BUTTINGTON ENERGY RECOVERY FACILITY
WASTE PLANING STATEMENT

CJ Ref: J0036928Butt
August 2020
ISSUE: FOR CONSULTATION

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Waste Planning Statement

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List of Abbreviations

Abbreviations

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

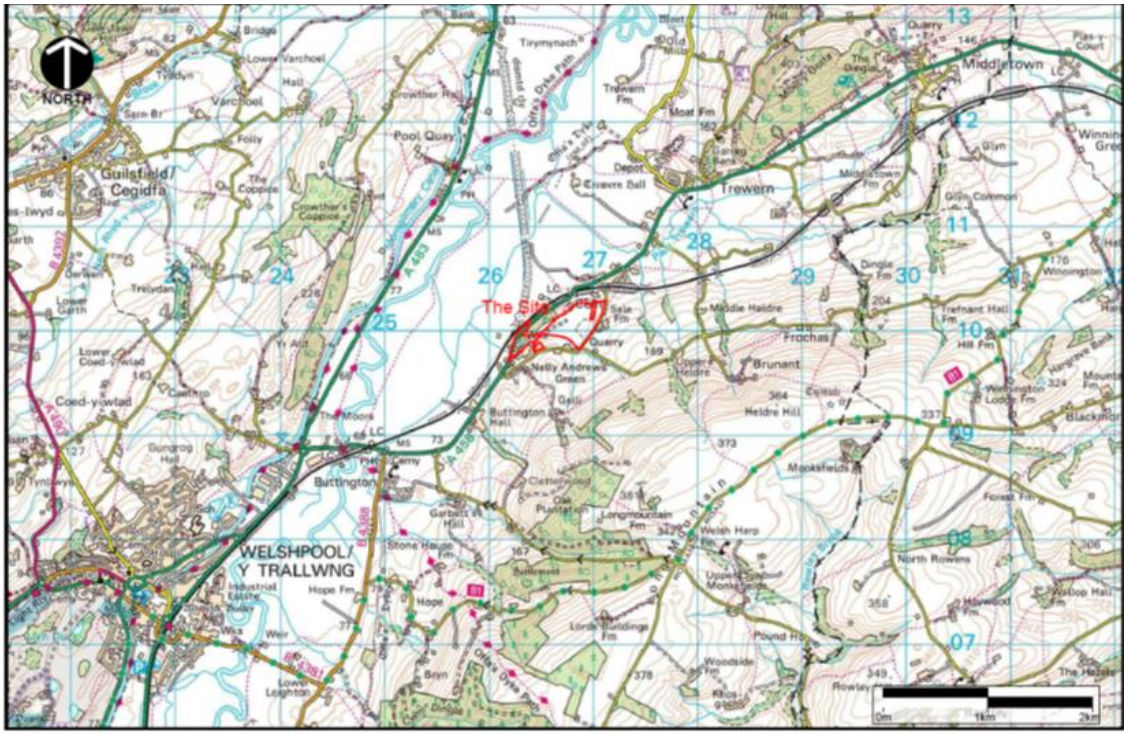
1.1.1 This Waste Planning Statement (WPS) has been prepared by Carter Jonas to accompany an application for planning permission that has been submitted to the Welsh Ministers under Part 5 of the Planning (Wales) Act 2015 by Broad Energy (Wales) Limited ("Broad Energy" or "the Applicant").

1.1.2 The application has been submitted 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, ancillary buildings, structures, sub-station and grid connection, parking, hardstanding including laydown areas for materials storage and plant, fencing, gates and CCTV, weighbridge and office, sustainable drainage measures, landscape works and ecological enhancements on land at Buttington Quarry, Buttington, Welshpool, Powys, SY21 8SZ ("the Development Site").

1.1.3 The Development Site location and boundary are shown on Figure 1-1.

Figure 1-1 – Site Location



1.1.5 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).[1]

1.1.6 This WPS is a draft version for the purposes of pre-application consultation prior to finalising the development proposals. It will be completed and appendices added at the time of submitting the planning application to PINS.

1.1.7 This WPS has been prepared in accordance with the requirements listed in Annex B of Technical Advice Note (TAN) 21: Waste, which are included as Appendix 1 of this report. The requirements cover 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.

1.1.8 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).

1.1.9 However, the WPS must set out how potential amenity, nuisance and air pollution impacts have been assessed and appropriately mitigated. This is addressed in section 4.

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 will support the generation of renewable energy and heat through the use of non-recyclable waste.

[1] PINS Notice of Acceptance, dated 5 August 2020

1.2.4 This partnership is keen to ensure that all future changes at the Development Site wherever possible, 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.

1.3.1 HZI is a global technology leader for energy and material recovery from waste. HZI solutions are based on efficient and environmentally sound in-house technology, are thoroughly tested, can be flexibly adapted to user requirements, and cover the entire plant life cycle.

1.3.2 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 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 (EIA Regulations).
- The Developments of National Significance (Wales) Regulations 2016 (as amended).
- The Developments of National Significance (Procedure)(Wales) Order 2016 (as amended).
- Planning Policy Wales, 10th Edition (December 2018).
- The Welsh Government's Technical Advice Notes (TANs).
- The Welsh Government DNS Guidance for Applicants.

Environmental Impact Assessment

1.4.2 Under the EIA Regulations, the proposed development constitutes a Schedule 1 development comprising:

> "waste disposal installations for the incineration… of non-hazardous waste with a capacity exceeding 100 tonnes per day" (Category 10).

1.4.3 As such, the planning application must be accompanied by an Environmental Statement (ES). An EIA Scoping Request was submitted to the Welsh Ministers in August 2018, a copy of which

is attached as Appendix 2 together with the Applicant's Scoping Report and PINS' Scoping Direction. The ES covers 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 and Materials Management (Chapter 13);
- Noise (Chapter 14);
- Health impacts (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 included ES Chapter 3: Need and Alternatives.

1.4.6 The planning application and accompanying Environmental Statement (ES) is submitted in two volumes as follows.

- Volume 1: Planning Application
  - Part 1 Letter, 1-App Planning Application Form, Certificates and Notices
  - Part 2 Waste Planning Statement
  - Part 3 Application Plans
  - Part 4 Design and Access Statement
  - Part 5 Shadow Habitats Regulation Assessment
  - Part 6 Schedule of Planning Application Documents.
- Volume 2: Environmental Statement
  - Part 1 Non-Technical Summary
  - Part 2 ES Main Report and Technical Appendices

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[2] 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 14th September and 26th October 2020 (i.e. the requisite 42 days) in accordance with the DNS Order. The Consultation Report at Appendix 3 of this WPS 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 phoneline and freepost address for further information and for submitting comments on the consultation.

[2] Regulations 6 and 7

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 326826 310149.

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 Development Site boundary for the proposed ERF 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 Drawing Reference (ref): ECL.BQ.000 Planning Boundary).

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

2.2.2 The Powys Local Development Plan (LDP) was adopted in April 2018 and covers the period 2011 to 2026.

2.2.3 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

2.3.2 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.

2.3.3 The Quarry is a working claypit which 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 purposes. Buttington Quarry is home to a number of commercial

operations, including operations by Border Stone.

2.3.4 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. When considering the decorative stone sales also involved an equal tonnage of bulk material being imported to the quarry, both operations involved around 150,000 – 195,000tpa of material being imported/exported from the quarry.

2.3.5 The former brickworks buildings are now occupied and used for third party commercial uses including storage and distribution.

2.3.6 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

3.1.2 ES Chapter 4 - Proposed Development, provides a detailed description and simplified flow diagram for the ERF process. The key elements of the facility and its design are summarised in the following paragraphs.

3.1.3 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.

3.1.4 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

3.2.2 The Buttington ERF will accept a range of non-hazardous residual municipal (household) commercial and industrial (C&I) wastes. By the term 'residual', recyclable materials would have been removed from the waste streams, either at source, or through other processing facilities.[3] At present, residual waste arisings in Powys are being disposed of to landfill or exported to Europe.

3.2.3 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.

3.2.4 Incinerator Bottom Ash (IBA) and Air Pollution Control Residues (APCR) will be transported off-site to a suitably permitted facility.

3.3 Energy Efficiency

3.3.2 The facility will be 'R1 efficient'[4] 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.

3.3.3 Electricity will be exported to the National Grid to help provide greater security of future

[3] 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

[4] 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.

supplies. The facility will be designed to be combined heat and power (CHP) ready. This will 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

3.4.2 The Development Site Plan, Drawing ref: ECL-BQ001 (Technical Appendix (TA) 4-1) illustrates the proposed layout of the buildings, plant, operational areas, haul roads and layout areas. The General Layout Plan (Drawing ref: BUT-RCA-00-ZZ-DR-A-0202 in Part 3, Volume 1 of this application) 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 TA 4-2 and is summarised in section 4 of this WPS.

3.4.3 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.

3.4.4 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.

3.4.5 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.

3.4.6 Associated infrastructure will include a weighbridge and weighbridge office, wheelwash facility, car and HGV parking areas, substation and grid connection and security measures (gates, fencing and CCTV).

3.4.7 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) was submitted in April 2020 to extend the timeframe for commencement of development. The access is shown on Bright and Associates Drawing BT1180-D1 in ES TA 4-1.

3.4.8 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

3.5.2 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).

3.5.3 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.

3.5.4 The design strategy is illustrated on the application plans and elevations (Volume 1, Part 3), the Design and Access Statement (Volume 1 - Planning Application) and the Landscape and Visual Impact Assessment (LVIA), in ES Chapter 9.

3.5.5 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.

3.5.6 The building design is complemented by a landscape strategy which is illustrated on the Landscape Masterplan (Drawing Ref: BT1180-D2v6, in Part 3, Volume 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 SSSI;
- 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

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

3.7 Process, Working Hours and Transport Movements

Construction Phase

3.7.2 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).

3.7.3 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 Drawing

ref: ECL-BQ-001 in ES, TA 4-1.

3.7.4 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.

3.7.5 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.

3.7.6 The construction phase will provide employment for just over 300 workers. 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).

3.7.7 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. An outine CEMP is included at ES, TA 4-3 (Ref: ECL:001.01.01/CEMP).

Operational Phase

3.7.8 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. Waste will be tipped into the waste bunker and the vehicle will exist the installation.

3.7.9 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 could take place for up to 12 hours on weekdays (7am – 7pm) and 5.5 hours on Saturdays (7am-12.30pm).

3.7.10 Deliveries of waste 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 Incinerator Bottom Ash (IBA) residues and Air Pollution Control (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 (Transport).

3.7.11 The proposed development is likely to employ 30 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

3.7.12 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. The building itself will last well over 30 years. This planning application is therefore for a permanent development.

3.7.13 Nevertheless, the scheme allows for restoration of parts of the former quarry which will provide landscape areas around the built development.

3 Need and Waste Policy Context

3.1 Powys County – Residual Waste

3.1.1 The North and South East Waste Monitoring Reports[5] set out that PCC has a contract with Potters Waste Management which sees refuse derived fuel (RDF) transported to Pembroke Dock for export for export to Sweden, with the remaining waste going to landfill at Bryn Posteg. The contract with Potters Waste Management involves landfill from the 1st April 2016 for the first 5 years and then an energy from waste solution for a further 5 years (from 1st April 2021). The company secured planning permission for a facility which could recover energy from residual waste in Welshpool, however, at the time of writing the report the planning permission had not been implemented.

3.1.2 In respect of the Bryn Posteg landfill, 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. NRW issued an Environmental Permit on 8th September 2020 which allows the overfilled material to remain on site and for an additional 116,657m3 to be deposited. The enforcement response to the breach is still subject to legal proceedings and there is no indication on PCC's online planning register when the planning application will be determined.

3.1.3 There is no information available on PCC's online planning register detailing, for example, the technology or market assessment for the permitted facility at Potters Yard, Severn Road, Welshpool (planning application ref: P/2014/1086), although it is understood to be for an energy generating plant capable of processing RDF and gridshell building to enclose machinery. Whilst the permission remains extant and has lawfully commenced, an application (ref: 19/1848/CLP) for a certificate of lawfulness for the development is still pending.

3.1.4 There remains uncertainty about future waste management within Powys. In line with the principles of 'self-sufficiency' and 'proximity' discussed in section 4 of this WPS, there is a clear need for treatment capacity locally to deal with locally generated waste. Exporting overseas or disposing to landfill instead of utilising waste as a valuable resource does not present a sustainable solution.

3.2 Wales Residual Waste Treatment Procurement Projects

3.2.1 The need for future waste energy recovery facilities should be considered in the context of existing waste management infrastructure, particularly within Wales.

3.2.2 The most recent regional waste monitoring reports[6] set out that a number of local authorities in Wales 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.

[5] Section 7.3 of North Wales and South East Wales Monitoring Reports, April 2017

[6] North Wales Waste Monitoring Report, April 2017; South East Wales Monitoring Report, April 2017; South West Wales Monitoring Report, Interim Report 2015

3.2.3 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 it will ever do so in the future.

3.2.4 The only other operational residual waste treatment facility in SW Wales is an MBT plant in Lampeter where the treated residue is sent to landfill. It has a capacity of 80,000 tonnes.

3.2.5 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). The facility is contracted to 2032 and largely serves Wrexham and the immediate environs. It is not expected to provide any ERF capacity.

3.2.6 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 project, now known as Parc Adfer, has culminated in the signing of a 25-year contract with Wheelabrator Technologies Inc. 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. It is understood that the facility is already at, or close to, capacity with the waste arisings from within the NW partnership area.

3.2.7 In South East (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 which included the Energy from Waste (EfW) facility at Trident Park which can manage up to 350,000 tonnes of residual waste per annum. Of this, an average of 170,000 tonnes per annum will come 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.

3.2.8 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.

3.2.9 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. It is reasonable to assume that any capacity in SE Wales will continue to cater for the SE catchment.

3.2.10 Powys County covers an extensive area which will inevitably have a significant bearing on the distance over which waste arisings would need to travel to reach a facility outside the County, particularly as Powys does not have a network of waste transfer stations.

3.2.11 Based on similar previous projects, 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. This would not provide a holistic approach to the management of Powys' residual waste from across the County. Furthermore, it would necessitate transportation of part of the County's waste via the road network through the Brecon Beacons National Park.

3.2.12 It is reasonable to conclude that there is no existing waste management option. Furthermore, there are no facilities in the pipeline that could be considered 'high probability deliverable[7]' and an appropriate solution for managing Powys waste.

3.2.13 On 4 September 2020 Mor Hafren Biopower submitted a planning application to Welsh Ministers for an ERF with a capacity to manage up to 200,00tpa of residual waste and to export approximately 15Mwe to the National Grid. The application is yet to be validated. The site lies on the eastern outskirts of Cardiff at a similar distance to Trident Park. There is currently no information in the public domain in respect of market assessment or proposed catchment, but it is reasonable to anticipate that it will draw in some capacity from the east.

3.3 Powys County - Site Search

3.3.1 Based on the above a site search was undertaken to establish whether a suitable site could be found within Powys County for the location of an ERF. The comprehensive alternative sites assessment (ASA) is included as TA 3-2, ES Chapter 3 – Need and Alternatives.

3.3.2 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).

3.3.3 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).

3.3.4 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.

[7] 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.

3.3.5 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.

3.3.6 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.

3.3.7 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.

3.3.8 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.

3.3.9 The site search and assessment exercise show Buttington Quarry to be the most 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 existing quarry.

3.4 Buttington ERF – Market Appraisal

3.4.1 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 TA 3.1, ES Chapter 3 – Need and Alternatives.

3.4.2 As discussed above in section 3.2, 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.

3.4.3 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 (Ceredgion).

3.4.4 Given that the entire eastern border of Powys borders England, and given Buttington Quarry's location, the 2 hour catchment area also includes Herefordshire, Shropshire, Cheshire and other West Midlands counties.

3.4.5 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.

3.4.6 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'.

3.4.7 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.

3.4.8 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.

3.5 Review of Key Legislation and Policies

3.5.1 Having identified a need for the facility, this section demonstrates how the proposed development complies with key legislation and policies relating to: waste management, in particular the move away from landfill towards recovery; low-carbon energy production; and locational criteria for siting waste management facilities.

❑ **International Directives**

- 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 10) (December 2018).
- 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).

❑ **Local Policy**

- Powys Local Development Plan (2011-2026).

Waste Framework Directive (2008/98/EC)

3.5.2 The Waste Framework Directive lays down waste management obligations for Members 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.

3.5.3 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.

3.5.4 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 Government 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.

3.5.5 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.

3.5.6 The 'R1 energy efficient[8]' **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.

National Legislation and Policy

Prosperity for All: A Low Carbon Wales

3.5.7 This Plan sets out the Welsh Government's approach to cut emissions and support the growth of a low carbon economy, confirming that landfill is the dominant source of emissions, making up 77% of the total from the waste sector. 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

[8] 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.

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."

The Environment (Wales) Act 2016

3.5.8 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.

3.5.9 **Buttington ERF** will be an R1 energy efficient facility, enabling diversion of residual waste away from landfill and its use as a valuable resource for the production of low carbon energy. The plant will produce up to 12.8MWe of renewable and low carbon energy in the form of electricity and heat for export to the National Grid. Furthermore, there is potential to provide heat to adjacent business park users and if the demand is there, to supply energy to suitable end users nearby.

Wellbeing of Future Generations (Wales) Act 2015

3.5.10 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.

3.5.11 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.

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

3.5.13 Table 1 (page 28) demonstrates how the **Buttington ERF** will help meet the 'wellbeing goals' and contribute to the 'place making outcomes' identified in Planning Policy Wales.

Planning Policy Wales

3.5.14 The application of the Well-being of Future Generations (Wales) Act 2015 in a planning context is reflected in Planning Policy Wales (PPW) Edition 10, published December 2018.

3.5.15 Chapter 10 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.

3.5.16 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."

3.5.17 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.

3.5.18 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.

3.5.19 Paragraph 5.4.18 confirms that planning authorities should look favourably on low carbon generation proposals including high efficiency energy recovery from waste.

3.5.20 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 recognized need to optimize renewable and low carbon energy generation."

3.5.21 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".

3.5.22 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.

3.5.23 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.

3.5.24 Table 1 (page 28) demonstrates how the **Buttington ERF** will help contribute to the place-making outcomes' identified in Planning Policy Wales and meet the wellbeing goals identified in the Wellbeing of Future Generations (Wales) Act 2015.

National Waste Strategy (Wales) Towards Zero Waste: One Planet (2010) and the Collections, Infrastructure and Markets (CIM) Sector Plan (2012)

3.5.25 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. Those relating to waste collected by Local Authorities are:

- A minimum of 64% of waste being reused, recycled or composted 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 5% of waste being landfilled by 2024/25; and
- Wales to achieve zero waste by 2050.

3.5.26 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."

3.5.27 Paragraph 3.17 of the CIM Plan states that recovery treatment capacity is 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.

3.5.28 The baseline data 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.

3.5.29 TZW does not contain spatial guidance on the location of waste management facilities, but points towards the guidance provided in TAN 21: Waste.

3.5.30 **Buttington ERF** will make a significant contribution to energy recovery capacity so helping to meet the medium term need for recovery facilities as identified in TZW. The proposal is supported by a Market Appraisal based on the most recent data available to supplement that provided in the CIM Plan and regional waste monitoring reports.

Technical Advice Note 21: Waste

3.5.31 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.

3.5.32 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 to2.9).

3.5.33 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 volume 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."

3.5.34 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.

3.5.35 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.

3.5.36 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.

3.5.37 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.

3.5.38 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.

3.5.39 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 of the spatial criteria set out in TAN 21.

Statutory Development Plan

3.5.40 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.

3.5.41 The National Development Framework is being prepared by the Welsh Government but is yet to be published, and there is no strategic plan as regional plans were revoked with the publication of TAN 21: Waste.

3.5.42 Therefore, the statutory development plan comprises only the adopted Powys LDP which was adopted in April 2018 and covers the period 2011 to 2026,

3.5.43 Para 4.9.2 says that:

> "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)."

3.5.44 Para 4.9.4 confirms that there will continue to be a need for recovery capacity up until 2050 when the aspiration of zero waste has been realised.

3.5.45 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)

3.5.46 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

3.5.47 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[9] and E4[10]. Not 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.

3.5.48 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).

3.5.49 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

[9] Employment Proposals on Allocated Employment Sites

[10] Safeguarded Employment Sites

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'.

3.5.50 Whilst some sites listed under Policy E1 are clearly 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.

3.5.51 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.

3.5.52 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).

3.5.53 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.

3.5.54 The **Buttington ERF** proposal 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, page 28, 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)".

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

	**A 'Prosperous Wales'** ❑ Innovative, productive, low-carbon society using resources efficiently. Skilled and well-educated population. Employment opportunities.	✓ 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. ✓ Buttington ERF is accompanied by a Health Impact Assessment and a Socio-Economic Impact Assessment. ✓ 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.
	**A 'More Equal Wales'** ❑ Equal access to jobs, education, health services.	
Placemaking Outcome	**Creating and Sustaining Communities and Sustainable Economic Growth** ❑ Jobs to meet society's needs. Community based facilities and services. Generates its own renewable energy. Embraces smart and innovative technology.	
	**A 'Globally Responsible Wales'** ❑ Support sustainable behaviour and use the earth's resources efficiently.	✓ 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. ✓ Buttington ERF provides a long-term, sustainable opportunity to use waste as valuable resource to create energy. As such is 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 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.
Placemaking Outcome	**Making Best Use of Resources** ❑ 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.	
	**A 'Resilient Wales'** ❑ Protect existing communities and natural environments while promoting well-connected facilities closer to where people live.	✓ 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). ✓ 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 significance contribution to the reduction of emissions by diverting waste away from landfill.
Placemaking Outcome	**Maximising environmental protection and limiting environmental impact** ❑ Resilient biodiversity and ecosystems. Integrated green infrastructure. Reduces environmental risk. Reduces overall pollution. Resiliant to climate change.	
	**A 'Healthier Wales'** ❑ Active nation and place-making and designing-in community health and well-being.	✓ Buttington ERF will provide staff access to external amenity areas. ✓ Encourage walking and standing meetings, natural lighting and good ventilation to buildings. ✓ 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. ✓ 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. ✓ The facility provides access to waste management infrastructure which will serve the local area.
Placemaking Outcome	**Facilitating Accessible and Healthy Environments** ❑ 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.	

4 Environmental Legislation and Policies

4.1 Overview

4.1.1 Section 3 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.

4.1.2 The planning application also addresses the wider environmental considerations through the EIA, notably:

- Policy DM2 The Natural Environment
- Policy DM4 Landscape
- Policy DM4 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

4.1.3 TAN 21 confirms that it is not the role of the WPS to repeat information included in the ES but to confirm 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 section 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.

4.1.4 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 in the following paragraphs.

4.2 Amenity and Nuisance

Compatibility of the proposed development with existing or neighbouring land uses

Design and Landscape Strategy

4.2.1 Section 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

4.2.2 The EIA has comprehensively assessed all potential impacts of the proposed development

and this includes 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), 14 (Noise).

4.2.3 Furthermore, a Health Impact Assessment has been undertaken as an independent exercise and the results are included in ES Chapter 15.

Environmental Permit

4.2.4 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.

