



## **BUTTINGTON ENERGY RECOVERY FACILITY WASTE PLANNING STATEMENT**



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## **Waste Planning Statement**

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## List of Abbreviations

### Abbreviation

DAS	Design and Access Statement
DNS	Development of National Significance
EIA	Environmental Impact Assessment
EPC	Engineering, Procurement and Construction (Contractor)
ERF	Energy Recovery Facility
ES	Environmental Statement
HGV	Heavy Goods Vehicle
HZC	Hitachi Zosen Corporation
HZI	HZI Zosen AG
MBT	Mechanical Biological Treatment
MSW	Municipal Solid Waste
NRW	Natural Resources Wales
NWMWPS	North Wales Minerals and Waste Planning Service
PINS	Planning Inspectorate
PCC	Powys County Council
RDF	Refuse Derived Fuel
TA	Technical Appendix
TAN	Technical Advice Note
TPA	Tonnes Per Annum
WM	Welsh Ministers

# 1 Introduction

## 1.1 The Proposed Development

1.1.1 This Waste Planning Statement (WPS) has been prepared by Carter Jonas to accompany a planning application submitted to the Welsh Ministers under Part 5 of the Planning (Wales) Act 2015 by Broad Energy (Wales) Limited ("Broad Energy" or "the Applicant").

1.1.2 The application is for:

"Proposed construction and operation of an energy recovery facility for the importation, storage and treatment of municipal, commercial and industrial waste and generation of heat and electricity, involving partial re-profiling of quarry void, earth works, alteration to existing residential access and provision of new vehicular site access from the A458 and site haul roads ancillary buildings, structures, transformer, sub-station and grid connection, parking, hardstanding including laydown areas for materials storage and plant, workshop, weighbridge, offices, welfare/mess facilities, fencing, gates, security and CCTV, bicycle storage and electric charging facilities, sustainable drainage measures, landscape works and ecological enhancements on land at Buttington Quarry, Buttington, Welshpool, Powys, SY21 8SZ ("the Development Site").

2.1.1 The Development Site location and planning boundary are shown on Figure 1-1 and application Drawing ECL-BQ-000 Rev 3 in Technical Appendix 4-1.

**Figure 1-1 – Site Location**



1.1.3 The Development accords with the definition of a Generating Station as set out in Regulation



4(1) of the Developments of National Significance (Specified Criteria and Prescribed Secondary Consents) (Wales) Regulations 2016, as the construction of a generating station expected to have an installed generating capacity of between 10 and 50 megawatts. The Development is therefore a “Development of National Significance” or “DNS” and has been accepted as such by the Planning Inspectorate (PINS).<sup>1</sup>

- 1.1.4 This WPS has been prepared in accordance with Annex B of Technical Advice Note (TAN) 21: Waste, which is included as Appendix 1 of this document. The requirements include details of the proposed development (type and quantity of waste to be managed, design and layout of buildings, lifespan and hours of operation), need for the development and energy efficiency.
- 1.1.5 As the planning application is supported by an Environmental Statement (see section 1.4 below) including a Non-Technical Summary (NTS), WPS need not repeat information detailed in the ES, but rather provide references indicating where the information can be found within it (TAN 21, Annex B).
- 1.1.6 However, the WPS must set out how potential amenity, nuisance and air pollution impacts have been assessed and appropriately mitigated. This is addressed in Chapter 4 of this Statement.

## **1.2 The Applicant**

- 1.2.1 The Broad Group is a multi-disciplinary group of companies providing Environmental Waste Management Services, Renewable Energy Infrastructure Development and Alternative Fuel Supply Chain Services to the renewable energy sector. Broad has grown into one of the industry’s leading waste management businesses with a multi-million pound turnover and an ever growing client base of some of the UK’s largest private and public businesses.
- 1.2.2 Broad Energy (Wales) Ltd (“Broad Energy”) is a special purpose company that has been established by Broad Group (UK) to develop the proposed ERF. This independently owned and operated company will form the key anchor delivering long-term cost effective and efficient energy and heat services as part of the wider plans by the owners of Buttington Quarry to create a sustainable eco-business park.
- 1.2.3 Broad Energy has formed a strategic partnership with global leader HZI Zosen AG (“HZI”) to design, build and operate a facility that will support the generation of renewable energy and heat through the use of non-recyclable waste.
- 1.2.4 This partnership seeks to ensure that, wherever possible, all future changes at the Development Site contribute to the local economy, offer new job opportunities to the local community and assist Powys County Council (PCC) with local recycling initiatives.

## **1.3 The Operator**

- 1.3.1 HZI is a wholly owned subsidiary of Hitachi Zosen Corporation and would be both the main technology supplier and operator of the ERF.
- 1.3.2 HZI is a global technology leader for energy and material recovery from waste. HZI solutions

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<sup>1</sup> PINS Notice of Acceptance, dated 5 August 2020

are based on efficient and environmentally sound in-house technology, which has been thoroughly tested, can be flexibly adapted to user requirements and cover the entire plant life cycle.

- 1.3.3 HZI is the global leader in the design, procurement and construction of moving grate Energy from Waste facilities, with over 500 Energy from Waste references worldwide including 12 in the UK and Ireland. Currently, operational plants utilising HZI's proven technology include Kidderminster- Worcestershire, Greatmoor – Buckinghamshire, Ferrybridge - West Yorkshire and Millerhill – Edinburgh.

## **1.4 The Application**

- 1.4.1 This planning application has been prepared and submitted in accordance with the following statutory requirements, regulations, planning policies and guidance.

- Town and County Planning Act 1990 (as amended).
- The Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (as amended).
- Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017.
- The Developments of National Significance (Wales) Regulations 2016 (as amended).
- The Developments of National Significance (Procedure)(Wales) Order 2016 (as amended).
- The Development Plan
  - National Development Framework – Future Wales: The National Plan 2040
  - Powys Local Development Plan
- Planning Policy Wales, 11<sup>th</sup> Edition
- The Welsh Government's Technical Advice Notes (TANs).
- The Welsh Government DNS Guidance for Applicants.

### **Environmental Impact Assessment**

- 1.4.2 The Proposed Development falls within Category 10 of Schedule 1 of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (EIA Regs) as it comprises:

“waste disposal installations for the incineration... of non-hazardous waste with a capacity exceeding 100 tonnes per day”.

- 1.4.3 As such, the planning application must be accompanied by an Environmental Statement (ES). An EIA Scoping Request was made to the Welsh Ministers in August 2018. A copy of Applicant's Scoping Report and PINS' Scoping Direction is included with this planning application. The ES and technical appendices cover the following key environmental aspects of the proposed development:

- Air Quality (Chapter 6);
- Socio-Economic (Chapter 7)
- Highways and Transportation (Chapter 8);
- Landscape and Visual (Chapter 9);

- Ecology (Chapter 10);
- Water Environment (Chapter 11);
- Archaeology and Heritage (Chapter 12);
- Geotechnical (Chapter 13);
- Noise and Vibration (Chapter 14);
- Health (Chapter 15); and
- Cumulative Impacts and Summary of Mitigation (Chapter 16).

1.4.4 EIA Regulations, Schedule 4 requires a consideration of:

“An outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for his choice, taking into account the environmental effects”.

1.4.5 A review of alternative technologies and an alternative sites assessment is provided in ES Chapter 3: Need and Alternatives.

1.4.6 The DNS submission includes the following documents:

- Planning Application Form, Certificates and Notices;
- Environmental Statement, Technical Appendices, and Non-Technical Summary;
- Site Plans and Drawings;
- Design and Access Statement;
- Pre-Application Consultation Report;
- Waste Planning Statement; and
- Shadow Habitats Regulations Assessment.

1.4.7 A full list of planning application and ES documents and where they can be found is set out in the ‘Index to DNS Submission’

## **1.5 Pre-Application Consultation**

1.5.1 The Planning (Wales) Act 2015 is the primary legislation for planning applications to be determined by Welsh Ministers. It affirms the ‘plan led’ approach to planning and includes the key statutory pre-application public consultation requirements.

1.5.2 The statutory provisions and requirements for pre-application consultation are set out in The Developments of National Significance (Wales) Regulations 2016 (DNS Regs) and The Developments of National Significance (Procedure)(Wales) Order 2016 (DNS Order). Under the DNS procedures, pre-application consultation forms a central part of the process and comprises both informal and statutory consultation.

1.5.3 The Applicant engaged from an early stage with PINS (on behalf of Welsh Ministers), the North Wales Minerals and Waste Planning Service (NWMWPS), Powys County Council (PCC) and technical consultees such as Natural Resources Wales (NRW), for the purposes of establishing the extent of the supporting information likely to be required to support the application, and relevant in respect of the Environmental Permitting of the Development. They also engaged with the Design Commission for Wales on the layout and detailed design of the ERF and its context.

- 1.5.4 Under the DNS Regs<sup>2</sup> the Applicant requested formal pre-application services from the local planning authority, PCC, the scope of which was agreed via a Planning Performance Agreement.
- 1.5.5 Formal pre-application consultation took place between 14<sup>th</sup> September and 26<sup>th</sup> October 2020 (i.e. the requisite 42 days) in accordance with the DNS Order. The Consultation Report details the publicity and consultation carried out prior to submitting the application to PINS, together with a summary of how comments were considered in preparing the final proposals.
- 1.5.6 In summary, pre-application consultation included:
- notices displayed on/near the application Development Site;
  - notice published in the Powys County Times and a Press Release in several local papers;
  - letters and notices sent to consultees including local Members ('community consultees'), technical consultees ('specialist consultees') such as NRW and Highways Authority (PCC) and others who have been engaged in the process including Shropshire Council as neighbouring authority; and
  - letters and notices sent to owners or occupiers adjacent to the planning application Development Site.
- 1.5.7 A dedicated project website was created where the following could be viewed and downloaded:
- draft planning application documents and ES;
  - consultation booklet;
  - details of webinars and an appointment based consultation drop-in session for those unable to engage on-line; and
  - response form and details of phonenumber and freepost address for further information and for submitting comments on the consultation.
- 1.5.8 Within 42 days of submitting the Buttington ERF DNS application, PINS will confirm to the Applicant if the submission is valid.
- 1.5.9 Following formal confirmation of a valid application PINS will publish the documents and begin the five week period of consultation. During this period relevant consultation and publicity will be undertaken by the Inspectorate who will contact consultees. The table below summarises the publicity requirements<sup>3</sup> and the responsible bodies.

Responsible authority	Publicity or consultation requirement
The Inspectorate (PINS)	Letters to statutory consultees
	Publishing material on DNS website
	Informing Powys County Council (Local Planning Authority) of the requirement to submit a Local Impact Report
	Press notice in local paper
The Inspectorate, with input from Powys County Council	Neighbour notification letters
	Notification to Community Councils
	Letters to interested parties and organisations

<sup>2</sup> Regulations 6 and 7

<sup>3</sup> <https://gov.wales/sites/default/files/publications/2019-11/developments-of-national-significance-dns-procedural-guidance.pdf>



Powys County Council	Erection of site notices (copies to be supplied by the Inspectorate)
	Placing a copy of the application on the local planning register

## 2 The Development Site

### 2.1 Development Site and Surrounding Area

- 2.1.2 Buttington Quarry is located on the A458 Shrewsbury to Welshpool Trunk Road, on the approximate Ordnance Survey National Grid Reference SJ 26826 10149.
- 2.1.3 The quarry occupies a total area of just under 18 hectares (ha) and is bounded by the A458 to the northwest, Sale Lane to the east and Heldre Lane to the south (both being unclassified roads). The Welshpool-Shrewsbury railway line runs immediately northwest of the A458, towards the northernmost point of the quarry crossing under the A458 and for a short section runs between the A458 and the wider quarry boundary.
- 2.1.4 The proposed Development Site boundary comprises an area of the quarry floor within the main quarry void together with the access corridor to the Development Site entrance and an area of land at the southern edge of the quarry. It is shown on the Planning Boundary Drawing ECL-BQ-000 Rev 3 in Technical Appendix 4-1.
- 2.1.5 The quarry is surrounded by open countryside with the village of Buttington located approximately 2km to the south-west, and Trewern approximately 1.5km to the north-east. Directly to the north-east of the Development Site is an outlying area of Trewern known as Cefn. This comprises an additional area of sporadic isolated houses and a larger area of residential development, including a school (Buttington Trewern County Primary School).

### 2.2 Local Development Plan Status

- 2.2.1 The Powys Local Development Plan (LDP) adopted in April 2018, covers the period 2011 to 2026.
- 2.2.2 6 ha of Buttington Quarry including the existing quarry void and the former brickworks site are allocated for B1, B2 and B8 employment development under LDP Policy E1 – Employment Proposals on Allocated Employment Sites. The accompanying text confirms that the site could be suitable for waste use under Policy W1 – Location of Waste Development. Further details of the local plan designation and policies relating to this site is provided in Section 3 of this WPS.

### 2.3 Planning History

- 2.3.1 Buttington Quarry has been operational as a clay pit primarily for the brick industry from the 1800's to the present day, resulting in the formation of a large void. Various applications for the continuation of quarrying activities, revisions to the quarry access and regularisation of diversified industrial uses have been submitted over the period of operation of the Quarry.

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- 2.3.2 The Quarry previously supplied clay to the adjoining Buttington Brickworks but, since the closure of the brickworks in 1990, has continued to produce only low-grade construction materials. Buttington Quarry is home to several commercial operations, including operations by Border Stone.
- 2.3.3 During 1999-2008 there was a considerable output of clay (circa. 75,000 to 95,000 tonnes per annum (tpa)) and decorated stone outputs of around 40,000-50,000tpa. The decorative stone sales also involved an equal tonnage of bulk material being imported to the quarry, so both operations involved around 150,000 – 195,000tpa of material being imported/exported from the quarry.
- 2.3.4 The former brickworks buildings are now occupied and used for third party commercial uses including storage and distribution.
- 2.3.5 The planning history for the entire Buttington Quarry area was obtained from Powys County Council's online planning register and is set out in Table 4-5 of ES Chapter 5 – The Existing Environment.

### 3 Overview of Proposed Development

- 3.1.1 ES Chapter 4 – Description of the Development, provides a detailed description and simplified flow diagram for the ERF process. The key elements of the facility and its design are summarised below.
- 3.1.2 Several different combustion technologies were reviewed prior to selecting the preferred technology for the Buttington ERF. Many of these were discounted due to either the waste they treat or the lack of proven performance and commercial applicability. Further detail is provided in ES Chapter 3 – Need and Alternatives.
- 3.1.3 Broad Energy has chosen moving grate incineration as the most appropriate combustion technology for the Buttington ERF. The HZI-designed moving grate allows a vigorous, stable fire, in which all the combustion phases - drying, gasification, ignition and combustion - occur simultaneously and consecutively at the front end of the grate. The constant stoking motion results in a uniform heat release and ensures excellent burnout. The HZI-designed grate has been used in more than 350 combustion systems in over 200 plants worldwide since 1965.

### 3.2 Waste Feedstock

- 3.2.1 The Buttington ERF will accept a range of non-hazardous residual municipal (household) commercial and industrial (C&I) wastes. The term ‘residual’ means that recyclable materials would have been recovered from the waste streams, either at source, or through other processing facilities.<sup>4</sup> It is understood that residual waste arisings in Powys are currently being disposed of to landfill outside the County or exported to England for energy recovery.
- 3.2.2 The ERF will have the capacity to treat up to 167,000 tonnes per annum (tpa), although in practice the plant will accept 150,000tpa. The difference in the figures is based on the difference between the maximum design capacity and what is possible taking account of operational hours and maintenance periods. Based on the Market Appraisal (Appendix 3.1, ES Chapter - Need and Alternatives) it is estimated that around 40,000tpa of MSW is potentially available from Powys and Ceredigion Counties, the remainder originating from C&I waste.
- 3.2.3 Air Pollution Control Residues (APCR) will be transported off-site to a suitably permitted facility. Incinerator Bottom Ash (IBA) would be re-used in the construction market and for building aggregate as it is classed as a non-hazardous material.

