

**Planning Application by Biffa Waste Services Ltd**

**Application Number: 2011/1088/02**

**County Council Identity Number: 2011/C472/02**

**Details: Application for an Energy Recovery Facility and ancillary facilities**

**Submission to Public Consultation**

**ENERGY EFFICIENCY**

**Shepshed Against Incinerator Group (SAIG)     June 2011**

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### **3. Energy Efficiency**

#### **3.1 Policy Framework**

The Leicestershire & Leicester Waste Development Framework Core Strategy includes the following Policy on Energy Recovery.

**Policy WCS6** The strategy is to allow anaerobic digestion (AD), incineration, mechanical-biological treatment (MBT) and other energy/value recovery technologies that would provide for the recovery of energy from waste, provided that:

- (i) pre-sorting is carried out;
- (ii) value recovery from by-products of the process is maximised;
- (iii) energy recovery is maximised;
- (iv) any residue of the process can be satisfactorily managed and disposed;
- (v) the proposal does not cause unacceptable harm to the environment or communities.

Article 6(6) of the Waste Incinerator Directive (WID) requires that any heat generated by the incineration should be recovered as far as practicable. It will, therefore, be necessary for all operators of incineration plants to demonstrate that this condition has been met or explain why it is not possible to recover energy.

The Sector Guidance Note (SGN) and the WID both require that, as well as maximising the primary use of heat to generate electricity, waste heat should be recovered as far as practicable, ie by identifying and utilising opportunities for Combined Heat and Power (CHP) is included as a factor in the decision.

Article 23(4) of Schedule 9 to the EPR 2010 – Waste Framework Directive (WFD) requires the recovery of energy take place with a high level of energy efficiency.

The WFD classifies waste incineration as a disposal operation but it may be regarded as a recovery operation if it operates at a minimum relative efficiency factor of 0.65. Since the relative efficiency of the Newhurst incinerator does not reach this level of efficiency then the Environment Agency (EA) refers to the facility as an Incinerator not as an Energy Recovery Unit (ERF) which is the description used by Biffa. This is confirmed by the EA who state on page 22 of the draft permit document that *‘The current proposal is that the installation will generate electricity only and has been specified to maximise electrical output with little or no use of waste heat’*.

#### **3.2 Biffa Heat Plan**

The Energy From Waste: a Good Practice Guide of November 2003 states that the exploitation of surplus heat from the electricity generation process can increase the overall energy efficiency of an ERF facility significantly, from approximately 22-25% to as much as 85% where CHP generation is incorporated. The facility at Newhurst

Quarry could produce approximately 20 Mega Watts of electrical energy. The amount of heat likely to be generated by the facility is around 70 Mega Watts which could be used by local businesses, as well as communal and domestic facilities. This illustrates the huge benefits that could accrue from a CHP operation – 20 Mega Watts from an electricity alone facility compared with 90 Mega Watts from a CHP system.

The Biffa Heat Plan (BHP) recognises this potential but does not put forward any ways by which this can be achieved in practice. The Environment Agency recognises that there is provision within the design of the steam turbine to extract low-grade steam for a district heating scheme but then goes on to say that establishing a district heating network to supply local users would involve significant technical, financial and planning challenges. The BHP does not address these issues at all – it is not a plan, merely a list of potential sites within 5km of Newhurst Quarry that might utilise the heat. Even this list is derived purely from a desk-top assessment with preliminary discussions held with only two employers. One of the main listed potential users of the excess heat, Astra Zeneca, is in fact scheduled to close.

The Heat Plan Feasibility Study recognises that for viability potential users should be within a 5km radius of the site and use fairly large amounts of heat, preferably with 24 hour demand. A CHP system is more likely to be viable if it can be integrated into new developments rather than retrofitting to an already existing large system. There is no information in the BHP as to whether retrofitting is economically and technically practicable. The feasibility study also discounts the possibility of providing heat to community or private housing schemes since the retrofitting of individual properties is likely to be impracticable.

Paragraph 2.4 of the Heat Plan includes the following: *‘The general approach to planning policy is to encourage renewable sources of energy and make use of the heat produced through CHP processing, the use of good design and the sustainable use of resources. Biffa fully supports these policies’*. However, in practice, Biffa have not submitted any plans *‘to make use of the heat produced through CHP processing’*. Biffa’s support for the policies is at best nominal and at worst non-existent.

### **3.3 Granting of Planning Permission**

Biffa should be refused Planning Permission until they submit a realistic Heat Plan and Feasibility Study showing if, and how it is practicable to implement a CHP system. The Feasibility Study should answer the following questions:

1. Which of the listed organisations would in fact be interested/capable of involvement with a CHP scheme?
2. How much heat would they require and would this requirement be consistent throughout the day/week/year?
3. Would there be enough customers to take 70 Mega Watts of heat?
4. What would happen to the heat in the spring/summer months or during periods when the customer would not require heat?

5. Given that the pipes carrying the hot water/steam would have to cross a major highway (the A512), the M1 motorway as well as housing and industrial estates, what would be the engineering challenges and how would they be overcome?
6. What would be the costs of setting up the CHP system and what are the likely sources of finance?
7. What level of energy efficiency would be achieved if the CHP system went ahead?

The Development Control and Regulatory Board have the duty to ensure that Policy WCS6 is complied with, including the requirement that energy recovery is maximised. Clearly the current Biffa Heat Plan does not provide this assurance. It is unreasonable to expect Biffa to submit a feasibility study showing how the maximum efficiency of 85% might be reached. But it is also unreasonable for Biffa to expect planning permission to be granted with so little information on energy efficiency concerns.

Biffa should not be allowed to waste 70 Mega Watts of Energy whilst they are producing only 20 Mega Watts of electricity. Councillors would not be fulfilling their duty of care if they did not insist on a much more detailed study of how a CHP system could be incorporated into the proposed development. It is clear that the benefit of producing only 20 Mega Watts of electricity do not outweigh the adverse impact on the landscape or the waste of 70 Mega Watts of energy.