4.2.5 In addition to the Environmental Permit the site will be managed in accordance with an environmental management system, compliant with ISO 14001 (Environmental Management).

Emissions and Odour Control

4.2.6 An assessment has been carried out to determine the local air quality impacts associated with installation of the facility and from vehicle emissions. A qualitative assessment of odour impact has also been undertaken.

4.2.7 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.

4.2.8 A detailed screening assessment confirmed that the optimum stack height for the installation would be 70m.

4.2.9 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.

4.2.10 It has also been demonstrated that the 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.

4.2.11 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.

4.2.12 An assessment was also made of the impact of the proposed plant when operating under the abnormal conditions permitted under Article 46(6) of the Industrial Emissions Directive. The results of the assessment indicated that it would be unlikely that any AQSs would be exceeded under such abnormal operating conditions.

4.2.13 Emissions controls will include a comprehensive flue gas treatment system with associated discharge stack and continuous emissions monitoring system.

4.2.14 The impact of road traffic associated with the installation, in all phases of the development can also be classed as not significant.

4.2.15 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.

4.2.16 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

4.2.17 The external lighting strategy is shown on Drawing 4052-ID-DR-1002 in TA, 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.

4.2.18 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.

4.2.19 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	• Provision of a Construction Environmental Management Plan ("CEMP") • Provision of a Decommissioning Environmental Management Plan ("CEMP")	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	• Design measures and management and operational procedures. • Integrated Management System • Environmental Permit • Process Control Measures • Flue Gas Treatment System • Continuous Emissions Monitoring Systems • Odour Control Systems	Design of Development The Installation will be required to obtain and Environmental Permit.
Highways and Transportation	• Traffic Management Plan including HGV Routing Strategy • Travel Plan	Planning Condition requiring both
Water Environment	• Implementation of Surface Water Management Plan	Planning Condition implementation of SWMP.
Geotechnical and Materials Management	• 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. • Inspection, sampling and testing to test soils • Install radon gas protection	Design of Development Planning Condition requiring CEMP
Noise	• The introduction of a temporary acoustic screen at site entrance along boundary with Brookfield House for the construction/decommissioning phase of the development. • Noise control measures have been incorporated into the design of the Development	Planning Condition containing noise limits
Health	• Creation of a Liaison Group	n/a – dependant on Community Involvement

Landscape and Visual	• 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.	Landscape Masterplan to be implemented as a Planning Condition

5. Conclusions

5.1.1 Broad Energy (Wales) Ltd is submitting a planning application for the construction and operation of a high efficiency (R1) energy recovery facility on land at Buttington Quarry.

5.1.2 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.

5.1.3 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', radically reduce greenhouse emissions, 'de-carbonise' society and build resilience to climate change.

5.1.4 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'.

5.1.5 This Waste Planning Statement clearly demonstrates the need for the energy recovery facility. 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.

Appendix 1

Technical Advice Note 21: Waste

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.
- 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.

Signed Declaration

To be included at time of submitting planning application to PINS.

Appendix 2

Scoping Request

Scoping Report

PINS Scoping Direction

Buttington Quarry Energy Recovery Facility Welshpool

Request For Scoping Direction

ECL Ref: ECL.001.01.02/RFS

Issue: 1
August 2018

Collaboration Details

- Bright Associates
- Broad Energy
- BSG Ecology
- HZI Zosen AG
- Intermodal Transport
- NewGate Communications
- Noise and Vibration Consultants
- NSugg Limited
- Orion Heritage
- Race Cottam Associates
- TerraFirma Wales

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- ACC – Air Cooled Condenser
- ADMS – Atmospheric Dispersion Modelling Software
- AOD – Above Ordnance Datum
- APC – Air Pollution Control
- APIS – Air Pollution Information System
- AQS – Air Quality Standards
- AQTAG – Air Quality Technical Advisory Group
- As – Arsenic
- ASCR – Application Site Condition Report
- AW – Ancient Woodland
- BAT – Best Available Technique
- BGS – British Geological Survey
- BIS – Biodiversity Information Service
- Broad Energy / The Applicant – Broad Energy (Wales) Limited
- Cd – Cadmium
- CEMP – Construction Environmental Management Plan
- CEMS – Continuous Emissions Monitoring System
- CFA – Continuous Flight Auger
- CHP – Combined Heat and Power
- CIEEM – Chartered Institute of Ecology and Environmental Management
- CIfA – Chartered Institute for Archaeologists
- CIMS – Collections, Infrastructure and Markets Sector
- CO – Carbon Monoxide
- Co – Cobalt
- CPAT – Clwyd-Powys Archaeological Trust
- Cr – Chromium
- CRTN – Calculation of Road Traffic Noise
- CrVI – Hexavalent Chromium
- cSACs – Candidate Special Areas of Conservation
- Cu – Copper
- DAM – Development Advice Map
- DEFRA – Department for Environment, Food and Rural Affairs
- DHN – District Heating Network
- DMRB – Design Manual for Roads and Bridges
- DNS – Development of National Significance
- EA – Environment Agency
- EcIA – Ecological Impact Assessment
- eDNA – Environmental Deoxyribonucleic acid
- EHO – Environmental Health Officer

List of Acronyms / Glossary (cont)

- EIA Regulations – Environmental Impact Assessment Regulations (2017)
- ELVs – Emission Limit Values
- EPAQS – Expert Panel on Air Quality Standards
- EPC – Engineering, procurement and construction
- ERF – Energy Recovery Facility
- ES – Environmental Statement
- EU – European Union
- FAQs – Frequently Asked Questions
- FEH – Flood Estimation Handbook
- GLCs – Ground Level Concentrations
- GVA – Gross Value Added
- HCL – Hydrogen Chloride
- HER – Historic Environment Record
- HF – Hydrogen Fluoride
- Hg – Mercury
- HGV - Heavy Goods Vehicle
- HIA – Health Impact Assessment
- HRA – Habitat Regulations Assessment
- HZC – Hitachi Zosen Corporation
- HZI – Hitachi Zosen Inova AG
- IAQM – Institute of Air Quality Management
- IBA – Incinerator Bottom Ash
- ID – Induced Draught
- IED - Industrial Emission Directive
- IEMA – Institute of Environmental Management Assessment
- IOA – Institute of Acoustics
- JNCC – Joint Nature Conservation Committee
- KEAs – Key Environmental Aspects
- kgN/ha/yr – Kilograms (nitrogen) per hectare per year
- LDP – Local Development Plan
- LPA – Local Planning Authority
- LSA – Local Study Area
- LVIA – Landscape and Visual Impact Assessment
- Met Office – Meteorological Office
- Mn – Manganese
- MSW – Municipal Solid Waste
- MW – Megawatt
- MWe – Megawatt Electrical
- MWt – Megawatt Thermal
- NE – Natural England

List of Acronyms / Glossary (cont)

- NH_3 – Ammonia
- NH_4 – Ammonium
- Ni – Nickel
- NNR – National Nature Reserve
- NO_2 – Nitrogen Dioxide
- NOx – Oxides of Nitrogen
- NRS – Noise Sensitive Receptors
- NRW – Natural Resources Wales
- NTS – Non-Technical Summary
- NWP – Numerical Weather Predictions
- O&M – Operation and maintenance
- OMH – Open Mosaic Habitat
- OS – Ordnance Survey
- PAH – Polyaromatic Hydrocarbons
- Pb – Lead
- PC – Process Contribution
- PCBs – Polychlorinated Biphenyls
- PCC – Powys County Council
- PCDD/Fs – Polychlorinated Dibenzodioxins and Furans
- PEC – Predicted Environmental Concentration
- PIA – Personal Injury Accident
- PINs Wales / The Inspectorate – Planning Inspectorate Wales
- PM_{10} – Particulate Matter with diameter less than 10 micrometres
- $PM_{2.5}$ – Particulate Matter with diameter less than 2.5 micrometres
- PRoW – Public Right of Way
- Ramsar Sites – Wetlands of International Importance
- RDF - Refuse Derived Fuel
- ROMP – Review of Mineral Permissions
- SAC – Special Area of Conservation
- Sb – Antimony
- SNCR – Selective Non-Catalytic Reductions
- SO_2 - Sulphur Dioxide
- SPAs – Special Protection Areas
- SSSI – Special Site of Scientific Interest
- SuDS – Sustainable Urban Drainage Systems
- SWMP – Surface Water Management Plan
- TAN – Technical Advice Note
- The Site – Buttington Quarry
- Tl – Thallium

List of Acronyms / Glossary (cont)

- Tpa – Tonnes per Annum
- UPS – Uninterruptable Power Supply
- V – Vanadium
- VOCs – Volatile Organic Compounds
- WaFD – Water Framework Directive
- WAP – Working Age Population
- WFD – Waste Framework Directive
- WHIASU – Wales Health Impact Assessment Support Unit
- WHO – World Health Organisation
- WMP – Waste Management Plan
- WSA – Wider Study Area
- ZVI – Zone of Visual Influence

1. Introduction

1.1. Purpose of Document

1.1.1. This document comprises a formal request on behalf of Broad Energy (Wales) Limited ("Broad Energy" or "the Applicant") for a Scoping Direction under Regulation 33 of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (the "EIA Regulations"). Broad Energy are intending to submit an application for Planning Permission to Welsh Ministers, under Part 5 of the Planning (Wales) Act 2015, for the construction and operation of an Energy Recovery Facility (abbreviated to 'ERF') and ancillary infrastructure ("the Development" or "the Facility").

1.1.2. The ERF would be capable of generating around 13MW of low carbon and renewable energy through the thermal treatment of up to 150,000 tonnes per annum of residual and commercial and industrial wastes. The Development would be located at Buttington Quarry, Buttington, Welshpool, Powys, SY21 8SZ. The location of the Quarry is shown in Figure 1. The planning boundary is shown on Drawing BUT-RCA-00-ZZ-DR-A-0203-Overall_Arrangement_Plan in Appendix 1.

Figure 1: Site Location

1.1.3. The Development would be in accordance 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 classed as a "Development of National Significance".

1.1.4. This Scoping Direction Request sets out the proposed structure, content and methodologies to be applied to the Environmental Impact Assessment ("EIA") and the resulting Environmental Statement ("ES") that will be submitted with the planning application.

1.1.5. It may subsequently be used to facilitate pre-application discussions with the Planning Inspectorate Wales ("PINs Wales" or "the Inspectorate") and the Local Planning Authority ("LPA"), Powys County Council ("PCC"), in the event that a formal request for pre-application services under either Regulation 6(1) or Regulation 7(1) of the Developments of National Significance (Wales) Regulations 2016, is submitted, although such a request does not immediately from part of the this request for a Scoping Direction.

1.1.6. This report should be taken as the Statement required under Regulation 33(2)(d) of the EIA Regulations that the request is made in relation to a development of national significance for the purposes of Section 62D of the 1990 Act.

1.2. Formal EIA Scoping Request

1.2.1. The EIA Regulations specify certain types of development for which EIA is mandatory (Schedule 1 projects), and categories of development where an EIA may be required (Schedule 2 projects) dependent upon the likely significance of the impacts. The proposed Development is considered to be a Schedule 1 development comprising:

> *"waste disposal installations for the incineration…of non-hazardous waste with a capacity exceeding 100 tonnes per day*". (Category 10)

1.2.2. As such EIA is mandatory and an Environmental Statement which is the report of an EIA will be submitted with the application.

1.2.3. This report forms Broad Energy's written request to the Planning Inspectorate Wales on behalf of Welsh Ministers, under Regulation 33 of the EIA Regulations, for its opinion as to the information topics that should be focused upon in the ES prior to embarking on an EIA.

1.2.4. In accordance with Regulation 33(2), requests for Scoping Directions, this request is accompanied by:

(a) a plan sufficient to identify the land (See Figure 1 and Appendix 1);
(b) a brief description of the nature and purpose of the development including its location and technical capacity (See Section 4);
(c) its likely significant effects on the environment (see Section 6 to Section 18);
(d) a statement that the request is made in relation to a development of national significance for the purposes of section 62D of the 1990 Act (see Section 1.1 above); and
(e) such other information or representations as the person making the request may wish to provide or make (see all Sections).

1.3. Project History

1.3.1. A Scoping Opinion for the Development was originally requested from PCC in February 2017. The original proposal was similar, to that currently proposed, except that the Facility was to be for the thermal treatment of up to 100,000 tonnes per annum of residual wastes, generating around 9MW of low carbon and renewable energy. Consequently, the Development did not fall within 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". At the time of the original Scoping Opinion request, the precise technology for the ERF had not been chosen, but was instead based on a generic technology, using suitable design parameters as the basis for reasonable 'worst case' assessment. In response to this PCC issued a Scoping Opinion on 7th April 2017, which, for information, is included in Appendix 2 of this report, together with the consultation responses received by the PCC in response to that request.

1.3.2. Although the design of the ERF has changed, it is considered that these changes are not so significant that the nature and scope of the environmental impacts has fundamentally changed since the PCC Scoping Opinion was issued. It is nevertheless considered that it is appropriate to reconsider the scope of the EIA, so that:

a. the Planning Inspectorate Wales on behalf of Welsh Minsters can give its own opinion as to the scope of the EIA;
b. that the scope should be updated in view of the potential for some of the assessed environmental impacts to have changed in the light of the proposed changes to the Development; and
c. to take into account the changes to the EIA Regulations introduced by Town

and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (the previous Scoping Opinion was issued by PCC under the predecessor regulations, the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2016).

1.3.3. This document sets out the proposed scope of the EIA and includes the following sections:

- Proposed Scope of the EIA;
- Need for the Development;
- Nature and Purpose of Development;
- Relevant Waste Management and Planning Law and Policy;
- Air Quality;
- Health Impact Assessment;
- Transportation, Traffic and Highways;
- Landscape and Visual Impact Assessment;
- Ecology;
- Water Environment;
- Archaeology and Cultural Heritage;
- Site Condition;
- Socio-Economic;
- Noise and Vibration;
- Geotechnical and Materials Management; and
- Cumulative Impact.

1.4. The Applicant

1.4.1. The Broad Group ("Broad") 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.

1.4.2. Established in 2013 with offices in Shrewsbury, Manchester and London, 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.

1.4.3. Broad Energy is a special purpose company that has been established by Broad Group (UK) Limited 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.

1.4.4. The management team at Broad Energy has forged close working relationships with industry leaders in the renewable energy market sector, enabling the company to deliver a "one-stop-shop" for businesses wanting to maximise land value through the development of a sustainable energy infrastructure solutions.

1.4.5. The proposed energy recovery facility within Buttington Quarry is being positioned as part of the wider plans for the quarry to create a sustainable eco-business park.

1.4.6. Broad Energy has formed a strategic partnership with global leader Hitachi Zosen Inova to design, build and operate a facility will support the generation of renewable energy and heat through the use of non-recyclable waste.

1.4.7. This partnership is keen to ensure that all future developments at the site contribute to the local economy and offers new job opportunities to the local community, with plans to contribute to local good causes and is keen to assist Powys County Council with local recycling initiatives.

1.5. The Operator

1.5.1. HZI Zosen AG ("HZI") is a wholly owned subsidiary of Hitachi Zosen Corporation ("HZC"), a Japanese industrial services business with an average annual turnover (last 3 years) of circa £2.65 Billion and a current net asset value of circa £800 Million. HZI would be both the main technology supplier and operator of the ERF.

1.5.2. HZI is a global technology leader for energy and material recovery from municipal solid waste ("MSW"), refuse derived fuel ("RDF") and organic waste. HZI acts as an engineering, procurement, and construction ("EPC") contractor delivering complete turnkey plants. HZI solutions are based on efficient and environmentally sound in-house technology, are thoroughly tested, can be flexibly adapted to user requirements, and cover the entire plant life cycle. HZI's portfolio is rounded off with strong operation and maintenance ("O&M") capabilities.

1.5.3. HZI's customers range from experienced waste management companies and municipalities to up-and-coming partners in new markets worldwide. HZI has developed innovative and reliable solutions for grate combustion, anaerobic digestion, flue gas treatment, and material and energy recovery.

1.5.4. 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 11 in the UK and Ireland.

1.5.5. HZI has an experienced and knowledgeable team of engineers and technicians of more than 300 based in Zurich. HZI adopt an integrated approach from first concept design, through to commissioning and operation, including long term major maintenance and overhaul services. For all the key components, HZI have developed in house proprietary technologies that are tried and tested in design, manufacturing, supply, installation and operation over many years and many projects.

1.5.6. Specific UK and Ireland experience includes the facilities shown in Table 1. These were completed, or are under construction over the last 10 years providing a total waste processing capacity of circa 3.8 million tonnes per year.

Table 1 : HZI Reference Plants

Project	Status	Client	Start Up Date	No of Lines	Nominal Capacity (tonnes/per annum)
Ferrybridge Multifuel 2	In construction	Multifuel Ltd	01.01.2019	2	550,000
Edinburgh	In construction	FCC	06.12.2018	1	154,000
Dublin	Under warranty	Covanta	01.06.2017	2	600,000
Herefordshire & Worcestershire	In operation	FCC/ Urbaser (Mercia)	01.01.2017	1	200,000
Severnside L1, L2	In operation	Suez	01.05.2016	1	150,000
Buckinghamshire	In operation	FCC	03.09.2015	1	300,000
Ferrybridge Multifuel 1	In operation	MEL	02.06.2015	2	500,000
Cleveland L4, L5	In operation	Suez	01.01.2013	2	250,000
Newhaven	In operation	Veolia	06.08.2011	1	300,000
Riverside, London	In operation	Cory	02.02.2011	3	650,000
Cleveland L3	In operation	Suez	01.01.2009	1	150,000
					3,804,000

1.6. Consultation Process Overview

1.6.1. Under the DNS procedure, pre-application consultation forms a central part of the process. This comprises informal and formal or statutory consultation. It is acknowledged that Applicants are strongly encouraged to engage with stakeholders early in the process.

1.6.2. Broad Energy has undertaken early informal discussion with both the PINs Wales (on behalf of Welsh Ministers) and PCC on the proposed DNS application, with a view to providing early details of the proposal and to seek advice on the process for, and format and content of, the application.

1.6.3. The statutory provisions and requirements for pre-application consultation are set out in The Developments of National Significance (Wales) Regulations 2016 and The Developments of National Significance (Procedure) (Wales) Order 2016.

1.6.4. Under Regulations 6 and 7 of The Developments of National Significance (Wales) Regulations 2016, applicants may make a request for Pre-Application Services to either the Welsh Ministers or the Local Planning Authority with a view to seeking their views and advice on a proposed DNS application.

1.6.5. In addition, Part 2 of The Developments of National Significance (Procedure) (Wales) Order 2016, sets out a statutory requirement to undertake Pre-Application Consultation on the draft application prior to submission. This includes consultation with the local community and statutory consultees and following this, the preparation and submission of a Pre-Application Consultation Report with the application, detailing how the responses to the consultation have been taken into account in finalising the proposal. It is understood that PINs Wales expects projects will exceed the minimum statutory consultation requirements.

1.6.6. Broad Energy envisages that, a request for Pre-Application Services will be submitted to PCC as the Local Planning Authority and will undertake the full Pre-Application Consultation in accordance with the statutory requirements set out in the Regulations.

1.7. Objectives of Broad Energy's Proposed Consultation

1.7.1. Broad Energy envisages that communications during the planning process for the proposed ERF will seek to engage and consult residents and businesses around Buttington Quarry to ensure they are fully informed about the proposal. Efforts will also be made to publicise the proposals more widely in order to inform the broader community.

1.7.2. The pre-application consultation programme will seek to:

- enable the local community to be informed, involved and influence the development of the final proposals for the ERF;
- inform and reassure residents, businesses, officers, politicians and third-party stakeholder groups about the proposal and address any concerns they might have;
- ensure a comprehensive and socially inclusive consultation that incorporates a wide-reaching audience, including harder-to-reach groups;
- state clearly which decisions can be shaped by stakeholder input.

1.7.3. The pre-application consultation programme will run for a minimum of six weeks but it is envisaged that engagement with local residents, business, elected representatives and interested third party stakeholders will continue following submission of the planning application.

1.7.4. All feedback received during the pre-application consultation programme will be assessed and where possible incorporated into the final planning application.

1.8. Consultation Methods and Contacts

1.8.1. It is proposed that the following methods will be used to inform and involve the local community and stakeholders:

- Newsletters - Newsletters will be distributed via post to all local residents and businesses in the Trewern, Welshpool Gunrog and Forden wards surrounding the site. The first will be distributed at the launch of the consultation programme and will outline the proposals and the consultation programme. A second newsletter will be distributed following the formal submission of the planning application to address frequently raised questions and provide feedback on how the consultation process has influenced the final planning application.
- Letters and Information Packs - Letters and information packs will be developed which explain the proposed ERF and wider solution in more detail, including frequently asked questions ("FAQs"). These will be sent to elected representatives, immediately adjacent residents and businesses and third party stakeholder groups. The various elements of the information pack will also be available to download from the bespoke project website.
- Dedicated Project Website - A bespoke project website will be developed to provide an online source of information about the proposal, the company and the wider waste treatment contract. Content for the website will develop during the pre-application consultation programme and all distributed

consultation materials will be available to download. An email address will enable visitors to the website to leave their feedback with the project team.

- Meetings and Presentations - Meetings will be offered to elected representatives, immediately adjacent residents and businesses and relevant third party stakeholder groups to discuss the proposals in more detail. Presentations will also be offered to all elected members at Powys County Council. Requests to attend established groups / meetings will also be considered and facilitated where appropriate.
- Public Information Days - A series of public information days will be held at community venues close to Buttington Quarry to publicise the proposals and gather feedback from local residents. The public information days will be staffed by members of the development team. Attendees will be invited to submit their questions and feedback via a feedback form, which will be collated and analysed to be included as part of the Statement of Community Involvement. A preview will be held for elected representatives prior to the public information days opening to the public.

1.8.2. Press releases and media packs will be sent to key journalists in the local media throughout the public consultation process. Journalists will also be offered briefings and interviews with senior members of the project team. Press releases will be sent out:

- at the launch of the proposals;
- prior to the public exhibitions;
- following the public exhibitions; and
- following the submission of the planning application.

1.8.3. Advertisements will also be placed in local publications to advertise the public information days, website and contact details for the project team.

1.8.4. A number of dedicated contact mechanisms will be put in place for interested parties to contact the project team. These include:

- freephone: 0800 368 8958;
- email: info@broadenergywales.co.uk;
- website: www.broadenergywales.co.uk; and
- freepost: RTXY-USYY-HAXE, Broad Energy, c/o Newgate Communications, Sevendale House, 5 – 7 Dale Street, Manchester, M1 1JA

1.9. Pre-Application Consultation Report

1.9.1. At the end of the consultation process the results will be detailed in a Pre-Application Consultation report to be submitted with the Planning Application in accordance with Regulation11 of the Developments of National Significance (Procedure) (Wales) Order 2016.

2. Other Information - The Proposed Scope of the EIA

2.1. Scope of the ES

2.1.1. The scope of the ES will be informed by the Scoping Direction received from PINs Wales. The ES will identify the key environmental aspects that may be affected by the Development; the content of the ES will also be based upon the following:

a) review of the current situation through existing information, including data, reports, desk-top studies and site surveys;
b) consideration of the relevant Planning Policies and other relevant guidance;
c) identification of the likely environmental effects and the evaluation of their duration, magnitude and significance;
d) consideration of potential sensitive receptors;
e) expert opinion;
f) use of technical guidance and best practice; and
g) specific consultations with appropriate bodies.

