

Lidl Botwell Lane

Energy and Sustainability Addendum

Application Reference: 1942/APP/2013/3565

08 April 2014

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1 BACKGROUND

Hillingdon Borough Council has reviewed the Energy and Sustainability Strategy for planning application reference 1942/APP/2013/3565 for the redevelopment of a Lidl Supermarket in Hayes and has provided the applicant with a number of comments and action points indirectly following a response on a separate application in South Ruislip. This addendum responds to the issues raised.

2 COMMENTS RECEIVED

'This application is very similar to a proposal in Hayes. The energy discussions for this other scheme are complicated and the applicant is querying the allowable contributions to make up for shortfall. Nonetheless, in both instances the energy report is deficient.

In this case there is no clear baseline to kWhr or KgCO2 per annum or how the measures (which primarily relate to lighting) manage to help reduce emissions by a little over 30%. Furthermore, the development does not meet the 40% reduction target despite not resorting to any form of renewable energy technology. The report states;

"Energy efficiency, clean energy and renewable energy all contribute to achieve a saving over and above Part L 2010.

Renewable energy measures were also reviewed, but the case for including them was poor and failed to make the investment hurdle rates required."

Despite the apparent contradiction about the use of renewables, the second sentence of the two is not supported by any evidence. The report therefore does not provide adequate justification as to why the 40% target cannot be achieved. Finally, it is not possible to understand what the shortfall is. However, if it is similar to the other scheme then it is expected that the shortfall will be a relatively low amount of less than 10tonnes per annum. This could easily be met by the use of onsite PVs.

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3 RESPONSES

The Energy Strategy submitted with the application sets out a methodology in section 3.1, detailing how the scheme energy demand and CO2 emissions have been modeled using SBEM, the government approved software for non-domestic buildings. It also sets out how a variety of energy efficiency and technology options have been modeled to determine the outcome of the strategy.

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Dasellie (DER)			
Energy consumption	kWh	kgCO2	
Heating	49,895	9,979	
Cooling	22,015	11,382	
Auxiliary	8,347	4,316	
Lighting	50,666	26,194	
Hot Water	4,794	2,478	
Total	135,717	54,349	:
10% Saving Target		21,740	kgCO2
Proposed Scheme (TER)			
Energy consumption	kWh	kgCO2	
Heating	37,788	7,635	
Cooling	19,251	9,953	
Auxiliary	8,422	4,354	
Lighting	25,931	13,407	
Hot Water	4,512	2,333	
Total	95,905	37,681	:
Actual Saving		16,668	kgCO2
		31%	-
Shortfall		5,072	kgCO2

The baseline, based on the model Target Energy Rating, is as follows:

The measures that reduce the CO2 emissions are set out in the report in detail in the executive summary, Section 4.3, and in the conclusion in section 6.2. These include not just lighting measures, but heating controls, heating set points, fabric U-values beyond the regulatory standards, air tightness beyond the regulatory standards, glazing standards beyond the regulatory standards, ventilation measures, free cooling, metering and monitoring measures. Further, the report also details the low cost approach to retail that is adopted by Lidl results in fundamentally far lower emissions than equivalent major supermarket retailers, as evidenced in section 4.1 of the report. It is worth noting though that lighting is responsible for the largest share of emissions and therefore is correctly the key focus for emissions reductions. This is demonstrated in Figure 4 on the strategy report.

Solar photo-voltaics were assessed, but represented a return on investment well below the Weighted Average Cost of Capital, used to determine what is and what is not commercially viable. This result fits with the design of the Feed-in-tariff, which has been designed and continually updated to aim to provide a return on investment of 5-8%. The commercial investment hurdle rate for viability is set at 12.5%, and even that is low. The National Planning Policy Framework sets out clear wording on viability:

JS Lewis Ltd Registered Office: 29 Church Road, Bath, BA1 4BT Company Registration No.: 07066238 VAT Registration No.: 121 2714 62 In determining planning applications, local planning authorities should expect new development to:

- comply with adopted Local Plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable

The Energy Strategy made clear reference to this in section 2.1. Solar PV remains a non-viable solution. All other renewable options were assessed using both commercial viability criteria and technical viability criteria with the following findings:

- Wind not technically viable;
- Solar PV not commercially viable;
- Biomass not commercially or technically viable;
- Ground source heat pumps poor comparative CO2 equation results in insufficient CO2 savings – not technically viable;
- Air source heat pumps worse than ground source;
- Solar thermal negligible CO2 benefit, not technically viable.

The London Plan makes allowances for offsetting as an alternative. Noting that Hillingdon does not have an adopted solution for offsets, the design team has been following the best guidance and examples of alternative Borough offset solutions. Accordingly, the design team has been in dialogue with the sustainability officer regarding the potential for offset solutions. The principle of offsetting seemed to have been accepted, and details of the value and nature of the offset contributions are in discussion.



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