

# 138-141, 142-143 & 144 Friar Street, Reading

## Comments on Planning Submission (Rev A)

29<sup>th</sup> November 2022

The following addresses comments received from Hoare Lea in their 'Energy and Sustainability Consultation Review – Rev 02 (24/11/2022)'. Noting that the report reflected the following suite of documents as produced by Troup Bywaters + Anders:

- Energy and BREEAM Statement (4<sup>th</sup> August 2022)
- MEP Strategies Report (15<sup>th</sup> July 2022)
- LZC Study (15<sup>th</sup> July 2022)

## Sustainability Statements

| Ref | RBC Requirement                                        | RBC / Hoare Lea Comment (10/11/22)                                                                                                                                                                                                            | Response                                                                                                                                                                                                                                                                    | RBC / Hoare Lea Comment (24/11/22)                                                                                                                                    | Response                                      |
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| SS1 | Energy efficiency and carbon emissions of the building | 62% carbon reduction achieved at the Be Lean stage (Part L 2013), this is welcome<br><br>The BRUKL document should be provided to demonstrate the calculation – as the appended BRUKL doesn't match this carbon reduction                     | As explained in section Methodology of TBA-Q2-XX-RP-N-00002 QVS2 Energy and BREEAM Statement the 62% carbon reduction is calculated relative to the LZC base case baseline, not the TER<br><br>Refer to attached report, updated to include intermediate BRUKLS for clarity | UPDATE: The BRUKL has been provided and the building does not comply at the Be Lean stage of the assessment demonstrating no energy efficiency measures in the design | The Active Design BRUKL on p.60 passes Part L |
| SS2 | Water conservation                                     | 2 credits targeted against Wat 01 – this is described as the maximum achievable due to limitations around shower performance<br><br>Rainwater and greywater harvesting should be explored to see how additional water savings can be achieved | (Extract from separate FRA ref. JME263 138-144 Friar Street FRA_QVS2_REVA) - There is insufficient space alongside the MEP plant spaces to provide enough storage to make it economically viable to use rainwater harvesting within the scheme                              | UPDATE: inclusion of SuDs to be considered at Stage 3                                                                                                                 | No response required                          |

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|     |                                  |                                                         | That said, there is the potential for small scale rainwater harvesting to be incorporated within the raised planters, and therefore the inclusion of SUDS planters will be considered fully at Stage 3 – Refer to attached Examples                                                                                                                                                                                                                                                        |                                                                                                     |                      |
| SS3 | Flood risk and drainage strategy | Flood risk is deemed to be low. A blue roof is proposed | <p>A separate FRA has been prepared and submitted with the application (ref. JME263 138-144 Friar Street FRA_QVS2_REVA). The site is flood zone 1, and no significant source of flooding has been identified.</p> <p>A blue roof is proposed across the majority of the roof (Refer to attached calculations), with tanked permeable paving and SUDS planters in the courtyard to provide attenuation to meet the requirements of the Reading Borough Council Plan in relation to SUDS</p> | -                                                                                                   | No response required |
| SS4 | Community impacts                | No mention of community impacts                         | <p>Refer to the attached 'Statement of Community Involvement' as produced by Town Planning Bureau</p> <p>Consultation with the public has continued post submission including meetings with the public, local press and community groups; inclusive of a further public consultation event in November 2022</p>                                                                                                                                                                            | UPDATE: Statement of Community Involvement has been provided, with some community benefits outlined | No response required |

