



Transition Bath is a charity whose aim is to build a sustainable future for Bath. Transition Bath would like to comment on the planning application [15/04290/FUL](#) on matters narrowly relating to 'sustainability' and in particular the '[Energy Statement](#)'. We don't think the Energy Statement is acceptable in its current form.

We feel many aspects of the 'Energy Statement' cannot be justified and are likely to be incorrect, much of the Energy Statement appears incoherent and lacking in evidence. Our comments include but are not limited to:

1. **Misleading 40% carbon reduction?:** The developer claims to identify a number of solutions in the design which would achieve a 40% reduction in energy and carbon emissions. We can find no evidence for this in their documentation. As far as we can tell this development will be built to minimum building standards and will have no carbon or energy reductions over these minimum standards – so the statement is probably false. Clarity would be provided if a Target Emissions Rate (TER) to Design Emissions Rate (DER) ratio under Building Regulations 2013 Part L were stated. To obtain a 40% reduction in total energy consumption a TER significantly below 11 kgCO<sub>2</sub>/m<sup>2</sup>/yr would be required, and perhaps something closer to 5 kgCO<sub>2</sub>/m<sup>2</sup>/yr if regulated and unregulated electricity were included.
2. **Heat pumps:** One of the developer's reasons for not using heat pumps "*Furthermore, the locality of each heat pump would make it vulnerable to vandalism and damage*" is the first such comment we have seen in any planning application. We are not aware of any written evidence in the UK to substantiate this claim that heat pumps are susceptible to vandalism. We also dispute the claim that maintenance costs of heat pumps significantly increase CO<sub>2</sub> emissions. It might have been better for the developer to simply state, that because of the current carbon intensity of the UK grid heat pumps don't offer significantly lower CO<sub>2</sub> than natural gas heating systems. We would however like to see the developer offering underfloor heating which would allow retrofitting of high COP heat pumps in future when the grid has substantially decarbonised which would make it easier for this development to meet the UK's 2050 carbon commitments.
3. **Solar PV and thermal:** The Energy statement alludes to these being feasible on the development without any commitment to install them. We would like to encourage the development to make a more formal concrete commitment to their installation, and perhaps they might make a contribution to some of the claimed 40% carbon reduction of the development?
4. **Insulation Standards (U Values):** The Energy Statement states the development will exceed Building Regulations 2010 Part L – we hope so, as we would expect them to exceed the current standard – 2013 Part L, otherwise the homes would be illegal! It's pointless providing a comparison with an out of date standard.
5. **Natural Ventilation:** We disagree with this statement "*Natural ventilation offers a number of benefits over mechanical ventilation including zero energy consumption and low maintenance. In order to reduce the energy demand by 40% no mechanical ventilation will be installed into the dwellings but rather a natural ventilation strategy has been adopted*". Mechanical Ventilation with Heat Recovery (MVHR), combined with low air permeability (<3 ach/hr@50Pa) provides the



opportunity to reduce energy losses, and would offer lower energy consumption than the developer's proposed approach. We would assume they are planning on installing extractor fans and trickle vents in the property, all of which contribute to energy losses? We would be supportive of this application if the developer committed to install MVHR with lower levels of air permeability than currently being proposed.

6. **Fabric and reduced solar gains:** 3.4.1 of the Energy Statement claims one of the aims of the design is to 'reduce solar gains', unless this is to avoid overheating we feel this objective is incompatible with their objectives to reduce energy demand.
7. **Energy efficient appliances:** "*Where electrical appliances and white goods are specified within the development they will be selected to ensure they are energy efficient rated by the EU energy labelling scheme*" – it is illegal to sell appliances without EU energy ratings, so this statement is not helpful. We would have preferred it if the developer committed to install A+ rated appliances.
8. **Stated CO2 emissions understated by a factor of 2:** Table 2 of the Energy Statement claims that the whole development would emit 157,906.42 kg/CO2/yr, which equates to 1.6 tonnes of CO2/yr/home - this seems unfeasibly low. We assume this is based on the Target Emissions Rate (TER) of 18.72kg/m2/yr required by Building Regulations 2013 Part L? This does not include regulated and unregulated electricity which at perhaps 3,000 kWh/dwelling/year would contribute another 1.5 tonnes of CO2/year per dwelling to the totals. We therefore suspect the development's stated CO2 emissions are understated by a factor of 2?
9. **Miscellaneous other issues with the Energy Statement:** there are too many of these to mention, but overall this is one of the poorest submissions we have seen from a developer

## **Conclusion**

This is perhaps the most poorly presented Energy Statement we have seen for a major development in B&NES and asks more questions than it answers; we feel that the developer should resubmit their Energy Statement with something which is more coherent and less misleading.