2.1.2. Taking into account the above, the structure of the ES will be broadly as follows, and this may be subject to change depending on the Direction received from PINs and the evolving project:

- Chapter 1 - Introduction: Introducing the project, the project team and explaining why the ES is required;
- Chapter 2 - Selection of Key Environmental Aspects and Methodology: This chapter details the scoping process, the public consultation process and details why each aspect of the environment has been selected for assessment. This chapter will explain the EIA methodology and describes the structure and content of the ES. In particular, it will detail the process of identifying the potential likely significant environmental effects of the Development and the method of assessing the significance of the effects;
- Chapter 3 - Needs and Alternatives: This chapter will outline why the Development is required and discusses any alternatives in respect of other sites, and technologies, that have been considered and why they have been dismissed in favour of the Development;
- Chapter 4 - The Proposed Development: This chapter will detail the construction and operational activities associated with the Development;
- Chapter 5 - The Existing Environment: This chapter will provide the historical context of the Development and will include information relating to the location and character of the Site and its surroundings, its planning history and historical land use. It will identify significant consents and licenses issued on land within or adjacent to the Site, geological, hydrogeological and hydrological data as well as access and infrastructure data. This will set the baseline.

- Chapter 6 - Planning Policy: This chapter will summarise relevant planning policy in relation to the each of the Key Environmental Aspects chapters.
- Chapters 7-18 - Key Environmental Aspects ("KEA") Chapters: Based on the information currently available these would be in accordance with the details set out in paragraph 2.1.1.; the original Scoping Opinion Request to PCC and response; and the response to this Request for Scooping Direction. At this stage the following KEAs are anticipated:
  - Air Quality;
  - Health Impact Assessment;
  - Transportation, Traffic and Highways;
  - Landscape and Visual Impact Assessment;
  - Ecology;
  - Water Environment;
  - Archaeology and Cultural Heritage;
  - Site Condition;
  - Socio-Economic;
  - Noise and Vibration;
  - Geotechnical and Materials Management; and
  - Cumulative Impact.

2.1.3. Each of the KEA Chapters (7-18) will be structured as detailed in Table 2.

Table 2 : Structure of the KEA Chapters

No.	Section	Contents
X.	**KEA Title**	
X.1	**Introduction:**	
	Brief introduction as to why the KEA has been selected and details of any specific consultation undertaken.	
X.2.	**Relevant Legislation:**	
	Details of the relevant legislation pertaining to the KEA, e.g. air quality objectives, protected species etc.	
X.3.	**The Existing Environment:**	
	Environmental Assessment Boundaries	Description of environmental assessment boundaries reflecting the ERF, ecological and/or socio-economic boundaries where relevant
	Methods	Description of the methods used to collect baseline data, use of models, research etc.
	Existing Conditions	A description of the existing base line situation, e.g. existing ecology, air quality, existing noise levels etc.
	Likely Future Conditions	A statement of likely condition of the environment within expected lifespan of Project if the Project is not approved

Table 2 : Structure of the KEA Chapters (cont)

No.	Section	Contents
X.4.	**Environmental Effects Assessment:**	
	Mitigation	A summary of environmental design features integrated into the Project, mitigation and environmental management initiatives for each project phase, as appropriate
X.5.	**Residual Environmental Effects:**	
	Subsections for each project phase	The provision of significance criteria, specific to each KEA to describe the residual environmental effects significance by planned Project phase including, where relevant construction, operation, decommissioning and closure, accidents, malfunctions and unplanned events, the project overall, the project in combination with other projects.
X.6.	**Summary**	
	A concluding summary of the chapter.	

2.2. Non-Technical Summary

2.2.1. The EIA regulations also require that a Non-Technical Summary ("NTS") of the ES be produced. The NTS is a standalone document which summarises (avoiding technical or other jargon) all of the information included within submitted ES. It allows for any non-technical specialist to understand the likely environmental impacts of a proposed development.

2.2.2. It is proposed that the Non-Technical Summary will also be published in the Welsh Language. All other documentation will be provided in English (Rydym yn bwriadu cyhoeddi'r crynodeb annhechnegol yn Gymraeg hefyn. Bydd yr holl ddogfennau eraill yn cael eu darparu yn Saesneg).

3. The Need and Alternatives

3.1. The Need for the Development

3.1.1. The rationale in developing any new waste management facility will be the need for additional waste management capacity to treat the amount of waste arisings within the area served by the facility. This need must be balanced against the potential environmental impacts of constructing and operating the ERF.

3.1.2. Waste management policy in Wales, as in the rest of the UK, has in recent decades been driven by the requirements of European Union waste management law in aiming to achieve the more sustainable management of waste, by driving this up the waste hierarchy and ultimately treating waste as a resource and generating zero waste. The requirements of key European legislation, notably the Waste Framework Directive ("WFD") (2008/98/EC) and the Landfill Directive (1999/31/EC), provide the basis for the Welsh Government's national waste management strategy, "Towards Zero Waste" and its supporting Sector Plans, including the Collections, Infrastructure and Markets Sector ("CIMS") Plan.

3.1.3. The CIMS Plan identifies that Wales at the time of its publication in 2012 produced approximately 17.4 million tonnes of waste a year from all sources, of which a significant proportion was, and still is disposed of to landfill, and that there has been a need across the whole of Wales to develop more residual waste treatment and recovery capacity. It notes that the requirements cannot be predicted with any degree of complete certainty but it provides a "range of best estimate capacity requirement", which for the North Wales region is between 203,000tpa and 468,000tpa for 2024/25.

3.1.4. The newly adopted Powys Local Development Plan 2011-2026 Policy W1 – Location of Waste Development makes clear that proposals for new waste management facilities in the countryside, will only be permitted where they are for the recovery or disposal of non-hazardous wastes and would meet an identified need at the regional level or a local need, and reflect the priority order of the waste hierarchy.

3.1.5. A detailed assessment of need will be presented in the Waste Planning Statement to be submitted with the DNS application and this will be summarised in the Environmental Statement, setting out details of where and how waste will be managed through the proposed ERF, to be constructed at Buttington Quarry.

3.2. Alternative sites

3.2.1. It is a requirement of the EIA Regulations that an Environmental Statement must include a description of the reasonable alternatives considered by the applicant. These must be relevant to the Development and its specific characteristics, provide an indication of the main reasons for the option chosen, and are required to take into account the significant effects of the Development on the environment.

3.2.2. As part of the development of the design for the proposed Energy Recovery Facility, the alternatives considered have included the location and the design of the facility. The Environmental Statement will set details of other sites considered. It will also consider the environmental, engineering and amenity issues and options associated with the specific site proposals in terms of its location within the quarry.

3.3. Alternative Technologies

3.3.1. Broad Energy considered a number of different options for the technology to be used in the proposed ERF at Buttington Quarry. The section will set out details of the different technologies considered and of the HZI designed moving grate technology and why this was chosen.

3.3.2. The technologies that are, or are potentially, suitable for the combustion of the waste types proposed to be accepted at the site are:

- fixed stepped hearth,
- moving grate,
- pulsed hearth,
- rotary kiln,
- fluidised bed,
- pyrolysis,
- and gasification.

3.3.3. Of these:

- fixed stepped hearth has not been considered further as it is only suitable for smaller throughputs;
- pulsed hearth has not been considered further as there have been difficulties in achieving reliable and effective burnout of waste, and it is considered that the burnout criteria required by the IED might not be achievable; and
- pyrolysis and gasification have not been considered further as it is considered that their performance is not proven and, on the scale proposed, a large number of small modular units would be required which would be more difficult to manage and control.

3.3.4. Accordingly, only the following techniques were considered in the revised assessment:

- moving grate,
- rotary kiln, and
- fluidised bed.

3.3.5. The HZI-designed moving grate was chosen because it 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.

3.3.6. The best available techniques ("BAT") assessment undertaken to justify this choice of technique for the HZI design will be provided in the EIA, and will also be used in the Environmental Permit Application to be submitted to Natural Resources Wales ("NRW").

3.3.7. HZI have installed this technology at a number of Installations in the UK, including FCC's plant in Lincoln (operational since 2013), and a further FCC plant at Greatmoor (operational since 2015). Both examples of the moving grate design are operated under Environment Agency ("EA") Permits.

4. The Nature and Purpose of the Development

4.1. Proposed Application

4.1.1. The scheme proposes the construction and operation of an ERF capable of generating around 13MWe of low carbon and renewable electrical energy (when operational in full condensing mode) through the thermal treatment of up to 150,000 tonnes per annum of residual MSW and MSW like waste ("the feedstock"). The feedstock would arise from industrial and commercial sources and would consist of material suitable for energy recovery. A Feedstock Assessment Report will be undertaken and will be submitted with the ES.

4.1.2. The ERF would be capable of generating both electrical and heat energy from the thermal recovery of energy through the process and so would be classed as a Combined Heat and Power plant, often referred to by the acronym CHP plant.

4.2. Plans to Identify the Land

4.2.1. The following drawings can be found in Appendix 1 and are included for the purposes of the identifying the land:

- Drawing No. 0202 - BUT-RCA-00-ZZ-DR-A-0202-General Arrangement Plan;
- Drawing No.0203 – BUT-RCA-00-ZZ-DR-A-0203 – Overall Arrangement Plan; and
- Drawing No 0210 - BUT-RCA-00-ZZ-DR-A-0210 – Elevations

4.3. The Site and Surrounding Area

4.3.1. A detailed description of the Site and surrounding area may be found in the original scoping request contained within Appendix 2. In summary, Buttington Quarry is located on the A458 Shrewsbury to Welshpool road (at NGR: 326690, 310106) located approximately 1.5km to the south of the village of Trewern, as shown on Drawing BUT-RCA-00-ZZ-DR-A-0203 – Overall Arrangement Plan in Appendix 1.

4.3.2. The quarry occupies a total land area of 18 hectares 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 Site boundary. The quarry accessed from the A458 and is located within the landownership of the quarry.

4.3.3. 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 Site is an outlying area of Trewern known as Cefn. This comprises an additional area pf sporadic isolated houses and a larger area of residential development, including a school.

4.3.4. The quarry operated from the late 19th Century and included a brickworks with permissions approved in 1961 and 1997 for extensions to the original quarry workings. The quarry now operates in accordance with the requirements of planning permission granted in 2010 in accordance with a "Review of Mineral Permissions" (ROMP) under the Environment Act 1995 (Planning Permission ref: P/2010/0165). In addition, planning permissions have been granted for an improved access approximately 155m north east of the existing quarry access, the most recent being in 2015 (Planning Permission Ref. P/2015/0439).

4.3.5. Buttington Quarry, is a working claypit which previously supplied clay to the adjoining Buttington Brickworks but, since the closure of the brickworks in 1990, has continued to produce only small amounts of clay for low grade construction purposes.

4.3.6. The former brickworks buildings are now occupied and used for third party commercial uses including storage and distribution.

4.3.7. Six hectares of the Quarry, including the existing quarry void and the former brickworks site, has been allocated for B1, B2 and B8 employment development under Policy E1 - Employment Proposals on Allocated Employment Sites, in the recently adopted Powys Local Development Plan 2011-2026. The supporting text in the Plan also suggests that it may also be an appropriate location for the storage and processing of wastes arising from construction and demolition.

4.3.8. The Site boundary for the proposed ERF development comprises an area of the quarry floor within the main quarry void together with the access corridor to the site entrance and an area of land at the southern edge of the quarry. As the landscaping scheme is yet to be fully developed, the planning boundary has been designed to encompass the whole area under the quarry ownership, as shown on Drawing BUT-ECA-00-ZZ-DR-A-0203 Overall Arrangement Plan in Appendix 1. The planning boundary will be refined during the EIA process.

4.4. The Purpose of the Development

4.4.1. The proposed ERF at Buttington Quarry would be developed to ensure that waste is managed effectively in accordance with Article 4 of the Waste Framework Directive (2008/98/EC) which requires that waste is managed in accordance with the Waste Hierarchy. The intention is to support the management of waste fulfilling the

aspirations of both the Welsh Government and PCC.

4.4.2. The operation of the proposed ERF would remove reliance on landfill for the disposal of residual waste and through the use of the proposed HZI technology to provide an efficient system of waste disposal that recovers energy thereby contributing to implement the Towards Zero Waste strategy for Wales.

4.4.3. The Welsh Government's Technical Advice Note 21 ("TAN21"): Waste sets clearly the overriding objectives of waste policy in Wales, which states:

Paragraph. 1.5: Waste is an increasingly important issue in society and there are economic and social imperatives, as well as environmental ones for us all to use non-renewable resources more wisely through resource efficiency measures and the increased use of alternatives. In order to secure our resources and extend their use within the economy we need to prevent waste from arising and where this is not possible we need to be (i) capturing waste in ways that enable us to reclaim materials to be used again and (ii) harnessing waste as a resource in its own right.

Paragraphs. 2.7.4: Where wastes cannot be recycled, other waste recovery operations should be encouraged. Waste recovery operations result in waste that can serve a useful purpose by replacing primary fossil fuel materials (i.e. coal or gas) which would otherwise have been used to fulfil a particular function in the plant or in the wider economy. Energy recovery includes: incineration, incineration with energy recovery, co-incineration (e.g. cement kiln), anaerobic digestion, pyrolysis and gasification with energy recovery and the spreading on land of a separated out bio-waste.

The recovery of energy from mixed municipal waste in high efficiency facilities is considered by Welsh Government to be a vital component of the waste management system in Wales. Such facilities are currently considered to represent the most sustainable outcome for mixed municipal waste.

4.4.4. Co-locating these facilities with heat users is preferential in order to allow utilisation of waste heat from the combustion process. When preparing proposals, developers should give consideration to the location of these facilities and the potential for future user demand and planning authorities should identify any opportunities for co-location in their local development plans.

4.4.5. The proposed ERF is accordingly intended to provide specific benefits including:

- maximising the use of the residual waste resource for the production of energy in the form of electricity and heat;

- acting as a catalyst for the development of additional commercial development as part of a Masterplan for development within the quarry in line with the aspirations of the emerging Local Development Plan;
- offering a sustainable and efficient alternative to landfill for the waste residues after recycling;
- supplying approximately 13MW of electricity to the National Grid in full condensing mode
- supplying in combination heat and/or electricity to local existing and future industrial/commercial developments
- offering employment for approximately 30 new permanent staff when operational in addition to up to 500 construction related jobs at the peak of the works and on average between 150 and 200 jobs per year over the three-year construction period;
- helping to achieve and possibly exceed local, regional and National targets on landfill diversion;
- boosting the local economy through increased employment opportunities; and
- providing a cost effective, efficient and reliable solution for dealing with non-recyclable residual wastes.

4.5. Construction Phase

4.5.1. Following the granting of planning permission, construction is anticipated to commence on site in early 2020.

4.5.2. The construction phase would incorporate the construction of a screening bund around the southern and western extent of the quarry. Additional land take within the wider quarry area would be temporarily required for the storage of construction materials, plant etc; i.e a "*lay down*" area. It is anticipated that the lay down area required would be approximately 2ha in extent and it is proposed that this would be located to the west of the construction area, with office and welfare accommodation to the south. The temporary use of land for such operations constitutes "*Permitted Development*" under the Town and Country Planning (General Permitted Development) Order 1995 and so would be outside of the application site, but the effects of using the Site will be considered as part of the EIA.

4.5.3. Construction is expected to take place during the hours of 07:00 to 19:00 (Monday to Friday) and 07:00 to 13:00 (Saturday). No construction operations would take place on Sundays or Bank Holidays. Specific activities will require 24/7 working for short durations.

4.5.4. The amount of construction employment generated would vary throughout the

period; however, it is anticipated that between 150- 200 construction personnel would be on site at any one time. Peak levels of employment would be associated with the installation, erection and testing of mechanical, electrical and process plant. Where appropriate, the HZI will source materials locally, to use local services and employ local staff.

4.5.5. On-site office accommodation and welfare facilities will be provided for construction employees.

4.5.6. Construction and Commissioning Method

4.5.6.1. The construction activities will include the deep foundations works, civil and structural works, installation of the process mechanical plant, installation of the electrical and control systems and commissioning of the entire plant. The construction activities will take approximately 36 to 39 months to complete. The number of operatives on site will average 150-200 over the complete construction duration with a peak of approximately 500 during a period of six months mid-way through the construction period.

4.5.6.2. Upon receipt of the planning permission and once any pre-commencement conditions have been satisfied, the construction activities will commence with the erection of a temporary site fence.

4.5.6.3. As the foundations for the new facility are likely to consist of deep piles, the first stage of construction will be to install a granular piling carpet which will be laid across the majority of the Site. The piling carpet will be approximately 400mm in thickness and will be constructed by importing new or recycled granular material.

4.5.6.4. Following the completion of part of the piling carpet the actual piling will commence. The piling is likely to consist of Continuous Flight Auger ("CFA") Piling which is the quietest form of piling and is a fast and very economical technique. It is a cast in-situ process, suited to soft ground where deep casings or use of drilling support fluids might otherwise be needed. Three to five piling rigs will be deployed to construct the plies. The benefit of CFA piles is that they are a non-impact construction and therefore the noise and vibration is significantly less than a driven pile.

4.5.6.5. During the piling operation the construction of the temporary site facilities, prefabrication areas and the site cabins will commence.

4.5.6.6. As the facility will include a deep waste bunker a temporary embedded retaining wall will be constructed around the perimeter of the bunker. The embedded retaining wall will serve a dual purpose to first support the adjacent ground when forming the deep

excavation and secondly to reduce any inflow of water into the excavation.

4.5.6.7. The waste bunker will be constructed using a slip form technique, which will require 24 hour construction, 7 days per week for a period of approximately 2 months. To slip form the bunker, special formwork will be constructed around the perimeter of the bunker. The concrete is then continuously pumped in to the formwork and the formwork is hydraulically jacked at a rate of approximately 25mm per hour.

4.5.6.8. Upon completion of the piling activities the remaining concrete foundations of the new plant will be constructed. The foundations will consist of large concrete rafts bearing directly on to the CFA piles. At the same time as constructing the foundations new underground drainage networks will be constructed together with the new roads around the perimeter of the buildings. The underground networks will also include other critical services such as a fire main, potable water, foul water and electric cables.

4.5.6.9. To construct the bunker and foundations towers cranes will be utilised. The cranes will be approximately 60m in height and have a radius of 65m. The final dimensions and size of the crane will be finalised once the detailed design of the plant is complete.

4.5.6.10. Upon completion of the main foundations and bunker the mechanical equipment will be installed. The mechanical equipment will be delivered mainly by normal road transport, however, some exceptional loads will need to be delivered. The mechanical erection phase will require a significant amount of laydown area to be made available to store and pre-fabricate the equipment.

4.5.6.11. When the majority of mechanical equipment has been installed it will be possible to commence the erection of the building steelwork. The building steelwork will be erected over the top of the mechanical equipment using the tower cranes. Metal cladding will be utilised to form the building envelope. The building steelwork and metal cladding will be sequenced to ensure that it is not been erected when works on the mechanical equipment directly under it are still on going.

4.5.6.12. Electrical equipment and the control system will be installed inside the water tight building. The majority of the electrical equipment will be delivered to site in prefabricated modular buildings.

4.5.6.13. Upon completion of the electrical installation the commissioning phase will start. The commissioning phase will consist of two distinct phases - cold and hot commissioning. The cold phase will be undertaken pre energisation of that particular system to ensure that all mechanical and electric items have been correctly installed and are ready to receive power.

4.5.6.14. The hot commissioning phase will include the delivery of waste and the production of steam from the boiler and then electricity via the steam turbine. During this phase the plant will be fully tested to ensure compliance with the Environmental Permit and any pre-operational conditions will be discharged. The plant will also be optimised during this phase to ensure maximum efficiency is achieved in the operation of the plant.

4.5.6.15. Upon completion of the commissioning the temporary facilities will be demobilised from site and the permanent landscaping will be completed.

4.5.7. Construction Traffic and Access

4.5.7.1. The construction area will be secured with temporary fencing and the principal contractor will set up the initial site accommodation and welfare facilities, including temporary services on the Site. To ensure site security there will be a single point of entry to the Site for all construction personnel.

4.5.7.2. Access to the Site would be from the new access road from the A458, to be constructed in advance of the start of the ERF construction works, in accordance with Planning Permission Ref. P/2015/0439. Parking for construction workers will be provided on-site throughout. The number of HGV movements will vary at different stages of the construction works in response to the activities taking place at any given time, although the maximum traffic levels will not be in excess of those associated with the Facility once operational.

4.5.8. Waste Management and Disposal

4.5.8.1. Construction related waste will be generated during all stages of the construction works. A Site Waste Management Plan ("WMP") will be prepared, and all relevant contractors will be required to seek to minimise waste arising at source and, where such waste generation is unavoidable, to maximise its recycling and reuse potential. It is anticipated that the WMP will be a requirement of the planning permission.

4.5.9. Environmental Management

4.5.9.1. Environmental control measures will be imposed to minimise adverse environmental effects during construction and a Construction Environmental Management Plan ("CEMP") will be prepared and adopted to include sections on: noise, vibration, air quality, water quality, surface quality (prevention of contamination of ground surface), site transportation and traffic management, visual intrusion and waste management.

4.5.9.2. All construction activities, which have the potential to generate significant amounts of noise and/or vibration, will be undertaken during daytime periods.

4.6. Development Layout

4.6.1. The proposed ERF will consist of the following principal elements:

- Waste Reception Hall - housing the unloading area, the waste and fuel bunkers. The hall would be approximately 23m in height, dependant on the requirement for tipping by the waste delivery vehicles and connected to the main energy recovery building. Fast acting roller shutter doors would be utilised and the hall would be maintained under negative pressure
- Waste Bunker - the storage facility for feedstock prior to treatment forming an enclosed space under negative pressure to minimise dust and odour release with approximately 5 days storage capability;
- Energy Recovery Hall (including the incinerator, boiler hall and energy generation equipment) - houses the majority of the plant required to generate energy. The main body of the structure will be approximately 40m high. This hall is an enclosed space offering weather protection, noise mitigation and visual screening;
- Flue Gas Treatment Area - this is where the gaseous emissions from the thermal treatment process would be treated prior to release into the atmosphere. This area also contains the consumables silos, fly ash silos, flue gas cleaning equipment needed for the treatment of the emissions from the process and associated emissions monitoring equipment.
- Turbine Building - this is a smaller separate building that is connected to the ERF building via inlet pipework and the air cooled condenser ("ACC") outlet pipework;
- ACC - this is located close to the main Energy Recovery Hall and Turbine building;
- Office/Control Room and Associated Car Parking - all of the ancillary elements of the ERF would be located within an integral building with appropriate parking facilities provided for staff and visitors.

4.6.2. Additional facilities would include:

- flue gas discharge stack at 70m high (measured from ground level so would protrude above the rim of the quarry). This height will be confirmed by detailed modelling so may be subject to change;
- weighbridge (with separate in and out access points);
- fire watertank;
- electricity sub-station;
- Site entrance and circulation roads;

- boundary fencing (2.4m high);
- landscaping and sustainable urban drainage systems ("SuDS");and
- bicycle shelter.