### 3.3 Energy Efficiency

- 3.3.1 The facility will be ‘R1 efficient’<sup>5</sup> and will generate up to 12.8MWe of renewable and low carbon energy in the form of electricity and heat. This will be achieved through the thermal treatment of the residual waste.
- 3.3.2 Electricity will be exported to the National Grid to help provide greater security of future supplies. The facility will be designed to be combined heat and power (CHP) ready. This will

<sup>4</sup> Municipal waste now includes some wastes produced by commerce and industry. However, for the purposes of this WPS, municipal waste is household waste collected by local authorities as separate from commercial and industrial ‘C&I’ wastes

<sup>5</sup> The R1 Energy Efficiency Formula within the Waste Directive is used to determine whether a facility is classed as a disposal operation or energy recovery operation. A facility may be defined as a recovery operation only if the R1 energy efficiency is greater than 0.65.

allow for the export of heat to future users of the existing business park as part of the wider plans for the quarry owners. Furthermore, energy could be supplied to existing developments in the area should suitable users come forward.

### **3.4 Layout, Buildings, Plant and Access**

- 3.4.1 The Development Site Plan, Drawing ECL-BQ-001 in Technical Appendix 4-1 illustrates the proposed layout of the buildings, plant, operational areas, haul roads and layout areas. The General Arrangement Plan Drawing BUT-RCA-00-ZZ-DR-A-0202 shows in more detail the arrangement of the ERF and ancillary buildings and associated parking within the area of the quarry void. The external lighting strategy is shown on Drawing 4052-ID-DR-1002 in Technical Appendix 4-2 and is summarised in Chapter 4 of this WPS.
- 3.4.2 The operational element of the ERF will be contained within a single 'main' building and a single stack structure: all wastes will be deposited within the building and there will be no external storage of material. The main elements of the building are:
- Waste Reception Hall;
  - Waste Bunker;
  - Boiler Hall;
  - Bottom Ash Storage;
  - Flue Gas Treatment Facility;
  - Flue Stack;
  - Turbine Hall; and
  - Bottom Ash (Storage and Loading) Hall.
- 3.4.3 The main building will have a length of approximately 150m, around 65m of which is required to accommodate the air-cooled condensers, and a width between a maximum of 56.5m, narrowing to 21.7m at the upper levels. The height of the main building will vary reflecting the operational height requirements of the various elements of process equipment. The tallest part will house the Boiler Hall at a height of circa 46m above ground level down to circa 33m for the roof of the Waste Reception Hall. The main stack will extend 70m in height from within the main building envelope.
- 3.4.4 Ancillary rooms, separate from the main building, will provide office accommodation and welfare facilities for employees at the ERF and a space where members of the local community and other visitors will be able to learn about and observe the recovery process undertaken at the ERF.
- 3.4.5 Associated infrastructure will include and office, welfare/mess facilities, workshop, weighbridge and weighbridge office, wheelwash facility, car and HGV parking areas, substation and grid connection and security measures (gates, fencing and CCTV).
- 3.4.6 A new access will be constructed off the A458 trunk road (A458T), approximately 170m north of the existing quarry access. The new and improved access and associated realignment of a stretch of the trunk road forms part of the ERF proposal and is of the same design as that previously approved under extant planning consent P/2015/0439. A section 73 planning application (ref: 20/0575/REM) to extend the timeframe for commencement of development was approved in 2020. The access is shown on the Access Plan, Drawing BT1180-D2v1 in

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Technical Appendix 4-1.

- 3.4.7 Vehicular access within the Development Site will be via haul roads. Operational vehicles associated with the ERF will be segregated from staff and visitors and road safety measures will be incorporated into the road design. The Design and Access Statement (DAS) describes how internal and external layout and circulation within the Development Site will be designed to accord with legislation and guidance on accessibility and safety.

### **3.5 Design and Landscape Strategies**

- 3.5.1 Located approximately 1.5km to the south-west of Trewern, the Development Site is at an appropriate distance from the nearest built-up area. Furthermore, the ERF will be situated, and partially hidden, within the quarry void of the existing Buttington Quarry which has a long history of industrial related use (quarry and former brickworks).

- 3.5.2 The project architects and landscape architects have engaged in a detailed design process to deliver a high quality and standard of built form capable of integration into the existing landscape setting. The aim has been to design a discreet building that blends into its landscape, as opposed to a stark 'iconic' building form which contrasts with its surroundings. Using data from the LVIA, each elevation has been designed to minimise the visual impacts of the buildings. Using a mix of colours from the selected palette, the arrangement of building panels has been 'tuned' to suit the landscape setting and backdrop. The palette of colours has been drawn from the local and surrounding landscape:

- Earth quarry faces - pinks, browns and oranges;
- Greens/ yellow tones of trees, fields, dark greens of boundary walls and hedges;
- Purple Haze of distant moorland; and
- Sky Blues / greys.

- 3.5.3 The design strategy is illustrated on the application plans and elevations, the Design and Access Statement and the Landscape and Visual Impact Assessment (LVIA) in ES Chapter 9.

- 3.5.4 In summary, the design strategy is as follows.

- The built form reflects the infrastructure technology required for the ERF facility.
- Each element has been designed to the minimum size needed to reduce the mass. Only where required to integrate the structure into the landscape has the function form of the buildings been altered.
- Each key stage/process of the energy recovery is 'housed' within a designed structure intended to be simplistic in shape and form, reliant upon the choices of cladding and colour to offer design features as well as visual mitigation.
- An integral element to the built form is a sloping central roof feature that links the various smaller building components and which, in a visual sense, breaks up the large massing and scale of the overall building.
- Materials have been selected based on their thermal and acoustic performance and robustness.
- The building design incorporates cladding which uses subtle hues of green, brown and cream to intentionally reflect the natural colours experienced in the landscape setting which is predominantly a rural setting with woodland and agricultural land uses.



- Detailed design will mitigate against a dominant built form which is situated in an otherwise irregular landscape comprising lowland fields and hill and valley features. A range of differing scales to the cladding colour matrix was investigated as part of the design process.
- The choice and combination of simple colours is key to the design strategy. Its aim is to reduce the appearance of the broader scale and to draw the eye to create a 'visual scene' that blurs the edges and facades of the building mass and reflects the more dominant scale and grain experienced in the adjacent landscape setting.

3.5.5 The building design is complemented by a landscape strategy which is illustrated on the Landscape Masterplan Drawing BT1180-D2v7, in Technical Appendix 4-1. In summary it will:

- make use of the existing topography where it provides an efficient existing screen;
- retain excavated soils and clay generated through the construction process to create a peripheral screen bund where existing screening is limited;
- extensively plant around the periphery with a native broadleaf woodland;
- allow for restoration of previously extracted quarry areas to grassland and scrub with local biodiversity value;
- preserve the geological Site of Special Scientific Interest (SSSI) which lies outside the planning application boundary;
- develop large areas of open mosaic habitat as diverse early successional habitat; and
- offer a unique wetland habitat through surface water design.

## **3.6 Project Timescales**

3.6.1 Based on a 3-year construction period starting early 2022, the plant would open in early to mid-2025. The facility has a 25-30-year design life.

## **3.7 Process, Working Hours and Transport Movements**

### **Construction Phase**

- 3.7.1 On-site construction activities will include site preparation (earthworks including re-profiling of part of the quarry void, foundations and drainage), mains structural works (erection of building frames) followed by ancillary works (hardstanding, parking areas, security structures and landscaping).
- 3.7.2 Laydown areas will be used for activities during the construction phase such as storage, fabrication, parking and security and welfare accommodation. These are shown on ECL Drawing ECL-BQ-001 in Technical Appendix 4-1.
- 3.7.3 The proposed new access off the A458T will be built during the construction phase. The existing access will continue to be used for construction traffic and once no longer needed it will be closed, other than to provide access to an existing residential property.
- 3.7.4 Apart from certain construction activities e.g. during the internal fit of the building and delivery of abnormal loads, construction operations would generally take place between:
- 07:00 to 1900hrs Monday to Friday; and

- 07:00 to 12.30hrs Saturday.

- 3.7.5 The construction phase will provide employment for over 300 workers throughout the 3-year build. Temporary traffic movements will include travel by construction staff (private car and light goods vehicles) and materials delivery (HGVs). Table 8-3 of ES Chapter 8 (Transport) sets out the movements which are estimated to be 141 HGVs (242 two-way movements) and 108 cars (216 two-way movements) during the first six month (enabling stage). The construction phase average (excluding enabling stage) is estimated to attract 108 cars (216 two-way movements) and 13 HGVs (26 two-way movements).
- 3.7.6 The Contractor will be required to operate under a site-specific Construction Environmental Management Plan (CEMP) and in accordance with regulations for the disposal of construction materials. The CEMP is included in the Technical Appendix 4-3 (ECL:001.01.01/CEMP).

### **Operational Phase**

- 3.7.7 All waste will be delivered to the installation by road. Delivery HGVs will enter the weighbridge and be directed to the Waste Reception Hall which will be accessed by means of a fast action roller-shutter door which will automatically operate on the approach of a vehicle. On entering the hall, the door will close behind the HGV, so that material is tipped into the waste bunker in an enclosed environment. The vehicle will then exit the installation.
- 3.7.8 The ERF will operate on a 24 hour a day, 7 days a week. This is necessary to ensure operational efficiency. Incoming waste and deliveries of consumables, together with export of bottom ash would take place for up to 12 hours on weekdays (7am – 7pm) and 5.5 hours on Saturdays (7am-12pm).
- 3.7.9 Waste deliveries are based on a 278 working day year (5.5 day week minus 8 public holiday days) and an average load of 15 tonnes per vehicle. Additionally, taking into account deliveries of consumables and the collection of IBA and APCR residues the average daily HGV levels attracted to Buttington ERF is expected to comprise 50 vehicular loads per day. Full details are provided in ES Chapter 8 (Highways and Transportation).
- 3.7.10 The proposed development is likely to employ 30 permanent staff which is estimated to generate 22 vehicle morning arrivals and evening departures. The remainder of ‘movements’ would be via walking, public transport, cycling, or commuting as passengers.

### **Proposed restoration**

- 3.7.11 The ERF would have a design life of approximately 25-30 years, however, in reality the ERF would last well beyond this, with the ability for the equipment within the building to be upgraded/replaced as required in the future.
- 3.7.12 The scheme allows for restoration of parts of the former quarry which will provide landscape areas around the built development.
- 3.7.13 The decommissioning stage will involve removal of built form and ground restoration. The planting illustrated on the Landscape Masterplan will link to existing areas of woodland both within and adjacent to the Site. Sustainable Drainage Systems include surface water attenuation ponds, together with amphibian wetland and peripheral habitat creation. The Buttington Brickworks geological SSSI is located outside the planning application boundary and

will not be affected by the development. The buildings and yard area located south of the site and which previously formed part of the quarry working will in future be used for the logistics industry.

#### **Decommissioning Stage**

- 3.7.14 Chapter 4, Section 4.7 describes the decommissioning stage in detail.
- 3.7.15 A detailed Site Closure and Decommissioning Plan will be included within the management system required by the Environmental Permit and it will be submitted to NRW for approval once the ERF is fully operational.
- 3.7.16 In the event of the definitive cessation of activities at the ERF, an application will be submitted to NRW to surrender the Environmental Permit. This will be accompanied by a Surrender (Site Condition) Report which will describe the condition of the land within the ERF boundary. The report will need to demonstrate that there has been no deterioration in the site condition as a result of permitted activities since the permit was issued.
- 3.7.17 Broad Energy (Wales) Limited will ensure that appropriate measures are put in place to avoid any pollution risk at the site during the decommissioning activities, and to ensure that it is returned to a satisfactory state. Section 4.7.5. of this document outlines these measures, although Broad will agree a detailed Site Closure Plan with NRW in advance.

## 4 Waste Policy Context and Need

### 4.1 Introduction

4.1.1 This Chapter sets out how the Buttington ERF proposals meet the aims and requirements of key waste management legislation and policies listed below. Their inter-related contribution to renewable and low-carbon energy production is covered in Chapter 5.

4.1.2 In particular this Chapter considers the proposals in the context of targets for the diversion of waste away from landfill towards management methods aimed at prevention/re-use/recycling and recovery, as well as locational criteria for siting waste management facilities.

#### ☐ International

- Waste Framework Directive 2008/98/EC and The Waste (England and Wales) Regulations 2011 (as amended).

#### ☐ National Legislation/Policy

- Well-being of Future Generations (Wales) Act 2015.
- Planning Policy Wales (Edition 11) (February 2021).
- Prosperity for all: A low carbon Wales (March 2019).
- The Environment (Wales) Act 2016.
- Towards Zero Waste: One Planet (2010) and associated Sector Plans.
- Technical Advice Note 21: Waste (February 2014).

#### ☐ Development Plan

- National Development Framework (February 2021).
- Powys Local Development Plan (2011-2026).

### 4.2 Waste Framework Directive 2008/98/EC

4.2.1 The Waste Framework Directive lays down waste management obligations for Member States; to establish an integrated and effective network of waste disposal plants, prepare waste management plans, ensure the proper storage and handling of wastes and that waste treatment operations are regulated by means of an environmental permit.

4.2.2 The Directive sets out a 'waste hierarchy', which places top priority on waste prevention and, thereafter, the management of residual waste as a valued resource where it cannot be avoided:

- Prevention;
- Preparing for re-use;
- Recycling;
- Other recovery (e.g. energy recovery); and
- Disposal.

4.2.3 In Wales, waste has historically been disposed of in landfills and there remains an urgent need to continue to reverse this trend. The UK and Welsh Governments have set stringent targets to avoid waste being sent to landfill with heavy fines imposed on local authorities that do not provide alternative, appropriate, long-term, waste management infrastructure.

- 4.2.4 The Directive is implemented through the Waste (England and Wales) Regulations 2011 which require businesses to confirm that they have applied the waste management hierarchy when transferring waste and to include a declaration to this effect.

The 'R1 energy efficient'<sup>1</sup> **Buttington ERF** will move residual waste away from disposal to landfill and 'up the hierarchy' to enable waste to be used in place of fossil fuels to generate energy. It will provide a sustainable and beneficial, low carbon solution for the management of waste from within Powys County and the identified catchment area, more detail about which is provided in Section 4.11.

### 4.3 Wellbeing of Future Generations (Wales) Act 2015

- 4.3.1 The Wellbeing of Future Generations (Wales) Act 2015 imposes a social, economic, environmental and cultural "well-being" duty on public bodies and requires them to act in a manner which seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.

- 4.3.2 The Act puts in place seven well-being goals:

- A Prosperous Wales;
- A resilient Wales;
- A Healthier Wales;
- A More Equal Wales;
- A Wales of Cohesive Communities;
- A Wales of vibrant culture and thriving Welsh language; and
- A globally responsible Wales.

- 4.3.3 This "wellbeing duty" is a fundamental underlying consideration in the process of determining planning applications.

Table 1 (page 50 of this WPS) summarises how the **Buttington ERF** will help meet the 'wellbeing goals' and contribute to the 'place making outcomes' identified in Planning

### 4.4 Planning Policy Wales

- 4.4.1 The application of the Well-being of Future Generations (Wales) Act 2015 in a planning context is reflected in Planning Policy Wales (PPW) Edition 11, published 24 February 2021.

- 4.4.2 Chapter 2 of PPW is concerned with "People and Places" and achieving well-being through "Placemaking" which is now a major policy theme and requirement in both plan making and development management decisions.

- 4.4.3 PPW defines 'placemaking' as:

"a holistic approach to the planning and design of development and spaces, focused on positive outcomes. It draws upon an area's potential to create high quality development and public spaces that promote people's prosperity, health, happiness, and well-being in the widest sense.



Placemaking considers the context, function and relationships between a development site and its wider surroundings. This will be true for major developments creating new places as well as small developments created within a wider place.

Placemaking should not add additional cost to a development, but will require smart, multi-dimensional and innovative thinking to implement and should be considered at the earliest possible stage. Placemaking adds social, economic, environmental and cultural value to development proposals resulting in benefits which go beyond a physical development boundary and embed wider resilience into planning decisions.”