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| SS5 | Transport                                                                                         | A travel plan has been created with some BREEAM credits targeted.                                                                                                                                                                                                                                         | No response required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No response required                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| SS6 | Health and Wellbeing including day-lighting analysis and thermal comfort                          | <p>No analysis provided. Daylighting and View Out credits not targeted due to massing and site context. Thermal comfort credit targeted.</p> <p>It is expected that some analysis and commentary would have been undertaken on the facade to reduce the cooling demand in relation to thermal comfort</p> | <p>The architect has undertaken passive design assessments and built these within the architectural pack the key points of which our highlighted below:</p> <ul style="list-style-type: none"> <li>Minimum glazed elements to south facing facades</li> <li>Maximisation of natural lighting for every hotel rooms</li> </ul> <p>Refer to TBA-Q2-XX-RP-N-00002 QVS2 Energy and BREEAM Statement, updated in terms of the above.</p> <p>Detailed thermal comfort analysis to be undertaken at Stage 3.</p> | <p>UPDATE: An update to the energy strategy has been provided with a statement that glazing reductions have been provided on the south façade</p> <p>The applicant has also stated that the rooms will have 'Maximisation of natural lighting for every hotel rooms' – it's not clear what is meant by this in relation to passive design</p> <p>Thermal comfort analysis has been committed to at Stage 3 – once the façade has been fixed, with the only option to mitigate being mechanical cooling</p> | <p>FCH: Every hotel room is provided with a large window</p> <p>TBA: A balance was struck in terms of window size between the need to limit summer solar gains while maximising daylighting. Stage 3 thermal comfort analysis will look at the g-value of the glazing to optimise this balance further.</p> <p>The Stage 3 analysis will use the g-value of the glazing to minimise mechanical cooling requirement, without impacting the daylighting.</p> |
| SS7 | Material usage, wastage, responsible sourcing and environmental impact, including embodied carbon | <p>Relevant BREEAM credits targeted</p> <p>No mention of how the reduction of embodied carbon has been considered throughout the design</p> <p>A pre-demolition audit is required to understand the opportunities to retain and re-use materials onsite</p>                                               | <p>A superstructure LCA assessment, via the BREEAM MAT 01 methodology, will be undertaken prior to the formal end of Stage 2</p> <p>A pre-demolition audit has been targeted for undertaking at Stage 3. Both are targeted credits</p>                                                                                                                                                                                                                                                                    | <p>UPDATE: A pre-demolition audit has been committed to at the beginning of Stage 3.</p>                                                                                                                                                                                                                                                                                                                                                                                                                   | No response required                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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| SS8 | Pollution issues, low NOx, low global warming potential (GWP), reducing need for mechanical cooling | <p>BREEAM credits targeted.</p> <p>No mention of how the design has reduced the need for mechanical cooling.</p> | <p>The architect has undertaken passive design assessments and built these within the architectural pack the key points of which our highlighted below:</p> <ul style="list-style-type: none"> <li>• Minimum glazed elements to south facing facades</li> <li>• Superior windows with a low thermal conductivity to ensure that the entire building envelope is well insulated</li> <li>• High-quality insulation in order to minimize the heat exchange with the outside environment</li> <li>• Airtight construction to avoid uncontrolled airflow between the internal and external environment</li> <li>• No thermal bridging between well insulated elements such as walls, floors and roofs in order to reduces the need for heating or cooling to achieve a comfortable temperature</li> <li>• High quality Mechanical ventilation with heat recovery units that recovers heat from the used air and transfers it to the fresh air coming in. This ensures a minimal loss of energy and a good indoor air quality</li> </ul> | <p>UPDATE: Further detail has been provided on how passive design measures have been adopted to reduce the need for mechanical cooling</p> | No response required |
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|      |                                                                         |                                                                                                                                                                                                                                                             | <p>Refer to TBA-Q2-XX-RP-N-00002 QVS2 Energy and BREEAM Statement, updated in terms of the above</p> <p>Detailed thermal comfort analysis to be undertaken at Stage 3</p>                                                                                                                                                                                                                                                                                                   |                                                                                                                    |                      |
| SS9  | Ecological aspects to enhance the proposed developments flora and fauna | <p>Ecologist appointed</p> <p>No detail provided on the measures that have been implemented to enhance the sites ecology</p>                                                                                                                                | Refer to the attached 'Preliminary Ecological Appraisal Including a Protected Species Appraisal and BREEAM Assessment' as produced by Skilled Ecology Consultancy Ltd                                                                                                                                                                                                                                                                                                       | UPDATE: Ecological Appraisal provided demonstrating the enhancement                                                | No response required |
| SS10 | Best practice management of the site                                    | Relevant BREEAM credits targeted – with emphasis on the Contractor                                                                                                                                                                                          | Best practice management of site BREEAM credits to be completed on appointment of Contractor                                                                                                                                                                                                                                                                                                                                                                                | -                                                                                                                  | No response required |
| SS11 | BREEAM Very Good / Excellent                                            | <p>BREEAM Excellent is targeted, and a pre-assessment is provided demonstrating a route to Excellent</p> <p>There is little evidence to see how the BREEAM targets have been designed in, and no evidence of any of the Stage 1 evidence being received</p> | <p>The architectural, civil and structural and MEP packages show how certain credits have been implemented into the design</p> <p>At this stage, where the design stage assessment hasn't started, it would not be expected to see detailed evidence per credit as this is collected as the design progresses</p> <p>For this project the Stage 1 requirements are:</p> <ul style="list-style-type: none"> <li>- Appointment of AP – refer to confirmation email</li> </ul> | UPDATE: Further information has been provided demonstrating the route to achieving the Stage 1 credit requirements | No response required |