4.6.3. The overall footprint of the proposed ERF would be around 154m long and vary in width from 22m (for the office and workshops) to 50m (for the waste bunker). The layout is shown Drawing BUT-RCA-00-ZZ-DR-A-0202-General Arrangement Plan in Appendix 1.

4.7. Process Overview

4.7.1. As detailed in Section 3.3, it is proposed to use Hitachi Zosen Inova's ("HZIs") thermal energy from waste technology at the plant incorporating a HZI designed moving grate and associated combustion chamber (i.e. a conventional incineration process).

4.7.2. It should be noted that the air extraction system required to keep the waste reception hall under negative pressure will be used as combustion air. Consequently any odours generated in this area will be captured within this system and destroyed within the combustion process.

4.7.3. Residual waste is fed into the combustion chamber by means of a feed hopper/feed chute arrangement where the waste is dried prior to being incinerated at temperatures in excess of 850°C in line with the requirements of the Industrial Emissions Directive ("IED"). Secondary combustion, i.e. oxidation/burnout of unburned gases, takes place in the flame body above the main combustion zone. Two low sulphur gas-oil fuelled auxiliary burners are provided to ensure that a combustion temperature of at least 850°C is maintained at all times. Complete burnout of the incinerator bottom ash ("IBA") formed during the combustion of the waste takes place at the rear end of the grate. The IBA falls into, and is quenched by, a water bath, where it is cooled to a temperature of approximately 80-90°C to make it safe to handle.

4.7.4. A selective non-catalytic reductions ("SNCR") system has been included in the design to minimise oxides of nitrogen ("NO_x") emissions from the combustion process. The SNCR system proposed by HZI still utilises ammonia solution to chemically reduce the NO_x to nitrogen and water.

4.7.5. The heat contained within the flue gases leaving the combustion stage will be recovered by means of a high-efficiency integral water tube boiler.

4.7.6. The power generation plant and auxiliaries include a steam turbine, a power

generator, an air cooled condenser and capacity for a district heating system. The turbine will be used to convert the steam energy into kinetic energy and drive a generator to produce electrical power in a highly efficient manner.

4.7.7. After heat recovery, the flue gases pass through the flue gas treatment plant after which a variable speed induced draught ("ID") fan draws the treated flue gas from the flue gas treatment plant and discharges it to atmosphere via a discharge stack which discharges to atmosphere at a height of 70m. The discharge stack will be equipped with a range of continuous emission monitoring systems ("CEMS") which meet the relevant requirements of the IED. Duplicate CEMS systems will be installed; this will ensure that, in the event of a failure of the duty system, continuous monitoring of the emissions to air will continue using the stand-by system. The CEMS will be provided with an uninterruptable power supply ("UPS") so that they will be able to continue monitoring the emissions to air from the discharge stack in the event of a power interruption to the plant.

4.7.8. The two main process-related wastes that will be produced at the Facility will be incinerator bottom ash ("IBA") and air pollution control ("APC") residues.

4.7.9. The proposed ERF is designed as a single line facility and has the potential to operate in CHP mode to produce electrical power and heat. In full condensing mode (i.e. electrical Power Mode), the Facility can deliver up to 13MWe, whilst in Heat Mode, the Facility can potentially deliver approximately 20MWTh, whilst still producing around 7MWe of electricity. However, it is important to note that the Facility will be funded on the basis of power generation, but will be 'heat-ready', and the financial viability of heat supply will play a key role in determining whether the energy is supplied as heat or power.

4.7.10. It is also important to note that the operator is not in control of how a District Heating Network ("DHN") is delivered and which party controls the distribution and management of any heat supplied from the Facility; in this regard, there are a number of other parties involved and all parties will have to work together to deliver any scheme.

4.8. Operating Hours

4.8.1. With the exception of an 'emergency situation' it is proposed that the ERF would generally only accept the delivery of waste and the despatch of materials during normal daytime hours, i.e. 07:00 to 19:00 hours Monday to Friday and 08:00 to 17:00 on Saturdays.

4.8.2. The design of the ERF will provide sufficient internal storage of waste and residues to enable continuous operation over the longer public holiday periods of Christmas and Easter.

4.8.3. The internal processing of materials would operate on a continuous (24 hour) basis; however, waste delivery would be limited to the delivery and despatch hours set out above. Routine and non-routine maintenance operations within the building(s) would take place as and when required. Routine maintenance operations outside the building(s) would be scheduled to take place during the daytime (delivery) hours and would only extend into the night time and/or weekends should this prove necessary to maintaining the continuity of the process. Any non-routine maintenance and repair operations would be undertaken as and when they arise.

4.9. Employment

4.9.1. There would be a significant number of direct employment opportunities created as a result of the construction of the ERF. It is intended that many of these construction workers would be derived from the locality and that local contractors would be employed in many aspects of the construction/implementation programme. It is anticipated the Development would typically employ some 100-150 civil engineering, management, skilled and semi-skilled workers during the two to three-year construction programme. A number of indirect employment opportunities would also be created in a variety of different trades as a result of the construction and operation phases of the development.

4.9.2. Local businesses would also benefit from the opportunity to supply materials and plant and equipment during the construction/fit out phases of the Development which would represent an investment of around £34,060,000 during the construction phase.

4.9.3. During the operational phase the ERF would directly create some 30 permanent jobs, it is proposed that the workforce for the ERF would be recruited from the local employment market, with training being provided by the technology provider. In terms of indirect employment, the Development would create a need for supplying consumables, road haulage logistics, equipment repair and maintenance and business support services for a period in excess of the ERF design life of at least 25 years.

5. Relevant Waste Management, Planning Law and Policy

5.1. Relevant Waste Management and Planning Law and Policy

5.1.1. There is a significant amount of waste management and planning law and policy relevant to the Development. An outline of the relevant law and policy will be included in the background to the Development to be set out in the Waste Planning Statement and summarised in the Environmental Statement. The following law and policy is potentially relevant. Other law and policy may also be included if considered to be relevant at the time of submission of the application.

5.2. European Union Law and Policy

5.2.1. The following EU Directives are potentially relevant to the development of the ERF and will be referred to in the Environmental Statement:

- Waste Framework Directive 2008/98/EC;
- Landfill Directive 1999/31/EC;
- Environmental Impact Assessment Directive 2014/52/EU;
- Industrial Emissions Directive 2010/75/EU;
- Ambient Air Quality Directive 2008/50/EC;
- Habitats Directive 1992/43/EEC;
- Birds Directive 2009/47/EC; and
- Public Participation Directive 2003/35/EC.

5.2.2. The key pieces of EU waste legislation are due to be amended and updated in 2018 and reference to the amended legislation which will implement the EU's Circular Economy package will be included if finalised prior to submission of the application.

5.3. Welsh Waste and Planning Policy

5.3.1. The following Welsh law and policy may be referred to in the Environmental Statement:

- Town and Country Planning Act 1990 (as amended)
- Planning and Compulsory Purchase Act 2004;
- Planning (Wales) Act 2015;
- Well-being of Future Generations (Wales) Act 2015;
- Environment (Wales) Act 2016;
- Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (as amended);

- Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017;
- The Development of National Significance (Wales) Regulations 2016;
- The Development of National Significance (Procedure) (Wales) Order 2016;
- The Developments of National Significance (Specified Criteria and Prescribed Secondary Consents) (Wales) Regulations 2016;
- The Developments of National Significance (Specified Criteria and Prescribed Secondary Consents) (Wales) (Amendment) Regulations 2016;
- Wales Spatial Plan – People, Places, Futures Update 2008
- Planning Policy Wales Edition 9 - November 2016 (or Edition 10 if finalised);
- Technical Advice Note (TAN) 5 - Nature Conservation and Planning;
- Technical Advice Note (TAN) 6 - Planning for Sustainable Rural Communities;
- Technical Advice Note (TAN) 8 - Renewable Energy;
- Technical Advice Note (TAN) 11 - Noise;
- Technical Advice Note (TAN) 12 - Design;
- Technical Advice Note (TAN) 15 - Development and Flood Risk;
- Technical Advice Note (TAN) 18 - Renewable Transport;
- Technical Advice Note (TAN) 21 - Waste;
- Technical Advice Note (TAN) 23 - Economic Development;
- Technical Advice Note (TAN) 24 - The Historic Environment;
- Towards Zero Waste -One Wales: One Planet (2010);
- Towards Zero Waste - One Wales: One Planet - Municipal Sector Plan (2011);
- Towards Zero Waste - One Wales: One Planet - Collections, Infrastructure and Markets Sector Plan (2012);
- Towards Zero Waste - One Wales: One Planet - Food Manufacture, Service and Retail Sector Plan (2014);
- Towards Zero Waste - One Wales: One Planet - Collections, Infrastructure and Markets Sector Plan (2012); Commercial and Industrial Sector Plan (2013);
- Environment Strategy for Wales (2006);
- Energy Wales: A Low Carbon Transition Plan (2012); and
- Noise Action Plan for Wales 2013-2018 (2013).

5.4. Local Planning policy to Consider

5.4.1. As noted in Section 4.3 there is a new Powys Local Development Plan (LDP) for the period 2011 to 2026, which was adopted in April 2018.

5.4.2. The stated Vision for the LDP is that "Powys will be a place of vibrant and resilient communities providing sustainable development and economic opportunities set in a healthy, safe environment, whilst celebrating, protecting, enhancing and sustainably managing its natural resources, native wildlife and habitats, heritage, outstanding

landscapes and distinctive characteristics". It includes a number of supporting Themes and Objectives.

5.4.3. The Plan is significant in that 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 Policy E1 - Employment Proposals on Allocated Employment Sites. The supporting text also suggests that it may 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.

5.4.4. The LDP describes the Site as a brownfield site, partly in employment use, allocated for further expansion for General Industrial Uses. It states that expansion of development in the allocated area is dependent on construction of the proposed new access. The Site is described as having heritage and ecology value, due to its location adjacent to a geological site of special scientific interest ("SSSI"). It states that the design of development must be sympathetic to the SSSI so that the protected area is not significantly affected. It also states that development proposals should be identified through the preparation of a development brief that takes account of all issues including constraints and that project level Habitats Regulations Assessment screening is likely to be required due to the proximity to the Montgomery Canal Special Area of Conservation ("SAC"), due to hydrological connections. Additionally, it states that the Site contains significant industrial remains including related features and development so that prior archaeological intervention and possibly post consent works may be required.

5.4.5. The LDP includes a number of other strategic and development management policies that are potentially relevant to the proposal and against which it will accordingly be assessed, particularly those in relation to environmental protection. These include the following:

- The LDP's Vision and Objectives
- Strategic Policy SP2 - Employment Growth
- Strategic Policy SP7 - Safeguarding of Strategic Resources and Assets
- 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 DM8 - Minerals Safeguarding
- Policy DM9 - Existing Mineral Workings

- Policy DM10 - Contaminated and Unstable Land
- Policy DM13 - Design and Resources
- Policy DM14 - Air Quality Management
- Policy DM16 - Protection of Existing Employment Sites
- Policy E1 - Employment Proposals on Allocated Employment Sites
- Policy T1 - Travel, Traffic and Transport Infrastructure
- Policy W1 - Location of Waste Development
- Policy W2 - Waste Management Proposals
- Policy RE1 - Renewable Energy
- Policy M5 - Restoration and Aftercare

6. Key Environmental Aspects - Air Quality

6.1. Overview

6.1.1. Key impacts during the construction phase will include dust and emissions from construction vehicles and dust from construction works.

6.1.2. Once operational, emissions to air will include fugitive emissions from vehicles and point source emissions from the main stack. The latter will be required to comply with the requirements of the Industrial Emissions Directive (IED) (2010/75/EU). An air dispersion modelling study of the releases from the ERF (specifically the main stack) will be undertaken.

6.1.3. The objectives of this study are as follows:

- to determine a suitable height for the main stack (designated A1);
- to determine the maximum ground level concentrations ("GLCs") arising from the emission of pollutants from the A1 stack; the pollutants are assumed to be released from the Installation at the Emission Limit Values ("ELVs") defined in Annex VI of the IED - *Technical provisions relating to waste incineration plants and waste co-incineration plants;*
- to assess the impact of emissions from the facility on existing local air quality in relation to human health at a range of potentially sensitive receptors by comparison with relevant air quality standards ("AQSs"); and
- to predict deposition rates of acids and nutrient nitrogen from the modelled emissions and compare these with relevant Critical Loads and Critical Levels at a range of sensitive habitat sites.

6.1.4. It is considered that there will be no point source emissions of odour associated with the Installation (see Section 4.6.5.). The Installation will be designed and built using the Best Available Techniques ("BAT") thus ensuring that there are no fugitive emissions of odour beyond the Installation boundary. Consequently it is considered that detailed odour modelling will not be required, however, a qualitative odour impact assessment will be undertaken.

6.2. Environmental Assessment Boundaries

6.2.1. Model Output Parameters

6.2.1.1. The Atmospheric Dispersion Modelling System ("ADMS") model calculates the likely pollutant ground level concentrations ("GLCs") at locations within a definable grid system pre-determined by a user. Output grids may be determined in terms of a

Cartesian or Polar co-ordinate system. For the purpose of this study the Cartesian system will be used. For assessing the maximum point of impact, a grid resolution of 4km x 4km will utilised in order to capture values of the predicted pollutant GLCs arising from the model. For assessing the impact of emissions on human health and ecological sites the grid references of each will be included as specified points within the ADMS model (see Sections 6.2.2. and 6.2.3.).

6.2.2. Potentially Sensitive Human Receptors

6.2.2.1. In addition to predicting concentrations over a 4km by 4km grid, there are 13 specified receptors that will be considered in the assessment within a 1km radius of the proposed Installation. Details of the specific receptors are provided in Table 3.

Table 3: Sensitive Human Receptors

Ref	Location	Easting	Northing	Distance from Site Centre (m)	Heading (degrees)
H1	House Off A458, Welshpool SY21 8TA, UK	326773	310265	179	28
H2	Heldre Ln, Welshpool SY21 8SX, UK	326783	309854	269	160
H3	House Off Sale Ln, Welshpool SY21 8SY, UK	327026	310357	419	53
H4	House Off Sale Ln, Welshpool SY21 8SY, UK	327129	310072	440	94
H5	Speed Welshpool	326305	309785	501	230
H6	Methodist Church, Buttington, Welshpool SY21 8SZ, UK	327059	310480	525	45
H7	Border Hardcore Offices	326221	309760	583	234
H8	Buttington Trewern Primary School, Welshpool SY21 8TB, UK	327386	310580	842	56
H9	Farm Buildings off A458, Welshpool SY21 8ST, UK	325894	309228	1185	222
H10	Criggion Lane, Trewern, Welshpool SY21 8DX, UK	327796	311358	1671	41

Table3: Sensitive Human Receptors (cont)

Ref	Location	Easting	Northing	Distance from Site Centre (m)	Heading (degrees)
H11	Buttington	325160	308852	1978	231
H12	Buttington Church Welshpool SY21 8HA, UK	324984	308840	2124	233
H13	Trailhead Fine Foods/ Welshpool Livestock Sales A483, Welshpool SY21, UK	324304	308746	2746	240

6.2.3. Potentially Sensitive Ecological Receptors

6.2.3.1. In accordance with EA and NRW guidance the impact of emissions to air on vegetation and ecosystems from the Installation should be assessed for the following sensitive environmental receptors within 10km of the discharge stacks:

- Special Protection Areas ("SPAs") and potential SPAs designated under the EC Birds Directive;
- Special Areas of Conservation ("SACs") and candidate SACs ("cSACs") designated under the EC Habitats Directive ; and
- Ramsar Sites designated under the Convention on Wetlands of International Importance.

6.2.3.2. In addition the impact of emissions to air on vegetation and ecosystems from the installation will be assessed for the following sensitive environmental receptors within 2km of the discharge stacks:

- Sites of Special Scientific Interest ("SSSI") established by the 1981 Wildlife and Countryside Act; and
- Local nature sites (Ancient Woodland ("AW"), Local Wildlife Sites, National Nature Reserves ("NNRs") and Local Nature Reserves ("LNRs").

6.2.3.3. Habitat receptor designations that have been identified within the distance criteria are listed in Table 4. The ecological sites each cover a large area, consequently grid references for the ecological sites have been taken as the point of the ecological site closest to the ERF Stack (A1).

Table 4: Specific Sensitive Habitat Receptors Considered for the Assessment

Ref	Location	Type of Receptor	Easting (X)	Northing (Y)	Distance from Source (m)	Heading (Degrees)
R1	Midland Meres and Mosses	RAMSAR	330001	323850	14137	14
S1	Buttington Brickworks	SSSI	326980	310222	312	68
S2	Montgomery Canal	SSSI	324911	310297	1789	276
SA1	Montgomery Canal	SAC	324911	310297	1789	276
SA2	Granllyn	SAC	322501	311267	4347	285
AN1	AW - 41971	Cat 3 - AW	326627	310039	92	223
AN2	AW - 33254	Cat 1 - AW	326365	310248	355	294
AN3	AW - 33255	Cat 1 - AW	326312	310244	402	290
AN4	AW - 47343	Cat 3 - AW	327442	310141	753	87
AN5	AW - 33238	Cat 1 - AW	326717	309109	997	178
AN6	AW - 26045	Cat 1 - AW	327683	310276	1007	80
AN7	AW - 27762	Cat 1 - AW	327370	309339	1025	138
AN8	AW - 27222	Cat 1 - AW	327761	309658	1161	113
AN9	AW - 28973	Cat 2 - AW	327692	309306	1282	129
AN10	AW - 27086	Cat 1 - AW	326285	308794	1373	197
AN11	AW - 35167	Cat 2 - AW	328187	310137	1497	89
AN12	AW - 27223	Cat 1 - AW	328256	309896	1580	98

6.3. Methodology

6.3.1. Construction Dust Assessment

6.3.1.1. An assessment of construction dust on potentially sensitive receptors will be undertaken in accordance with the Institute of Air Quality Management's ("IAQM's") Guidance on land-use planning and development control: Planning for air quality.

6.3.2. Choice of Model

6.3.2.1. The latest version of ADMS (developed by Cambridge Environmental Research Consultants) will be used in the assessment.

6.3.3. Key Assumptions

6.3.3.1. The study will be undertaken on the basis of a worst-case scenario. Consequently, the following assumptions will be made:

- the release concentrations of the pollutants will be at the permitted Emission Limit Values ("ELVs") on a 24-hourly basis, 365 days of the year; in practice, when the plant is operating, the release concentrations will be below the ELVs, and, for most pollutants, considerably so; furthermore, taking shutdowns for planned maintenance into account, the plant will not operate for 365 days;
- the highest predicted pollutant GLCs for the five years of meteorological data for each averaging period (annual mean, hourly, etc.) have been used;
- concentrations of NO_2 in the emissions have been calculated assuming a long-term 70% NOx to NO_2 conversion rate, and a short-term 35% NOx to NO_2);
- all of the particulate releases will be present as $PM_{2.5}$ and also as PM_{10}; this enables direct comparison with the particle AQSs, which are expressed in terms of $PM_{2.5}$ and PM_{10}; in practice, this will not be the case as some of the particles present will be larger than PM_{10}; and
- maximum predicted GLCs at any location, irrespective of whether a sensitive receptor is characteristic of public exposure, are compared against the relevant AQSs for each pollutant; in addition, the predicted maximum sensitive receptor GLC has also been assessed.

6.3.4. Air Quality Standards for Assessment – Protection of Human Health

6.3.4.1. The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2007) details Air Quality Strategy Objectives for a range of pollutants, including a number that are directly relevant to this study, i.e. CO and NO_2. In addition the NRW must ensure that the proposals do not exceed Ambient Air Directive ("AAD") limit values. The term Air Quality Standard ("AQS") is used to refer to any of these values.

6.3.4.2. The various AQSs are intended to be used as guidelines for the protection of human health and the management of local air quality. Consequently all relevant AQSs will be considered.

6.3.5. Air Quality Standards for the Protection of Sensitive Habitat Sites and Ecosystems

6.3.5.1. Critical levels are thresholds of airborne pollutant concentrations above which damage may be sustained to sensitive plants and animals. High concentrations of pollutants in ambient air directly can cause harm to leaves and needles of forests and

other plant communities. Oxidised nitrogen can have both a toxic effect on vegetation and an impact on nutrient nitrogen. The 2008 Air Quality Directive set limit values for the protection of vegetation and ecosystems and these have been adopted by the Air Quality Strategy, but are not currently set in Regulations. The current objectives will be used in the assessment.

6.3.5.2. Critical Loads are defined as *"a quantitative estimate of exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge*"[1]. Critical loads for nutrient nitrogen are set under the Convention on Long-Range Transboundary Air Pollution based on empirical evidence, mainly observations from experiments and gradient studies. Critical loads[2] are assigned to habitat classes of the European Nature Information System[3] in units of kgN/ha/yr.

6.3.5.3. Exceedance of critical loads for nitrogen deposition can result in significant terrestrial and freshwater impacts due to changes in species composition, reduction in species richness, increase in nitrate leaching, increases in plant production, changes in algal productivity and increases in the rate of succession[4].Exceedance of the critical loads for acid deposition can result in significant terrestrial and freshwater impacts due to leaching and subsequent increase in availability of potentially toxic metal ions.

6.3.5.4. Site specific critical loads for nutrient nitrogen deposition and acid deposition respectively will be obtained from the Air Pollution Information System ("APIS") website (for SAC's) or directly from the SSSI citation. Where a site has numerous habitat features, that feature with the lowest Lower Critical Load, and lowest Upper Critical Load will be used in the assessment.

6.3.6. Deposition Parameters

6.3.6.1. Deposition of nitrogen and acids at designated habitats sites will be included in the assessment. This will focus on sites within 10km of the main stack (A1). The pollutant deposition rates will be used as detailed in the Air Quality Technical Advisory Group's Guidane Note 06 ("AQTAG06).

6.3.6.2. For acidification impacts, the deposition of oxides of nitrogen, ammonia, sulphur dioxide and hydrogen chloride will be considered. For nutrient nitrogen, the deposition of the oxides of nitrogen and ammonia will be included.

([1]) From http://www.unece.org/env/lrtap/WorkingGroups/wge/definitions.htm
([2]) From http://www.apis.ac.uk/overview/issues/overview_Cloadslevels.htm
([3]) See http://eunis.eea.europa.eu/ for details
([4]) From http://www.apis.ac.uk/overview/issues/overview_Cloadslevels.htm#_Toc279788052

6.3.7. Stack Emissions Parameters

6.3.7.1. The stack emission parameters used in the study will be listed, namely:

- stack Height (m);
- stack Centre Co-ordinates;
- stack Exit Diameter (m);
- stack Gas Discharge Temperature (^{o}C);
- stack Gas Discharge Velocity (actual) (m/s); and
- normalised Volumetric Flowrate (Nm^3/s).

6.3.7.2. The emission limit values ("ELVs") assumed for each are presented in Table 5. These are the assumed daily ELVs used for the main modelling assessment.