- 4.4.4 Placemaking and achieving sustainable places is underpinned by five ‘Key Planning Principles’. These are intended to ensure that the right development is in the right place and to enable the goals and five ways of working set out in the Well-being of Future Generations Act to be realised through land use planning. The ‘Principles’ are translated into National Sustainable Placemaking Outcomes which should be used to inform the assessment of development proposals. The Principles and Outcomes relate to:

- Growing the economy in a sustainable manner;
- Making best use of resources;
- Facilitating accessible and healthy environments;
- Creating and sustaining communities; and
- Maximising environmental protection and limiting environmental impact.

- 4.4.5 Paragraphs 5.13.4 and 5.13.15 confirm that:

“The Welsh Government’s general policy for waste management is contained in its overarching waste strategy document Towards Zero Waste and associated sector plans. Planning authorities should, in principle, be supportive of facilities which fit with the aspirations of these documents and in doing so reflect the priority order of the waste hierarchy as far as possible”.

- 4.4.6 PPW does not provide specific advice for the location of potential waste sites. However, it does reaffirm the ‘Proximity Principle’ (i.e. that waste should in general be treated and disposed of close to where it was produced) and that sites should be selected so as to minimise adverse environmental and amenity impacts.

- 4.4.7 Para 5.13.10 accepts the need for facilities to deal with residual waste:

“Planning authorities must support the provision and suitable location of a wide ranging and diverse waste infrastructure which includes facilities for the recovery of mixed municipal waste and may include disposal facilities for any residual waste which cannot be dealt with higher up the waste hierarchy. The extent to which a proposal demonstrates a contribution to the waste management objectives, policy, targets and assessments contained in national waste policy will be a material planning consideration.”

- 4.4.8 Para 5.13.11 provides guidance on the principle of self-sufficiency and nearest appropriate installation:

“The ‘Nearest Appropriate Installation’ concept and the principle of self-sufficiency will only be applicable in relation to wastes covered by Article 16 of the revised Waste Framework Directive<sup>5</sup> and should guide the provision of an integrated and adequate

network for the treatment of such wastes. The network should include all necessary supporting facilities such as waste transfer stations and processing facilities<sup>6</sup>.”

- 4.4.9 PPW confirms the Collections, Infrastructure and Markets (CIM) Plan (see below) as the starting point when considering need for waste management infrastructure, but that it is not necessary for LPAs to repeat the waste assessment in the CIM Plan at the regional or local level. Rather, the extent of waste management progress should be established through regional monitoring. The onus will be on strategic and local plans to identify locations for waste management development and the criteria by which applications will be determined.

**Buttington ERF** will contribute to the diverse waste infrastructure capacity required to help manage residual waste within Powys and the environs.

Table 1 (page 50 of this WPS) summarises how the **Buttington ERF** will help meet the ‘wellbeing goals’ and contribute to the ‘place making outcomes’ identified in Planning Policy Wales.

## 4.5 Towards Zero Waste: One Planet 2010

- 4.5.1 Towards Zero Waste (TZW), 2010 is the overarching waste strategy document for Wales to 2050. TZW identifies two key milestones – ‘towards zero waste’ by 2025 and ‘achieving zero waste’ by 2050. To this end it sets out ‘high level’ targets for increasing recycling and for residual waste to be phased out of landfill into high efficiency ERF plants. The targets are:

- Local Authority MW: A minimum of 64% of waste being reused, recycled or composted by 2019/20 with this rising to 70% by 2024/25;
- Commercial & Industrial Waste: A minimum of 67% reuse or recycled or composted (including AD) by 2019/20 with this rising to 70% by 2024/25
- a maximum of 30% energy being created from waste by 2024/25;
- a maximum of 10% by 2019/20 to landfill and 5% by 2024/25; and
- Wales to phase out residual waste and achieve ‘zero waste’ by 2050 by ensuring that all waste is reused or recycled.

- 4.5.2 At paragraph 2.3.4.4 the Plan states that:

“There is a need across Wales to develop more residual waste treatment and recovery facility capacity. The future needs for residual mixed waste treatment and recovery cannot be predicted with any complete certainty due to the variety of factors that will affect future tonnages and a variety of factors that affect actual existing capacity.”

- 4.5.3 TZW is accompanied by a series of Sector Plans. Paragraph 3.17 of the Collections, Infrastructure and Markets (CIM) Sector Plan 2012, states that recovery treatment capacity is

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<sup>6</sup> Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives. Wastes covered by Article 16 are mixed municipal wastes and include those mixed wastes collected by third parties from commercial and industrial sectors as well as private households [www.europa.eu/legislation\\_summaries/environment/waste\\_management/ev0010\\_en.htm](http://www.europa.eu/legislation_summaries/environment/waste_management/ev0010_en.htm)

likely to come forward primarily through the on-going procurement programme being taken forward by the local authority consortia and facilitated by local planning authorities in order that the existing capacity gap for recovery facilities can be closed.

- 4.5.4 The baseline used in the CIM Plan for calculating best estimate is now outdated and needs to be considered in the context of more recent data. Regional monitoring will help to establish the extent to which the 'capacity gap' is being closed, identify the sites likely to come forward to facilitate the provision of these facilities and indicate where further provision through local development plans may be necessary.

### **Towards Zero Waste – 'High Level' Review of Progress against Targets**

- 4.5.5 The information included in the tables below seeks to present a 'high level' review of waste generation and treatment in Wales, both today and into the future and to consider how current and future targets are being or will be achieved.
- 4.5.6 The following sources of information have been used.

**Targets** - Towards Zero Waste – One Wales: One Planet, June 2010

**Current Municipal Waste Statistics** - Stats Wales (<https://statswales.gov.wales>)

- Annual waste generated (tonnes) by source - (2012/13 to 2019/20; last update November 2020)
- Rolling 12-month period (2016/17 – 2019/20) of municipal waste arisings by local authority (1000 tonnes) (last update Jan 2021)
- Annual management of waste by management method (tonnes) – (2012/13 to 2019/20; last update November 2020)
- Rolling 12-month period (2016/17 – 2019/20) of combined municipal reuse/recycling/composting rates by local authority (last update Jan 2021)

**Current Commercial and Industrial Waste Statistics** - Natural Resources Wales, Survey of Industrial and Commercial Waste Generated in Wales 2018

Waste Arisings		(Current) 2020	2025	2050
Municipal Waste (Household and business waste collected by the Local Authority)	Waste Reduction Target/Actual	(Target) 1.5% year on year (Actual) 0.3% average annual decrease from 2007 base year		
	Recycling Targets/Actual	(Target) 64% (Actual) 65.1%	70%	100%
	Total waste stream (tpa)	1,512,000	1,403,000	961,000
	Waste recycled (tpa)	985,000	982,000	961,000
	Residue (tpa)	527,000	421,000	0
	Waste Reduction Targets	(Target) 1.6% year on year		

Waste Arisings		(Current) 2020	2025	2050
Commercial and Industrial Waste		(Actual) 1.6% average annual decrease from 2007 base year		
	Recycling Targets/Actual	(Target) 67% (Actual) 67%	70%	100%
	Total waste stream (tpa)	2,900,000	2,675,000	1,829,000
	Waste recycled (tpa)	1,928,000	1,873,000	1,829,000
	Residue (tpa)	972,000	802,000	0
Combined	Total waste stream (tpa)	4,412,000	4,078,000	2,790,000
	Waste recycled (tpa)	2,913,000	2,855,000	2,790,000
	Residue (tpa)	1,499,000	1,223,000	0

Waste Treatment (Requirements)		(Current) 2020	2025	2050
Recycling/Composting (As set out in the Local Authority Recovery Target LART) (includes AD)	Municipal Waste Target/Actual	(Target) 64% (Actual) 65.1%	70%	100%
	Commercial and Industrial Waste Target/Actual	(Target) 67%	70%	100%
	Municipal waste (tpa)	985,000	982,000	961,000
	Commercial and Industrial waste (tpa)	1,928,000	1,873,000	1,829,000
	Total (tpa)	2,913,000	2,855,000	2,790,000
Landfill	Municipal Waste Target/Actual	(Target) 10%	5%	0%
	Commercial and Industrial Waste Target/Actual	(Target) 10% (Actual) 11%	0%	0%
	Municipal waste (tpa)	114,000	70,000	0

Waste Treatment (Requirements)		(Current) 2020	2025	2050
	Commercial and Industrial waste (tpa)	306,000	0	0
	Total (tpa)	420,000	70,000	0
Incineration (no Energy Recovery)	Municipal Waste Target/Actual	(Actual) 8.3%	0%	0%
	Commercial and Industrial Waste Target/Actual	(Actual) 0.4%	0%	0%
	Municipal waste (tpa)	1,000	0	0
	Commercial and Industrial waste (tpa)	12,000	0	0
	Total (tpa)	13,000	0	0
Energy from Waste	Municipal Waste Target/Actual	(Target) 36% (Actual) 26%	30%	0%
	Commercial and Industrial Waste Target	(Actual) 7.8%	30%	0%
	Municipal waste (tpa)	387,000	421,000	0
	Commercial and Industrial waste (tpa)	225,000	802,000	0
	Total (tpa)	612,000	1,223,000	0

Waste Treatment (Capacity)		(Current) 2020	2025	2050
Energy from Waste	Wrexham (Parc Adfer)	232,000	232,000	0
	Cardiff (Trident Park)	350,000	350,000	0
	[Cardiff East (Mor Hafren)] POTENTIAL ONLY – at planning Application Stage	0	200,000	0
	Total operational and permitted	582,000	782,000	0



Waste Treatment (Capacity)		(Current) 2020	2025	2050
	Total waste treatment requirements	1,499,000	1,223,000	0
	SHORTFALL in capacity	917,000	441,000	0

Notes:

All figures have been rounded to the nearest 1,000 tpa.

All percentages relate back to the total amount of waste in that year.

## Analysis

### 4.5.7 Towards Zero Waste means that:

- Waste will be reduced significantly;
- There will be a strong economy in resource management;
- Residual waste will be minimised;
- Landfill will be eliminated as far as possible; and
- Legacy wastes will be tackled.

4.5.8 These future projections assume that the targets set out in TZW will be achieved, namely that the volume of waste produced year on year will fall at a rate of 1.5% for municipal waste and 1.6% for commercial and industrial waste year on year. It also assumes that the rates for the recycling of waste (including composting), will continue to rise, hitting 70% by 2025 and 100% by 2050.

4.5.9 If these challenging targets are met, then the analysis above shows, that having taken into account the removal of waste through; reduction, reuse and recycling, there remains a residue of waste to be treated/disposed of, currently c1.5 million tpa, falling to 1.2 million tpa by 2025. As landfill and incineration without energy recovery are phased out, with only a maximum of 5% of municipal waste permitted to go to landfill from 2025, so the reliance on energy from waste, and similar technologies, as a method of treating this residue will increase.

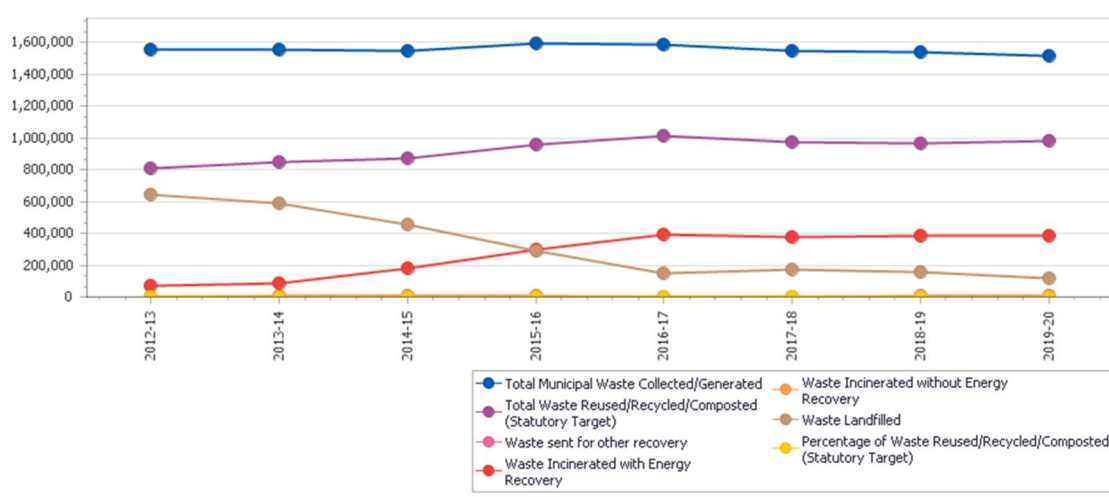
4.5.10 Based on the current operational and permitted capacities, this analysis shows that there is and continues to be a shortfall in available energy from waste (or similar) capacity until beyond 2025. The proposed Buttington ERF would make a significant contribution to fill this shortfall.

4.5.11 To date, the target reduction of 1.5% year on year for Municipal Waste has not been reached, with 1,512,101 tonnes of municipal waste being produced in 2019/20, a reduction of just 60,319 tonnes from the 2007 baseline, or an average annual reduction rate of just 0.3%. If there is no acceleration to the current rate of reduction, and this 13 year average is maintained, then by 2025, there could be an additional 50,000 tpa of municipal waste to be processed, with an additional nearly 400,000 tpa by 2050. The success of achieving the 1.5% reduction going forward will be dependent on an increase in the rate at which waste is designed out of society, which is not something that the Welsh government can control, as well as continued education of the population.

4.5.12 Over the same period, the Commercial and Industrial Waste section achieved an average annual reduction rate of 1.6%, in line with the target. Whilst this is an achievement, as with

municipal waste, it will become increasingly more difficult to minimise the amount of waste being produced each year, especially in a climate of economic and population growth and increased economic activity.

#### Annual Management of Waste by Management Method (tonnes) - Stats Wales



#### Towards Zero Waste - Waste Prevention

- 4.5.13 The Waste Framework Directive defines waste prevention as ‘Measures taken before a substance, material or product has become waste, that reduce the quantity of waste, including through re-use of products or the extension of lifespan of products the adverse impacts of generated waste on the environment and human health or the content of harmful substances in materials and products’.
- 4.5.14 The OECD (Organisation for Economic Co-operation and Development) breaks down waste prevention into three components: Strict avoidance involves the complete prevention of waste generation by virtual elimination of hazardous substances, or by reducing material or energy intensity in production, consumption and distribution. Reduction at source involves minimising the use of hazardous substances and/ or minimising material or energy consumption. Product reuse involves the multiple use of a product in its original form, for its original or alternative purpose, with or without reconditioning. This includes refurbishment and repair.
- 4.5.15 Reuse is important and is the part of the waste hierarchy most often overlooked. Not only does it move material use up the waste hierarchy, but it also provides social and economic benefits to Welsh communities, such as opportunities for jobs and increasing skills.
- 4.5.16 The Waste Framework Directive requires member states to give first priority to the adoption of prevention measures, with the requirement to have had Waste Prevention Plans in place by December 12, 2013 (Article 29). They shall also take ‘measures, as appropriate, to promote the reuse of products and preparing for reuse activities, notably by encouraging the establishment and support of reuse and repair networks, the use of economic instruments, procurement criteria, quantitative objectives and other measures (Article 11, paragraph 1).
- 4.5.17 A big change in recycling is needed across all sectors to achieve a recycling rate of 70% or

higher by 2025. There is good evidence that businesses and public sector bodies can very rapidly exceed 70% recycling levels but this depends on commitment and the necessary collection services being secured.

- 4.5.18 TZW states that by 2025, all sectors in Wales to be recycling at least 70% of their waste – this includes business, households and the public sector.

Achieving Zero Waste relies on achieving the TWZ targets, namely that the annual volume of waste generated will consistently fall in line with the waste reduction targets and that recycling will continue to rise. Alongside this, landfill and incineration without energy recovery will be phased out, with only a maximum of 5% of municipal waste permitted to go to landfill from 2025.

As behaviours change and recycling technologies advance, there will continue to be a need in the medium term for energy from waste and similar technologies to deal with the residual waste in the interim.

