKL reports should be provided so that the outputs can be checked. <i>The SAP Worksheets provide a total energy demand, whereas the BRUKL Worksheets provide energy demand per m². The spreadsheets attached to the Sustainability and Energy Statement as Appendices 2 & 4 set out how the totals have been derived.</i> <i>The spreadsheets attached as Appendices 2 & 4 set out how the total energy demand for the residential and communal spaces have been derived. These are reported separately within the spreadsheets.</i> <i>We had included the SAP Regulations Compliance Reports within Appendices 1 & 3 but the amended Statement now includes the full TER and DER Worksheets as requested. We have provided the TER & DER Worksheets for the Be Lean case the DER Worksheets only for the Be Green (ASHPs) stage to reduce repetition of the TER sheets.</i>

	<i>Since the original Statement was prepared Part L of the Building Regulations has been revised and we would agree with the comment made regarding the U-values of the windows and these have been revised to achieve 1.20 W/m²K.</i>
Baseline annual predicted carbon emissions of the development (regulated and unregulated), the Target Emission Rate (TER)	No reference to unregulated energy demand. Residential demand is provided per dwelling, whereas the non-residential demand is provided per m2 making it unclear how the total is derived. The residential and non-residential performance should be set out separately. Example SAP and BRUKL reports should be provided so that the outputs can be checked. <i>Ditto above.</i>
The contribution of each proposed renewable energy technology	The total Be Green carbon reduction has been stated, although nothing achieved for the commercial element.
Cost information of technically feasible low or zero carbon renewable technologies, including additional insulation, low carbon decentralised energy, heat pumps etc	No cost information has been provided for the proposed ASHP but we assume this is. <i>The comment appears unfinished. However, we are not sure what the relevance of cost information is? The insulation standards proposed meet current good practice, the proposal includes a communal heating system, which includes the use of heat pumps. However, having used the Daikin GEO system on a number of developments we would anticipate the cost of the heat pump installation into each apartment to be £6,046 and for the external chiller units of which two will be required the we would anticipate the total cost to be £65,422. The total costs of the heat pump installation will therefore be around £422,000 excluding installation.</i> No other LZC technologies have been deemed feasible.
Feasibility of district or community heating	No appraisal of connecting to a local district heating network or creating a DHN with any major energy consumers close to the development. <i>There is no district heating network locally to connect to. The provision of a communal system within the site using heat pumps minimises</i>

	<i>current emissions and allows for emerging technology to provide heat to the apartments at some future time if appropriate.</i>
	A community ASHP network is provided per block. It is not clear whether the individual blocks are connected
Summary of the benefits of various energy technologies	The benefits of various LZC technologies have been appraised.
The total estimated reduction in the development's baseline carbon and/or energy emissions	This has been provided. Although data in the appendices and the body of the report is not clear.
Zero Carbon Target	The carbon offset payment has not been calculated correctly for the residential element.
	<i>We are unclear about this comment. From the Statement of the 1st Feb 2022 the residual emissions from the site were estimated to be 23.557 tonnes and using the offset rate set out in the SPD of £1,800/tonne CO2 this required a total payment of £42,403. The whole site is residential and the offset had been applied the total residual emissions. Note the offset payment has not changed with the additional enhancements that have been included in the specification.</i>

RBC Policy Review

A response from Bluesky Unlimited has been added in bold italics as follows;

RBC Response: A BREEAM 'Very Good' rating is to be targeted for the communal areas. A pre-assessment should be provided demonstrating a route to achieving 'Very Good' as a minimum.

A lot of the issues in the BREEAM Assessment will be site wide benefits to the development that address the requirements in this policy

As set out above the communal accommodation is ancillary to the residential use of the buildings and is not classed as 'non-residential' and BREEAM Assessment is not required.

RBC Response: The report references that the position of the buildings within the site are in context with the surrounding development and the shape of the site –there is no reference to consideration of the form factor how the layout/orientation impacts on the reducing energy demand.

This covered in the Design and Access Statement.

RBC Response: Although daylight levels are important for the site, lighting demand is not a major consideration for energy consumption in dwellings, more impactful is the risk of overheating from too much solar gain. These are retirement living properties with the potential to house vulnerable occupants who may be restricted in leaving their dwellings, therefore an overheating assessment should be carried out to ensure that comfort levels are achievable.

