DB/TC/CC1236

18 October 2012

HTC Architects
York Place Studio
8 Britannia Street
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LS1 2DZ

Watsons
BUILDING SERVICES LTD

For the attention of: David Wainwright

Dear Sir

Re: James Durrans & Sons Ltd, Penistone - Planning Condition 15 - CO2 Emissions

Various documents covering sustainability requirements to reduce further the CO2 emissions for the new building have been considered and detailed below are our findings.

Photovoltaics have been considered as a form of renewable technology. However, the capital cost and payback period has proved prohibitive. The capital cost required to install sufficient Photovoltaic Cells and control gear would result in the overall project capital cost being unaffordable.

Rainwater Harvesting was considered as a form of renewable technology. However, the low number of toilets which would be fed from the system and the capital cost and payback period has proved prohibitive. The capital cost required to install the system would result in the overall project capital cost being unaffordable.

Solar Thermal was considered as a form of renewable technology. However, low number of wash areas which would be fed from the system, the capital cost and payback period has proved prohibitive. The capital cost required to install the system would result in the overall project capital cost being unaffordable.

We do have though within the M&E design, the following high efficiency/ renewable technologies:-

- An air source heat pump providing heating and hot water to ancillary areas.
- A VRF heating and cooling system providing heating and cooling to the office areas. These units are on the Enhanced Capital Allowance (ECA) Scheme is a key part of the Government's programme to manage climate change.
- The provision of LED (Light Emitting Diodes) has been included to corridor and toilets lighting. Typically, fluorescent lighting has an efficiency of 12 W/m^2 and LEDs are 4 W/m^2. There is a significant increase in capital costs when specifying LEDs. Currently the LED technology is not sufficiently advanced to promote utilising this to serve the office areas, and would be cost prohibitive.
- A DALI lighting control system and DALI compliant fittings will be installed to office areas. Office areas are to have PIR and photocell operated control to switch the lights off when the room is not occupied and dim the lights as the daylight level rises within the room. The control function for the PIR shall be absence detection and shall have a time out period adjustable from 5 Minutes to 1 hour. Photocell control shall automatically dim the lighting in increments from 100% to 5% dependant on the natural light levels in the core of the controlled area. All toilets to have PIRs installed to control the lighting.

We trust the above is satisfactory but if you require further information, please do not hesitate to contact us.

[redacted]

David Bottomley
Director
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