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|  |  |  | <ul style="list-style-type: none"> <li>- Ecologist appointment – Refer to the attached 'Preliminary Ecological Appraisal Including a Protected Species Appraisal and BREEAM Assessment'</li> <li>- Flood Risk Assessment - FRA has been prepared and submitted with the application (ref. JME263 138-144 Friar Street FRA_QVS2_REVA)</li> <li>- Travel plan – A transport plan has been prepared and submitted with the application</li> <li>- Sustainable procurement plan - refer to attached plan</li> <li>- Material efficiency - refer to attached summary</li> </ul> |  |  |
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## Energy Strategies

| Ref | RBC Requirement                                                                                                           | RBC / Hoare Lea Comment (10/11/22)                                                                                                                                                                                                                                                                | Response                                                                                                                                                                                                                                     | RBC / Hoare Lea Comment (24/11/22)                                                                                                                                         | Response                                                                                                                                                                                                              |
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| EE1 | Energy efficiency of the building                                                                                         | Energy efficiency measures and carbon emissions have been provided<br><br>It's not clear from the report what is providing the heating and hot water in the Passive Design Measures Option                                                                                                        | The baseline MEP service strategy and energy consumption data is shown in Table 2 of TBA-Q2-XX-RP-N-00003 QVS2 LZC Study.<br><br>The BRUKL in Appendix C of TBA-Q2-XX-RP-N-00002 QVS2 Energy and BREEAM Statement is for the Green Iteration | UPDATE: The BRUKL has been provided and the building does not comply at the Be Lean stage of the assessment<br>Demonstrating no energy efficiency measures in the design   | The "Lean" stage comprises both passive and active design measures and is equivalent to our Active Design category. The Active Design BRUKL passes Part L and present a 54% energy saving over the baseline building. |
| EE2 | Baseline annual predicted energy demand of the development (regulated and unregulated)                                    | This has not been provided                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                              | UPDATE: The consumption data has been provided but an overall Baseline annual predicted energy demand of the development (regulated and unregulated) has not been provided | The total energy consumption for the baseline building is shown in Appendix B, p.58                                                                                                                                   |
| EE3 | Baseline annual predicted carbon emissions of the development (regulated and unregulated), the Target Emission Rate (TER) | TER has been provided (53.1 kgCo2/m2. Annum) It is not clear if this is the final BRUKL. The BER is 45.1 kgCo2/m2. Annum – so the overall improvement is calculated at 15% - which doesn't match the results stated in the report.<br><br>The BRUKLs should be provided for each stage for Review |                                                                                                                                                                                                                                              | UPDATE: The front pages of the BRUKL reports have been provided. The table in the Executive Summary does not match the results shown in the BRUKLs                         | The table in the exec summary shows energy and carbon savings, not BRUKL values. However, the savings with the Part L carbon factors reflect the BRUKL savings of baseline vs Green BRUKL (142.7-45.1)/142.7=69%      |