Table 5: Pollutant Emission Rates (all in g/s)

Pollutant	ELV[a)c)] (mg/Nm^3)
Nitrogen dioxide	200
Sulphur dioxide	50
Carbon monoxide	50
Particulate matter[b)] as PM_{10} and $PM_{2.5}$	10
VOCs (as benzene)	10
Hydrogen chloride	10
Hydrogen fluoride	1
Cadmium/thallium	0.05
Mercury	0.05
Group 3 Metals Sb, As,Pb, Cr, Co, Cu, Mn, Ni, V	0.5
Ammonia	10
PAH (as benzo[a]pyrene)	0.001[d)]
Polychlorinated biphenyls	0.00001[d)]
Dioxins and Furans	0.0000001

Notes to Table 5

(a) Concentrations are at reference conditions i.e. 273K, 1 atmosphere, 11% oxygen, dry.
(b) It has been assumed that all particulate matter could be present as PM_{10} and/or $PM_{2.5}$
(c) Unless stated otherwise, pollutant ELVs are as stated in the IED, unless otherwise indicated.
(d) No IED ELV assigned. Emission concentration indicated provided by HZI.

6.3.8. Meteorological Data

6.3.8.1. Further to advice from the Met Office it is considered that modelling will be undertaken using data from Shawbury for 2013 – 2017 as this is the closest site to the ERF.

6.3.8.2. It should be noted that this location is in excess of 30km north east of the ERF. However, feedback from an earlier public consultation indicated that local residents have concerns around plume grounding on Long Mountain. Numerical Weather Prediction ("NWP") data is available from the Met Office which would provide modelled site specific weather conditions. It is therefore suggested that modelling be initially undertaken using data from an observed meteorological station (in accordance with NRW/EA guidance) and sensitivity analysis be then undertaken using the a years' worth of NWP data based on the worst case observed met data year.

6.3.9. Building Parameters

6.3.9.1. The building parameters utilised for the study will be detailed and a visual representation will be provided.

6.3.10. Terrain Data

6.3.10.1. ADMS has a terrain pre-processing capability, which calculates the required boundary layer parameters from a variety of data. Terrain data will be used which will be of sufficient size to encompass the output area (4km x 4km). Depending on the initial modelling it may be required to use two terrain files, a smaller one to encompass the output area, and a large one to encompass all sensitive receptors. This will ensure that the complex terrain around the proposed Installation is fully assessed on the maximum point of ground level concentration.

6.3.10.2. It should also be noted that the terrain file will be manipulated to ensure that the above ordnance datum ("AOD") levels of the base of the existing quarry are consistent with the final built levels. A visualisation of the terrain will be provided.

6.3.11. Roughness Length

6.3.11.1. The surface nature of the terrain is defined in terms of Roughness Length (Z_o). The roughness length is dependent on the type of terrain and its physical properties. The ADMS model gives values to various types of terrain, for example, agricultural areas are classed as 0.3m, parkland and open suburbia is classed as 0.5m and cities and woodlands are classed as 1.0m. Due to the agricultural terrain and small villages surrounding the facility a roughness length of 0.3m is considered appropriate. However a sensitivity analysis will be undertaken on the worst case met year.

6.3.12. Assessment of Significance of Impact Guidelines

6.3.12.1. The EA online guidance (which NRW state should be used) will be used for the purposes of significance assessment, and this guidance details the guidelines upon which the assessment of the significance of impact can be established. In the first instance, it indicates that process contributions ("PCs") can be considered insignificant if:

- the long-term PC is <1% of the long-term environmental standard; and
- the short-term PC is <10% of the short-term environmental standard.

6.3.12.2. Where a PC exceeds the above criteria then the impact is deemed 'potentially significant', and further assessment has to be undertaken. The next step of the assessment takes account of the existing background concentrations of the pollutant of interest, and EA online guidance indicates that environmental standards are unlikely to be exceeded provided:

- the long-term PEC is <70% of the long-term environmental standard; and
- the short-term PC is <20% of the short-term standard minus twice the long-term background).

(where the long-term PEC - predicted environmental concentration - is the sum of the long-term PC and the long-term pollutant background concentration).

6.3.12.3. Where there are local nature sites within the specified distances process contributions ("PCs") can be considered insignificant if:

- the long-term PC is <100% of the long-term environmental standard; and
- the short-term PC is <100% of the short-term environmental standard.

6.3.12.4. However, it is important to note that for the Group 3 metals there is an additional guideline indicated in the EA Guidance for Group 3 Metals (see below) that states that the environmental standard is unlikely to be exceeded if:

- the long-term and short-term PEC is <100% of the long-term and short-term

environmental standard (as appropriate)

(where the short-term PEC is the sum of the short-term PC and twice the long-term pollutant background concentration).

6.3.12.5. For trace metals, Annex VI of the IED assigns ELVs for three groups. Group 1 comprises cadmium ("Cd)" and thallium ("Tl"), Group 2 comprises mercury ("Hg") and Group 3 comprises antimony ("Sb"), arsenic ("As"), chromium ("Cr"), cobalt ("Co"), copper ("Cu"), manganese ("Mn"), lead ("Pb"), nickel ("Ni") and vanadium ("V"). The ELVs are the total for the combined emissions, and it would not be reasonable to assume that each metal emits at the maximum ELV for the group. In this regard, the Environment Agency ("EA") has provided guidance on the steps required for assessing the impact of such metal emissions, namely *Releases from Waste Incinerators* - (V4).

6.3.12.6. Step 1 of the guidance is to assume that all emissions are at the maximum ELV for the group. For example, all of the Group 3 metals would be assumed to be emitted at a concentration of 0.5mg/Nm^3. For Step 1 it is assumed that hexavalent chromium ("CrVI") is 20% of total Cr. This is based on information on background concentrations provided by the Expert Panel on Air Quality Standards ("EPAQS") (*Guidelines for metals and metalloids in ambient air for the protection of human health*, May 2009).

6.3.12.7. Where the release is considered to be potentially significant, Step 2 of the guidance allows the applicant to use the maximum emissions data listed in Appendix A of the guidance to revise predictions, and consider each pollutant as a percentage of the Group 3 ELVs.

6.3.12.8. As deposition of nutrient nitrogen and acidity targets vary depending on location the APIS site-relevant critical load tool will be used to inform the standard that PCs and PECs need to be compared with. These will be detailed in the final assessment.

6.3.13. NO_x to NO_2 conversion Rates

6.3.13.1. EA online guidance (again approved for use by NRW) states that emissions of NO_x should be recorded as NO_2 as follows:

- for the long-term PCs and PECs, assume 100% of the emissions of NO_x convert to NO_2; and
- for the short-term PCs and PECs assume 50% of the emissions of NO_x convert to NO_2.

6.3.13.2. However, further to detailed discussion with the EA and NRW on previous studies, a long-term 70% NO to NO_2 conversion rate, and a short-term 35% NO to NO_2 as required by guidance on NO_x and NO_2 Conversion Ratios as referenced in AQTAG06 *Technical guidance on detailed modelling approach for an appropriate assessment* (April 2010) should be used in all detailed modelling assessments. The conversion rates of 100% and 50% should only be used for initial screening assessments.

6.4. Existing Conditions – Background Air Quality

6.4.1. Nitrogen Dioxide (NO_2)

6.4.1.1. It is understood that PCC undertake NO_2 diffusion tube monitoring. However, no further information appears to be available. As part of this scoping request it is requested that Powys CC could provide any air quality monitoring data that may be relevant.

6.4.1.2. Diffusion tube monitoring was undertaken by SLR consulting from 26th August 2015 to 30th September 2015 at five locations around the ERF. This data will be review to ascertain its suitability for use as background data.

6.4.1.3. In the absence of actual data (for example if PCC consider the 2015 data too aged) the Department for the Environment, Food and Rural Affairs ("DEFRA") mapped data will be used.

6.4.2. Oxides of Nitrogen (NO_x)

6.4.2.1. As there is no suitable measured data for NO_x the Departments DEFRA mapped data will be used.

6.4.3. Sulphur Dioxide

6.4.3.1. The 2001 DEFRA mapped SO_2 concentration for the area surrounding the proposed Installation will be used. Year adjustments are not considered to be required, as it is considered that, away from specific locations near industrial sources or areas of high domestic coal burning, that SO_2 background concentrations would change very little, i.e. the factor would be close to 1[5].

[5] Defra - Air Pollution Background Concentration Maps: A User Guide for Local Authorities June 2014

6.4.4. Particulate Matter

6.4.4.1. As there is no suitable measured data for PM_{10} or $PM_{2.5}$ DEFRA mapped data will be used.

6.4.5. Volatile Organic Compounds (as Benzene)

6.4.5.1. 2001 DEFRA mapped benzene concentration for the area surrounding the proposed facility will be used and will be multiplied by the year adjustment factor.

6.4.6. Trace Metals

6.4.6.1. Monitoring of trace elements has been undertaken by DEFRA since 1976. Currently, monitoring of twelve metals is carried out at locations throughout the UK, predominantly in urban locations. In addition, concentrations of As, Cd, Hg, and Ni are monitored at a further ten rural locations. The closest location to the application site is the rural site at Cwmystwyth, located 60km SW from the site. The mean concentrations measured in 2017 will be used for the assessment.

6.4.6.2. For CrVI, it will be assumed that the background concentration is 20% of the total Cr concentration (as indicated in the EPAQS report *Guidelines for metals and metalloids in ambient air for the protection of human health*, May 2009).

6.4.6.3. Antimony and mercury are no longer routinely measured, however, older data (2013) is available from Cwmystwyth and will be used.

6.4.6.4. There is no data available for thallium thus in the absence of data the background Has been assumed to be zero.

6.4.7. Polyaromatic Hydrocarbons (PAH) as Benzo[a]pyrene)

6.4.7.1. Ambient monitoring of benzo[a]pyrene ("B[a]P") is carried out as part of the DEFRA PAH Network at a number of locations around the UK.The closest sites to the Installation is Ruardean. This is a rural background station and is considered to be representative of air quality in the vicinity of the site and receptors.

6.4.8. Carbon Monoxide (CO)

6.4.8.1. 2001 DEFRA mapped CO concentrations for the area surrounding the proposed Installation will be used, multiplied by the relevant year adjustment factor.

6.4.9. Ammonia (NH_3)

6.4.9.1. Gaseous ammonia (NH_3) is measured monthly at 85 sites across the UK. The monitoring provides a baseline in the reduced nitrogen species (NH_3 + NH_4^+), which is necessary for examining responses to changes in the agricultural sector and to verify compliance with targets set by international agreements.

6.4.9.2. There are two monitoring stations, one to the north and one to the south of the ERF. Both are rural background stations, and both have data for 2017. Consequently the station with the highest background will be used to be representative of background air quality in the vicinity of the Installation.

6.4.10. Hydrogen Fluoride (HF)

6.4.10.1. Monitoring of ambient levels of HF is not currently carried out in the UK. A modelling study has suggested a natural background concentration of 0.5µg/m^3 with an elevated background of 3µg/m^3 where there are local anthropogenic emission sources [(6)]. To ensure a worst case scenario is assessed the higher of these two values will be used.

6.4.11. Hydrogen Chloride (HCl)

6.4.11.1. Ambient monitoring of HCl is carried out as part of UK Acid Gases and Aerosols Monitoring Network (AGANet) at a number of locations around the UK. The closest monitoring site is at Cwmystwyth. The average annual mean HCl concentration measured in 2015 (latest data available) will be used and is assumed to provide a reasonable estimate of the background concentration at the Installation.

6.4.12. Dioxins and Furans (PCDD/Fs)

6.4.12.1. Monitoring of PCDD/Fs is currently carried out by DEFRA at six locations in the UK (Hazelrigg, High Muffles, London, Manchester, Weybourne and Auchencorth Moss). Of these six locations, four are rural locations. The latest available data is from 2010.To ensure a worst case scenario assessment the highest value from these four sites will be used.

6.4.13. Polychlorinated Biphenyls ("PCBs")

6.4.13.1. Monitoring of PCBs is currently carried out by DEFRA at six locations in the UK (Hazelrigg, High Muffles, London, Manchester, Weybourne and Auchencorth Moss). Of these six locations, four are rural locations. The latest available data is from 2010.

(6) EPAQS (February 2006), Guidelines for Halogen and Hydrogen Halides in Ambient Air for Protecting Human Health Against Acute Irritancy Effects

6.4.13.2. To ensure a worst case scenario assessment the highest value from these four sites will be used.

6.5. Existing Conditions – Specified Ecological Sites

6.5.1. Habitat Site Specific Baseline Concentrations

6.5.1.1. Site specific baseline concentrations of oxides of nitrogen ("NO_x"),sulphur dioxide ("SO_2") and ammonia ("NH_3"),will be obtained from APIS. Background concentrations for each ecological receptor will been obtained at the grid square of the ecological site closest to the Installation.

6.5.2. Nutrient Nitrogen and Acid Deposition

6.5.2.1. Site specific baseline nutrient nitrogen and acid deposition rates will be obtained from APIS. Again, the specific deposition rates for each ecological receptor will be obtained at the grid square of the ecological site closest to the Installation.

6.6. Points for Clarification

6.6.1. Based on the information provided in Sections 6.1 – 6.5 its respectfully requested that the following points be addressed in the response to this scoping request:

- confirmation that the method for assessing construction dust is acceptable;
- provide any background air quality data or confirm that proposed background data is acceptable;
- confirmation that SLR diffusion tube data from 2015 can be considered;
- confirmation that no other potentially sensitive human receptors are required;
- confirmation that no other potentially sensitive ecological receptors are required;
- confirmation that the approach to assessing potentially sensitive ecological sites is acceptable;
- confirmation that the location of the meteorological site is suitable.;
- confirmation that the NOx to NO_2 conversion rates are acceptable;
- confirmation that the ELVs are acceptable, specifically for PAHs and PCBs;
- confirmation that the assessment criteria is acceptable; and
- confirmation that the approach to the terrain effects is acceptable.

7. Key Environmental Aspects - Health Impact Assessment

7.1. Overview

7.1.1. Health Impact Assessment ("HIA") is a means to assess, in an objective and systematic process, both potential positive and negative impacts of a proposal on health and well-being. The assessment process views health in its broadest sense and utilises the framework that has developed around the concept of the wider determinants of health. HIA is underpinned by the core principals of transparency, ethical, equitable, robust, participatory, sustainable and democratic (Wales Health Impact Assessment and Support Unit "WHIASU").

7.2. Environmental Assessment Boundaries

7.2.1. The environment, in terms of HIA, is more holistic in context than would perhaps be considered when thinking of the traditional use of the word 'environment'. Through the HIA process environment is considered in its entirety, meaning that all aspects of human life and that of the natural systems within which we exist can be considered and given due regard appropriate to the level of assessment being performed.

7.2.2. Taking this more holistic view of the 'environment' ensures that artificially set boundaries do not hamper or constrain an assessment of a proposal and the potential impacts on the health and well-being of vulnerable and disadvantages groups are identified.

7.3. Methodology

7.3.1. The Wales Health Impact Assessment Support Unit ("WHIASU") have developed a tool kit and guidance documents to assist the development of an HIA and to identify what type of HIA should be performed. These resources will be utilised to ensure that an appropriate and robust assessment is performed taking in to consideration the nature and scale of the proposed development. Whilst there is no prescriptive method of performing an HIA, the various tools and guidance will be utilised to ensure an holistic and encompassing assessment is performed

7.3.2. An important aspect will be cross referencing to the Well-Being of Future Generations goals and objectives to ensure that opportunities to contribute towards them are taken, and to develop mitigation where necessary.

7.3.3. The initial stage of an HIA is a Screening exercise that identifies the need for an HIA and records the key aspects of what an HIA will need to take in to consideration. The Screening exercise and associated record sheet are shown in Appendix 3.

7.4. Existing Conditions

7.4.1. Information and data relating to the existing environmental and health conditions in the locality will need to be collated. Much of this will be done as part of the other assessments required under EIA and Habitats regulations.

7.4.2. There may be certain data or information that will not be required for other assessments, such as 'Multiple Indices of Depravation', which will need to be collated in order to perform an appropriate HIA. Likewise there may be 'local knowledge' that is not captured in any formal way that could be gathered through participatory workshops, should the Scoping Assessment identify the need.

7.5. Points for Clarification

7.5.1. Based on the information provided in Sections 7.1 – 7.4 it is requested that the following points be addressed in the response to this scoping request:

- are there any specific local issues in respect of health or wellbeing that need to be given consideration;
- are there specific local stakeholders that should be requested to participate in the HIA process; and
- are there any other specific areas of concern, or potential opportunities, from the proposed development that should be included in the HIA process.

8. Key Environmental Aspects - Transportation, Traffic and Highways

8.1. Overview

8.1.1. Access to/egress from the Development proposal would be via the recently approved new access junction to the north east of the existing site access junction.

8.1.2. From a transport perspective, key impacts during the construction phase would be the effect of construction vehicle movements on highway capacity and safety on the local road network.

8.1.3. Once operational, the key impacts of the Development will be the effect of operational vehicle movements on highway capacity and safety on the local road network

8.1.4. The objectives of this study are as follows:

- to assess the effect of the construction and operational development traffic on the local road network from a highway capacity and safety perspective; and
- to undertake a qualitative assessment of the impact of the proposal on the local pedestrian, cycle and public transport networks.

8.1.5. It is considered that the construction and operational traffic would at worst only be likely to have a moderate impact on the operation of the local road network. Consequently it is considered that junction capacity assessments would not be required, however, a link capacity assessment would be undertaken.

8.2. Environmental Assessment Boundaries

8.2.1. The study area of the transport investigations is proposed to be the A458 from a point 500m north east of the existing site access junction to and inclusive of its roundabout junction with the A483.

8.2.2. Within this study area the proportional impact of the construction and development traffic movements on the A458 would be assessed as would the latest available 3 year period of Personal Injury Accident ("PIA") data. In addition, a qualitative assessment of the impact of the Development on the local pedestrian, cycle and public transport networks would be undertaken.

8.3. Methodology

8.3.1. A Transport Assessment would be prepared in accordance with the relevant aspects of Technical Advice Note 18: Transport (March 2007) and chapter 8 of Planning Policy Wales Edition 9 - November 2016 (or Edition 10 if finalised).

8.3.2. The proportional increase in traffic levels on the A458 as a result of the development traffic would be calculated.

8.3.3. The following significance criteria are considered relevant in respect of considering the impact of the development traffic flows within the study area and are provided in Table 6.

Table 6: Significance Criterial

Impact Magnitude				
Subject Area	Impact Significance			
	Major	Moderate	Minor	Negligible
Vehicular traffic from proposed development	Considerable impact (by extent, duration or magnitude) or more than local significance or in breach of recognised acceptability, legislation, policy or standards (greater than 60 % change).	Limited impact (by extent, duration or magnitude) which may be considered significant (30 % to 60 % change).	Slight, very short or highly localised impact of no significant consequences (10 % to 30 % change).	The bearing of the impact is too small to be measured meaningfully (0 to 10%).
Construction related traffic	Construction traffic flows greater than development traffic flows.	Construction traffic flows greater than 100 HGVs per day on major road network, or greater than 25 HGVs per day on minor roads.	Construction traffic flows less than 100 HGVs per day on major road network, or greater than 25 HGVs on minor roads.	Construction traffic flows less than 25 HGVs per day on all roads.

8.3.4. In addition to the above significance rating the nature / type and duration of the impacts will be assessed using the following criteria provided in Table 7.

Table 7: Impact Nature or Type

Impact Nature or Type	Definition
Beneficial	An impact that is considered to represent an improvement on the baseline or introduces a positive change.
Adverse	An impact that is considered to represent an adverse change from the baseline, or introduces a new undesirable factor.
Direct impact	Impacts that result from a direct interaction between a planned project activity and the receiving environment/receptors.
Indirect impact	Impacts that result from other activities that are encouraged to happen as a consequence of the Project.

8.4. Existing Conditions

8.4.1. The following will be undertaken in order to confirm existing conditions:

- a review of baseline conditions, including the layout of the local road network, the site access arrangements, the haul route arrangements and confirmation of the existing pedestrian, cyclist and public transport networks;
- review of July 2016 Automatic Traffic Count data for the A458 from a point between the existing site access and the roundabout junction with the A483;
- review of the latest available 3 year period of Personal Injury Accident data for the A458 from a point 500m north east of the existing site access junction to and inclusive of its roundabout junction with the A483; and
- consideration of historic, existing and future traffic levels associated with the site.

8.5. Points for Clarification

8.5.1. Based on the information set out in Sections 8.1 – 8.4 it is requested that the following points be addressed in the response to this scoping request:

- confirmation that the recently approved site access junction is considered acceptable to serve the Development;
- confirmation that the proposed extent of the study area is acceptable;
- confirmation that there is no committed development traffic that should be considered in this assessment; and
- confirmation that provided that at worst moderate impacts only are expected that junction capacity assessments are not required.

9. Key Environmental Aspects - Landscape and Visual Impact

9.1. Overview

9.1.1. Key impacts during the construction phase relate to the proposed screening bund around the southern and western extent of the quarry, storage of construction materials, plant etc. for a temporary duration and the construction of the stack and buildings relating to the ERF.

9.1.2. Once operational, the main impacts concern the visibility of the stack and buildings associated with the ERF for a period of at least 25 years, following which, the site will be restored.

9.1.3. The Landscape and Visual Impact Assessment ("LVIA") will review and assess separately the matters relating to the effects on landscape character and the effects upon visual amenity.

9.1.4. All relevant national and local landscape policies and documents will be considered with a summary provided in Chapter 6: Planning Policy of the ES.

9.1.5. A Conceptual Masterplan will be prepared by Bright & Associates and will form part of the LVIA. Currently, this is represented by Drawing No. BT1021-D1: Proposed Locations for Representative Viewpoints in Appendix 1.

9.2. Environmental Assessment Boundaries

9.2.1. The study area to be adopted for the LVIA will effectively comprise all areas within and near to the mapped Zone of Visual influence ("ZVI") demonstrated by Drawing No. BT1021-D1 in Appendix 1.

9.2.2. The ZVI has been established using computer based analysis and is based on the visibility of the stack at 160mAOD (i.e. the quarry base at 90mAOD, plus 70m for the stack). Consequently, the total search distance is 15km from the Development, although the methodology reduces the visual impact assessment to up to 10km.

9.3. Methodology

9.3.1. Guidance and Best Practice

9.3.1.1. The LVIA will be undertaken in accordance with The Guidelines for Landscape and Visual Impact Assessment (Third Edition), published in April 2013 by the Landscape Institute and Institute of Environmental Management and Assessment.

9.3.1.2. It will also make reference to the following sources:

- Landscape Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment, Landscape Institute, (2011);
- An Approach to Landscape Character Assessment, Natural England (2014); and
- Visual representation of development proposals, Technical Guidance Note 02/17, Landscape Institute (2017).

9.3.1.3. Further to the above, direction will be taken from information provided by LANDMAP, including methodologies and guidance notes and the Adopted Powys Local Development Plan 2011 – 2026 (April 2018) with reference to Policy DM4: Landscape.

