bhenergygap

Fryers Road Development Q&A Document

1. **Who is BH EnergyGap?** BH EnergyGap (BHEG) is a developer that maintains a long-term interest in what it develops. BHEG builds success on it's know-how in developing sites, procuring planning consents and building contracts, selecting state of the art technologies and waste management expertise. These skills together with the ability to secure long term institutional funding, enables BHEG to deliver major projects.

2. **What is BHEG proposing?** BHEG is proposing to build a Resource Recovery and Renewable Energy Production Facility (The 3Rs) at the Fryers Road site, Birchills Leamore, Walsall. The 3Rs will process up to 300,000 tonnes of commercial and industrial and similar waste types that would otherwise be sent to landfill.

3. **What is a 3Rs facility?** The 3Rs facility will sort and segregate materials such as metals, plastics and rubble and recover their value using the latest sorting technology such as magnets, eddy currents, near-infrared cameras and air jets. The residual material ('what's left') will be used to produce energy using a process of advanced thermal treatment called Gasification. The gas produced will be used to generate electricity, and potentially heat, for export from the site. These activities will provide a sustainable alternative to landfill disposal, the use of fossil fuels and of primary materials.

4. **Where will waste come from?** Deliveries of materials for processing will come predominantly from commercial and industrial businesses within the Black Country area. Whilst the UK has made major strides in landfill avoidance, there are few local facilities for businesses to ensure waste they generate is properly recycled and processed and therefore there is a real shortage of facilities to support the business community.

   Waste production in the UK is circa 288 million tonnes with 48% landfilled – that's a huge 138 million tonnes every year that just goes into the ground. (Defra June 2011 – waste data overview report) (2008). Action needs to be taken to deal with this major waste disposal problem.

5. **What used to be on this site?** The site has a long history of industrial activity including mining productive coal seams, metal processing and landfill. The site has also been subject to remediation and works to create a development platform.

6. **Why was this site chosen?** The site has an existing full planning permission to build a waste recovery and combined heat & power plant. The site is identified in the adopted Black Country Core Strategy (February 2011) as a site for new strategic waste management infrastructure. It is located within a 'Core Employment Area' that is also part of an 'Industrial Regeneration Area' defined in the adopted Walsall Unitary Development Plan.

7. **Why submit a new planning application?** To enable a better development solution for the site and a more workable and viable commercial solution that will better accommodate technological advances in fast changing market conditions.

8. **What are the benefits compared to the existing planning permission?** Various improvements have been made and include improvements to the architectural design, up to 250 construction jobs, increased capital investment and therefore regeneration opportunities. Increased environmental features such as planting along the canal, the addition of a wild flower meadow, and electric vehicle charging points. Opportunities for district heating or power to nearby businesses and inclusion of facilities for visitors, tours and opportunities as an education and training resource.

9. **What is the application process?** BHEG submitted a new Planning Application on 31 May 2013 to Walsall Council. Details of the final proposals are available via Walsall Council Planning Department or can be viewed on our website www.bhenergygap.co.uk. Key factors which will be fully considered as part of the application process will include ecology, flood, existing site contamination, noise, dust, odour, traffic, air quality and health.

   The 3Rs facility, should permission be granted, will be constructed in accordance with the planning permission granted by Walsall Council and it will be operated in accordance with required permits issued by the Environment Agency.

10. **How many new jobs will the 3Rs create?** During construction the 3Rs facility will create up to 250 jobs. Skills required will be construction, mechanical, electrical and civil engineering, instrumentation and administration. This development will be a significant investment and also create various regeneration opportunities for local business suppliers and services in the area during the building programme and into operation. The construction programme will include a building envelope with offices, internal plant with steel frame and walkways, extensive concrete structures and mechanical machinery. Once operation it is expected to employ up to 50 permanent jobs on site.

11. **When will the 3Rs facility be up and running?**
    Construction and commissioning of the 3R's will take approximately three years to complete.

12. **How much energy will the 3Rs generate?** The 3Rs will generate approximately 19 megawatts of electricity - enough to provide heat, light and power for 42,000 homes.