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| EE4 | The contribution of each proposed renewable energy technology                                                                                                        | <p>It's not clear from the report what is providing the heating and hot water in the Passive Design Measures option</p> <p>Contributions should be provided for the ASHP. VRF is not a renewable energy technology when providing cooling and therefore cannot be considered</p> | <p>The baseline MEP service strategy and energy consumption data is shown in Table 2 of TBA-Q2-XX-RP-N-00003 QVS2 LZC Study.</p> <p>The original QVS1 Energy and sustainability statement, which was part of the approved QVS1 scheme specified ASHP as a renewable energy source. On page 23 it states that a combined heating / cooling ASHP unit will provide the comfort cooling. On page 7 of Appendix B of that report it is stated that comfort cooling is provided by VRF units. Therefore, it is implied that heating is also provided by VRF and that this was permissible in the approved QVS1 scheme. By extension, it should be permissible for QVS2</p> | <p>UPDATE: VRF was previously considered and approved as a renewable technology</p> <p>The contribution should be provided for each of the renewable technologies proposed</p>                                                                                                        | <p>No response required</p> <p>They are split out in Table 4 on p.11</p>                                   |
| EE5 | Cost information of technically feasible low or zero carbon renewable technologies, including additional insulation, low carbon decentralised energy, heat pumps etc | A LZC appraisal has been carried out for ASHP and GSHP. This has not included insulation requirements and costs associated with a GSHP installation                                                                                                                              | <p>The TBA-Q2-XX-RP-N-00003 QVS2 LZC Study comprises an analysis of the ground heating potential for three types of GSHP and concludes that there is not enough heating capacity in the ground underneath the building to meet the heating demand. Therefore, no discussion of insulation requirements or cost was required</p>                                                                                                                                                                                                                                                                                                                                       | <p>UPDATE: GSHP has been discounted as it was deemed that there was not enough heating capacity to serve the development</p> <p>A cost appraisal of additional insulation should be provided – especially as the building is failing the Be Lean (energy efficiency) requirements</p> | <p>No response required</p> <p>The building does meet the Lean requirements (Active design BRUKL p.60)</p> |
| EE6 | Feasibility of district or community heating                                                                                                                         | No evidence has been provided to determine whether there are any DHN nearby                                                                                                                                                                                                      | Section "Decentralised Energy" of the TBA-Q2-XX-RP-N-00002 QVS2 Energy and BREEAM Statement discusses the DHN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | UPDATE: Evidence of DHN investigations has been provided                                                                                                                                                                                                                              | No response required                                                                                       |