9.3.2. Potentially Sensitive Landscape Receptors

9.3.2.1. The LVIA will consider effects on landscape character, cultural (heritage) designations and their settings.

9.3.2.2. The baseline will determine the current status of the landscape character. Given the location of the Site close to the Wales-England border and extent of the proposed study area, National Landscape Character Areas are classified by NRW and National Character Areas are categorised by Natural England ("NE"). At a more detailed scale, information is provided by NRW through LANDMAP.

9.3.2.3. The Powys Landscape Character Assessment Study (2008) prepared by John Campion Associates Ltd. for Powys County Council and Shropshire Landscape Typology (2006) (Shropshire Council) will also be referred to.

9.3.2.4. Landscape and cultural heritage designations with the defined study area which contribute to a sense of place and/or signify an amenity value for receptors such as footpath users and visitors, will be reviewed for the LVIA.

9.3.3. Potentially Sensitive Human Receptors

9.3.3.1. The LVIA will consider effects on human (visual) receptors. It will assess the primary viewpoints within a 10km distance, thereby, refining the 15km study area.

9.3.3.2. For the visual impact assessment, representative viewpoint locations will be identified to assist the understanding and context of the existing amenity and changes due to the proposed development.

9.3.3.3. It is proposed to include 20 representative viewpoints which are identified on Drawing No. BT1021-D1: Proposed Locations for Representative Viewpoints in Appendix 1 and summarised in the Table 8. The table provides details of the distance and direction from the Site Centre, together with an explanation of why the viewpoint location has been selected.

Table 8: Proposed Locations for Representative Viewpoints

Proposed Location Number	Distance from Site Centre (c.km)	Direction from the Site Centre	Description of Location/Reason for the Proposed Viewpoint Being Chosen
1	0.4	SW	From Heldre Lane near Whitehouse Farm. Chosen due to the vicinity of the Site, open vista and proximity to a residential property. Receptors would be road users and residents at the farmstead
2	0.4	SE	From Heldre Lane, demonstrating a general view from a public road. Receptors would be road users.
3	0.7	SE	From a public footpath off Heldre Lane. Chosen due to the proximity to the Site, the elevated viewpoint location and direct views to the Site. Receptors would be footpath users.
4	0.9	E	From near Upper Heldre, representing potential views from residential properties (a house and adjacent bungalow). Receptors will comprise residents and road users.

Table8: Proposed Locations for Representative Viewpoints (cont)

Proposed Location Number	Distance from Site Centre (c.km)	Direction from the Site Centre	Description of Location/Reason for the Proposed Viewpoint Being Chosen
5	1.3	S	From a public footpath south-east of Gelli. Chosen due to its close proximity and given that the route incorporates prominent views towards the Site. Receptors would be footpath users.
6	1.4	SE	From a public footpath south of Upper Heldre. Chosen due to its prominent location and north-western aspect towards the Site and the open hill side. Receptors would be footpath users.
7	1.7	E	From a public footpath near Peny-Bank. The viewpoint location would permit an exploration of mid distance views for footpath users and also inform potential views from nearby residential properties. Receptors would comprise footpath users and residents (NB. The latter would be representative).
8	1.6	N	From the residential area of Trewern. In addition, it would also be in the vicinity of the Maesfron (Grade II) Register of Parks and Gardens of Special Historic Interest in Wales (CADW) and its associated setting. It is proposed that the viewpoint location should be from main road or side road, to best illustrate the southerly amenity. Receptors would comprise residents.
9	2.3	NE	From an area of Winnington Green, comprising both public footpath and roadside views. A section of the Sustrans National Route No.81 (cycleway) uses the nearby road. Receptors would be footpath users and may include road users or residents dependent on the location of the photograph.

Table8: Proposed Locations for Representative Viewpoints (cont)

Proposed Location Number	Distance from Site Centre (c.km)	Direction from the Site Centre	Description of Location/Reason for the Proposed Viewpoint Being Chosen
10	2.1	W	From a section of the A483 and Offa's Dyke Path National Trail, west of the Site. The latter links to the Severn Way long distance footpath close by. Chosen due to the significance of the National Trail/long distance footpath routes and given the extent of flat ground between the viewpoint location and the Site. Receptors would be footpath users and road users.
11	2.2	NW	From a public footpath near Crowthers Coppice and adjacent to residential properties, illustrating wider views over the Severn Valley. Receptors would be footpath users and residents.
12	4.59	NE	From Cefn y Castell Hill Fort and chosen due to the site's significance as a Scheduled Ancient Monument (CADW) and its prominent location at c.367mAOD. Receptors would be footpath users.
13	5.49	NW	From a road and public footpaths at Burgedin. Chosen due to its prominent location and south-easterly aspect towards the Site. In addition, residential properties may receive views towards the Site. Receptors would be footpath users, road users and may include residents if the photograph is taken near residential properties.
14	6.40	NW	From north of Arddleen, chosen to represent the typical amenity towards the Site, near a church and public road. Receptors would be footpath users and may include road users if the photograph is taken near the road.

Table8: Proposed Locations for Representative Viewpoints (cont)

Proposed Location Number	Distance from Site Centre (c.km)	Direction from the Site Centre	Description of Location/Reason for the Proposed Viewpoint Being Chosen
15	3.78	SW	From a residential area of Welshpool. Chosen due to its prominent location and far reaching views but limited amenity in regards to the Site with views being better directed to the east. Receptors would be residents.
16	4.8	SW	Comprising a secondary view from a residential area of Welshpool exploring potential visibility near to a footpath/beacon. In addition, areas north of Red Bank (road) have been categorised for housing allocation as Site Ref P57 HA3 Land at Red Bank, Welshpool (149 units) in the Adopted Powys Local Development Plan 2011 – 2026 (April 2018). Receptors would include footpath users and residents. Both receptor groups being representative.
17	6.5	SW	From Powis Castle and Garden. Chosen due to the site's significance as a National Trust property and prominent location. The Site also includes a Scheduled Ancient Monument (CADW). Receptors would be visitors to Powys Castle.
18	9.1	SW	From the trig point at Y Golfa, accessed by footpath users on the Glyndwr's Way National Trail. Presenting an elevated and prominent view over the Severn Valley with the Site as backdrop. Receptors would be footpath users.
19	8.9	SW	From a section of road near Llwynderw. Chosen due to its prominent location and north-easterly aspect towards the Site. In addition, residential properties nearby may receive views towards the Site. Receptors would be road users and may include residents if the photograph is taken near residential properties.

Table8: Proposed Locations for Representative Viewpoints (cont)

Proposed Location Number	Distance from Site Centre (c.km)	Direction from the Site Centre	Description of Location/Reason for the Proposed Viewpoint Being Chosen
20	7.0	N	From Rhos (near Llandrinio) and Offa's Dyke Path National Trail. The view is representative of the low lying valley form and long distance views south, towards the Site with only limited visibility, but enables a representative view. Receptors would be footpath users and may include residents if the photograph is taken near the road.

9.3.4. Photomontage

9.3.4.1. Photomontages will be included to enable assessment from selected viewpoint locations. It is proposed that photomontage will be used for approximately eight key local viewpoints and two more distant viewpoints to enable understanding of the visual context of the stack. These will present 'before' and 'after' views, namely, the existing view (before) and the Development within the view (after).

9.3.4.2. The LVIA will consider the proposed development and the resulting effects. In particular, it will give consideration to the stack position and height as well as building heights in terms of the evaluation and magnitude of the effect through the ZVI mapping as shown on Drawing No. BT1021D1 in Appendix 1.

9.3.5. Potential Impacts and Mitigation Measures

9.3.5.1. The LVIA will set out the landscape screening proposals that will form an integral part of the design of the proposed development and the assessment evaluation will take such aspects into account.

9.3.5.2. Mitigation measures will primarily relate to the layout of the Development, extensive screen bund and tree planting together with a review of the quarry restoration where it applies to the Red Line area shown on Drawing No. BT1021-D1 in Appendix 1

9.3.5.3. Any residual landscape and visual impacts, following mitigation, will also be assessed.

9.3.6. Concept Masterplan

9.3.6.1. A Concept Masterplan will be prepared. This will take into account the broader site uses. It is envisaged that this will encompass the following:

- proposed areas of scattered scrub and woodland planting;
- restored clay slopes to allow the natural colonisation of grassland habitat, with scattered scrub;
- former quarrying areas can be used for industrial purposes in future, in addition, there is the potential for logistics, business and specialist horticulture uses; and
- the area associated with the Buttington Brickworks SSSI will remain undeveloped and it is suggested that an interpretation board and access is provided.

9.4. Existing Conditions

9.4.1. The baseline situation for the LVIA will consider the current land use and context of the Site, given that the immediate vicinity consists of a consented quarry and further quarrying will take place under an extant consent.

9.4.2. Of note is the Adopted Powys Local Development Plan 2011 – 2026 (April 2018), with the majority of the Site categorised as Site Allocation Ref. No. P59 EA1 under Policy E1 Employment Proposals on Allocated Employment Sites (Site Name: Buttington Quarry). It is also stated that the Quarry is '*Suitable for waste uses through Policy W1[Location of Waste Development]*'

9.5. Points for Clarification

9.5.1. Based on the information provided in Sections 9.1 to 9.4, it is requested that the following points be addressed in the response to this scoping request:

- confirmation that no other potentially sensitive landscape receptors are required; and
- confirmation that no other potentially sensitive visual receptors are required.

10. Key Environmental Aspects - Ecology

10.1. Overview

10.1.1. The main ecological considerations of the Development are the potential effects on designated sites as a result of gaseous emissions from the thermal treatment process during the operational phase of the development, loss of Open Mosaic Habitat ("OMH")[7] of previously developed land, and displacement of bats due to changes in lighting levels.

10.1.2. Desk study and survey work to inform the ecological assessment for the Site is ongoing. Survey work has included an extended Phase 1 habitat survey, environmental DNA surveys for great crested newts, and breeding bird surveys. Bat survey work, involving both walked transects and the deployment of static data loggers, began in May 2018 and will continue until September 2018.

10.1.3. The work will inform the Ecological Impact Assessment ("EcIA") for the site, which will be conducted in line with industry standard Chartered Institute of Ecology and Environmental Management ("CIEEM") guidance. Although impacts on protected sites and habitats will be fully considered within the EcIA, a separate Habitats Regulations Assessment ("HRA") report will be produced that will focus on impacts of aerial deposition on European Sites ("SACs") within 10 km of the main stack[8]. The assessment of the likely impacts of aerial deposition on habitats will be informed by the findings of air quality modelling.

10.1.4. It is anticipated at this stage that habitat loss and associated effects on protected species will be small-scale. There are opportunities to deliver a positive outcome for biodiversity that ensures legislative compliance and is in line with policy drivers.

10.2. Environmental Assessment Boundaries

10.2.1. The ecological assessment will consider potential effects of aerial deposition on Natura 2000 sites (SACs and SPAs) and Ramsar Sites (Wetlands of International Importance) within 10 km of the Site, and on other statutory and non-statutory designated sites and areas of Ancient Woodland within a 2 km perimeter area. These

[7] This is a habitat of principal importance for the conservation of biodiversity in Wales (in accordance with the provisions of Section 7 of the Environment Wales Act 2016). It is typically characterised by a patchwork of bare, previously disturbed ground and vegetated areas which can be in the process of changing from one vegetation type to another. The previous disturbance is often industrial, such as mining, although the habitat can include old quarries or building sites, areas of spoil from old coal mines, disused railway lines and urban brownfield land).
[8] This is in accordance with NRW guidance. A more detailed rationale is set out in the air quality section.

assessment area boundaries follow the rationale set out in the air quality section of this document.

10.2.2. The search area for biological records applied during the desk study will extend to 2 km from the Site boundary. This is in accordance with industry standard (CIEEM, 2016) guidance, and should allow relevant contextual information to be collated. The level to which impacts (other than aerial deposition) on biodiversity are likely to extend beyond the Site boundary will depend on the sensitivity and importance of the habitats within the Development footprint, their degree of connectivity, and the evidence that they are of importance to protected or priority species. It is considered likely, at this stage, that the zone of influence of the Development will be relatively small.

10.3. Methodology

10.3.1. Desk Study

10.3.1.1. The scope of survey and assessment work has been informed by desk study. This has included:

- study of open source aerial photography and Ordnance Survey mapping to determine the ecological context of the site/its connectivity in terms of the wider landscape;
- a review of the positions and qualifying features of statutory sites of nature conservation importance in relation to the site boundary.
- a data request to the Powys Biodiversity Information Service ("BIS") for biological records and information on non-statutory designated sites of nature conservation importance within 2 km of the site.
- a review of the proximity of the Site to ancient woodland (based on NRW and BIS data); and
- a review of previous ecological survey data collected by SLR Consulting in connection with the ERF.

10.3.2. Extended Phase 1 Habitat Survey

10.3.2.1. An extended Phase 1 habitat survey was completed of the Site and a 50 m perimeter area in summer 2018 in accordance with industry standard (JNCC, 2010) methods. Habitats present were mapped, a botanical species list compiled, and signs of protected and notable species (and the potential for them to occur) noted.

10.3.3. Great Crested Newt Survey

10.3.3.1. Environmental DNA (eDNA) survey for great crested newt *Triturus cristatus* was completed at two ponds within the site boundary in June 2018 in accordance with Freshwater Habitats Trust (2015) guidance. Samples were analysed by Sure Screen Consulting.

10.3.3.2. These ponds had previously been subject to eDNA survey (data collected by SLR Consulting and analysis again by Sure Screen Consulting) in 2015.

10.3.3.3. A further pond (a shallow depression) identified in 2018 was unsuitable for eDNA survey due to its depth and limited extent. The only plant species present was common reedmace. The pond was subject to systematic torch searching in June 2018.

10.3.4. Bat Surveys

10.3.4.1. Walked bat activity surveys and static detector deployments commenced in May 2018 and are due to continue up to and including October 2018. This survey effort is in accordance with industry standard guidance for a medium sensitivity site (Collins, 2016). The Site is considered to be of medium sensitivity as the footprint of the development has very little potential to support bats, while the wider site and adjoining habitats have good foraging potential, and there are also local opportunities for roosting (principally in off-site semi-natural woodland).

10.3.4.2. The route of the transect and the locations of the three static detectors used at the site have been designed / selected to collect data from the footprint of the Development and semi-natural habitats within the wider Site boundary (including woodland, scrub and grassland). Static detectors have been deployed to collect data for a period of five consecutive nights each month.

10.3.4.3. Bat survey undertaken in July and August 2015 involved two walked transects. These were predominantly through semi-natural habitats to the south of the Development area.

10.3.5. Breeding Bird Survey

10.3.5.1. Walkover breeding bird surveys have been completed in May, June and early July 2018, and have covered the entire Site boundary. All points have been approached to within 50m, and all species seen and heard have been recorded using standard British Trust for Ornithology two-letter species codes and activity symbols. Particular attention has been given to the quarry pools and faces to determine whether any breeding waders, wildfowl or raptors occur on the site.

10.3.6. Ecological Assessment

10.3.6.1. The approach to ecological impact assessment ("EcIA") will be based on Chartered Institute of Ecology and Environmental Management (CIEEM, 2016) guidance.

10.3.6.2. The ecological features that could be impacted by the proposed ERF will be established through consultation (scoping and follow up correspondence), desk study and field survey. Those features that are considered to be important, and potentially affected by the project, will be subject to detailed impact assessment.

10.3.6.3. The assessment will consider the likely impacts of construction and operation of the ERF on these important features in the absence of mitigation, and in combination with other proposed developments. Relevant mitigation, compensation and enhancement measures will then be identified, as relevant, and any significant residual effects identified.

10.3.6.4. The EcIA will conclude by assessing whether there are legal and / or biodiversity policy implications associated with the development. This will include reference to The Conservation of Habitats and Species Regulations 2017, the Wildlife and Countryside Act 1981 (as amended), the Environment Wales Act (2016) and Technical Advice Note 5: Nature Conservation and Planning.

10.3.6.5. It is anticipated that a separate report will be produced to specifically address the requirements of the Conservation of Habitats and Species Regulations 2017. This will consider the potential for effects of aerial deposition on SACs within 10 km of the flue stack of the proposed ERF.

10.4. Existing Conditions

10.4.1. Protected Sites

10.4.1.1. There are two SACs within 10 km of the main stack at the site. These are the Montgomery Canal SAC, which is designated due to the occurrence of floating water-plantain *Luronium natans*, and Granllyn SAC, which supports the largest population of great crested newts *Triturus cristatus*, in Powys. The respective SACs are approximately 1,800 m and 4,350 m from the proposed stack.

10.4.1.2. Two SSSIs are present within 2 km of the main stack. These are Buttington Brickworks SSSI, which was notified for its geological interest (and is not considered further here) and the Montgomery Canal SSSI. In addition to the internationally important floating water-plantain population, the Montgomery Canal is of special scientific interest for its aquatic, emergent and marginal plant communities, individual rare plants and

associated invertebrate assemblage. It is approximately 1,800 m from the proposed stack (sharing a common boundary with the SAC in this location).

10.4.1.3. No additional non-statutory sites of nature conservation interest have been identified as a result of the data search.

10.4.2. Habitats

10.4.2.1. The development area in the floor of the quarry is mainly bare ground. Scattered short-lived annual and ruderal plant species are present around the fringes of the quarry, and reedmace *Typha latifolia* occurs in the pools. The access track to the Development is also bare ground (compacted quarried material).

10.4.2.2. Within the southern part of the site there is a network of tracks through remnant areas of semi-improved neutral grassland (pasture), ruderal habitats and scattered scrub. Fragments of hedgerows are present, but these are not linked to a wider hedgerow network due to a network of tracks and areas of former quarrying activity.

10.4.2.3. Woodland is present to the north-west of the Site (a small area extends into the Site but is outside the Development footprint). The nearer areas of woodland to the development site are dominated by conifers, with semi-natural broadleaved woodland further to the west. The woodland is a mixture of plantation on an ancient woodland site and restored ancient woodland. A strong linear habitat feature extends along the line of a dismantled railway between the woodland and the A453 approximately 2.5 km to the north; it is dominated by scrub and developing woodland and is likely to provide a commuting / dispersal corridor through the area for various species. Otherwise, the landscape around the Site is dominated by mixed farmland.

10.4.3. Great Crested Newt

10.4.3.1. No records of great crested newt were returned by BIS for the 2 km perimeter search area around the Site. Study of aerial photographs and maps has not resulted in any ponds being identified within 500m of it (other than those within the Site).

10.4.3.2. The 2018 eDNA surveys and the 2015 eDNA surveys of the on-site ponds both returned negative results for great crested newt, while the torching of the additional shallow pool identified in 2018 found palmate newts *Lissotriton vulgaris* (which are not subject to the same levels of protection) to be present.

10.4.4. Bat Surveys

10.4.4.1. Bat records returned by BIS indicated that common pipistrelle *Pipistrellus pipistrellus*,

soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, Daubenton's bat *Myotis daubentonii*, lesser horseshoe bat *Rhinolophus hipposideros*, noctule *Nyctalus noctula* and Natterer's bat *Myotis nattereri* have been recorded within the area. No records were returned for the Site, albeit brown long-eared bat has been noted within the western part of the quarry.

10.4.4.2. Bat surveys to date have recorded very few bats using the Site, but a diverse bat community (that reflects the results of the data search) using the semi-natural habitats in the southern part of the site and the woodland to the north-west. There are no roosting opportunities for bats within the development area; the quarry lacks suitable cracks and cavities. There are a few trees within the wider site boundary that have some potential to support bat roosts, but greater opportunities are present in the western part of the off-site woodland (mature trees with natural cavities).

10.4.4.3. The limited work completed in 2015 returned broadly similar results. A record of Leisler's bat *Nyctalus leisleri* obtained during the work is the only record of the species on site to date.

10.4.5. Breeding Bird Surveys

10.4.5.1. Ornithological data from BIS indicates that barn owl *Tyto alba* occurs in the wider area, and that a range of declining farmland and suburban / urban passerines species have been recorded within 2 km of the Site.

10.4.5.2. Bird surveys completed in 2018 did not identify any breeding raptors or waterbirds within the development area or the wider Site boundary. The mudstone faces of the quarry have very few shelves or ledges that could accommodate nests. The on-site pools are small, the open ground within the quarry is limited in extent and overlooked (providing potential predator perches); and, a mixed roost of Corvids (crow species) is present close to the Site, with these birds apparently using pools within the quarry for drinking. All of these factors are likely to discourage open-ground nesting species.

10.4.5.3. The bird community associated with the semi-natural habitats within the site (but outwith the development area) does not include any specially protected species. A small number of species of principal importance for the conservation of biodiversity in Wales (with reference to Section 7 of the Environment Wales Act 2016) were recorded during the work, and are likely to breed.

10.4.6. Other species

10.4.6.1. The extended Phase 1 survey found that reptile habitat was present within the Site boundary but is largely outwith the Development area. It is therefore considered that a working method statement will be required as part of a Construction Environmental

Management Plan to ensure legislative compliance with regard to reptiles, but that no survey work is necessary to inform the planning application.

10.4.6.2. Badgers are known to be present, from both BIS data and the extended Phase 1 survey, in woodland to the north of the site. No evidence was found of badgers setts within the footprint of the development. Two outlier/small subsidiary setts were noted within 15m of the quarry area.

10.4.6.3. Suitable habitat for other protected and priority species such as otter *Lutra lutra*, water vole *Arvicola amphibius* and hazel dormouse *Muscardinus avellanarius* is not present in the development footprint. Hedgehog *Erinaceus europaeus* records were returned by BIS for the data search area.

10.5. Points for Clarification

10.5.1. Protected Sites

10.5.1.1. The main ecological consideration for the Development will be potential effects on protected sites and priority species as a result of the deposition of aerial pollutants. The outputs of air quality modelling will be used to determine the nature and scale of predicted effects on these sites and features, and to determine whether they are likely to be significant.

10.5.1.2. In addition to the assessment completed in the EcIA, a separate report to inform an assessment of impacts on the Montgomery Canal and Granllyn SACs will be required (in accordance with the Conservation of Habitats and Species Regulations 2017); a Habitats Regulations Assessment ("HRA") report.

10.5.1.3. Do consultees agree with the scope of the EcIA and HRA (with regard to aerial deposition)?

10.5.2. Habitats and Species

10.5.2.1. The Site area is of low ecological value; the wider site boundary and adjacent land supports a range of semi-natural habitats that are of greater value, but which are unlikely to be affected by the proposals.

10.5.2.2. The main impact of the development on / near site habitats will be the loss of OMH on previously developed land, which occurs around the edges of the quarry. While there is no indication from the Phase 1 survey that the OMH on site is particularly botanically diverse, this is nevertheless a habitat of principal importance for the conservation of biodiversity in Wales (with regard to Section 7 of the Environment Act

Wales, 2016). The reduction in the extent of OMH should therefore be compensated by a commitment to safeguard and enhance the remaining resource and achieve local conservation gain (in accordance with Planning Policy Wales, Edition 9 – November 2016 (or Edition 10 if finalised).

10.5.2.3. The main potential protected species issue that will need to be considered in the EcIA will be impacts on bats through changes in lighting regime during both the construction and operational phases of the development. It will be necessary to provide a lighting plan that demonstrates light spill beyond the Site is very limited to mitigate lighting effects on bats.

10.5.2.4. It is reasonable to assume that great crested newts are not present on site, and that effects on the species will not need to be considered in detail in the EcIA.