If this development is required to comply with Part O of the building regulations, that came into force on 15 June 2022, as it has a site wide heat network, dynamic modelling will be required. Mechanical ventilation is not proposed and therefore there will be limited options to deal with excess solar gains should there be any excess noise conditions –this should be investigated further.

The development will now be required to comply with Part O of the Building Regulations.

Therefore, as part of the detailed working drawing design a Part O assessment will be prepared in order to demonstrate Building Regulation compliance. This can be submitted to demonstrate compliance in response to any potential planning condition.

The Noise Assessment, which accompanies the application recommends that the apartments fronting Henley Road will need to be ventilated on the basis of closed windows. Therefore, these apartments will require the installation of acoustically damped ventilation units. However, these units are north facing and therefore at the least risk from summer overheating. All apartments with south facing elevations will benefit from opening windows to reduce summer overheating.

(Note: The limiting U-values in Part L are provided in those cases whereby there is a restriction as to why better performance cannot be achieved – _these are used in the worst case only. U-values should be compared to the notational values in Part L 2013, and Part L 2021).

It is typical for double glazing U-values to achieve 1.20 W/m²K – this should be explored.

Agreed and within the amended Sustainability and Energy Statement the U-value for the windows and glazed doors has been reduced to 1.2 W/m²K.

RBC Response: There is no reference to the proposed landscaping and how it has been proposed considering native species and climate resilience. Detail should be provided.

This is beyond the scope of our work but we would assume a detailed landscape plan will be prepared and can be submitted in response to an appropriate condition.

RBC Response: Detail should be provided on how surface water runoff is going to be reduced through the design of the drainage strategy. Further SuDs methods should be explored to see what opportunities can be designed into the development.

A Flood Risk Assessment has been submitted in support of the application and this considers the installation of SuDS.

RBC Response: ASHP are proposed on each Block. It is not clear whether the blocks will be linked to provide a site wide network, further information should be provided

As set out in the SPD, evidence should be provided at the detailed planning application stage where GSHP systems are discounted, and ASHP systems selected, with the following technical analyses:

- Calculated system seasonal efficiency comparison
- Evidence of any constraints on boreholes related to existing utilities or other sub-surface infrastructure
- Borehole spatial constraints
- Any other technical reasons why GSHP cannot be progressed and ASHP must be taken forward as the primary heat technology
- Further detail should be provided.

The installation of a ground-source heat pump in lieu of the current proposal could be considered at the detailed working drawing stage but at this stage we are not aware there is sufficient site information available to decide whether it is appropriate or not. Is it not best to progress on the basis of what can be delivered and aspire to upgrade if feasible than to assume the best-case scenario, which may not be deliverable?

RBC Response: No evidence has been provided of any investigations of nearby existing or proposed opportunities to connect to an offsite district heating connection. Detailed investigations should be undertaken to understand any opportunities.

RBC Response: Further detail should be provided around the approach to Operational Waste.

Recycling and waste storage is provided within each block for collection by the Local Authority or a private contractor.

RBC Response: Reference should be made to the Flood Risk Assessment submitted with the application.

We have cross-referenced the FRA within the amended Sustainability and Energy Statement.

RBC Response: A review of potential SuDs should be undertaken to determine what approach can be taken on site to reduce surface water run-off.

The FRA includes a drainage and SuDS strategy.

RBC Response: The calculation provided demonstrates compliance with the standard however check flow rates/ capacity – 6/36 litre flush isn't right.

Well spotted. This is a typo and the dual flush rates are 6/3 litres.

RBC Response: Subject to the revised off-set calculation this target has been achieved, although further measures could be investigated to increase the onsite carbon reduction:

- PV Array – this has been discounted due to the aesthetics of the scheme – this should be revisited. Can the cost of the offset contribution be put towards a PV Array?

We had been advised to avoid the installation of photovoltaic because of the possible impact on the aesthetics of the proposal but assuming discretely located panels are acceptable we have proposed the installation of a total of 81 x 400W PV panels. These will be installed on the internal flat roof of Block A and on an internal pitched roof of Block B. The panels will reduce emissions by a further 6,897 kg CO₂ per year.

- Double Glazing – improvement on the U-value is expected to be achieved based on likely typical performance.

Agreed and we have altered the U-value to 1.2 W/m²K