| EE7                 | Summary of the benefits of various energy technologies                                     | <table><tr><th>Design measure</th><th></th><th></th></tr><tr><td rowspan="2">Fabric improvements</td><td>U value</td><td rowspan="2">See Table 1</td></tr><tr><td>Air permeability</td></tr><tr><td rowspan="5">MEP</td><td>Heating</td><td>VRF system with heat recovery, SCOP5.5</td></tr><tr><td>DHW</td><td>90% ASHP with SCOP=2.85, 10% gas-fired water heater, 935</td></tr><tr><td>Cooling</td><td>VRF system, SEER=6.5</td></tr><tr><td>MVHR</td><td>SFP0.9W/l/s, 85%HR</td></tr><tr><td>Lighting</td><td>100lm/W</td></tr><tr><td>Renewables</td><td>PV</td><td>100m², 22% efficient, 10° inclination, south-facing</td></tr></table> <p>Table 6 Summary of applied energy performance measures</p> <p>High efficiency, high temperature ASHP should provide 100% of the DHW – there is no need for a gas boiler.</p> <p>VRF – refrigerant with low embodied carbon should be specified – this should be confirmed</p> <p>PV – this would be more efficient if at 30o inclination</p> | Design measure       |                                                            |                                                                                                          | Fabric improvements | U value | See Table 1 | Air permeability | MEP | Heating | VRF system with heat recovery, SCOP5.5 | DHW | 90% ASHP with SCOP=2.85, 10% gas-fired water heater, 935 | Cooling | VRF system, SEER=6.5 | MVHR | SFP0.9W/l/s, 85%HR | Lighting | 100lm/W | Renewables | PV | 100m², 22% efficient, 10° inclination, south-facing | <p>Part L 2013 penalises the use of ASHPs. In order to meet the Part L 2013 requirements, a proportion of gas heating needed to be introduced. This was most easy effected by pre-heating the DHW with ASHP and topping it up with gas. We kept the proportion of gas heating to the absolute minimum</p> <p>Report updated to include VRF refrigerant detail</p> <p>Refer to TBA-Q2-XX-RP-N-00001 QVS2 MEP Strategies, updated to include VRF refrigerant detail.</p> <p>We agree that a PV array at 30° inclination would generate more yield. However, it would also experience a higher degree of wind loading. It is industry practice to install PV arrays on flat roofs at 10° inclination to reduce wind loading</p> | <p>UPDATE: The applicant has advised that Part L 2013 'penalises the use of ASHP. We are unable to see how this has been modelled as only the front page of the BRUKL has been provided.</p> <p>the table of results in the Executive Summary seem to imply that without an ASHP there is a 62% reduction in CO2</p> <p>In line with the drive to NZC and the climate emergency, no new gas provision should be included as part of the energy strategy</p> <p>UPDATE: Potential for R32 to be used – this is welcomed</p> <p>UDPATE: There is concern over wind loading – so the angle of the PV is reduced. Protection from the wind should be investigated to maximise the benefit of the PV</p> | <p>DHW was modelled as bivalent system with 10% gas contribution.</p> <p>Correct, 62% relative to standard building baseline.</p> <p>We have minimised the gas consumption as much as possible while still complying with Part L 2013 SBEM and Ene01 requirements. We are not aware of any RBC planning policies requiring the complete elimination of fossil fuels from the building.</p> <p>No response required</p> <p>Angle of PV to be reviewed during RIBA Work Stage 3, input will be sought from PV installer.</p> |
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| Design measure      |                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                                            |                                                                                                          |                     |         |             |                  |     |         |                                        |     |                                                          |         |                      |      |                    |          |         |            |    |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Fabric improvements | U value                                                                                    | See Table 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                      |                                                            |                                                                                                          |                     |         |             |                  |     |         |                                        |     |                                                          |         |                      |      |                    |          |         |            |    |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                     | Air permeability                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                                            |                                                                                                          |                     |         |             |                  |     |         |                                        |     |                                                          |         |                      |      |                    |          |         |            |    |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| MEP                 | Heating                                                                                    | VRF system with heat recovery, SCOP5.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                                                            |                                                                                                          |                     |         |             |                  |     |         |                                        |     |                                                          |         |                      |      |                    |          |         |            |    |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                     | DHW                                                                                        | 90% ASHP with SCOP=2.85, 10% gas-fired water heater, 935                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      |                                                            |                                                                                                          |                     |         |             |                  |     |         |                                        |     |                                                          |         |                      |      |                    |          |         |            |    |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                     | Cooling                                                                                    | VRF system, SEER=6.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                      |                                                            |                                                                                                          |                     |         |             |                  |     |         |                                        |     |                                                          |         |                      |      |                    |          |         |            |    |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                     | MVHR                                                                                       | SFP0.9W/l/s, 85%HR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                                                            |                                                                                                          |                     |         |             |                  |     |         |                                        |     |                                                          |         |                      |      |                    |          |         |            |    |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                     | Lighting                                                                                   | 100lm/W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                                                            |                                                                                                          |                     |         |             |                  |     |         |                                        |     |                                                          |         |                      |      |                    |          |         |            |    |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Renewables          | PV                                                                                         | 100m², 22% efficient, 10° inclination, south-facing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |                                                            |                                                                                                          |                     |         |             |                  |     |         |                                        |     |                                                          |         |                      |      |                    |          |         |            |    |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| EE8                 | The total estimated reduction in the development's baseline carbon and/or energy emissions | An 84% reduction in carbon emissions against Part L 2013 (+ SAP 10)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No response required | UPDATE: This does not match the modelling outputs provided | 84% is with SAP carbon factors. With Part L 2013 carbon factors as per BRUKL it's (142.7-45.1)/142.7=69% |                     |         |             |                  |     |         |                                        |     |                                                          |         |                      |      |                    |          |         |            |    |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| EE9                 | Zero Carbon Target                                                                         | There is no policy requirement for Net Zero on purely non-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No response required | -                                                          | No response required                                                                                     |                     |         |             |                  |     |         |                                        |     |                                                          |         |                      |      |                    |          |         |            |    |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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|  |  | domestic buildings, therefore, no<br>offset payment to make |  |  |  |
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## Policy Review