13. **Will the district heating and/or power generated by the 3Rs facility be available to local users?** BHEG is keen to try and achieve this and the feasibility of such a scheme is currently being assessed. To find out more and express an interest in receiving either heat or power contact BHEG via our website in the contact section www.bhenergygap.co.uk

14. **What advanced thermal treatment is being used at the 3Rs?** The type of advanced thermal treatment being proposed is called 'Gasification'. The incoming waste is subjected to a high temperature in a manner that avoids it burning (the amount of oxygen in this part of the process is strictly controlled); a gas is produced (called a 'syngas') and, after being treated, it is the syngas that is used to generate electricity and/or heat for sale to end users.

15. **What happens on site, please describe the process?** Various waste materials are delivered to the facility from different businesses in the Black Country area. First, the material is weighed and then unloaded into a pit in the delivery hall. Unwanted wastes will be rejected and removed from the site. The remainder is loaded onto a conveyor and moved into the Preparation Hall. The material then passes through a series of electrical/mechanical devices to extract the recyclable materials and produce a quality-controlled fuel for the thermal treatment. The material is shredded to reduce the particle size; screened to remove rubble and debris; passed under magnets to remove ferrous metals and through eddy current separators to remove non-ferrous metals. An optical sort using a near infrared camera removes plastics and can even be used to separate the various polymers. The various materials removed are collected in hoppers, then baled and stored on site. Once there is enough to fill a lorry the materials are loaded up and sent for onward processing and recovery.

    After a possible second shred, the resulting residue from this sorting process is then stored in a silo as Feedstock. From the silo the Feedstock is fed into the gasification chamber which is heated to above 850°C and contains a limited amount of air. The feedstock transforms into an ash and a gas, known as syngas. The ash is discharged from the unit and once cooled is exported from the site to be turned into an aggregate substitute. The hot syngas passes into a boiler where it is mixed with air and fired at high temperature, enabling the boiler to produce superheated steam. The steam then drives a turbo-generator, which produces electricity and heat that is exported from the site to the national grid and/or supplies heat or

power to local users. The remaining cleaned gasses are released through the twin chimneys.

16. **What traffic is the 3Rs facility likely to receive?** Lorry movements related to the development will arrive from the south of Fryers Road.

    The Waste Reception operations will occur during the period 0730 – 1900 hours Monday to Friday and 0730 – 1300 hours on Saturdays.

    At full capacity, the 3R's will have the potential to receive circa 98 HGVs on a typical weekday. These movements are unlikely to occur during traditional peak periods and will not have significant impact on the road junctions in the area. Furthermore, the vehicles are not necessarily new to the area, as some of the vehicles are already servicing local businesses.

    Background traffic counts at the Leamore Lane/Fryers Road junction indicate that there are approximately 934 vehicular movements on some arms during the AM peak period and 969 movements during the PM peak period.

    Few HGV vehicles are likely to use the facility during the AM and PM peak periods. However, if for example 20 HGV movements do occur during these periods it would represent an increase in overall traffic flows of less than 2% during the AM and 2% during the PM peak hours.

17. **What will the building look like?** The buildings have been designed to provide a high-tech business park feel, with clean modern lines. Importantly, one feature has been to enhance the canal walkway views and create wild meadow planting throughout to encourage greater biodiversity in the local area.

18. **How visible will the 3Rs be from nearby properties?** The 3Rs facility is situated in the middle of an industrial estate. The majority of the facility is 19 metres high with the highest part of the building at 37 metres.

    A full landscape and visual impact assessment forms part of the Planning Application. These show various local views with the building superimposed to scale on it.

19. **How high will the chimney be?** The chimneys are expected to be up to 65 metres in height. The final height of the chimneys will be approved by Walsall Council following further discussion with the Environment Agency.

20. **How safe is the 3Rs facility and will there be any health risks?** As part of the planning and permitting requirements to build and operate such a facility a detailed study has already been undertaken and this looks at existing air quality conditions and any additional emissions related to the 3Rs facility including traffic. With this 3Rs facility in full operation any contributions from the plant will be insignificant.

    To operate the 3Rs facility an Integrated Pollution Prevention Control permit will also need to be issued by the Environment Agency (EA). This is done once the EA has independently reviewed all the information and is satisfied that potentially polluting substances are controlled to a safe level. This includes emissions to ground, water and air. Once approved and the facility is operational the 3Rs facility must comply with stringent emission controls which will be monitored by the EA for the life of the facility, along with continuous monitoring and reporting undertaken at the 3Rs facility.