

# Design Review Report

Buttington Energy Recovery Facility,  
Welshpool, Powys

**DCFW Ref: N234**

Meeting of 31<sup>st</sup> July 2020



## Review Status

## PUBLIC

Meeting date	31 <sup>st</sup> July 2020
Issue date	10 <sup>th</sup> August 2020
Scheme location	Welshpool Powys
Scheme description	Energy infrastructure
Scheme reference number	N234
Planning status	Pre-application

## Declarations of Interest

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Panel members, observers and other relevant parties are required to declare ***in advance*** any interests they may have in relation to the Design Review and meeting Agenda items. Any such declarations are recorded here and in DCFW's central records.

None at this meeting.

## Consultations to Date

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This is the first time the Design Commission has been consulted on the proposals. The scheme is a matter of public knowledge and engagement with key stakeholders is ongoing alongside preparation for further public engagement.

## The Proposals

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The proposal is for the Buttington Energy Recovery Facility (ERF) at the site of the former Buttington Quarry, Buttington, Welshpool, Powys, SY21 8SZ. The project is identified as a Development of National Significance (DNS), will occupy approximately 6 hectares on the site of the former quarry and has a budget of £120m. Key programme dates include the DNS Submission in Quarter 4 2020 aiming for DNS Determination in Q4 2021 and a start on site anticipated in Quarter 2 of 2022 subject to consent. The scheme is described as representing an opportunity for *'an anchor development to transform waste management throughout Powys and help deliver the ongoing beneficial use of Buttington Quarry through sustainable, local employment opportunities and environmental enhancements.'*

The stated aim is to deliver long term, cost effective, efficient energy and heat services as part of wider plans to create a sustainable business park in future phases. The development partnership comprises Hitachi Zosen Inova and Broad Energy (Wales) Ltd who will design, build and operate the facility. Generating capacity is estimated at 13

Megawatts equivalent of renewable and low carbon energy, achieved through the thermal treatment of up to 165,000 tonnes/year of non-recyclable residual municipal, commercial and industrial waste, previously destined for landfill. The facility will be accompanied by an adjoining building for staff and visitors including administrative, workshop, shower and catering/mess facilities.

The site of the Buttington Quarry, a former brickworks, lies adjacent to the A458 Welshpool to Shrewsbury Trunk road (NGR: 326690 310106), approximately 1.5km to the south of the village of Trewern and 2km to the north east of Buttington. Surrounded by open countryside and land in agricultural use, the nearest residential development is Cefn, an outlying area of Trewern, located to the north-east between the A458 and Welshpool-Shrewsbury train line. The ERF will be situated on the floor of the main quarry void which is allocated in the local plan, for employment use. The remaining former brickwork buildings are already occupied and used for third party commercial uses. A proximate SSSI is geological in nature and results from the former quarry activity. Heavy vehicular traffic serving the ERF directly access via the A458 trunk road and an improved vehicular access will be constructed 150m north of the existing access to the quarry.

### Main points from the meeting

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Location and site: The Commission understands that early consultation with the Planning Inspectorate Wales indicated further benefit may be drawn from consultation with the Design Commission. The proposal is to be determined as a Development of National Significance (DNS). Such proposals warrant strategic and spatial analysis of appropriate locations as part of the planning process and establishing the principle of development and appropriate use. Whilst the selected site is allocated for employment use in the local development plan, there was no wider evidence presented i.e. that Welsh Government or the local authority has considered the strategic planning process for regional waste facilities at local, regional or national level. Therefore, whilst the site may be opportune, analysis and the application of criteria for appropriate locations and potential sites for Developments of National Significance including waste and energy infrastructure, is not evident and does not form part of establishing and justifying the need for the project. No evidence was provided by the applicant in this respect. Criteria were suggested on site selection, but these were applied to justify the site under consideration, rather than as informing an objective site selection exercise.

Overall design approach: The clear and concise presentation illuminated the design approach to date which has aimed to achieve a compact arrangement within the quarry voidspace, accommodating the technical requirements and necessity for a robust envelope, reducing and limiting visibility from the surrounding landscape.

There are two distinct parts to the facility. The low-level areas of the building which will not be visible from any of the surrounding viewpoints are proposed as clad in profiled metal cladding, with elements of exposed concrete or blockwork for robustness. A mix of profiled metal cladding and flat panels are proposed for visible elevations in a palette of colours and tonal range intended to reflect the surroundings and strata. The same principle is proposed for the roof. The current landscape design strategy is to make use of the existing topography for efficient screening and to retain and reuse excavated soils and clay generated through the construction to create a peripheral screen bund around the site. The planting strategy is for native broadleaf woodland.

The Commission questioned whether this was an appropriate design approach. The technical requirements are understood, however, alternative approaches were not demonstrated with regard to materials choice. The result of the desire to achieve the compactness of form and layout within the developable area is a rather bulky block form which works better on the side elevations. The attempt at compactness and 'hiding' or disguising the plant may be the right one, however, alternatives do not appear to have been tested (or at least was not demonstrated in the materials or at the review). The Design Commission appreciates that the current approach avoids the SSSI, shifts development to the south west of the site and aligns with the land profile at the north west.

The Commission is also aware of the likelihood of a lively debate during public consultation and we wonder whether the design approach too eagerly anticipates that debate and is somewhat defensive as a result. We encourage the team to carry out full analysis of options to help demonstrate the most appropriate approach to the site layout, arrangement and architectural approach to the core facility and ancillary buildings. Taking things back a stage to carry out this analysis and testing will help demonstrate whether the current approach is indeed the most appropriate.