**Buttington ERF** will make a significant contribution to energy recovery capacity by diverting 167,000t of non-hazardous, non-recyclable, household, commercial and industrial waste. The proposal is supported by a Market Appraisal and catchment for the facility, based on the most recent data (ES Chapter 3).

## 4.6 Wales Residual Waste Treatment Procurement Projects

- 4.6.1 The need for future waste energy recovery facilities has been considered in the context of existing waste management infrastructure, particularly within Wales.
- 4.6.2 Currently, Wales is divided into 3 regions for the purposes of waste monitoring,
- South East Wales (which incorporates North Powys);
  - South West Wales; and
  - North Wales (which incorporates North Powys).
- 4.6.3 The most recent of these regional waste monitoring reports<sup>7</sup> for Wales set out that a number of local authorities are procuring residual waste treatment capacity to maximise the amount of waste that is diverted from landfill and to ensure that waste management targets are met.
- 4.6.4 The management of residual waste comprises three broad processes:
- Intermediate treatment e.g. Mechanical Biological Treatment (MBT) and Mechanical Heat Treatment (MHT) and the production of Refuse Derived Fuel (RDF) and Solid Recovered Fuel (SRF); and
  - Other recovery e.g. energy from waste and landspreading; and
  - Disposal e.g. landfill.

<sup>7</sup> North Wales Waste Monitoring Report, April 2017; South East Wales Monitoring Report, April 2017; South West Wales Monitoring Report, Interim Report 2015

- 4.6.5 With MBT and MHT the non-recyclable residues go to either energy from waste, landfill or landspreading.
- 4.6.6 Other recovery or residual waste can include incineration, pyrolysis, gasification with residues (such as incinerator bottom ash) being recycled or landfilled. Anaerobic Digestion (AD) is also a form of other recovery.

### **South West Wales**

#### **Materials Recovery and Energy Centre, Neath Port Talbot**

- 4.6.7 In SW Wales, the Materials Recovery and Energy Centre (MREC) in Neath Port Talbot forms part of an integrated recovery facility that includes a Mechanical Biological Treatment (MBT) plant which is permitted to accept 166 thousand tonnes of residual waste per year. The plant produces an RDF, which is sent for use as a fuel in cement kilns at various locations (there are currently no cement kilns permitted in SW Wales). Part of the RDF was formerly used in the incinerator on site. The MREC has currently ceased incineration of RDF on site, although it retains its permit to allow it to do so should circumstances change in future. The plant is not providing any ERF capacity and it is uncertain as to whether it will ever do so in the future.
- 4.6.8 With respect to the future of the facility, a report to the Neath Port Talbot Cabinet Meeting on 26 June 2020 states that:

“With respect to waste treatment, the national policy is clear on having a smaller number of larger scale high efficiency ‘heat and power’ enabled facilities to deal with waste residues as the most sustainable option. The MREC is not one of those and furthermore high efficiency plants require collaboration between councils and others to make them economic....larger volumes of waste are generally needed to achieve economies of scale along with large investments. Whilst providing much needed capacity in relation to recycling, the proposed service change will facilitate collaborative working on regional residual waste treatment facilities.”

### **North Wales**

#### **Mechanical Biological Treatment Plant, Wrexham**

- 4.6.9 Wrexham County Borough Council signed a Private Finance Initiative (PFI) agreement in 2007 with Waste Recycling Group, now FCC Environment. The project includes an MBT facility which can process up to 75,000 tonnes of residual waste per annum with the output sent to an ERF in England (Ferrybridge).
- 4.6.10 The facility is contracted to 2032 and largely serves Wrexham and the immediate environs. It is not expected to provide any ERF capacity.

#### **Parc Adfer, Flintshire**

- 4.6.11 The North West (NW) Residual Waste Treatment Partnership is a partnership comprising of Flintshire, Denbighshire, Conwy, Gwynedd and Anglesey Councils which has been formed to procure residual waste treatment capacity. The Par Adfer project culminated in the signing of a 25-year contract with Wheelabrator Technologies Inc.

- 4.6.12 The 200,000 tpa EfW facility in Flintshire recently opened and is able to manage local authority municipal residual waste as well as some commercial and industrial wastes. The facility has temporary consent to end 2050.
- 4.6.13 In September 2020 an application was made to Flintshire County Council to vary the existing permission to allow for a change to the maximum throughput of the plant. The plant design originally envisaged a throughput between 175,000tpa and a maximum of 200,000tpa. The reason for the variance is due to the calorific value of the residual waste; following a change in technology provider and consequential change in the boiler design the maximum capacity could be increased to 232,000tpa based on the facility operating for 8,000 hours per year.
- 4.6.14 The proposed source of waste remains unchanged; the majority will be residual Municipal Solid Waste collected by the five authorities referred to above. The balance comprises residual commercial and industrial waste collected by private waste management companies, or other MSW contracts.
- 4.6.15 It is understood that the facility is already at, or close to, capacity with the waste arisings from within the NW partnership area and that the most recent application will not alter this
- 4.6.16 Waste returns for 2020 show that waste was being accepted from north Wales (Flintshire and Gwynedd) with the majority coming from England (from as far afield as Somerset in the South West to Mersyside and Cheshire in the North West). By Q3 2020, the majority of waste originated from North Wales and South South West Wales (Isle of Anglesey, Denbighshire, Flintshire, Gwynedd, Conwy, Ceredigion) and the remainder from England (Midlands, North and North-West).

### **South East Wales**

- 4.6.17 The SE Wales Monitoring Report states that actual arisings of residual waste in SE Wales were lower than the baseline year used in the CIM Sector Plan. Additional recovery capacity that had been granted permission since the CIM Sector Plan is described below.

### **Trident Park, Cardiff**

- 4.6.18 In SE Wales, the only partnership to procure dedicated residual waste treatment capacity to date is Prosiect Gwyrdd, a partnership involving Caerphilly, Cardiff, Monmouthshire, Newport and Vale of Glamorgan. A contract between the partner authorities and Viridor commenced in 2016 includes the Energy from Waste (EfW) facility at Trident Park which can manage up to 350,000 tonnes of residual waste per annum. Of this, about 172,000 tonnes per annum is delivered from the partner authorities. Trident Park diverts 425,000 tonnes of municipal waste a year away from landfill, which equates to 95% of residual waste produced in South Wales. The plant has capability to export approximately 30 MW of electrical power.
- 4.6.19 Blaenau Gwent and Torfaen had an interim residual waste contract in place for waste to be managed at a site in Bristol, England until 31st January 2016 with the option to extend for a further 5 years with residual waste being managed using MBT with the output going to an Advanced Thermal Treatment facility and any unsuitable material going to landfill. Blaenau Gwent and Torfaen have now joined the Tomorrow's Valley Partnership with Rhondda Cynon Taff and Merthyr Tydfil Councils for the procurement of a long-term contract for the treatment of residual waste. The procurement process was concluded in late 2015 and a contract for a



period of 25 years signed with Viridor Waste Management Limited to treat approximately 95,000 tonnes of residual waste per annum at Trident Park from the 1st of April 2016.

The Annual Performance Report 2019 for Trident Park Capacity stated that in that year (1<sup>st</sup> January to 31<sup>st</sup> December 2019) the plant processed 365,643t of waste compared against a capacity of 368,000. 257,132 MWh of electricity was generated and no heat was exported.

- 4.6.20 The SE Waste Monitoring Report highlights that the procurement of capacity to manage local authority collected waste could have implications for commercial and industrial wastes and that the volumes that the facility is contracted to accept from local authorities will reduce the available capacity for dealing with other wastes.
- 4.6.21 It is reasonable to assume that any capacity in SE Wales will continue to cater for the SE catchment.

#### **Mor Hafren, Cardiff**

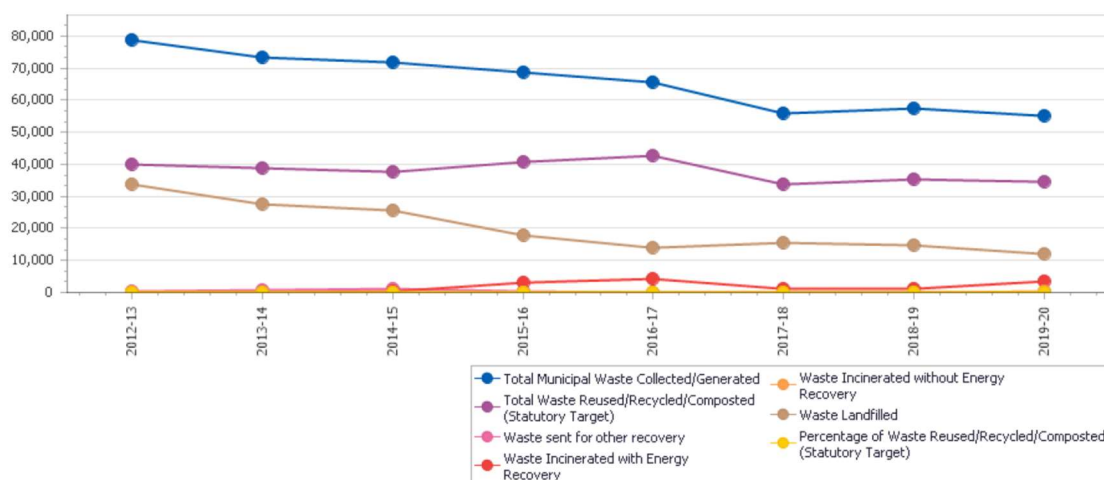
- 4.6.22 On 4 September 2020 Mor Hafren Biopower Ltd submitted a planning application to Welsh Ministers for an ERF on land on the eastern outskirts of Cardiff. The plant will generate approximately 15Mwe for export to the National Grid. It is anticipated that the plant will not be operational until at least 2025.
- 4.6.23 The Waste Planning Statement (3 September 2020 Rev 2) assesses ‘the need for the facility as well as compliance with the waste hierarchy’ but it does not include a market assessment.
- 4.6.24 The Permit issued by Natural Resources Wales states that the facility will have capacity to manage up to 200,00tpa of residual, mainly commercial and industrial waste per annum sourced from within a 30-mile catchment area of Cardiff. This could potentially extend into the Brecon Beacons National Park in the southernmost part of Powys County. However, it is assumed that the waste will largely be sourced from closer by, including from the east.
- 4.6.25 The planning application is undergoing examination and hearings are currently scheduled to take place between 23-26 March 2021.

## **4.7 Powys County – Residual Waste**

### **Towards Zero Waste Targets – ‘High Level’ Review of Progress against Targets**

- 4.7.1 Powys levels of MW collected/generated have continued to decline since 2012.
- 4.7.2 In terms of waste management in 2019/20, 63% of the MW waste collected/generated within Powys was reused, recycled or composted. This was down on 2016/17 but rates have been steadily increasing since. Some 21.8% went to landfill and 6.42% to energy recovery.

### Annual Management of Waste by Management Method (tonnes) – Stats Wales



- 4.7.3 With respect to C&I waste, the NRW Survey 2018 presents figures regionally. Powys sits partially within the North Wales and South East Wales Regions.
- 4.7.4 The survey concludes that recycling is the dominant waste management method across the regions.
- 4.7.5 Mid and South West Wales has the highest preparation for reuse, recycling and composting rate (72%) followed by the south East (65%) and then the North (63%).
- 4.7.6 Landfill is the second highest form of waste management across the regions (South East 11% and North 10%, Mid and South West 10%).
- 4.7.7 Between 2012 and 2018 the proportion of waste generated that was landfilled reduced by approximately 15% points. Therefore, a further reduction of 6 percentage points is required in the next 5-6 years by the C&I sectors to achieve the landfill cap target.
- 4.7.8 The majority (80%) of the C&I waste landfilled in 2018 was mixed waste consisting of (90%) Mixed Residual Wastes, indicating that further reduction would rely on measures such as improved segregation of recyclable materials in commercial sectors.

### Residual Waste Management Capacity

#### Regional Waste Monitoring Reports

- 4.7.9 The South East Wales Waste Monitoring Report<sup>8</sup> states that PCC has a contract with Potters Waste Management which sees waste going to landfill at Bryn Posteg. It states that “the Council is in the process of extending their contract with Potters which involves landfill from 2016 for the first 5 years and then an energy from waste solution for a further 5 years (from 1<sup>st</sup>

<sup>8</sup> Para 7.3.4 of South East Wales Waste Monitoring Report, April 2016

April 2021). The North Wales Monitoring Report states<sup>9</sup> that Bryn Posteg is in the North Wales region for planning purposes but does not manage waste arising in the North Wales region outside Powys.

#### **Bryn Posteg Landfill, Llanidloes**

- 4.7.10 A planning application (ref: 19/1477/FUL) is pending for the regularisation and retention of over-tipped material on the existing landfill and additional landfilling operations, in order to enable an acceptable slope profile to be achieved and enable leachate, landfill gas, surface water and other operations to be satisfactorily controlled. The site is operated by Sundorne Products (Llanidloes) Ltd (Potters Group).
- 4.7.11 NRW issued an Environmental Permit<sup>10</sup> on 8<sup>th</sup> September 2020 which allows the overfilled material (333,302 cu.m) to remain on site and for an additional 116,657m<sup>3</sup> to be deposited.
- 4.7.12 The EPR was issued without prejudice to ongoing enforcement proceedings and there is no indication on PCC's online planning register or forthcoming Planning Committee Meeting Agendas when the planning application will be determined.
- 4.7.13 The landfill does not offer a long-term solution for Powys' management of waste that cannot be recycled.

#### **Anaerobic Digestion Plant**

- 4.7.14 In December 2010, Potters Waste Management obtained consent<sup>11</sup> for an anaerobic digestion (AD) facility including a combined heat and power plant adjacent to the landfill. Approval<sup>12</sup> was given in May 2017 for a 5 year extension of time for the commencement of the development until May 2022.
- 4.7.15 In July 2015, planning permission<sup>13</sup> was granted to Potters Waste Management for a biomass boiler, fuel store and associated works at the site with a condition to commence development by July 2020.
- 4.7.16 There is minimal information currently available on the PCC planning applications portal and the status of the development and its potential contribution to residual waste management is uncertain.

#### **Energy from Waste, Potters Yard, Welshpool**

- 4.7.17 In June 2009<sup>14</sup> Potters Waste Management obtained consent for an energy generating plant using recycled wood (CHP) and gridshell building to enclose machinery. In February 2015<sup>15</sup> PCC granted approval for use of RDF as fuel.

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<sup>9</sup> Para 10.3

<sup>10</sup> Permit Number EPR/BU7766IC

<sup>11</sup> Planning Application Ref: P/2010/0566

<sup>12</sup> Planning Application Ref: P/2015/1192

<sup>13</sup> Planning Application Ref: P/2015/0236

<sup>14</sup> Planning Application Ref: P/2008/1573

<sup>15</sup> Planning Application Ref: P/2014/1086

- 4.7.18 There is no information available on PCC's online planning register detailing the technology or market assessment for the permitted facility at Potters Yard, Severn Road, Welshpool (planning application ref: P/2014/1086<sup>16</sup> as amended by ref: 19/2032/NMA).
- 4.7.19 The permission has lawfully commenced and a certificate of lawfulness<sup>17</sup> was issued in 2020. However, it is understood that for legal reasons, the document is not in the public domain.
- 4.7.20 Whilst there is information on the PCC website to confirm that some pre-commencement requirements have been met, it is unclear as to whether there are some still outstanding.

### **Current Management of Powys Residual Waste**

- 4.7.21 An extract from PCC's website<sup>18</sup> under "What happens to Residual Waste in Powys" states:
- "Unfortunately, capacity for EfW is lacking in the UK at present, creating a deficit of capacity compared with the supply of residual waste derived from households and businesses.
- This problem affects Powys' residual waste, and as a result while much of our material is sent to the Gloucester facility, the remainder still requires landfilling. Material from South Powys that is not able to be taken to Gloucester is currently landfilled in Pembrokeshire, and the material from North Powys is landfilled in Shropshire."
- 4.7.22 Powys County covers an extensive area and this has a strong bearing on the distance over which waste arisings would need to travel to reach a facility outside of the County, particularly as Powys does not have a network of waste transfer stations.
- 4.7.23 Based on similar ERF projects elsewhere, it is accepted industry practice to assume movement of residual waste within a two-hour (one way) drive time. If travelling south, only part of south Powys would fall within the travel timeframe.
- 4.7.24 There are no facilities in the pipeline that could be considered 'high probability deliverable'<sup>19</sup> and an appropriate solution for managing Powys' residual waste in line with the principles of 'self-sufficiency' and 'proximity' discussed below.