10.5.2.5. It is possible that the on-site ponds have a function as drinking water resources for locally-breeding birds and for mammals, such as badgers and hedgehog, and the potential impact of their loss will need to be considered in this context. Potential issues with regard to legislative compliance (as opposed to significant impacts in EIA terms) concerning badgers and reptiles can be addressed through a pre-construction check and / or working method statements.

10.5.2.6. Impacts on other species will not require detailed assessment in the EcIA.

10.5.2.7. Do consultees agree with the proposed scope of the EcIA and the preliminary conclusions drawn within the Request for a Scoping Direction.

11. Key Environmental Aspects - Water Environment

11.1. Overview

11.1.1. The key potential impacts of the construction phase to the water environment are contamination of surface water runoff with suspended solids and fuel/oil. It is understood that the base of the quarry is at an elevation below the local groundwater level and the bedrock geology is of very low permeability, therefore the potential risks to groundwater quality are considered negligible due to the absence of a pathway.

11.1.2. Once operational, the key potential impact of the proposed development is associated with increased surface water runoff rates/volumes and resultant increased flood risk downstream.

11.1.3. A surface water management plan would be prepared to ensure appropriate management of surface water runoff during the entire lifetime of the development. The surface water management plan would incorporate the use of sustainable drainage systems ("SuDS") to manage and treat runoff as close to source as possible, in accordance with The SuDS Manual 2015.

11.1.4. It is considered that there will be no significant impacts of the proposed development on groundwater quality or flow although these will be assessed qualitatively.

11.1.5. Due to the nature of the proposed development and the low risk to groundwater and surface water quality, following implementation of the proposed surface water management plan, it is assumed that the requirement for a Water Framework Directive Assessment ("WaFD) would be screened out. However, clarification is sought from Natural Resources Wales on this issue.

11.2. Environmental Assessment Boundaries

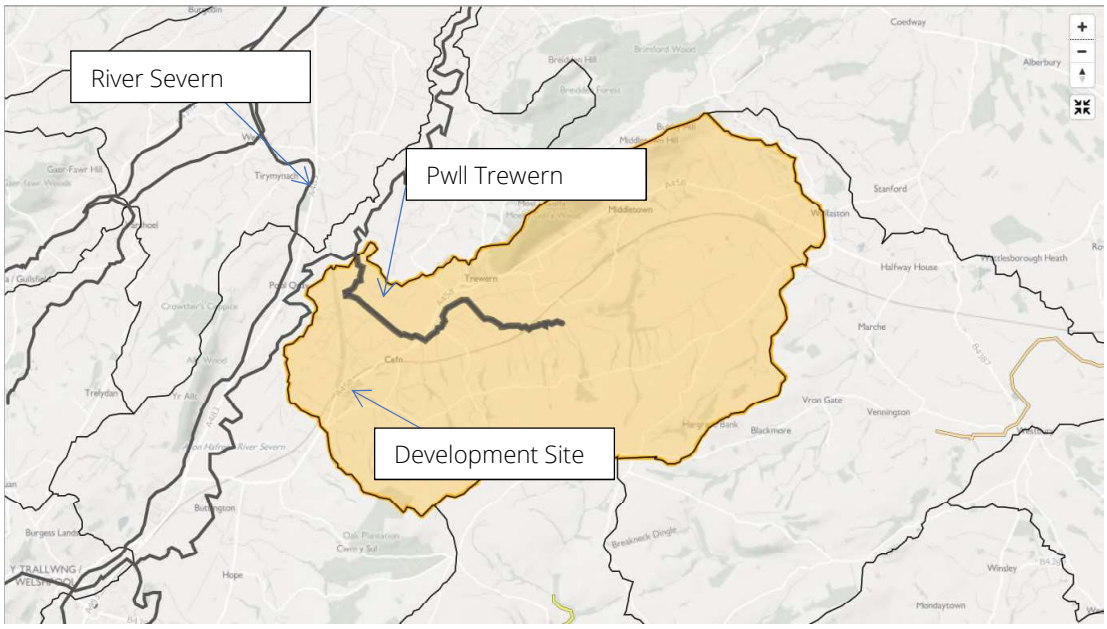
11.2.1. The study area for the water environment will extend to a 1km radius from the Development site boundary. However, the assessment will include water bodies outside of this area if appropriate, based on professional judgement of their value and connectivity to the Site, as outlined below.

11.2.2. Surface Water Bodies

11.2.2.1. The Environment Agency's Catchment Data Explorer indicates that the site lies within the surface water catchment area of Pwll Trewern, a tributary of the River Severn. The surface water bodies that will be assessed for potential effects from the Development are:

- Pwll Trewern – an ordinary watercourse (not classified as a main river) which discharges to the River Severn near Watery Lane, Trewern, approximately 2km north of the Site. Pwll Trewern rises as a number of springs / tributary watercourses on Heldre Hill to the east of the site. Pwll Trewern is classified as a Water Framework Directive (WaFD) surface water body and will be considered within the WaFD Assessment screening exercise. The alignment of Pwll Trewern and catchment area are shown in Figure 2.

Figure 2: Pwll Trewern Catchment



- A minor, unnamed tributary of Pwll Trewern rises on Heldre Hill and flows adjacent to the southern boundary of the Site. It is understood that surface water runoff from the Site currently discharges to this watercourse, which continues to flow in a westerly direction beneath the A458 and railway line, discharging to Main Ditch, a tributary of Pwll Trewern.

11.2.2.2. It is noted that the low-lying land to the west of the A458, within the floodplain of the River Severn, is within the boundary of Powysland Internal Drainage District ("IDD"); the Site is not shown to be within an IDD area.

11.2.2.3. Pwll Trewern discharges to the River Severn within the Camlad to Trederwen stretch of the River Severn, which is a defined WaFD surface water body. However, it is proposed that the River Severn would not be included within the WaFD Assessment screening, or wider environmental assessment due to its distance from the Site (3km

downstream), dilution potential and the inclusion of upstream tributary watercourses within the assessment. If the assessment demonstrates that the risks to tributary watercourses are acceptable, it can be assumed that the risks to the downstream River Severn would also be acceptable.

11.2.2.4. No other surface water bodies have been identified for assessment.

11.2.3. Groundwater

11.2.3.1. The Environment Agency's Catchment Data Explorer indicates that the Site lies within the catchment area of the WaFD Severn Uplands Lower Palaeozoic Groundwater Body. This groundwater body will therefore be included within the WaFD Assessment screening.

11.2.3.2. The geology of the Site comprises Quaternary Superficial Till, Alluvium and Glaciofluvial Fan Deposits, which have been removed by quarrying exposing Lower Palaeozoic, Silurian bedrock (predominantly mudstones).

11.2.3.3. The aquifer potential of the local geology will be investigated and assessed but the presence of low permeability mudstones within the quarry void suggests negligible groundwater flow and storage potential.

11.2.3.4. No other groundwater bodies have been identified for assessment.

11.2.4. Flood Risk and Surface Water Management

11.2.4.1. The assessment of flood risk and surface water management will be limited to the Site and the immediate upstream catchment area that naturally contributes surface water runoff to the Site.

11.3. Methodology

11.3.1. Groundwater Risk Assessment – Groundwater Quality

11.3.1.1. The potential risks to groundwater quality during the construction phase are associated with infiltration of potentially contaminated surface water runoff including suspended solids and fuels/oils. During the operational phase, the potential risks to groundwater quality are associated with spills or leaks of fuels/oils.

11.3.1.2. However, it is understood that the existing quarry extends below the regional groundwater table; this will be confirmed during the Site walkover and baseline data collection. If the Site is below local groundwater levels, with inflow towards the site, the potential risks to groundwater quality are negligible due to the absence of a pathway.

11.3.1.3. A qualitative risk assessment would be undertaken using a standard source-pathway-receptor approach with consideration of aquifer characteristics, pathway (based on groundwater levels), receptors (including private and licensed groundwater abstractions) and proposed mitigation measures.

11.3.1.4. As part of this Scoping Report it is requested that Powys County Council provides details (location, source of water and use) of all private water supplies located within a 2km radius of the Site boundary. It is also requested that Natural Resources Wales provides details (location and licence details) of all licensed groundwater and surface water abstractions within a 2km radius of the development site boundary.

11.3.1.5. It is proposed that appropriate management of surface water drainage will mitigate any potential risks to groundwater receptors.

11.3.2. Groundwater Risk Assessment – Groundwater Flow Regime and Quantity

11.3.2.1. It is understood that the existing quarry extends below the regional groundwater table, with limited groundwater ingress due to the low permeability geology.

11.3.2.2. A qualitative risk assessment will be undertaken of the potential impacts of any below ground development on the local groundwater flow regime. Groundwater inflows would be assessed and incorporated within the site's surface water management plan.

11.3.3. Flood Consequences Assessment

11.3.3.1. Review of the Development Advice Map ("DAM") produced by NRW for land use planning purposes confirms that the entire Site is located within Flood Zone A. Flood Zone A is defined as land "*considered to be at little or no risk of fluvial or coastal/tidal flooding.*"

11.3.3.2. Technical Advice Note (TAN) 15[9] states that, in terms of flood risk, new development should be directed towards suitable land within Zone A. Based on the Site's location within Flood Zone A, it is inferred that a Flood Consequences Assessment is not required for the Development.

11.3.4. Risk of Flooding from Other Sources

11.3.4.1. All potential sources of flood risk to the Site would be considered including: fluvial, tidal, surface water, reservoir and groundwater. Review of NRW's online Flood Risk

[9] Welsh Assembly Government, July 2004, Technical Advice Note 15: Development and Flood Risk.

Map Viewer confirms that the Site is at little or no risk of flooding from fluvial, tidal and reservoir sources. However, the Flood Risk Map Viewer identifies areas within and surrounding the Site that are at risk of flooding from surface water (due to the accumulation of precipitation and/or surface water runoff). The areas at risk of surface water flooding are limited to small pockets of land within the quarry footprint (defined as low flood risk) and the alignment of the minor, unnamed watercourse to the south of the Site which crosses the site access road (defined as low to high flood risk).

11.3.4.2. It is proposed that the risk of flooding from surface water would be fully considered in the development of the site's Surface Water Management Plan ("SWMP"). The SWMP would be developed with regard to Policy DM6 of the Powys Local Development Plan (2011-2026), which states:

"In areas identified at risk of flooding (fluvial, tidal, surface water and groundwater) or where a watercourse has insufficient channel capacity, opportunities to improve existing flood risk by using Sustainable Drainage Systems (SuDS), wetlands or other agreed and appropriate measures are investigated and implemented wherever possible".

11.3.5. Surface Water Management Plan

11.3.5.1. A SWMP will be prepared for the proposed development to ensure appropriate management of surface water runoff during the construction and operational phases. The principal aim of the SWMP would be to ensure surface water runoff (clean and potentially contaminated) is managed to prevent unacceptable flood risk to the Development, to prevent any increase in flood risk off-site and to ensure the protection of local surface water quality.

11.3.5.2. The SWMP would be developed with due regard to Policy DM6 of the Powys Local Development Plan (2011-2026), PCC Local Flood Risk Management Strategy[10] and PPW Chapter 13[11].

11.3.5.3. The SWMP will incorporate sustainable drainage systems (SuDS) designed with regard to current Welsh non-statutory standards[12] and CIRIA's The SuDS Manual[13].

11.3.5.4. It is understood that surface water runoff within the existing quarry currently drains in

[10] Powys County Council, April 2014, Local Flood Risk Management Strategy (2013 – 2017).
[11] Welsh Government, Planning Policy Wales, Chapter 13 – Minimising and Managing Environmental Risks and Pollution.
[12] Welsh Government, 2017, recommended non-statutory standards for sustainable drainage (SuDS) in Wales – designing, constructing, operating and maintaining surface water drainage systems.
[13] CIRIA, 2015, The SuDS Manual, C753-V6.

a south-westerly direction via interconnected drains, ponds and culverts adjacent to the Site access road and discharges to a minor watercourse to the south of the Site; this would be confirmed by a detailed site walkover. It is assumed that the SWMP for the Development would also outfall to this surface watercourse. If appropriate the existing outfall would be utilised; if a new outfall location and/or structure is required, Land Drainage Consent could be required and PCC would be consulted.

11.3.5.5. The potential to reuse surface water runoff within the development and the potential to discharge surface water runoff via infiltration to ground would be investigated.

11.3.5.6. The SWMP would be designed in accordance with the SuDS Manual using the industry standard MicroDrainage Source Control software module and HR Wallingford's Tools for the Design and Evaluation of SuDS.

11.3.5.7. For previously developed sites the SuDS Manual recommends that post development runoff rates and volumes should be reduced to the greenfield rates wherever possible and this approach would be followed for the Development.

11.3.5.8. The SuDS Manual states:

"Where the site has been developed previously (i.e. redevelopment sites), there should always be an aspiration to manage runoff to represent greenfield characteristics. This will help reduce any receiving watercourse flood risk (both now and under future climatic change scenarios), thus contributing to more sustainable development. However, it is recognised that redevelopment sites tend to be more constrained in terms of space and infiltration may be more restricted, so drainage approving bodies (in conjunction with the environmental regulator) may agree that reductions to an agreed proportion of the previously developed rates/volumes are acceptable."

11.3.5.9. Greenfield runoff rates would be calculated using FEH ReFH2, the most up-to-date version of the Flood Estimation Handbook (FEH) rainfall-runoff approach to flood estimation.

11.3.5.10. The SWMP would be designed to manage events up to and including the 100 year (1% annual probability) event, with allowance for climate change, to ensure no increased off-site flood risk. For rainfall events with a return-period in excess of 30 years, surface flooding of open spaces such as landscaped areas or car parks could occur for short periods. The SWMP would aim to achieve post-development peak runoff rates and volumes that are attenuated to pre-development rates and volumes for the 1 in 1 year, 1 in 30 year and 1 in 100 year events, in accordance with current guidance.

11.3.6. Climate Change Allowances

11.3.6.1. Appropriate allowance for climate change would be incorporated within the SWMP design, based on the design life of the development. Peak rainfall intensity is predicted to increase as a result of climate change. The Environment Agency has published climate change allowances for peak rainfall intensity for England[14] and it is proposed that these allowances be applied to the SWMP, in the absence of recommended allowances for Wales.

11.3.7. Potentially Contaminated Surface Water Runoff

11.3.7.1. Potentially contaminated surface water runoff (due to suspended solids loading and/or fuels/oils) would be discharged via appropriately designed silt traps / interceptors. Pollution prevention measures would be incorporated within the SWMP and designed in accordance with relevant Pollution Prevention Guidelines (and replacement Guidance for Pollution Prevention) including:

- GPP2 – Above Ground Oil Storage Tanks
- PPG3 – Use and Design of Oil Separators in Surface Water Drainage Systems
- GPP5 – Works and Maintenance in or near Water
- PPG6 – Working at Construction and Demolition Sites

11.3.7.2. All incoming wastes will be deposited, stored and managed undercover within the waste bunker, in a completely sealed system. Therefore, there is no potential pathway for leachate from incoming wastes to impact groundwater or surface water. Consequently, with this potential risk screened out, it will not be included for further assessment.

11.3.7.3. Oils would be stored on site in accordance with the Control of Pollution (Oil Storage) (Wales) Regulations 2016 and the requirements of the Site's Environmental Permit.

11.3.8. Water Framework Directive ("WaFD") Assessment

11.3.8.1. The Site is located within the catchment area of the following WaFD water bodies as defined within the River Severn River Basin Management Plan:

- Pwll Trewern surface water body; and
- Severn Uplands Lower Palaeozoic groundwater body

11.3.8.2. Consideration of whether the Development has the potential to impact upon these WaFD water bodies will be made.

[14] Environment Agency, February 2016, Flood Risk Assessments: climate change allowances

11.3.8.3. A staged approach to the WaFD assessment process is proposed, in accordance with the Planning Inspectorate's guidance[15]. Surface water runoff from the Site discharges to a minor ordinary watercourse which discharges to Pwll Trewern (the WFD surface water body) approximately 2km downstream of the site. Due to the inherent low risks posed by the Development to the local groundwater and surface water bodies it is assumed that any potential risks would be screened out and no further assessment would be required.

11.3.8.4. As part of this scoping report the views of Natural Resources Wales are requested on the need, or otherwise, for a specific WFD assessment and the appropriate scope / methodology of a WFD assessment if one is required.

11.4. Existing Conditions

11.4.1. The current baseline hydrogeological and hydrological conditions of the Site and study area would be determined via a detailed desk study exercise, data requests to NRW and PCC and a site walkover.

11.4.2. Desk Study and Data Review

11.4.2.1. The desk study exercise would include review of all relevant published mapping, reports and baseline water environment data. Relevant available site specific information including site investigation reports, groundwater monitoring data and geological reports would be reviewed.

11.4.2.2. As set out in Section 11.5 water environment data are politely requested from NRW and PCC to support the baseline information.

11.4.3. Site Walkover

11.4.3.1. A detailed walkover of the Site and surrounding land (where accessible via public highways/footpaths) will be undertaken by an experienced hydrologist/hydrogeologist. The aims of the walkover include: to identify the local surface water drainage network, potential outfall location/arrangements for the SWMP, constraints for the Site's surface water management and to review the quarry groundwater inflows/management.

[15] The Planning Inspectorate, July 2017, Advice Note 18: The Water Framework Directive. Version 1.

11.5. Points for Clarification

11.5.1. Based the information provided in Sections 11.1 – 11.4 above, it is requested that the following points be addressed in the response to this scoping request:

- confirmation that no other surface water bodies should be included as receptors for assessment;
- confirmation that no other groundwater bodies should be included as receptors for assessment;
- confirmation that no Flood Consequences Assessment is required. The current risks from surface water flooding would be considered and addressed within the proposed surface water management plan and drainage design;
- confirmation that the proposed design standards for the Surface Water Management Plan are appropriate (including the methodology for greenfield runoff calculations and the design standard for the drainage system);
- confirmation that no quantitative assessment of the potential risks from the proposed development to groundwater or surface water quality is required;
- confirmation that it is appropriate to use the Environment Agency published climate change allowances for peak rainfall intensity. Alternatively, please provide climate change allowances for peak rainfall intensity that are appropriate for the development site;
- Powys County Council: please provide details (including location, source of water, final use and classification) of all private water supplies located within a 2km radius of the development site boundary;
- Natural Resources Wales: please provide details (location and full licence details) of all licensed groundwater and surface water abstractions within a 2km radius of the development site boundary. Please also provide details of any groundwater level, groundwater quality, surface water quality and surface water flow data for monitoring points within a 2km radius of the site (please include location and details of each monitoring point). Please provide rainfall data for the closest NRW monitoring station; and
- Natural Resources Wales: please provide confirmation that the requirement for a Water Framework Directive (WaFD) Assessment can be screened out. Alternatively, please confirm the appropriate scope/methodology of the WFD Assessment if one is required.

12. Key Environmental Aspects - Archaeology and Cultural Heritage

12.1. Overview

12.1.1. The Archaeology and Cultural Heritage Assessment will evaluate the known and potential archaeological and historic resource within the Site and its surroundings (i.e. the study area). This will be placed in the local, regional and national context, and assessed against national criteria.

12.2. Environmental Assessment Boundaries

12.2.1. The archaeological study area will comprise the Site and a radius of 1 km from its boundary. All historic assets listed on the Clwyd Powys Archaeological Trust's Historic Environment Record ("CPAT HER") will be described and mapped.

12.2.2. All designated historic assets (Scheduled Monuments, World Heritage Sites, Listed Buildings, Conservation Areas, Historic Landscape Areas, Registered Parks and Gardens, and Battlefields) will be discussed and mapped within a radius of 5 km from the Site boundary.

12.2.3. Historic map regression will be undertaken to understand the development of the historic landscape and place-names, as well as other information on the cultural heritage of the area; this would be analysed to help with understanding the heritage significance of the heritage assets and their settings. The collation and assessment of this information would enable a robust impact assessment to be made, and an appropriate level of mitigation designed for any potential impacts.

12.2.4. National and local legislation and planning policy would be summarised and discussed in relation to archaeology and heritage; and the assessment undertaken to ensure compliance with relevant law and policies. This will include the following:

- Planning Policy Wales (Edition 8 – November 2016 (or Edition 10 is finalised) (Welsh Assembly), particularly Chapter 6, entitled 'The Historic Environment';
- Technical Advice Note (TAN) 24: The Historic Environment (Welsh Assembly 2017);
- Conservation Principles for the Sustainable Management of the Historic Environment in Wales (Cadw 2011);
- Standard and Guidance for Historic Environment Desk-Based Assessment (Chartered Institute for Archaeologists [CIfA] 2014); and
- Powys Local Development Plan (2011-2026).

12.2.5. As appropriate, other methodological approaches and guidance documented by Historic England will also be used the supplement the available guidance for Wales. This includes the following:

- Historic Environment Good Practice Advice in Planning Note 2: Managing Significance in Decision-Taking in the Historic Environment (Historic England 2015); and
- Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets (second edition, Historic England 2017).

12.2.6. Consultation will be undertaken with the Conservation Officer fromPCC and representatives of Cadw to ensure a robust approach to the assessment.

12.3. Methodology

12.3.1. The aim of the assessment is to identify, as far as is reasonably possible, the nature of the archaeological and cultural heritage resource within the site and its surroundings (i.e. the study area), to assess their significance and to make appropriate recommendations for the future treatment of any heritage assets or their settings which may be affected.

12.3.2. All heritage assets identified will be categorised in terms of their sensitivity in accordance with guidelines set out in the Design Manual for Roads and Bridges, Volume II, Section 3, Part 2 (2007).

12.3.3. The assessment will identify and evaluate the nature and likelihood of the impacts of the Development, in both the short and long term, on archaeological and cultural heritage features against clearly defined criteria. Significance will be assigned to impacts relative to the sensitivity of the resource and the magnitude of impact in accordance with best practice.

12.3.4. Archaeological resources are susceptible to a range of impacts during development. These relate to works associated with site preparation as well as construction related activities, including:

- demolition and site clearance activities that disturb archaeological remains;
- excavation that extends into archaeological sequences, for example deep foundations or basements resulting in the removal of the resource;
- piling activities resulting in disturbance and fragmentation of the archaeological resource; and
- dewatering activities resulting in desiccation of waterlogged remains and deposits.

12.3.5. The implications, if any, of these actions will be discussed and significance criteria allocated to any identified impact.

12.3.6. In terms of the effects on cultural heritage, the effects of the Development can be direct, such as loss or damage to heritage features, or indirect, including the effect on the setting of a designated heritage asset (i.e. Listed Building, World Heritage Site, Scheduled Monument, Conservation Area, Historic Landscape Area, Battlefield or Registered Park and Garden). This component of the assessment will be cross referenced with the national and local legislation and planning policy for setting assessments and the Landscape and Visual Assessment; the approach to which is set out in Section 9 of this report. Any such impacts will be discussed, and significance criteria applied.

12.3.7. Once impacts have been identified, how they can be avoided through design will be explored as a priority. Where these are possible, designed-in mitigation measures will be clearly identified and incorporated into the parameters plans.