| Ref | RBC Requirement                                                                                                                                                                                                                                                                                                                                                                                                                          | RBC / Hoare Lea Comment (10/11/22)                                                                                                                                                                                                                          | Response                                                                                                                                                                                                                                         | RBC / Hoare Lea Comment (24/11/22)                                                                                                                                                                     | Response                                                                                                                                                         |
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| PR1 | <b>Sustainable Design and Construction CC2 Policy:</b><br>Proposals for new development, including the construction of new buildings and the redevelopment and refurbishment of existing building stock, will be acceptable where the design of buildings and site layouts use energy, water, minerals, materials and other natural resources appropriately, efficiently and with care and take account of the effects of climate change | BREEAM Excellent is targeted, and a pre-assessment is provided demonstrating a route to Excellent<br><br><i>There is little evidence to see how the BREEAM targets have been designed in, and no evidence of any of the Stage 1 evidence being received</i> | Refer to SS12 response                                                                                                                                                                                                                           | UPDATE: Further information has been provided demonstrating the route to achieving the Stage 1 credit requirements                                                                                     | No response required                                                                                                                                             |
| PR2 | <b>Adaptation to Climate Change CC3 Policy:</b><br>Wherever possible, new buildings shall be orientated to maximise the opportunities for both natural heating and ventilation and reducing exposure to wind and other elements.                                                                                                                                                                                                         | <i>There is no reference to consideration of the form factor how the layout/orientation impacts on the reducing energy demand. Also, no reference of natural ventilation. This should be provided.</i>                                                      | There are openable windows (150mm gap) to allow an element of natural ventilation, however, the primary means of ventilation for the project is MVHR to reduce overall noise and pollution within bedrooms, and as to not conflict with cooling. | UPDATE: No reference to consideration of orientation or form factor has been provided. Windows are openable – but there are noise and pollution constraints, so mech vent and cooling will be required | FCH: form factor and orientation are given by site constraints.<br><br>TBA: The compact shape of this 7-storey building affords it a form factor of less than 1. |

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| <b>PR3</b> | <b>Adaptation to Climate Change CC3 Policy:</b> Proposals involving both new and existing buildings shall demonstrate how they have been designed to maximise resistance and resilience to climate change for example by including measures such as solar shading, thermal mass, heating and ventilation of the building and appropriately coloured materials in areas exposed to direct sunlight, green and brown roofs, green walls, etc | No detail has been provided as to how the building has been designed to maximise resistance and resilience to climate change. This should be provided.        | As SS8 | UPDATE: Some information has been provided as a response to the passive design approach and some commitments to providing BREEAM evidence in relation to climate resilient. Nothing in detail | TBA: Hea04, Mat05 and Wst05 credits addressing resilience are targeted. Requirement for high thermal mass will be reviewed under Hea04, mechanical ventilation and cooling are provided. Roof areas are overshadowed by PV arrays or covered with blue roofs. |
| <b>PR4</b> | <b>Adaptation to Climate Change CC3 Policy:</b> Use of trees and other planting, where appropriate as part of a landscape scheme, to provide shading of amenity areas, buildings and streets and to help to connect habitat, designed with native plants that are carefully selected, managed and adaptable to meet the predicted changed climatic conditions.                                                                             | There is no reference to the proposed landscaping and how it has been developed considering native species and climate resilience. Detail should be provided. | As SS9 | UPDATE: Ecological Appraisal provided demonstrating the enhancement                                                                                                                           | No response required                                                                                                                                                                                                                                          |
| <b>PR5</b> | <b>Adaptation to Climate Change CC3 Policy:</b> All development shall minimise the impact of surface water runoff from the development in the                                                                                                                                                                                                                                                                                              | Detail should be provided on how surface water runoff is going to be reduced through the design of the drainage strategy. SuDs methods should be              | As SS3 | UPDATE: Further information on SuDs have been provided – namely a blue roof and SuDs planters                                                                                                 | No response required                                                                                                                                                                                                                                          |