Landfilling across Wales is on the decline as waste generation reduces, recycling increases and energy recovery comes on stream.

However, after recycling, landfill is the second highest form of waste management for C&I waste across all 3 survey regions and this applies also in Powys.

ERFs in North and South East Wales are at capacity, serving neighbouring authorities and any potential contribution from facilities in Powys is uncertain.

**Buttington ERF** will be well located to help address the capacity gap.

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<sup>17</sup> Planning Application Ref: 19/1848/CLP

<sup>18</sup> <https://en.powys.gov.uk/article/7725/What-happens-to-my-recycling-and-residual-waste-once-collected-from-the-kerbside>

<sup>19</sup> Projects which have planning permission and are approaching financial close. 'Low probability' projects i.e. undeliverable or unproven technology or no investor support are not included.

## **4.8 Technical Advice Note 21: Waste**

- 4.8.1 Technical Advice Note 21 (TAN21) provides advice on the framework and principles for waste management in the planning system, strategic planning for waste, waste planning assessments and detailed planning considerations in this process.
- 4.8.2 Paragraph 4.8 confirms that there is a need across Wales to develop more residual waste treatment and recovery facilities and that this provision should be underpinned by the concepts of ‘self-sufficiency’ and ‘nearest appropriate installation’ (paragraphs 2.8 to 2.9).
- 4.8.3 The principle of ‘self-sufficiency’ requires Wales to provide an integrated and adequate network of facilities to deal with as much of its own waste as possible. However, TAN 21 recognizes that waste will continue to travel across borders and that the ‘wider waste management network’ and ‘factors including the nature of a certain waste, its frequency of arising and location may mean that some waste is better managed across the border’, including in England (paragraph 1.23). Equally, Wales does not only manage its own arisings, waste is taken from other parts of the UK and treated, recycled, recovered and disposed of in Wales.”
- 4.8.4 The ‘nearest appropriate installation’ principle recognizes that it is important to manage waste close to where it arises, so reducing the detrimental environmental impacts associated with the transportation of waste and retaining the intrinsic value of waste as a resource, in line with the need to secure greater resource efficiency.
- 4.8.5 In relation to the location of waste facilities TAN 21 states that the aim should be to ensure that the right facilities are located in the right place to meet environmental, economic and social needs whilst recognising the clear benefits of managing waste as a resource. Such sites may include:
- industrial areas, especially those containing heavy or specialised industrial uses;
  - active or worked-out quarries;
  - degraded, contaminated or derelict land;
  - existing or redundant sites or buildings;
  - sites previously or currently occupied by other types of waste management facilities;
  - sites where the nature of existing and proposed neighbouring land uses facilitates the location of waste management infrastructure and there are opportunities for co-locating waste management / resource recovery / reprocessing / re-manufacturing facilities to form environmental technology clusters; and
  - farms where the output will be used on the farm.
- 4.8.6 Related to these are sites-specific factors which might benefit or detract from the suitability of a particular site:
- site infrastructure (including electricity grid connections for energy from waste facilities) is present;
  - existing or proposed transport infrastructure links – including opportunities for integrated multi-modal road, train, canal and sea connections; and
  - need for sites for smaller-scale community-based reuse and recycling activities.

4.8.7 Annex C includes detailed planning considerations which both applicants and planning authorities must have reference to whilst preparing and determining applications for waste management proposals, namely:

- Ensuring prudent use of land and resources;
- Minimising greenhouse gas emissions;
- Minimising adverse effects on air quality and quantity;
- To protect and enhance the landscape, townscape and cultural heritage of Wales;
- Minimising adverse effects on water quality;
- Avoid increasing the risk of flooding;
- Protecting biodiversity;
- Providing employment opportunities and support long-term jobs and skills;
- Minimising adverse effects on residential property;
- Minimising the increased cost of waste management;
- Protecting local amenity;
- Minimising adverse effects on public health and to avoid increasing health inequalities; and
- Minimising local transport impacts.

4.8.8 In summary, TAN 21 confirms that waste proposals should be guided first by the waste hierarchy and by the principles of ‘nearest appropriate installation’ and ‘self-sufficiency’. It sets out ‘spatial criteria’ for the location of facilities but that the onus is on local development plans to identify sites and locational requirements. Capacity and need for additional facilities will be ‘tracked’ through the regional monitoring frameworks based on the former regional planning areas – North Wales (North Powys), South East Wales (South Powys) and South West Wales.

The **Buttington ERF** responds to the need identified in TAN 21 for more recovery facilities across Wales. The proposed Development Site has been chosen following a review of the existing energy recovery capacity in Wales based on regional waste monitoring and the most up to date market data, and a comprehensive alternative sites assessment. The Development Site location accords with the principles of self-sufficiency and proximity and the spatial criteria set out in TAN 21. As a quarry with an employment designation the site accords with the type of location identified in TAN 21 as being suitable for waste management.

## 4.9 Statutory Development Plan

4.9.1 Section 38(4) of the Planning and Compulsory Purchase Act 2004 (as amended by the Planning Wales Act 2015) identifies that the development plan in Wales comprises the National Development Framework for Wales, the strategic development plan for any strategic planning area that includes all or part of that area, and the local development plan for that area.

### National Development Framework

4.9.2 The Welsh Government published the National Development Framework (NDF) - Future Wales: The National Plan on 24th February 2021. It replaces the Wales Spatial Plan.

4.9.3 The document sets out the direction for development in Wales to 2040.

“It is a development plan with a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of our communities.”

4.9.4 The role of Future Wales is defined by legislation and by the Programme for Government – Prosperity for All: the national strategy. The Plan will play an important role in driving sustainable growth and combating climate change by guiding strategic development over the next 20 years and will inform the Wales Infrastructure Investment Plan in determining capital investment priorities.

4.9.5 Future Wales reinforces the plan-led system providing the national, *strategic* tier of the Development Plan, beneath which Strategic Development Plans (SDPs) at a regional level and Local Development Plans (LDPs) will take forward policies and key issues and identify more specifically the appropriate scale and location for new infrastructure and development. All 3 tiers are strongly influenced by Planning Policy Wales<sup>20</sup>.

4.9.6 The Future Wales ‘Challenges and Opportunities’ recognises the importance of a low carbon economy to deliver clean growth and renewable energy which could provide the opportunity for Wales to become a world leader in renewable energy technologies. This is echoed in Future Wales Outcome 11 which aims to create “*A Wales where people live in places which are decarbonised and climate-resilient*”.

4.9.7 It deals with land use planning issues which it considers to be a national priority at this time including where to locate renewable energy generation technology which it states:

“is a spatial issue of such significance that national ambitions are unlikely to be achieved without national planning policies.”

4.9.8 Future Wales requires the careful use of natural resources and through a strong circular economy that their use and contribution to society is maximised.

#### **Future Wales – Regions**

4.9.9 The Development Site is located in the ‘Mid Wales’ Region.

4.9.10 Future Wales recognises the importance of resilience in the face of the challenge of Covid-19 and the need for infrastructure located in the right places, providing jobs and vehicle charging networks in areas where travel by car is the only realistic mode of travel.

4.9.11 The Plan identifies that lack of employment opportunity is a key reason behind rural depopulation, particularly in the younger workforce. It recognises the importance of rural communities developing strong economies and supporting local enterprise and the presence of local rural business and employment opportunities in reducing the need for workers to travel long distances and reduce the reliance on larger economic centres.

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<sup>20</sup> Edition 2011



- 4.9.12 The NDF aims to “facilitate the decarbonisation of the economy, including energy and transport choices, and promote the principles of a circular economy”.

**Buttington ERF** will generate new direct and indirect employment, focussing on the local market. An apprenticeship scheme will provide on-site learning and an education centre will provide opportunity for local school children to learn about waste, energy and sustainability issues and how their generation can make a difference in helping to move towards a circular economy.

The long-term objective is for the ERF to serve as a catalyst to realise aspirations for an eco-park within the wider site and as technology advances to provide electric charging facilities for potential use by local people and businesses (See Table 2, page 51 of this WPS)

### **Powys Local Development Plan**

- 4.9.13 The adopted Powys LDP was adopted in April 2018 and covers the period 2011 to 2026.
- 4.9.14 Para 4.9.2 confirms the waste management targets defined in nation policy:
- “Over the last decade there has been a dramatic shift in the way in which waste is managed across Wales, away from a reliance on landfill towards reuse, recycling and recovery.... By 2024-25, 70% of all waste produced in the County will need to be recycled or composted, with only 5% being sent to landfill and a maximum of 30% diverted to energy from waste facilities (Wales Waste Measure 2010).”
- 4.9.15 Para 4.9.4 identifies that there will continue to be a need for recovery capacity up until 2050 when the aspiration of zero waste has been realised.
- 4.9.16 The LDP accepts that waste facilities at all levels of the waste hierarchy may be required and recognizes that well located, properly managed waste facilities have the potential to make a significant positive contribution towards the health and well-being of communities in Wales through the safe management of waste, recovery of important resources and provision of jobs (Para 4.9.11)
- 4.9.17 Therefore, the LDP aims to facilitate an integrated and adequate network of waste management facilities in sustainable locations in line with national policy and guidance and in accordance with the waste hierarchy, against which all proposals for waste management will be considered (Para 4.9.1).

### **Location of Waste Management Facilities**

- 4.9.18 Powys’ LDP recognises that many waste management facilities are akin to general industrial or B2 uses and, therefore via Policy W1, directs proposals to existing and suitable allocated B2 sites, as well as existing waste management uses, identified under policies E1<sup>21</sup> and E4<sup>22</sup>. Not

<sup>21</sup> Employment Proposals on Allocated Employment Sites

<sup>22</sup> Safeguarded Employment Sites

all sites identified will be suitable for all types of waste management facility. Existing and allocated sites within the flood plain, for example, will be unsuitable for the recovery facilities.

- 4.9.19 The LDP clarifies that a large proportion of the land listed under Policy E4 will accommodate expansion space for indigenous occupiers. The employment land that is genuinely available within these sites is therefore limited as the majority of the land will provide flexibility for existing users (Para 4.4.12).
- 4.9.20 Allocated employment sites identified under Policy E1 will complement existing employment sites in providing a continuous supply of appropriate employment land across the Plan area to accommodate expansion in the economy, to replace and upgrade the existing supply of premises where needed, and to ensure choice and range across types, settings and locations. These sites have been grouped into categories that reflect the nature of the site and the potential future uses: strategically located and regionally important 'Prestige Sites', regionally important 'High Quality Sites', 'Local Sites' providing a varied industrial and / or employment setting with minimised visual impact yet located within close proximity to the main road and transport infrastructure as well as centres of population; and 'Mixed Use Sites'.
- 4.9.21 Whilst some sites listed under Policy E1 are maybe appropriate for a waste management use from a planning policy perspective (i.e. Policy W1); their '*highest and best use*' remains a broader B1, B2 and B8 employment use. This is particularly pertinent for the '*prestige sites*' which have the potential to provide much wider economic / employment benefits than could be derived from any potential waste management facility.
- 4.9.22 Policy W2 supports development proposals for waste management facilities that are located where the highway network is suitable for use by HGVs (with reference to the '*proximity principle*'), they are of an appropriate nature and scale; and that there should be no adverse hydrological, ecological, heritage or landscape impacts.
- 4.9.23 Owing to the transport infrastructure in the County there is a necessary reliance on transportation of waste by road and the LDP also acknowledges that the diverse, rural nature of Powys will inevitably lead to some forms of waste management needing to be located outside existing settlements (Para 9.11).
- 4.9.24 The Plan is significant in that 6 ha of Buttington Quarry, incorporating the existing quarry void and the former brickworks site, are allocated for B1, B2 and B8 employment development under Policy E1. The supporting text also suggests that it may also be an appropriate location for the storage and processing of wastes arising from construction and demolition and Policy W1 -Location of Waste Development makes clear that proposals for management of waste which accord with the waste hierarchy will be supported on employment sites identified in Policy E1.

**Buttington ERF** responds to the identified need for a network of facilities within the local plan area and of the need for recovery capacity up until 2050 when the aspiration of zero waste has been realised. Buttington Quarry is well located in line with the LDP site location criteria and policy aspirations for new waste management facilities. As set out in Table 1, of this WPS, the proposed ERF will "make a significant positive contribution towards the health and well-being of communities in Wales through the safe management of waste, recovery of important resources and provision of jobs (Para 4.9.11)".

## 4.10 Powys County - Site Search

- 4.10.1 A site search exercise has been undertaken to identify sites within Powys that could potentially accommodate an ERF". The comprehensive alternative sites assessment (ASA) is included as Technical Appendix 3-2, ES Chapter 3 – Need and Alternatives.
- 4.10.2 The ASA was based on the spatial criteria for locating new waste sites set out in TAN 21: Waste (see also section 4 of this WPS) and considered all sites identified in the adopted Powys LDP which are safeguarded or allocated for waste or employment use (LDP Policies E1, E4 and W1). Given the industrial nature of quarry related activities, mineral sites were also included (Policy M1).
- 4.10.3 In all, 61 locations were considered – 30 areas safeguarded for employment, 15 sites allocated for employment, 15 identified for minerals use and one currently used for non-hazardous landfill (Bryn Posteg).
- 4.10.4 The initial review focussed on those sites that had a gross area of at least 5-6 hectares (ha); the area required for the type of ERF and ancillary infrastructure proposed. Of the original 61 sites; 34 were omitted from detailed consideration primarily due to size limitations or because the land has been put to a new use, those sites are listed at Appendix 1 of the ASA.
- 4.10.5 Fifteen sites were assessed in more detail using a scoring matrix taking into account factors such as land area, proximity to the primary (trunk) road network, current level of use/activity, key 'high-level' environmental designations, and published information relating to the availability of land for sale or long-term lease.
- 4.10.6 By their nature, the 2017 Regulations are concerned with the environmental impacts of the proposed development (see Section 2). It follows that any alternative site selection process is primarily guided by the environmental impact of those '*reasonable*' alternatives. However, for an alternative to be '*reasonable*', it must also be deliverable from a land ownership and tenure perspective.
- 4.10.7 Therefore, the scoring exercise was designed to identify '*high-level*' constraints which might arise further into any future environmental assessment or consultation exercise. The results of the scoring matrix must be viewed in the context of other factors such as the availability of land, need, and the colocation of the wider waste management infrastructure within Powys. It is important to note that no sites were discounted based on these constraints.
- 4.10.8 The 15 sites subject to further assessment are identified on the ASA Composite Location Plan and results of the assessment, using a concise 'pro-forma' template, are included as ASA Appendix 4

The site search and assessment exercise shows **Buttington Quarry** to be the preferable site. It is located on a major arterial route, unaffected by any planning or unmitigable environmental constraints and benefits from a 6-ha LDP employment allocation which incorporates a deep quarry void.

The site is also identified as being suitable for waste use under Policy W1 of the Powys Local Development Plan. Most of the land is in single freehold ownership and is available for the design life of the facility.

The former brickworks buildings are occupied for commercial activities and there is scope to provide heat and electricity as part of wider plans to create a sustainable business park. The proposal in this location would also bring forward the early restoration of part of the quarry.

