

Wardell Armstrong International

Wheal Jane, Baldhu, Truro, Cornwall, TR3 6EH, United Kingdom

Telephone: +44 (0)1872 560738 Fax: +44 (0)1872 561079 www.wardell-armstrong.com



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Letter to
Kristy Ingles
Development Control Officer
Regulatory Services Group - Blaby District Council

Dear Kirsty

Please see my responses below to your letter. I hope that this addresses the relevant issues.

Yours sincerely
for Wardell Armstrong International Ltd

A rectangular box containing a handwritten signature in blue ink that reads 'H Scholes'.

HAYDN SCHOLES
Director
hscholes@wardell-armstrong.com



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ENERGY AND CLIMATE CHANGE
ENVIRONMENT AND SUSTAINABILITY
INFRASTRUCTURE AND UTILITIES
LAND AND PROPERTY
MINING, QUARRYING AND MINERAL ESTATES
WASTE RESOURCE MANAGEMENT



Andy,

Draft Green Energy Statement

I have circulated the revised green energy statement to the members of the Environmental Sustainability Working Group. The general conclusion is that the structure and layout of the revised statement is much easier to read and understand than the previous reports. From the observations received, I have the following comments on the draft statement:

Section 3

Has the possibility of an energy centre near the District Centre been considered? Access issues would need to be resolved but schemes such as Hanham Hall in Bristol have energy centres integral to the main parts of the development.

A single energy plant to provide for the whole development would be over 100 sq. m with a 20m high chimney, making it the largest building in the district centre, and indeed on the site. It would give rise to significant environmental issues being located close to the district centre and existing housing, so it was decided some time ago that this would not be pursued as a solution. There are alternative sites within the SES that might meet this need and these will be assessed more closely as the scheme moves forward.

A separate biomass boiler and heat network was considered for the district centre and schools but it may undermine the viability of the biomass CHP plant for the whole development, it was not considered an appropriate solution.

Estimating Energy Demand - RTPi domestic energy use figures are provided as percentages on page 11 and then translated into kWh/m²/yr on page 12. Are these typical average household energy use figures? Are they based on regulatory newbuild minimum? The Building Research Establishment has figures for existing and newbuild housing averages and should be consulted - there is a possibility that the benchmarks used by BRE are much worse than the 'worse case scenario' stated on page 12 of the Report. The energy use assumptions for non-residential development should also be checked and benchmarked using BRE average data.

As stated in the report, the residential energy use figures are based on the Zero Carbon Hub's new Fabric Energy Efficiency Standard (FEES) benchmarks plus the RTPi split (Figure 3.1) to identify individual components within the energy demand for each type of dwelling, as we were advised. Similarly the non-residential demand estimates are based on DCLG's carbon reduction targets with a 25% adjustment to reflect the changes embodied in the 2010 Building Regulations. We believe these benchmarks are robust.

Page 13 table 3.3 – the 250 sq m of B1 workspace proposed and the 700 sq m of assembly and leisure uses proposed in each of the local centres hasn't been included. The A2/A3/A4/A5 uses in the District and Local Centres don't appear to have been included. The table states 17,700 sq m is proposed for light industrial uses. However, in accordance with the to be revised schedule of



development this should be for B1(b), B1(c), B2 and B8 uses. The totals are not shown in the correct columns of the table.

For energy demand purposes the B1 workspace and assembly and leisure has been included in the 200m² of office space. Similarly the A2/A3/A4/A5 has all been rolled up into the 5000m² retail space. This is 5460m² on the revised plan, requiring an additional 28MWh per annum. Similarly the revised plan provides 4600m² of employment space (gateway site), requiring an additional 3MWh per annum. Both of these are insignificant in terms of the overall annual energy demand, 19688MWh and do not materially affect the energy options for the development. Please note in the SES, the 19,700m² is for general industrial space, ie B2 use, the 7600m² of (assumed) office space is the B1 space and the 56700m² of warehouse is the B8 space.

Section 4

The Carbon Compliance target for 2013 looks like it will change again since the Energy Report was prepared stating an 8% reduction will be required. See for example:
<http://www.architecture.com/MemberUpdate/Practice/2012/February2012/2February2012.aspx>
This would necessarily change the compliance commentary and table on page 14 of the Report and associated figures.

The carbon compliance levels may change before being implemented as 2013 Building Regulations. However nothing is definitive at this time and any changes are likely to require less CO₂ savings than those currently being proposed for Lubbersthorpe. At the moment there is no plan to reduce the 2016 targets and much of the development will be built out after this.

Air Source Heat Pumps – the report states that they do not produce significant CO₂ savings. I have been advised that this is incorrect and significant CO₂ savings can be achieved particularly where they are installed in buildings designed for them which should be the case here. They also have the advantage, as acknowledged in the report, of being cheaper than Ground Source Heat Pumps although it is recognized that Ground Source Heat is more stable and constant. Further consideration should be given to the use of Air Source Heat Pumps.

You have been incorrectly advised. Despite some manufacturer's claims of high COPs, ASHPs in practice still only produce seasonal COPs of 2.0-2.5 and have a tendency to freeze up in colder weather. This is why they are not eligible for the RHI.

Energy Scenarios are a useful addition to the document but the generation figures, CO₂ saving figures, percentages towards residential carbon compliance and demand met from renewables requires more thorough and detailed explanation. Similarly, scenarios 1 & 2 appear to achieve large percentages towards carbon compliance and demand from renewables but more detailed explanation and rationale is needed to assist understanding.

As discussed at the last meeting with Blaby et al., it was decided to remove much of the technical element of the report to make it more palatable to the general public. Including the detailed modelling and rationale would cut across this.



On a general point it is disappointing that the development is not proposed to go beyond the national standards and targets for energy use and efficiency. However I do appreciate the current viability issues for the development. Hopefully in the future as technologies develop and perhaps become cheaper and more efficient it will be possible to consider a more innovative energy strategy at New Lubbesthorpe.

As discussed the development is aiming to achieve the highest standards that it can against the current policy, technological and market contexts. The aim is to respond to these challenges at each stage of the development as it moves forward and to keep options open to ensure the development best responds to the opportunities.

Regards

Kristy Ingles
Development Control Officer
Regulatory Services Group - Blaby District Council
Tel: 0116 272 7565
Email: lubbesthorpe@blaby.gov.uk