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|     | design of the drainage system, and where possible incorporate mitigation and resilience measures for any increases in river flooding levels as a result of climate change                                                                                                                                                                     | explored to see what opportunities can be designed into the development                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                      |
| PR6 | <b>Decentralised Energy CC4 Policy:</b> Any development of more than 20 dwellings and/ or non-residential development of over 1,000 sqm shall consider the inclusion of decentralised energy provision, within the site, unless it can be demonstrated that the scheme is not suitable, feasible or viable for this form of energy provision. | <p>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:</p> <ul style="list-style-type: none"> <li>– Calculated system seasonal efficiency comparison</li> <li>– Evidence of any constraints on boreholes related to existing utilities or other sub-surface infrastructure</li> <li>– Borehole spatial constraints</li> <li>– Any other technical reasons why GSHP cannot be progressed and ASHP must be taken forward as the primary heat technology.</li> </ul> <p>Further detail should be provide</p> | <p>The RBC response is not relevant to the policy. See section “Decentralised energy” of TBA-Q2-XX-RP-N-00002 QVS2 Energy and BREEAM Statement for a discussion of decentralised energy.</p> <p>In terms of the ASHPs / GSHPs see EE6</p>    | <p>UPDATE: No response has been provided to the SPD requirements (Section 8.6 in the link below):</p> <p><a href="https://images.reading.gov.uk/2019/12/Sustainable-Design-and-Construction-SPD-Adopted-December-19.pdf">https://images.reading.gov.uk/2019/12/Sustainable-Design-and-Construction-SPD-Adopted-December-19.pdf</a></p> | The capacity analysis in the LZC report showed that the heat capacity below the building is smaller than the heat demand. GSHP was therefore ruled out on technical grounds. Therefore, no further analysis of GSHP pf seasonal efficiencies or borehole constraints was undertaken. |
| PR7 | <b>Decentralised Energy CC4 Policy:</b> Where there is existing decentralised energy provision present within the vicinity of an application site, further developments of 10 dwellings or more or non-residential development of                                                                                                             | No evidence has been provided of any investigations of nearby existing or proposed opportunities to connect to an offsite district heating connection.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Section “Decentralised heating” of TBA-Q2-XX-RP-N-00002 QVS2 Energy and BREEAM Statement states that connection to DHN is presently not possible but provisions will be made for the VRF to work with a water-based energy source in future. | UPDATE: DHN information has been provided                                                                                                                                                                                                                                                                                              | No response required                                                                                                                                                                                                                                                                 |

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|     | 1,000sqm or more will be expected to link into the existing decentralised energy network or demonstrate why this is not feasible                                                                                                                                                                                                                                                                                                                       | Detailed investigations should be undertaken to understand any opportunities.                                                      |                                                                                                                                                                                                      |                                                                                                                               |                      |
| PR8 | <b>Waste Minimisation and Storage CC5 Policy:</b><br>Development should demonstrate measures to minimise the generation of waste in the construction, use and life of buildings and promote more sustainable approaches to waste management, including the reuse and recycling of construction waste and the promotion of layouts and designs that provide adequate, well-designed space to facilitate waste storage, reuse, recycling and composting. | The relevant BREEAM credits are committed to with no detail as to specifically how waste will be reduced. This should be provided. | In-use waste management strategy to be developed by occupier pre-occupation as is common practice.<br><br>Construction waste management strategy to be developed following appointment of Contractor | UPDATE: Operational waste strategy is to be completed by the occupant with construction waste to be managed by the Contractor | No response required |