## 4.11 Buttington ERF – Market Appraisal

- 4.11.1 Having identified a potentially suitable location for an ERF, a comprehensive appraisal was undertaken to establish the residual waste capacity within a defined catchment area of Buttington Quarry. The Market Appraisal is included as Technical Appendix 3-1, ES Chapter 3 – Need and Alternatives.
- 4.11.2 As discussed above, the most recent regional waste monitoring reports have been used as a basis for the appraisal and brought right up to date using several data sources including:
- DEFRA’s 2017-18 Annual Municipal Waste Management statistics and equivalents for the devolved regions;
  - Local Authority municipal waste data – StatsWales;
  - NRW Waste Permit Returns Data Interrogator 2018;
  - EA’s Waste Data Interrogator 2017 (“WDI Data”);
  - EfW Annual Returns for 2018; and
  - Various internet searches.
- 4.11.3 The catchment area initially considered was generally defined as a 2-hour drive from Buttington Quarry. However, given the rural nature of large parts of Powys and west and south east Wales, it is anticipated that waste from these areas could travel further. Consequently, for the purposes of the ES and WPS an ‘expanded’ drive time was applied which includes Welsh counties to the north (Isle of Anglesey, Gwynedd, Conwy, Denbighshire, Flintshire, Wrexham) and south west (Ceredigion).
- 4.11.4 Given that the entire eastern border of Powys borders England, and given Buttington Quarry’s location, the 2 hour catchment area also includes parts of Herefordshire, Shropshire, Cheshire and other West Midlands counties.
- 4.11.5 Within the catchment area there is a total of approximately 2,660,000 to 2,720,000 tonnes per annum (tpa) of residual waste arisings.
- 4.11.6 Within the catchment there are other competing ERFs with a total treatment capacity (within the catchment area) of between 2,020,000 and 2,030,000tpa. The analysis considered

ERF/EfW projects in the pipeline within the England catchment area which are 'high probability deliverable'.

- 4.11.7 Therefore, within the catchment area of the Buttington ERF there is a surplus of 640,000 to 690,000tpa or residual MSW and C&I waste. This equates to nearly 4 times the capacity of the proposed ERF, therefore clearly demonstrating a need for such a facility.

Owing to the rural nature of Wales and the lack of motorway infrastructure within west and mid Wales, there is potential for residual waste to travel from counties such as Carmarthenshire and Pembrokeshire, particularly as there are no ERF/EfW facilities within these counties.

Furthermore, the technology required to achieve R1 efficiency and the associated costs would preclude smaller facilities to manage residual waste within these areas. Therefore, the waste available within a wider catchment is likely to be higher.

Within the catchment area of the **Buttington ERF** there is a surplus of 640,000 to 690,000tpa or residual MSW and C&I waste. This equates to nearly 4 times the capacity of the proposed ERF, therefore clearly demonstrating a need for such a facility.

## 5. Renewable and Local Carbon Energy

5.1.1 This Chapter sets out how the Buttington ERF proposals meet the aims and requirements of key legislation and policies relating to renewable and low-carbon energy production.

❑ **National Legislation/Policy**

- Well-being of Future Generations (Wales) Act 2015.
- Planning Policy Wales (Edition 11) (February 2021).
- Prosperity for all: A low carbon Wales (March 2019).
- The Environment (Wales) Act 2016.
- Climate Change Act 2008

❑ **Development Plan**

- National Development Framework (February 2021)
- Powys Local Development Plan (2011-2026).

## 5.2 UK Targets

### Climate Change Act 2008

5.2.1 In 1995, the UK became a signatory to the Paris Agreement (UNFCCC COP21). This agreement aims to:

“..... strength the global response to the threat of climate change by keeping a global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C.”

5.2.2 The Climate Change Act 2008 sets a legal framework for the UK to cut greenhouse gas emissions. As a result of an amendment to this act, the statutory target to reduce UK greenhouse gas emissions has been increased from at least 80% to net zero by 2050. This increase has yet to be reflected in Welsh legislation.

## 5.3 National Targets

### The Environment (Wales) Act 2016

5.3.1 As well as introducing powers to help deliver an improvement in the amount and quality of materials available for recycling, the Act also sets a target of reducing greenhouse gas emissions by at least 80% by 2050. This is less than the Net Zero target proposed by the Climate Change Act 2008.

5.3.2 Amongst other measures, the Act requires a system of 5 yearly carbon budgets and interim targets. These serve as stepping stones and ensure that regular progress is made towards this long-term target of at least an 80% reduction. These budgets and targets include emissions from all sources, not just those relating to heat and power generation.

5.3.3 The carbon budgets targets as defined in the Climate Change (Carbon Budgets) (Wales) Regulation 2018, are set out in the table below:

PERIOD	REDUCTION FROM 1990 BASELINE	PROPOSED AMENDED TARGETS <sup>23</sup>
2015	19%	
2016-2020	23%	
2021-2025	33%	37%
2026-2030		58%

5.3.4 It is expected that new targets, based on the advice of the Climate Change Committee will be set. These will take into the account the move toward a Net Zero goal by 2050.

5.3.5 The Interim Targets, as set by the Climate Change (Interim Emissions Targets) (Wales) Regulation 2018 are set out in the table below:

YEAR	REDUCTION FROM 1990 BASELINE	PROPOSED AMENDED TARGETS <sup>24</sup>
2015	19%	
2020	27%	
2030	45%	63%
2040	67%	89%

### **Wales Energy Targets 2017**

5.3.6 In September 2017, Welsh Minister for Environment, Energy and Rural Affairs, Lesley Griffiths proposed the following targets for Wales:

- Wales to generate 70% of its electricity consumption from renewable energy by 2030.
- 1GW of renewable electricity capacity in Wales to be locally owned by 2030.
- By 2020 all new renewable energy projects to have at least an element of local ownership.

### **Climate Emergency 2019**

5.3.7 In April 2019, Lesley Griffiths declared a “climate emergency”, and the Welsh Government accepted the Climate Change Committee’s recommendation to a target of at least a 95% reduction in greenhouse gas emissions by 2050 and stated its intention to:

“go further... to bring forward a target for Wales to achieve Net Zero emissions no later than 2050”.

5.3.8 In their 2020 Advice Report, the Climate Change Committee recommend that the Welsh Government should set an ambitious Net Zero target for 2050. These targets have not yet been legislated.

<sup>23</sup> Recommendations taken from Advice Report: The path to a Net Zero Wales, published by the Climate Change Committee in December 2020.

<sup>24</sup> Recommendations taken from Advice Report: The path to a Net Zero Wales, published by the Climate Change Committee in December 2020.



### Prosperity for All: A Low Carbon Wales 2019

- 5.3.9 This Plan sets out the Welsh Government's approach to cut emissions and support the growth of a low carbon economy.
- 5.3.10 The document confirms that landfill is the dominant source of emissions, making up 77% of the total from the waste sector.
- 5.3.11 The Government is aiming for a 92% reduction in waste sector emissions from baseline (1990) levels by the year 2030. This will be achieved by reducing emissions from landfill and
- “supporting the generation and recovery of energy from waste and through waste management and innovation, stimulating the move towards a more circular economy.”
- 5.3.12 Within the document it identifies the power generation sector as accounting for 29.3% of the overall greenhouse gas emission in Wales, second only to the industrial sector.
- 5.3.13 The document set out the following aims, with reference to emissions from power generation:
- **2020 emissions target** Emissions in 2020 will be 29% lower than in 2016. This will mean that power sector emissions are 2% greater than the baseline in the year 2020.
  - **Power sector allocation for Carbon Budget 1** The total budget for the power sector for CB1 is estimated to be 64.9 MtCO<sub>2</sub> e<sup>42</sup>. The Power Sector contributes 29.3% of the total Welsh budget for CB1. In 2016 the sector emitted 16.2 MtCO<sub>2</sub> e using up 25% of the Power Sectors contribution to CB1. However, indications from the 2017 EU-ETS suggest that a significant reduction in emissions from the power sector occurred in 2017.
  - **Power sector pathway to 2030** Power sector emissions will reduce by 37% from baseline levels [1990s] by the year 2030 by:
    - reducing overall power generation from fossil fuels;
    - increasing the deployment of renewable energy to meet the target for Wales to generate 70 per cent of its electricity consumption from renewable energy by 2030; and
    - increasing support for innovation in the Power Sector.

### Planning Policy Wales

- 5.3.14 PPW, section 5.7 emphasises the global challenge faced by climate change and the Welsh Government's commitment to planning for and transitioning towards a low carbon economy and to the integration of development with the provision of additional electricity grid infrastructure.
- 5.3.15 Paragraph 5.4.18 confirms that planning authorities should look favourably on low carbon generation proposals including high efficiency energy recovery from waste.
- 5.3.16 Paragraph 5.9.9 states that the local need for a low carbon energy development
- “is not a material consideration, as energy generation is of national significance and there is a recognised need to optimize renewable and low carbon energy generation.”

- 5.3.17 Para 5.7.6 supports the idea that the planning system should secure an appropriate mix of energy provision.
- 5.3.18 Para 5.7.8 references the need to maximise renewable and low carbon energy generation and confirms the targets for renewable energy; 70% by 2030.
- 5.3.19 Para 5.9.1 states that:
- “Local authorities should facilitate all forms of renewable and low carbon energy development and should seek cross-department co-operation to achieve this. In doing so, planning authorities should seek to ensure their area’s full potential for renewable and low carbon energy generation is maximised and renewable energy targets are achieved.”
- 5.3.20 Para 5.9.6 confirms that:
- “Planning applications should not be refused on the basis of exceeding a renewable energy target.”
- 5.3.21 Para 5.9.14 sets out that:
- “Planning authorities should support and guide renewable and low carbon energy development to ensure their area’s potential is maximised.”
- 5.3.22 Para 5.9.19 requires that:
- “In determining applications for the range of renewable and low carbon energy technologies, planning authorities should take into account:
- the contribution a proposal will make to meeting identified Welsh, UK and European targets;
  - the contribution to cutting greenhouse gas emissions; and
  - the wider environmental, social and economic benefits and opportunities from renewable and low carbon energy development.

#### **Future Wales: the National Plan 2040**

- 5.3.23 The Welsh Government published the National Development Framework (NDF) - Future Wales: The National Plan on 24th February 2021. It replaces the Wales Spatial Plan.
- 5.3.24 The document sets out the direction for development in Wales to 2040.
- “It is a development plan with a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of our communities.”
- 5.3.25 The role of Future Wales is defined by legislation and by the Programme for Government – Prosperity for All: the national strategy. The Plan will play an important role in driving sustainable growth and combating climate change by guiding strategic development over the next 20 years and will inform the Wales Infrastructure Investment Plan in determining capital investment priorities.

- 5.3.26 Future Wales reinforces the plan-led system providing the national, *strategic* tier of the Development Plan, beneath which Strategic Development Plans (SDPs) at a regional level and Local Development Plans (LDPs) will take forward policies and key issues and identify more specifically the appropriate scale and location for new infrastructure and development. All 3 tiers are strongly influenced by Planning Policy Wales<sup>25</sup>.
- 5.3.27 The Future Wales ‘Challenges and Opportunities’ recognises the importance of a low carbon economy to deliver clean growth and renewable energy which could provide the opportunity for Wales to become a world leader in renewable energy technologies. This is echoed in Future Wales Outcome 11 which aims to create “*A Wales where people live in places which are decarbonised and climate-resilient*”.
- 5.3.28 It deals with land use planning issues which it considers to be a national priority at this time including where to locate renewable energy generation technology which it states:
- “is a spatial issue of such significance that national ambitions are unlikely to be achieved without national planning policies.”
- 5.3.29 Future Wales requires the careful use of natural resources and through a strong circular economy that their use and contribution to society is maximised.

#### **Future Wales – Regions**

- 5.3.30 The Development Site is located in the ‘Mid Wales’ Region and all renewable energy generation proposals should seek to maximise the economic, environmental and social benefits to the communities of Mid Wales.
- 5.3.31 The Region’s rural areas are supported by policies 4 and 5. In support of these policies Future Wales recognises the importance of resilience in the face of the challenge of Covid-19 and the need for infrastructure located in the right places, providing jobs and vehicle charging networks in areas where travel by car is the only realistic mode of travel.
- 5.3.32 Within Mid Wales, biodiversity is to be enhanced and ecosystems become more resilient.
- 5.3.33 Policy 26 confirms support for growth and development of existing and new economic opportunities in Mid Wales. The NDF states that:
- “It is vital the region plays its part in the decarbonisation of society and supports the realisation of renewable energy”
- 5.3.34 Development in towns and villages in rural areas will support local aspirations and need, complementing rather than competing with efforts to grow the towns and cities. Rural areas have an important function as providers of food, energy and mineral resources.
- 5.3.35 Policy 4 ‘Supporting Rural Communities’ seeks the identification of job opportunities and local services. Policy 5 ‘Supporting the rural economy’ supports emerging technology business and sectors and proposals for diversification including innovative and emerging technology based enterprise, start ups and micro businesses. The NDF states that the foundational economy sector, which includes energy, makes up approximately 40% of jobs in Wales. The Plan

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<sup>25</sup> Edition 2011

confirms that rural areas play a crucial role in helping decarbonise Wales by providing suitable environments for different forms of renewable energy (see Policies 17 and 18 below).

5.3.36 The Plan identifies that lack of employment opportunity is a key reason behind rural depopulation, particularly in the younger workforce. It recognises the importance of rural communities developing strong economies and supporting local enterprise and the presence of local rural business and employment opportunities in reducing the need for workers to travel long distances and reduce the reliance on larger economic centres.

5.3.37 The NDF aims to “facilitate the decarbonisation of the economy, including energy and transport choices, and promote the principles of a circular economy”.

5.3.38 Policy 17 - Renewable and Low Carbon Energy and Associated Infrastructure, confirms that the Welsh Government:

“strongly supports the principle of developing renewable and low carbon energy from all technologies and at all scales to meet future energy needs.

In determining planning applications for renewable and low carbon energy development, decision-makers are required to give significant weight to the need to meet Wales’ international commitments and our target to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency.”

5.3.39 Proposals should describe:

“the net benefits the scheme will bring in terms of social, economic, environmental and cultural improvements to local communities.”

5.3.40 Policy 18 relates specifically to “Renewable and Low Carbon Energy Developments of National Significance”. It states:

“Proposals for renewable and low carbon energy projects (including repowering) qualifying as Developments of National Significance will be permitted subject to Policy 17 and the following criteria:

1. Outside of the Pre-Assessed Areas for wind developments and everywhere for all other technologies, the proposal does not have an unacceptable adverse impact on the surrounding landscape (particularly on the setting of National Parks and Areas of Outstanding Natural Beauty);
2. The proposal is designed to minimise its visual impact on nearby communities and individual dwellings, and the cumulative impact of the proposal, with other existing or proposed development, is acceptable;
3. There are no adverse impacts on international and national statutory designated sites for nature conservation (and the features for which they have been designated), protected habitats and species;
4. The proposal includes biodiversity enhancement measures to provide a net benefit for biodiversity;
5. There are no unacceptable adverse impacts on statutorily protected built heritage assets;

6. There are no unacceptable adverse impacts by way of shadow flicker, noise, reflected light, air quality or electromagnetic disturbance;
7. There are no unacceptable impacts on the operations of defence facilities and operations (including aviation and radar) or the Mid Wales Low Flying Tactical Training Area (TTA-7T);
8. There are no unacceptable adverse impacts on the transport network through the transportation of components or source fuels during its construction and/or ongoing operation;
9. The proposal includes consideration of the materials needed or generated by the development to ensure the sustainable use and management of resources;
10. There are acceptable provisions relating to the decommissioning of the development at the end of its lifetime, including the removal of infrastructure and effective restoration.

Table 2 on page 51 of this WPS summarises how the Buttington ERF proposals accord with Future Wales Policies 17 and 18.

**Buttington ERF** will be capable of generating 12.8MWe of low carbon and renewable energy and deliver benefits for the local community and environment.

## 5.4 Progress towards Targets - The UK Picture

5.4.1 The Climate Change Committee has provided an overview of the progress that the UK have made towards Net Zero and concluded that UK emissions were 44% below 1990 levels in 2018, largely due to progress reducing emissions in electricity generation, waste and in the industrial sector.

5.4.2 Below is a summary of UK progress in meeting these targets.

	PERIOD	PROGRESS TO TARGET
1 <sup>st</sup>	2008-2012	Met
2 <sup>nd</sup>	2013-2017	Met
3 <sup>rd</sup>	2018-2022	On track
4 <sup>th</sup>	2023-2027	Not on track
5 <sup>th</sup>	2028-2032	Not on Track
6 <sup>th</sup>	2033-2037	

5.4.3 Crucially, these budgets were set against the previous target of an 80% reduction in emissions by 2050. The new Net-Zero target (100% reduction by 2050) means that progress will need to accelerate.