Several views demonstrate the presence of agricultural and industrial structures both prominent and visible in the landscape. The current design approach attempts to camouflage the structures both in terms of form and appearance. We question how successful the use of coloured/tonal cladding might be, especially in the winter, and would urge the team to consider a more distinctive approach, which celebrates visible elements, rather than attempts to hide them. Views from Garreg Bank and the A458 are instructive on this point but are shown in full green. Whilst we appreciate the woodland species, analysis of visibility in winter and varying light conditions would be beneficial.

Administration/staff accommodation and ancillary buildings: The design approach here should contribute to highlighting the environmental, economic, social and educational value of the project as a whole as these represent the point of arrival. The buildings should respond to the quarry setting and have the capacity for visitors to learn and understand more about the wider contribution to more sustainable development and energy production. The administration/workforce building offers the opportunity to make much more of audio-visual interpretation and exhibition design which communicates the waste to energy process and its importance. School and education visits, informal learning and public interest can all be more positively accommodated and offer considerable potential for added value and positive contributions to the locale.

Further thought should be given to more generous amenity and workforce facilities and amenity space, environmental considerations such as selection of materials and embodied energy and acoustic qualities. Careful thought should be given to the experience of the site at human scale and the project would benefit from greater consideration of how people experience this site. The design life across the whole is stated as c30years and the use of recycled steel and minimal concrete are important considerations. The team are encouraged further explore ways to achieve as 'light' a footprint as possible and to communicate steps taken to optimise resource efficiency and environmental benefits, as the proposals develop and, if consented, during and after construction.

## Summary and Recommendations

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In terms of energy generating capacity and reducing waste to landfill the broad need was established. No specific considerations of alternatives were presented however, nor any analysis of current and future waste trends at the local, county and national level. Inherent in ERF facilities is a concern that the long design life allows for a 'lock in' of fuel volumes via contracts which can in some circumstances have the perverse incentive of discouraging waste reduction and can be a dis-incentive for recycling. The Commission would anticipate this aspect being highly scrutinised as part of the planning and determination process for the project, particularly the evidence supporting the long-term residual waste quantum and trends.

Similarly, in respect of site location, a more thorough exploration of the alternatives considered would allow a far more insightful debate. This is particularly important for the challenges of assessing complex and often conflicting environmental and planning issues, such as transportation impacts, local and national air quality, visual impact, and sustainability. On the latter, whilst the panel noted an interest in possible use of the considerable waste heat from the facility, the highly contained nature of the proposed site makes this a challenge to deliver in quantum in the vicinity. Co-location of the facility

adjacent to existing or proposed larger industrial, commercial, or even institutional or residential facilities with large space heating requirements would considerably aid the possibility of this happening successfully into the future. The development and design team may find value on considering this further.

The concept and design approach to what is a project of *national significance* warranting £120m investment should be clearly demonstrated. The Commission urges the team to be confident and to consider and robustly test alternatives to the current design approach. The form and massing may benefit from further consideration and the testing of alternatives to the 'camouflage' approach. Drawing on precedent in the locale and elsewhere and celebrating distinctive aspects, focussing the highest quality on the more visible elements, would be beneficial in better resolving the requirements. Seasonal changes including winter light and landscape conditions should form part of this. The Commission would urge the design team to be bolder and more honest in articulating its design philosophy and how it has been executed in the approach to siting, massing, orientation and finishes. The Commission is not yet wholly convinced that the current approach allows either the complete screening and camouflaging of the building, or the celebration of its important societal and engineering function as a source of renewable energy and a contribution to solutions for residual waste issues.

The site wide sustainability strategy should carefully consider embodied carbon, options for renewables such as PVs and solar thermal on the roof, ground source heat pumps and, importantly, connecting to businesses in the vicinity who will benefit from the energy generation. The 30year design life means the selection of materials and the capacity for recycling is a critical consideration.

Careful consideration is needed for the administration and workforce accommodation building and the Commission would welcome further discussion with the team on this building, its quality, amenity provision and capacity to aid educational/visitor interest and the contribution to be made to the seven goals of the Well-being of Future Generations Act.

Given its nature, the proposal is inevitably likely to be controversial locally and regionally when submitted for its consultation, scrutiny, and determination. Further Design Review presents an opportunity to test and debate justifications for key decisions around a hierarchy of issues. Namely need, site selection, site layout, plant form design philosophy, finishes, environmental and sustainability and approach to staff and visitor accommodation. It is likely this would assist the development and design team in refining communications as effectively as possible regarding the approach taken and why it has been adopted.

The Commission would therefore welcome further consultation with the team and suggest they reserve a second review date as soon as possible due to high demand.

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***A Welsh language copy of this report is available upon request.***

Attendees

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Agent/Client/Developer:	Alistair Hilditch-Brown, Broad Energy, Developer
Design & Client Team:	David Speddings, Race Cottam Associates Ltd, Architect. Rick Bright, Rick Bright Associates, Landscape Architect. Karen Hearnshaw Carter Jonas, Planning Consultant. Sarah Burley, Environmental Compliance Limited.
Design Review Panel:	
Chair	Cora Kwiatkowski
Lead Panellist	Simon Power Kedrick Davies Jen Heal, Design Advisor, DCFW Efa Lois, Place Advisor, DCFW Carole-Anne, Chief Executive, DCFW