## 5.5 Progress towards Targets – The Welsh Picture

### Reducing emissions in Wales – Progress Report 2020

5.5.1 The Progress Report - Reducing Emission in Wales was published by the Climate Change Committee in December 2020. The report monitors progress towards Wales' existing targets using the latest available emissions data for Wales, with a focus on Wales' first Carbon Budget period from 2016 to 2020.

5.5.2 In terms of electricity supply the report confirms:

- "Electricity supply has been responsible for 85% of the total changes in emissions since 2016. Emissions from the electricity supply sector in Wales have halved (-53%) in the last two years and have fallen by 33% since 1990. The fall has been driven by reductions in fossil-fired electricity generation supported by the steady expansion of renewable capacity in Wales:
- In 2018, 30 TWh of electricity was generated in Wales. Wales was a net exporter of electricity to the rest of the GB network, consuming around 14 TWh. Around 25% of generation was from low-carbon sources (7.4 TWh), up from 22% in 2017 and from 6% in 2010.<sup>26</sup>
- Total electricity generation in Wales fell by 11% from 2017 to 2018. Most of this change was due to an 83% fall in generation from coal-fired power generation, but gas-fired generation also fell by 3%.<sup>27</sup>
- The rate of installation of new renewable electricity capacity in Wales has fallen every year since 2015. In 2018, 126 MW of new renewable electricity capacity was installed, compared to more than 900 MW in 2015.
- In South Wales, there is currently a constraint on the transmission electricity network, potentially preventing large power stations from connecting to either the transmission or distribution networks until reinforcement is completed in 2026. It is unclear whether the closure of Aberthaw Power Station in 2020 will help mitigate this constraint and/or expedite the solution to unlocking capacity sooner.<sup>28</sup>

5.5.3 In terms of meeting the first carbon budget target, the conclusions of the report are summarised in the table below.

PERIOD	REDUCTION FROM 1990 BASELINE	PROGRESS TO TARGET
2015	19%	
2016-2020	23%	On track to achieve this, as long as emissions do not increase in 2019 and 2020.
2021-2025	33%	

<sup>26</sup> Future Generations Commissioner for Wales (2019) 10 point plan to fund Wales' climate emergency.

<sup>27</sup> Just Transition Commission (2020) Interim Report

<sup>28</sup> Welsh Government (2018) Planning Policy Wales.

### Energy Generation in Wales: 2019

- 5.5.4 Energy Generation in Wales: 2019 was published in November 2020 and updated in January 2021 builds on previous Energy Generation in Wales reports and the energy use in Wales report published in 2020, which set out how energy is used in Wales and how energy use has changed over time.
- 5.5.5 In her Ministerial foreword, Lesley Griffiths MS, The Minister for Environment, Energy and Rural Affairs, notes that:
- “2019 figures reveal positive signs, despite the challenging market conditions faced by developers. We continue to progress towards our target of 70% of Wales’ electricity consumption to be from renewable energy by 2030. **Renewable electricity generation is now equal to 51% of electricity consumption in Wales.** We are 83% of the way towards our target of 1 GW of renewable energy capacity in Wales to be locally owned by 2030. An additional 145 MW of new renewable electricity capacity was installed in 2019 and we now have 825 MW of renewable energy capacity in local ownership.”
- 5.5.6 The document provides a summary of the current position on electricity generation in Wales:
- “Total electricity generation in Wales has reduced by approximately 8% since 2018. This is predominantly due to a reduction in generation from gas fired power stations. Meanwhile, the total amount of electricity generated from renewables increased by 0.6%. As a result of these two factors, the renewable share of Wales’ total electricity generation increased from 25% in 2018 to 27% in 2019. Electricity generation from coal fired power remained low in 2019, representing just 2% of all electricity generated in Wales. This is down from nearly a third in 2012 and 2013.”
- 5.5.7 As noted by the Minister, progress towards the target of 70% of Wales’ electricity from renewable sources by 2030 currently stands at 51%, the 2019 document notes:
- “Progress towards the 70% target has historically been a combination of both decreasing electricity consumption and increasing renewable electricity generation. Since 2005, electricity consumption has decreased by 16% while renewable electricity generation has increased by over 500%.”
- 5.5.8 It is important to note that this progress has been achieved in the main through the commissioning of a small number of large-scale wind farms and that whilst more capacity was brought on stream in 2019, than in 2018, there has in general been a downward trend in the provision of additional renewable power generation since the peak in 2015/2016.

### Progress in Powys Local Authority Area

- 5.5.9 Energy Generation in Wales: 2019 confirms that 91% (equivalent percentage) of electricity consumption was delivered by local renewable generation, this is up from 86% in 2018. By 2019, Powys benefited from 6,994 projects delivering a total capacity of 388 MW, with the majority of this from on-shore wind farms and biomass schemes, with a smaller percentage coming from solar PV and hydropower. The report states:



“Powys is the local authority area with the greatest installed renewable energy capacity, with a total of 388 MW. Powys also generated the most energy from renewable technologies in 2019, at an estimated 980 GWh.”

## 5.6 Contribution made from Buttington ERF

- 5.6.1 Prosperity for All: A Low Carbon Wales, published in March 2019, accepted that there is a need for a range of technologies to ensure a consistent and reliable source of renewable energy.

“Renewable generation will continue to increase to meet a large portion of power in a decarbonised system. However, the intermittent nature of renewables means they alone cannot currently meet an electricity demand that varies considerably by time of day and season and will increase with the penetration of electric vehicles and electric heating.”

- 5.6.2 The Buttington ERF would complement the existing portfolio of renewable and low carbon energy suppliers, which relies heavily on wind and solar energy. It has the potential to produce in the order of 12.8 MWe of energy.

- 5.6.3 Based on the most recent data, 3,372 MW of energy are supplied from renewable projects, this equates to 51% of the energy produced.<sup>29</sup> To reach the target of 70% by 2030, there is a requirement for an additional 1,256 MW of energy to be commissioned in the next 8 years.

- 5.6.4 In terms of additional annual production, had this facility been commissioned in 2019, it would have represented an 8.2% contribution to the additional annual capacity in that year.

In terms of the UK picture, whilst historical reductions in emissions have met targets to date, this is not expected to continue into the future, with the UK failing to meet the 4<sup>th</sup> and 5<sup>th</sup> projected Carbon Budgets.






Likewise, in Wales, emissions have been falling, almost entirely due to reductions in fossil-fired power generation. However, the underlying indicators and a lack of a cohesive, economy wide strategy for 2050 mean that Wales is not currently on track for to achieve the existing, 80% target for a reduction in emissions, or Net Zero.

Good progress has been made towards the target of 70% power from renewable resources, but there is still a requirement for a significant amount of additional generating capacity to be commissioned in the next 8 years in order to meet this target.

The Powys Local Authority area has been successful in providing 91% of their energy requirements from renewable resources, the majority of electricity originating from on-shore wind farms and biomass schemes.

**Buttington ERF** will make a necessary contribution to the overall targets for both Wales and the UK. It will complement the existing portfolio of renewable and low carbon energy suppliers, which relies heavily on wind and solar energy with potential to produce in the order of 12.8 MWe of energy to help progress towards the ambitious targets.

Table 1: How Buttington ERF meets 'Wellbeing Goals' and contributes to 'Placemaking Outcomes'

	<b>A 'Prosperous Wales'</b> <input type="checkbox"/> Innovative, productive, low-carbon society using resources efficiently. Skilled and well-educated population. Employment opportunities.	<ul style="list-style-type: none"> <li>✓ Buttington ERF will divert residual waste away from landfill, generate low-carbon energy and provide direct and indirect employment opportunities helping to educate existing and future generations about waste resource management, the 'circular economy' and renewable energy.</li> <li>✓ Buttington ERF is accompanied by a Health Impact Assessment and a Socio-Economic Impact Assessment.</li> <li>✓ It will provide for a mix of construction and operation employment requiring a range of technical and support skills – estimated to be 30 staff in the development and approximately 300 construction related jobs. It will provide long term, cost effective, efficient electricity and heat services. The facility will comply with all relevant Health and Safety and Building Regulations.</li> </ul>
	<b>A 'More Equal Wales'</b> <input type="checkbox"/> Equal access to jobs, education, health services.	
<b>Placemaking Outcome</b>	<b>Creating and Sustaining Communities and Sustainable Economic Growth</b> <input type="checkbox"/> Jobs to meet society's needs. Community based facilities and services. Generates its own renewable energy. Embraces smart and innovative technology.	
	<b>A 'Globally Responsible Wales'</b> <input type="checkbox"/> Support sustainable behaviour and use the earth's resources efficiently.	<ul style="list-style-type: none"> <li>✓ Buttington ERF will help to achieve Welsh Government targets for sustainable waste management, reduction of carbon emissions and generation of renewable energy. The form of construction will adopt best practice and work with the advantages of the quarry site.</li> <li>✓ Buttington ERF provides a long-term, sustainable opportunity to use waste as valuable resource to create energy. As such it contributes to the goals of delivering development that is resilient to climate change, decarbonising society and developing a circular economy for the benefit of both the built and natural environments. It is in line with the proximity and self-sufficiency principles to ensure that waste management is solved locally rather than the challenge being passed on to other places or future generations.</li> </ul>
<b>Placemaking Outcome</b>	<b>Making Best Use of Resources</b> <input type="checkbox"/> Makes best use of natural resources. Prevents waste. Prioritises the use of previously developed land and existing buildings. Unlocks potential and regenerates. High quality and built to last.	
	<b>A 'Resilient Wales'</b> <input type="checkbox"/> Protect existing communities and natural environments while promoting well-connected facilities closer to where people live.	<ul style="list-style-type: none"> <li>✓ Buttington ERF will bring forward restoration of part of the quarry, retain the adjacent geological SSSI, provide SuDS, landscape and biodiversity enhancements including extensive native broadleaf woodland, wetland habitats and open mosaic habitat (see landscape masterplan).</li> <li>✓ The proposal has been assessed against all key environmental aspects. Negative impacts will be avoided or appropriately mitigated. The Buttington ERF proposal incorporates extensive areas of green infrastructure. The facility will provide low carbon energy to export in the National Grid so making a significant contribution to the reduction of emissions by diverting waste away from landfill.</li> </ul>
<b>Placemaking Outcome</b>	<b>Maximising environmental protection and limiting environmental impact</b> <input type="checkbox"/> Resilient biodiversity and ecosystems. Integrated green infrastructure. Reduces environmental risk. Reduces overall pollution. Resilient to climate change.	
	<b>A 'Healthier Wales'</b> <input type="checkbox"/> Active nation and place-making and designing-in community health and well-being.	<ul style="list-style-type: none"> <li>✓ Buttington ERF will provide staff access to external amenity areas.</li> <li>✓ Encourage walking and standing meetings, natural lighting and good ventilation to buildings.</li> <li>✓ In developing the proposal for Buttington ERF, the Applicant has involved and collaborated with others to ensure issues are understood and prevented at the earliest opportunity through effective engagement with those affected by or having an interest in the development concerned. A Liaison Group will be established to ensure ongoing dialogue with members of the local community who have questions or concerns about the development.</li> <li>✓ By its nature, the ERF will be reliant on transport by road. However, Buttington ERF will provide a waste management facility which has direct access onto a trunk road and is well located in relation to the Primary Road Network. Although limited, there are non-car travel options available for those working at or visiting the Development Site.</li> <li>✓ The facility provides access to waste management infrastructure which will serve the local area.</li> </ul>
<b>Placemaking Outcome</b>	<b>Facilitating Accessible and Healthy Environments</b> <input type="checkbox"/> Accessible and high-quality green space. Accessible by means of active travel and public transport. Minimises the need to travel. Convenient access to goods and services. Promotes physical and mental health and well-being.	

**Table 2: How Buttington ERF meets the ‘Future Wales’ Low Carbon and Renewable Policy Criteria for Developments of National Significance**

National Development Framework 2020	
Policy 17 Renewable and Low Carbon Energy and Associated Infrastructure	
<ul style="list-style-type: none"> <li>❑ Strong support for the principle of developing renewable and low carbon energy:-from <b>all technologies and at all scales</b> to meet future energy needs.</li> <li>❑ Give significant weight to the need to meet Wales’ international commitments and our target to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency</li> <li>❑ Net social, economic and environmental and cultural benefits to local communities including retention of younger generation with opportunities to develop their skills</li> </ul>	<p><b>How Buttington ERF meets the ‘Future Wales’ Low Carbon and Renewable Policy Criteria for Developments of National Significance</b></p> <ul style="list-style-type: none"> <li>• Generate around 13 MWe of low-carbon and renewable energy to the National Grid to help provide greater security of supply helping to meet 70% target of consumed electricity by renewable means by 2030. The ERF will complement the more intermittent supply from renewable technology such as wind and solar.</li> <li>• Pivotal role in addressing the management of residual waste material from across Mid-Wales and across the borders by diverting up to a maximum 167,000 tonnes away from landfill facilities and converting it into low carbon energy.</li> <li>• R1 facility will help to contribute to the interim solution to waste management whilst other recycling technologies are being developed as progress is made towards achieving net zero waste.</li> </ul> <p><b>Employment and Education Opportunities in Powys</b></p> <ul style="list-style-type: none"> <li>• An anticipated 300 jobs throughout the 3-year build.</li> <li>• Employment for 30 permanent staff once facility operational.</li> <li>• Additional indirect employment through supply chain opportunities such as maintenance and materials supply.</li> <li>• Apprenticeship scheme providing onsite learning.</li> <li>• An estimated 100 new jobs in spin out industries which could boost the local economy.</li> <li>• Local jobs fair, giving those who currently live and work in the area an opportunity to learn more about the employment positions.</li> <li>• Local Employment Plan which will actively target local employment.</li> <li>• On-site education centre for local school children to learn about recovery and recycling (e.g. air quality monitoring, wider circular economy).</li> </ul>

	<p><b>Current and Future Business in Powys</b></p> <ul style="list-style-type: none"> <li>• Realise the potential of the employment allocation on the site (Powys Local Development Plan).</li> <li>• Long-term objective for the Buttington ERF ‘anchor’ development to act as a catalyst for the aspirations for the wider site to create an eco-business park.</li> <li>• Provision of subsidised electricity (via private wire) and heat to businesses within the wider development site to incentivize development of sustainable development opportunities.</li> </ul> <p><b>Potential for Electric Vehicles and Charging Facilities</b></p> <ul style="list-style-type: none"> <li>• Provide an Electric Vehicle charging station within wider quarry (subject to a separate planning application) for commercial and public motorists.</li> <li>• Aspirations for a fleet of electric vehicles for transporting waste and residual materials associated with the ERF.</li> </ul>
<p><b>POLICY 18 Renewable and Low Carbon Energy</b> “Proposals for renewable and low carbon energy projects (including repowering) qualifying as Developments of National Significance will be permitted subject to Policy 17 and the following criteria:</p>	
	<p><b>How Buttington ERF meets the ‘Future Wales’ Low Carbon and Renewable Policy Criteria for Developments of National Significance</b></p>
<p><b>Landscape and Visual Impact</b></p> <p><input type="checkbox"/> <b>Buttington ERF will:</b> not have an unacceptable adverse impact on the surrounding landscape (particularly on the setting of National Parks and AONB)</p> <p><input type="checkbox"/> <b>Buttington ERF has:</b> been designed to minimise its visual impact on nearby communities and individual dwellings, and the cumulative impact of the proposal, with other existing or proposed development, is acceptable</p>	<ul style="list-style-type: none"> <li>• Landscape and Visual Impact Assessment (ES Chapter 9).</li> <li>• Alternative Sites Assessment (ES Chapter 3) excluded potential sites within the Brecon Beacons National Park.</li> <li>• Design and Access Statement.</li> <li>• Design and Landscape Strategy (summarised in Section 3.5 of the WPS).</li> <li>• Architect designed custom-built ERF which is sympathetic to the existing landscape setting, utilizing quarry void (scale, layout, materials, colours).</li> <li>• Screening bund around quarry rim planted with broadleaved woodland.</li> <li>• Retention of mature woodland on southern site boundary.</li> </ul>

<b>Nature Conservation and Biodiversity Enhancements</b> <input type="checkbox"/> <b>Buttington ERF</b> will: have no adverse impacts on international and national statutory designated sites for nature conservation (and the features for which they have been designated), protected habitats and species.  <input type="checkbox"/> <b>Buttington ERF</b> will include: biodiversity enhancement measures to provide a net benefit for biodiversity.	<ul style="list-style-type: none"> <li>• Ecology Assessment (ES Chapter 10).</li> <li>• Design and Access Statement.</li> <li>• The Design and Landscape Strategy is summarised in Section 3.5 of the WPS.</li> <li>• Provision of new native woodland planting, open mosaic habitat, species rich grassland and ponds.</li> <li>• Local habitat connectivity.</li> <li>• Overall increase in quality of priority habitats.</li> <li>• Habitat Management Plan to secure long term management and monitoring.</li> <li>• Exclusion of the adjacent geological Site of Special Scientific Interest from within planning application boundary.</li> </ul>
<b>Built Heritage Sites</b> <input type="checkbox"/> Buttington ERF will: have no unacceptable adverse impacts on statutory protected built heritage assets	<ul style="list-style-type: none"> <li>• Archaeology and Heritage Assessment (ES Chapter 12)</li> <li>• Programme of archaeological works during construction.</li> </ul>
<b>Noise, Air, Light</b> <input type="checkbox"/> <b>Buttington ERF</b> will: have no unacceptable adverse impacts by way of shadow flicker, noise, reflected light, air quality or electromagnetic disturbance	<ul style="list-style-type: none"> <li>• Air Quality Assessment (ES Chapter 6)</li> <li>• Noise Assessment (ES Chapter 14)</li> <li>• Lighting Strategy (Technical Appendix 4-2).</li> <li>• Optimum stack height.</li> <li>• Construction Environment Management Plan.</li> <li>• Acoustic screening within site.</li> <li>• Emissions control measures incorporated into design.</li> <li>• Planning conditions and Environmental Permit to define operational limits and monitoring obligations.</li> </ul>
<b>Transport</b> <input type="checkbox"/> <b>Buttington ERF</b> will	<ul style="list-style-type: none"> <li>• Highways and Transportation Assessment (ES Chapter 8)</li> </ul>

<p>have no unacceptable adverse impacts on the transport network through the transportation of components or source fuels during its construction and/or ongoing operation.</p>	<ul style="list-style-type: none"> <li>• Design and Access Statement</li> <li>• The site is conveniently located on a crossing of two major trunk roads and a new purpose built access into the site will be constructed off the A458.</li> </ul>
<p><b>Materials used and generated</b></p> <p><input type="checkbox"/> <b>Buttington ERF</b> has:</p> <p>Considered the materials needed or generated by the development to ensure the sustainable use and management of resources.</p>	<ul style="list-style-type: none"> <li>• Design and Access Statement</li> <li>• Construction Environment Management Plan</li> <li>• Local supply of materials.</li> </ul>
<p><b>Decommissioning</b></p> <p><input type="checkbox"/> <b>Buttington ERF</b> proposal includes acceptable provisions relating to the decommissioning of the development at the end of its lifetime, including the removal of infrastructure and effective restoration.</p>	<ul style="list-style-type: none"> <li>• All ES Chapters cover the decommissioning phase. Chapter 4, Section 4.7 describes the decommissioning stage in detail.</li> <li>• Detailed Site Closure and Decommissioning Plan will be included within the management system required by the Environmental Permit and it will be submitted to NRW for approval once the ERF is fully operational.</li> <li>• In the event of the definitive cessation of activities at the ERF, an application will be submitted to NRW surrender its Environmental Permit. This will be accompanied by a Surrender (Site Condition) Report which will describe the condition of the land within the Installation boundary. The report will need to demonstrate that there has been no deterioration in the site condition as a result of permitted activities since the permit was issued.</li> <li>• Broad Energy (Wales) Limited will ensure that appropriate measures are put in place to avoid any pollution risk at the site during the decommissioning activities, and to ensure that it is returned to a satisfactory state.</li> </ul>

## 6 Environmental Legislation and Policies

### 6.1 Overview

- i. Chapter 4 above has set out the need for the proposed ERF and demonstrated how it accords with international, national and local legislation and policies relating to waste management and carbon emissions.
- ii. The planning application also addresses the wider environmental considerations through the EIA, notably Powys Local Development Plan Policies:
  - Policy DM2 The Natural Environment
  - Policy DM4 Landscape
  - Policy DM5 Development and Flood Risk
  - Policy DM6 Flood Prevention Measures and Land Drainage
  - Policy DM7 Dark Skies and External Lighting
  - Policy DM10 Contaminated and Unstable Land
  - Policy DM13 Design and Resources
  - Policy DM14 Air Quality Management
  - Policy T1 Travel, Traffic and Transport Infrastructure
- iii. TAN 21 confirms that it is not the role of the WPS to repeat information included in the ES but to 'signpost' where it can be found. Each of these policy areas is encompassed and addressed within the key environmental aspects (EIA topics) which are covered within the ES chapters listed in Chapter 1 of this WPS. The ES confirms that the Buttington ERF could be delivered without significant adverse effects and it details any mitigation measures required in order to achieve this.
- iv. TAN 21 does stipulate that the WPS should set out how the proposals have considered any potential nuisance and amenity impacts and how these have been addressed, as set out below.

### 6.2 Amenity and Nuisance

#### **Compatibility of the proposed development with existing or neighbouring land uses**

##### **Design and Landscape Strategy**

- 6.2.1 Chapter 3 of this WPS discusses how the buildings and layout of the ERF have been designed and arranged to fit appropriately within the wider Buttington Quarry and surrounding landscape.

##### **Land contamination, light pollution, noise, smell, dust, birds and vermin and litter and air pollution**

- 6.2.2 The EIA has comprehensively assessed all potential impacts of the proposed development including measures to prevent and control contamination, pollution, noise, air quality and



odour emissions and vermin. Details are provided in ES Chapters 6 (Air Quality), 8 (Transport), 11 (Water Environment) and 14 (Noise).

- 6.2.3 A Health Impact Assessment has been undertaken as an independent exercise and the results are included in ES Chapter 15.

#### **Environmental Permit**

- 6.2.4 The Development will be operated under an Environmental Permitting Regulations Permit ("EPR Permit") issued and regulated by Natural Resources Wales ("NRW"). The EPR Permit will identify the potential for effects on the environment and public amenity. As part of the determination of the Permit application, NRW will review the management measures proposed to ensure that the Buttington ERF is operated in a sound environmental manner and does not give rise to unacceptable environmental impacts or detriment to the amenities of the locality. The EPR application will be submitted to NRW in tandem with the planning application, in accordance with best practice guidance.

- 6.2.5 The site will be managed in accordance with an environmental management system, compliant with ISO 14001 (Environmental Management).

#### **Emissions and Odour Control**

- 6.2.6 Local air quality impacts associated with installation of the facility and from vehicle emissions have been assessed and a qualitative assessment of odour impact has been undertaken.
- 6.2.7 As a worst-case, emissions from the installation's stack have been assumed to be at the maximum emission limit values. This represents a conservative assessment of the impact as the actual emissions from the site are likely to be significantly lower.
- 6.2.8 A detailed screening assessment confirmed that the optimum stack height for the installation would be 70m.
- 6.2.9 Predicted maximum Ground Level Concentrations (GLC) are within the short and long-term air quality objectives and are assessed as not significant (less than 1% of the Air Quality Standard (AQA)/Environmental Assessment Level) for most pollutants assessed. For those which are potentially significant, further screening has demonstrated that AQSs are unlikely to be exceeded as a result of emissions from the proposed installation at the maximum point of GLC or at any of the potentially significant human receptors.
- 6.2.10 Impact from the proposed installation on sensitive ecological habitats is unlikely to result in a breach of the relevant Critical Loads or Critical Levels or have a detrimental effect on local habitat sites.
- 6.2.11 An assessment of plume visibility concluded that visible plumes would only occur around 30% of the time and for 95% of the time any visible plumes would remain within the site boundary.
- 6.2.12 The assessment of the impact of the proposed plant when operating under the abnormal conditions permitted under Article 46(6) of the Industrial Emissions Directive indicated that it would be unlikely that any AQSs would be exceeded.

- 6.2.13 Emissions controls will include a comprehensive flue gas treatment system with associated discharge stack and continuous emissions monitoring system.
- 6.2.14 The impact of road traffic associated with the installation, in all phases of the development can also be classed as not significant.
- 6.2.15 The odour assessment confirmed that the installation will have a negligible effect on the nearest sensitive receptors. Odour control will be provided by the atmosphere control system ducting the air from the waste reception hall into the combustion chamber to be used as combustion air within the combustion process.
- 6.2.16 In conclusion, the proposed ERF will not have a significant impact on local air quality, human health or sensitive habitat sites, nor give rise to any significant odour impacts.

### **Lighting**

- 6.2.17 The external lighting strategy is shown on Drawing 4052-ID-DR-1001 (2-sheets) in Technical Appendix 4-2, together with the lighting calculations and risk assessment. In summary:
- Lighting levels for each area have been designed to be in keeping with site's rural location and in accordance with BSEN 12464-2 for outdoor work places;
  - Additional localized lighting will be required for ladders and platforms;
  - external security lighting will operate all night, with the exception of the ERF access road and firewater storage areas;
  - mounting heights have been selected to minimise lighting impacts and where necessary external backlight shields will be provided to minimise back spill;
  - all external lighting will have primary photocell control to ensure it is not operational during daylight hours; and
  - luminaires have been selected to minimise any impact on bats.
- 6.2.18 Lighting requirements are likely to alter as construction progresses. Temporary lighting is generally used as it can be relocated easily to areas where and when needed.

6.2.19 Below is an extract from Table 16-1 of the NTS – Summary of Mitigation, which lists the mitigation proposed for the Key Environmental Aspects (KEA) relating to amenity, nuisance and pollution. More detail is provided in the relevant ES chapters and in ES Chapter 16 – Cumulative Impacts and Mitigation Summary.

KEA	Mitigation Proposed	Means of Securing Delivery
Air Quality Ecology Health Impact Water Environment Geotechnical and Materials Management Noise	<ul style="list-style-type: none"> <li>Provision of a Construction Environmental Management Plan (“CEMP”)</li> <li>Provision of a Decommissioning Environmental Management Plan (“CEMP”)</li> </ul>	Planning Condition requiring CEMP. DEMP will form part of the Decommissioning Plan for the Installation to be submitted to NRW as part of an EPR Permit Condition
Air Quality Health Impact	<ul style="list-style-type: none"> <li>Design measures and management and operational procedures.</li> <li>Integrated Management System</li> <li>Environmental Permit</li> <li>Process Control Measures</li> <li>Flue Gas Treatment System</li> <li>Continuous Emissions Monitoring Systems</li> <li>Odour Control Systems</li> </ul>	Design of Development The Installation will be required to obtain an Environmental Permit.
Highways and Transportation	<ul style="list-style-type: none"> <li>Traffic Management Plan including HGV Routing Strategy</li> <li>Travel Plan</li> </ul>	Planning Condition requiring both
Water Environment	<ul style="list-style-type: none"> <li>Implementation of Surface Water Management Plan</li> </ul>	Planning Condition implementation of SWMP.
Geotechnical and Materials Management	<ul style="list-style-type: none"> <li>Pre-import assessment of chemical test data for materials and post-import sampling, testing and quantitative assessment of import materials to confirm suitable for use.</li> <li>Inspection, sampling and testing to test soils</li> <li>Install radon gas protection</li> </ul>	Design of Development Planning Condition requiring CEMP

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Noise	<ul style="list-style-type: none"> <li>The introduction of a temporary acoustic screen at site entrance along boundary with Brookfield House for the construction/decommissioning phase of the development.</li> <li>Noise control measures have been incorporated into the design of the Development</li> </ul>	Planning Condition containing noise limits
Health	<ul style="list-style-type: none"> <li>Creation of a Liaison Group</li> </ul>	n/a – dependant on Community Involvement
Landscape and Visual	<ul style="list-style-type: none"> <li>A screening bund will be formed around the quarry rim which will be planted with broadleaved woodland, with further areas being restored to open mosaic habitat and grassland.</li> </ul>	Landscape Masterplan to be implemented as a Planning Condition

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## **7 Conclusions**

- 7.1.1 Broad Energy (Wales) Ltd is submitting a planning application for the construction and operation of a high efficiency (R1) energy recovery facility (ERF) on land at Buttington Quarry.
- 7.1.2 It will be capable of thermally treating up to 167,000 tonnes of non-recyclable, residual municipal, commercial and industrial waste to produce up to 12.8MWe for export to the National Grid and to potentially to serve local users.
- 7.1.3 The proposed development will make a significant contribution to the diversion of residual waste away from landfill, instead utilising it as a valuable resource in line with the objectives to achieve a 'circular economy', reduce greenhouse emissions, 'de-carbonise' society and build resilience to climate change.
- 7.1.4 It will provide a much needed facility for Powys and the surrounding area to allow for waste to be managed locally in line with the principles of 'self-sufficiency' & 'proximity'.
- 7.1.5 This Waste Planning Statement demonstrates the need for the energy recovery capacity as progress towards achieving the ambitious target of net zero waste and carbon emissions in 2050. The proposed development complies with international and national legislation and policies, and the statutory development plan for Powys County, in respect of waste management priorities, low-carbon energy production, location of waste infrastructure, and management of impacts on communities and the environment.
- 7.1.6 The application is accompanied by an Environmental Statement which concludes that the Proposed Development can be successfully mitigated.
- 7.1.7 It is concluded that planning permission should be granted for the Buttington ERF proposals which comply with UK and Welsh legislation, planning policies and guidance and will deliver community and environmental benefit.



## **Appendix 1**

### **Technical Advice Note 21: Waste, Annex B**

#### **Waste Planning Statement Requirements**



**Waste Policy Statement** comprising the following:

- A description of how the proposals will contribute to the relevant provisions of 'Towards Zero Waste' and the Collections, Infrastructure and Markets Sector Plan (CIM) Plan.
- A statement of compliance with policy related to need & location requirements;
- A calculation of existing and projected future demand
- Details of the markets that will be served by the proposed development;
- A calculation to identify the current shortfall in treatment capacity;
- A description of the consultation undertaken by the applicant; and
- A signed declaration that in making the application the applicant has paid due regard to the waste hierarchy.

**In relation to details of the Development** the following:

- Time-scale:
  - Details of the lifespan of the operation, including any proposed measures for future proofing; and
  - Details of the days and hours of operation.
- Types and quantities of waste to be managed including the following:
  - Estimated annual quantity of each waste type to be received and estimated total capacity where relevant;
  - The destination of any end product (residues and any hazardous materials) from the site should be submitted;
  - The minimum and maximum quantities that the facility could process and remain operational; and
  - The amount of waste (in tonnes) the facility is designed to treat.
- Design, layout, buildings and plant – a full description of the proposed development including:
  - the processes involved, including transportation to and from the site.
  - layout and design of buildings, plant, operational areas, haul roads and external lighting.
  - If relevant - Details on landfill gas and leachate control infrastructure should also be identified.
  - Proposed restoration and aftercare

**In relation to amenity and nuisance**

- An assessment of the compatibility of the proposed development with existing or neighbouring land uses;
- Details of measures to prevent and control land contamination, light pollution, noise, smell, dust, birds and vermin, litter; and
- Details of any emissions associated with the proposed operations.

**In relation to air pollution:**

- Details of the impact of emissions to atmosphere of any product gasses resulting from specialist treatment/recovery processes.

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## Signed Declaration

This statement sets out how the waste hierarchy has been considered in developing the proposals currently forming this planning application.

Signed: 

Karen Hearnshaw, Partner Minerals and Waste Planning, Carter Jonas

Date: 26<sup>th</sup> February 2021

on behalf of Broad Energy (Wales) Ltd.