12.3.8. If impacts cannot be avoided through design, then alternative strategies would be proposed for securing through planning conditions. The residual impacts following the implementation of these measures will then be defined and significance criteria applied.

12.3.9. A separate Cumulative Impacts section is presented (Section 17). This will assess the cumulative impacts of the proposed development in conjunction with any committed developments within the surroundings of the Site.

12.4. Existing Conditions

12.4.1. The CPAT HER has been consulted in relation to all designated heritage assets and non-designated archaeological assets; the results of which are currently awaited.

12.4.2. Previous information available for the site and a radius of 2 km from its boundary indicate that there are 31 Post-Medieval monuments (most of which relate to houses, farmsteads, agricultural buildings and industrial structures [such as corn mills, water mills, etc.]). A Medieval abbey is also recorded.

12.4.3. Several sites of unknown date, postulated to be enclosures, are recorded beyond the boundary of the site.

12.4.4. Two multi-period archaeological monuments are also recorded (a corn mill and a village).

12.4.5. Online information indicates that there are no World Heritage Sites, Historic Landscape Areas, Conservation Areas, Registered Parks and Gardens and Battlefields within 5 km of the site.

12.4.6. There are ten Scheduled Monuments within 5 km of the site.

12.4.7. Two Grade II* Listed Buildings are recorded on the CAPT HER within 2 km of the site (Trewen Hall and Grotto at Measfron).

12.4.8. Eighteen Grade II Listed Buildings are also recorded within 2 km on the CAPT HER.

12.4.9. As stated above in Section 12.2, a new HER data search has been requested for all designated heritage assets (Scheduled Monuments, World Heritage Sites, Listed Buildings, Conservation Areas, Historic Landscape Areas, Registered Parks and Gardens, and Battlefields) within a radius of 5 km and non-designated archaeological assets within a radius of 1 km; the results of which will be discussed and mapped as part of the Archaeology and Cultural Heritage Assessment.

12.5. Points for Clarification

12.5.1. Based on the information provided above, it is requested that the following points be addressed in the response to this scoping request:

- confirmation that no other consultation is required; and
- confirmation that the assessment boundaries and proposed methodology are appropriate.

13. Key Environmental Aspect - Site Condition

13.1. Overview

13.1.1. This chapter will detail the condition of the Site at the time of submission of the planning application for the Development. The chapter will be written with consideration to the Application Site Condition Report ("ASCR") template provided in the NRW Horizontal Guidance Note H5 (*Version 5, Dated October 2014*). The ASCR will be submitted with the Environmental Permit application shortly after the planning application has been submitted.

13.1.2. The aim of the Site Condition Chapter will to describe the condition of the land and groundwater at the Site and, in particular, to identify any substance in, on, or under the land that may present a pollution risk.

13.1.3. The chapter will give information on the physical attributes and vulnerability of the Site; it will assist in understanding its environmental setting, and the nature, extent and behaviour of any contaminants that may be present; local hydrology, hydrogeology, geology and general setting will be taken into account. It will also set out the current condition of the Site and take into account any pollution incidents that may have occurred at the Site and details of any measures put into place to mitigate the effects of any such incidents.

13.2. Environmental Assessment Boundaries

13.2.1. For the purposes of this chapter, this assessment boundary will be limited to the Development area, in terms of the immediate underlying ground conditions. This is shown on drawing BUT-RCA-00-ZZ-DR-A-0202-General Arrangement Plan in Appendix 1.

13.2.2. However, there may be the potential, during the construction phase for impacts associated with groundworks to be observed off site. Consequently, potentially sensitive human receptors within a 1km radius, and ecological receptors within 2km of the Site will be considered. These are provided in Table 9 and 10 respectively.

Table 9: Identified Potentially Sensitive Receptors within 1km of the Site

Ref	Location	Easting	Northing	Distance from Site Centre (m)	Heading (degrees)
H1	House Off A458, Welshpool SY21 8TA, UK	326773	310265	179	28
H2	Heldre Ln, Welshpool SY21 8SX, UK	326783	309854	269	160
H3	House Off Sale Ln, Welshpool SY21 8SY, UK	327026	310357	419	53
H4	House Off Sale Ln, Welshpool SY21 8SY, UK	327129	310072	440	94
H5	Speed Welshpool	326305	309785	501	230
H6	Methodist Church, Buttington, Welshpool SY21 8SZ, UK	327059	310480	525	45
H7	Border Hardcore Offices	326221	309760	583	234
H8	Buttington Trewern Primary School, Welshpool SY21 8TB, UK	327386	310580	842	56

Table 10: Specific Sensitive Habitat Receptors Considered for the Assessment

Ref	Location	Type of Receptor	Easting (X)	Northing (Y)	Distance from Source (m)	Heading (Degrees)
S1	Buttington Brickworks	SSSI	326980	310222	312	68
S2	Montgomery Canal	SSSI/SAC	324911	310297	1789	276

13.3. Methodology

13.3.1. A desk based assessment will be undertaken to assess the condition of the land within the Site. This will describe the current environmental condition of the land and groundwater at/under the site; it will include/address:

- a reconnaissance of the Site and immediate surrounding area;
- a review of historical use of the Site and surrounding area; this will include a review of available documentation, including historic Ordnance Survey ("OS") maps, Site planning records and associated documentation;

- a review of existing environmental consents, licences, permits and other relevant designations for the Site and surrounding area;
- an assessment of the environmental setting of the site; this will include:
  - a review of available geological, hydrogeological and hydrological data for the Site and surrounding area, including BGS geological maps and memoirs, hydrogeological maps, groundwater vulnerability maps, BGS borehole data, Coal Authority mining report and any relevant intrusive investigation reports;
  - determination of the location of any Habitats Directive sites, SSSIs and other relevant sensitive environmental designations within the vicinity of the Site;
  - a review of available records of any land pollution incidents on, or in the vicinity of, the Site;
  - a review of any existing site investigation and assessment reports;
  - an assessment of proposed Site operations, which will address/review the proposed Site layout and drainage arrangements, the infrastructure of the Site; any proposed pollution prevention measures at the Site, a qualitative risk assessment of the likelihood of significant pollution arising from the Site's activities, based on the source-pathway-receptor approach, and using the methodology detailed in the Environment Agency's online guidance, in particular, this will address accident and amenity risks posed by the Site's activities both in the construction and operational phases.

13.4. Existing Conditions

13.4.1. The Site extends to approximately 8 Hectares of the total 18 Hectares of the former quarry site. The Site is located within the quarry, and will be accessed via the new quarry access (which has planning permission and will be constructed prior to the commencement of construction work on the Development) and internal road network.

13.4.2. The Site slopes to the south, west and north from a high point at its eastern end (from approximately 89m AOD to 107m AOD). The quarry will be worked and the Site prepared to a flat level of 90m AOD as part of the existing quarry activities. These preparatory works will not be included in the planning application for the ERF. Consequently, the baseline will therefore be considered to be a level, fully prepared site.

13.4.3. Glaciofluvial Fan Deposits (sand and gravel) are present in the southern/south eastern

areas of the Site extending to land to the south/south east; Devensian Till deposits are present in the south western area of the Site and Head deposits (clay, silt, sand and gravel) are present to the north east and extend just into the eastern area of the Site. The permeability of the superficial deposits is described as very low (Till) to very high (Fan Deposits) with flows within the higher permeability deposits being intergranular.

13.4.4. Buttington Quarry is excavated within the Cefn Formation, comprising sandstones and mudstones of the Silurian Period, and Stone House Shale Formation of the Ordivician Period. Strata are steeply dipping towards the southeast within the quarry, resulting in a narrow band of the high-quality brick making material being exposed at surface.

13.4.5. Buttington Quarry was originally operated to produce mudstone and clay for use at the neighbouring brickworks. Since closure of the brickworks the Site has been worked to produce a medium quality general aggregate from more competent slate/shale horizons on the northern flank of the Site.

13.4.6. The permeability of the mudstone deposits is described as low.

13.4.7. There is no indication of mining activity under the Site.

13.4.8. A full site history will be provided within the chapter, however, in summary, the Site was progressively developed as a quarry from the nineteenth century with mineral extraction commencing in the western area and extending east over time. Adjacent land uses comprise the brickworks adjacent to the existing Site entrance/access road, and a malthouse adjacent to the southern boundary of the Site. Other land uses appear to have comprised farming related uses, with residential to the north and south.

13.5. Points for Clarification

13.5.1. Based on the information provided above, it is requested that the following points be address in the response to this scoping request:

- it is considered that this chapter will contain a desk based assessment only. Should further works be identified (i.e. intrusive investigation) it is requested that they be secured via a planning condition.

14. Key Environmental Aspects - Socio Economic

14.1. Overview

14.1.1. The Socio-Economic Assessment will evaluate the socioeconomic impacts of both the construction and the operational phases of the development including the effects on tourism and recreational receptors.

14.1.2. These effects may occur as a result of direct interaction between the Development and socio-economic, tourism or recreational characteristics and features of the area (e.g. creation of employment during the construction phase or severance along a Public Right of Way (PRoW) or indirectly via employment opportunities generated as a result of increased local spending of wages earned by the construction and operational workforce.

14.1.3. The majority of socio-economic effects are likely to be experienced during the construction phase. Many of these are likely to be beneficial effects for the local economy, including increased employment opportunities and spend on local services. Additionally, there may be temporary restrictions on PRoW movements and potential secondary effects arising from disruption to neighbouring businesses including tourism businesses.

14.2. Environmental Assessment Boundaries

14.2.1. The study area will be separated into two categories for the purposes of this assessment comprising a:

- Wider Study Area ("WSA"); and
- Local Study Area ("LSA").

14.2.2. Wider Study Area (WSA)

14.2.2.1. The WSA is the study area within which socio-economic effects are most likely to occur. This area of study is required for certain receptor groups because the majority of the business and labour market effects that may occur would be experienced by population and business centres. The WSA area is primarily set at the area of the administrative county of Powys but is however, extended nationally where relevant.

14.2.3. Local Study Area (LSA)

14.2.3.1. This is primarily defined as the planning application boundary plus an offset of 5km around the boundary. This area is the focus for the assessment of direct and indirect impacts on tourism and recreational assets including Public Rights of Way (PRoW) and accommodation businesses.

14.3. Methodology

14.3.1. Guidance

14.3.1.1. National guidance on appropriate assessment of potential effects of development on socio-economics, tourism and recreation is limited but the following legislation is considered relevant in this regard:

- Planning Policy Wales (Edition 9, November 2016 or Edition 10 if Finalised);
- TAN 8: Planning for Renewable Energy;
- TAN 16: Sport, Recreation and Open Space;
- TAN 21: Waste;
- TAN 23: Economic Development;
- Measuring the economic impact of an intervention or investment (Office for National Statistics 2010); and
- Green Book (HM Treasury 2003, updated July 2011).

14.3.2. Approach

14.3.2.1. The socio-economic, land use and recreation assessment will be presented in two parts, focusing on the construction phase aspects of the proposed development and the longer term economic effects once the development is built and operational for both of the study areas identified.

14.3.3. Assessment of the Likely Economic Effect of the Proposed Development

14.3.3.1. This part of the assessment will comprise a quantitative assessment of the likely direct, indirect and induced effects of the project on the WSA in terms of investment, employment, additional Gross Value Added ("GVA") and contribution to the labour market.

14.3.3.2. Construction phase job creation and investment will be assessed through the use of employment estimates provided by Broad Energy and the construction elements categories within which these jobs will fall.

14.3.3.3. The assessment will address the potential effects of the proposed development to the labour market and the local supply chain and economic output of GVA. The estimates for construction GVA will be calculated using the latest regional estimates for the average yield of GVA per worker for the construction and civil engineering sector in Wales obtained from the Office of National Statistics.

15.3.3.4. A quantitative assessment will be produced which includes direct, indirect and induced effects of the proposed development. The significance of the likely socio-economic effects of the development during construction based on the magnitude of the impacts and the sensitivity of the receptor groups will be assessed.

15.3.3.5. With regard to the operational phase, the direct impact of job creation and indirect and induced job effects will be considered.

15.3.3.6. The assessment will provide an estimate of the contribution of the proposed development to GVA and the labour market within the WSA. The significance of the likely socio-economic effects of the development during the operational phase based on the magnitude of the impacts and the sensitivity of the receptor groups will be assessed.

14.3.4. Assessment of effects of the proposed development on land use and recreation within the LSA

14.3.4.1. It is considered that the proposed development will have direct effects on the existing use of the proposed site and may have indirect effects on the use, or planned use, of land in the vicinity for other types of development.

14.3.4.2. This part of the socio-economic assessment will comprise of a qualitative assessment of the effects of the proposal on tourism and recreation receptors within the LAI including tourism-related businesses and Public Rights of Way. Any effects due to replacing the existing use of the application site with the proposed development or preventing a development or use on a neighbouring site from continuing will also be assessed.

14.3.5. Sensitivity of Socio-economic, Recreation and Land Use Receptors

14.3.5.1. There are no published standards that define receptor sensitivity relating to socio-economic assessment. As a general rule the sensitivity of each receptor or receptor group is based on its importance or scale and the ability of the baseline to absorb or be influenced by the identified effects. In assigning receptor sensitivity, consideration will be given to the following:

1. the importance of the receptor e.g. local, regional, national, international;
2. the availability of comparable alternatives;

3. the ease at which the resource could be replaced;
4. the capacity of the resource to recover or adapt to identified impacts over a period of time; and
5. the level of usage and nature of users (e.g. sensitive groups e.g. such as people with disabilities).

14.3.5.2. The level of effect of an impact on socio-economic, tourism and recreational and other land use receptors will initially be assessed by combining the magnitude of the impact and the sensitivity of the receptor. The assessment will consider the effects of the proposed development itself including the generation of employment for permanent staff; the generation of construction employment including civil engineering, management, skilled and semi-skilled workers; the generation of economic benefit for local businesses for the supply of materials and plant and equipment during the construction/fit out phases of the development; and the generation and export of low carbon energy.

14.3.5.3. The impact of any other major development proposals which could occur in combination with the Development will be considered to determine their cumulative employment and additionality effects.

14.3.6. Mitigation

14.3.6.1. The assessment will then consider any mitigation proposed to minimise the impact of the Development during both the Construction Phase and the Operational Phase.

14.3.7. Residual Effects (Construction and Operation)

14.3.7.1. The significant of any residual effects once mitigation measures have been incorporated will be assessed.

14.3.8. Summary of Effects

14.3.8.1. The effect of the magnitude of the impacts on socio economics, land use and recreation and tourism of both the construction phase and the operational phase and the mitigation measures proposed will then be summarised.

14.4. Existing Conditions

14.4.1. The assessment will set out the existing baseline conditions relevant to the socio-economic assessment. A review of baseline conditions will be undertaken for the WSA covering the following areas:

1. Population and demographic: summarising the principal characteristics of the human population of the WSA, covering:
    - Resident population: current levels and recent trends in the normally resident population of the WSA; and
    - Working Age Population (WAP): current levels and recent trends in the WAP (aged 16-64) of the WSA.
2. Structure of employment: summarising the sectoral composition of the employment base of the WSA, covering:
    - employment trends – employees: the number and type of jobs found in the WSA.
3. Sectoral analysis: providing an analysis of employment found in the WSA by broad business sector, focussing on sectors of relevance to the proposed development – construction and distribution.
4. Current labour market performance: providing an analysis of the performance of the labour market within the WSA, covering:
    - Participation levels and trends: the extent to which residents of the WSA are economically active (i.e. either in employment or actively seeking work).
    - Occupational structure: the breakdown of working residents' employment by occupational type.
5. Tourism economy: a summary of the importance of the tourism economy to the area.

14.4.2. For the LSA, the baseline conditions with comprise a description of tourism and recreational features ('assets'), including PRoWs and long-distance routes, and a description of any neighbouring tourism features and businesses including accommodation businesses.

14.5. Points for Clarification

14.5.1. Based on the information provided above, it is requested that the following points be addressed in the response to this scoping request:

- confirmation of whether any consultation is required; and
- confirmation that the assessment boundaries and proposed methodology are appropriate.

15. Key Environmental Aspects - Noise

15.1. Overview

15.1.1. The noise chapter of the ES will present an assessment of the potential noise impacts of the Development on neighbouring noise sensitive receptors during both the construction and operational phases.

15.1.2. The assessment will include:

- description of the existing sound environment;
- outline of the likely evolution of the future baseline sound levels;
- identification of those aspects of the Proposed Development that may cause noise effects;
- predictions of noise levels during the operation phase upon the nearest Noise Sensitive Receptors (NSRs);
- details of potential cumulative effects where noise from other potential developments may also affect the same NSRs; and
- likely residual significant effects taking account of proposed mitigation.

15.1.3. The Site would be designed to comply with BAT to enable compliance with Environmental Permit guidance on noise and vibration.

15.2. Environmental Assessment Boundaries

15.2.1. An assessment of the location of the nearest sensitive receptors ("NSRs") will be carried out to determine where the greatest impact would occur relative to Site generated noise. The NSRs to the Site generally relate to isolated residential properties in proximity to the Site boundary and access road.

15.2.2. The possible (likely) environmental noise effects of the Proposed Development are as follows:

- noise associated with the construction works;
- operational noise associated with the various components of the Proposed Development;
- increase in road traffic noise; and
- potential cumulative operational noise associated with nearby developments that are consented but not yet operational.

15.2.3. Liaison with the Environmental Health Officer at PCC is currently being undertaken to agree the location of sensitive receptors relative to the Site, representative noise monitoring positions and noise criteria and assessment methodology.

15.2.4. The impact assessment will be undertaken with reference to the following standards and guidance:

- BS4142: 2014 'Method for rating industrial noise affecting mixed residential and industrial areas';
- BS8233:2014 'Guidance on sound insulation and noise reduction for buildings';
- World Health Organisation ("WHO") Guidelines for Community Noise: April 1999;
- World Health Organisation 'Night Noise Guidelines for Europe': 2009
- The Institute of Acoustics ("IOA") and the Institute of Environmental Management and Assessment ("IEMA") Joint Working Party draft 'Guidelines for Noise Impact Assessment';
- Environment Agency Horizontal H3 Guidance for Noise;
- Planning Guidance (Wales) Technical Advice Note ("TAN") 11, Noise – October 1997;
- BS5228-1: 2009+A1:2014 `Code of practice for noise control on construction and open sites'.
- Design Manual for Roads and Bridges: Volume 11 - 2011;
- BS 7445-1:2003 'Description and measurement of environmental noise. Guide to quantities and procedures';

15.3. Methodology

15.3.1. Monitoring

15.3.1.1. A baseline sound survey will be undertaken at locations agreed with the PCC Environmental Health Officer ("EHO"). The NSRs to the Site are as follows:

- Green Farm;
- Whitehouse Farm;
- Sale Farm;
- Cefn Farm;
- Whitehouse Farm;
- York House; and
- Brookside.

15.3.1.2. Sound monitoring surveys will be undertaken at up to four of the nearest sensitive receptors to identify the representative background sound levels around the Site. The monitoring locations would be subject to agreement with the relevant landowners. The monitoring positions would be agreed with the EHO by inspection or provision of details showing exact site location.

15.3.1.3. Baseline data would be measured in accordance with guidance found within BS4142: 2014 and BS7445: 2003. It is proposed to undertake fixed sound monitoring at

appropriate accessible secure positions over weekday and weekend periods to determine representative background sound levels in accordance with BS4142: 2014.

15.3.1.4. Monitoring would be carried out during morning, afternoon, evening and night-time periods at the sensitive receptors involving sequential readings at each location during suitable weather conditions. A weather station would be set up at one location for the duration of the survey to ensure measured data is valid.

15.3.2. Modelling

15.3.2.1. Information on the proposed site layout, building materials, detail of the likely plant list and any available information from HZI on plant noise levels or research into library data would be reviewed. Where appropriate, empirical noise level data would be referred to as obtained from similar plant operating in the UK.

15.3.2.2. Following the review of the proposed site layout and data available on plant noise levels, noise prediction calculations would be undertaken of the effect of the plant in operation. This will consist of producing a noise model with using computer-based noise modelling software for the operation of the facility (likely to be CADNA), which models noise to ISO9613-2 with appropriate model settings. This would include the cumulative effect of the operation of all plant on site. The predicted noise levels would assist in establishing the likely highest impact at the nearest sensitive receptor positions.

15.3.3. Assessment

15.3.3.1. Noise would also be assessed for the construction phase of the development. Information on noise sources likely to be used at site will be derived from the construction phase description and library data. An assessment of the highest likely noise levels will be provided based on the methodology provided within BS BS5228-1: 2009+A1:2014 `Code of Practice for noise and vibration control on construction and open sites'.

15.3.3.2. The results of the baseline sound monitoring will be analysed and assessed against the modelled noise impacts. The main noise sources on Site would be assessed in terms of their contribution to noise radiating from the Site at nearest sensitive receptors and results compared with relevant impact criteria.

15.3.3.3. Where appropriate, noise control measures will be considered to ensure that noise levels are within relevant noise criteria guidance. An example of a noise control strategy would be detailed taking BAT into consideration.

15.3.3.4. Noise arising from road traffic will be determined from the traffic figures provided in the

Transport Assessment in accordance with the methodologies provided within 'Calculation of Road Traffic Noise' and the Design Manual for Roads and Bridges 2011.

15.3.3.5. The assessment of effects both with incorporated mitigation and any additional mitigation measures will be provided as impacts and residual impacts relating these to established semantic tables which reference appropriate standards and guidance for noise. These will include, where appropriate, an assessment against baseline and/or change in residual noise levels.

15.3.3.6. The assessment of any cumulative effects likely to arise from permitted or proposed Development in the area that may potentially have impacts on NSRs would be considered.

15.4. Existing Conditions

15.4.1. For Site facility construction or operational noise impacts reference would be made to the established representative baseline sound levels as described above in section 15.3.1. to 15.3.4.

15.4.2. For any effects from road traffic impacts, reference and calculation of existing baseline traffic volumes will be made to determine any significant change in road traffic noise in accordance with the calculation methodology found within Calculation of Road Traffic Noise ("CRTN"): 1988 and DMRB impact assessment tables.

15.4.3. Any potential effects on future baseline sound levels due to committed development in the area around NSRs will be considered.

15.5. Points for Clarification

15.5.1. Based on the information provided above, it is requested that the following points be addressed in the response to this scoping request:

- in view of the separation distance from the facility and plant to NSRs, does PCC agree that vibration can be scoped out of the assessment from a construction and/or operational perspective;
- following provision of baseline sound survey results at NSRs, it is requested that PCC enter into discussion with the Acoustic Consultant with the intention of agreeing on a noise limit in relation to BS4142: 2014 relative to background or an appropriate absolute limit where baseline background levels are shown to be very low and therefore compliance with sleep disturbance at night is then the overriding sensitive factor to protect residential amenity; and

- provide any further comments on the proposed methodology or scope that requires additional consideration in PCC's opinion.

16. Key Environmental Aspects - Geotechnical and Materials Management

16.1. Overview

16.1.1. The site is currently an operational quarry. However, it is proposed that the new ERF will be constructed within the existing quarry. This will require some stabilisation of the quarry floor and slopes to create a level and stable plateau for construction.

16.1.2. The quarry will have been re-profiled and stabilised following geotechnical investigation and assessment using Geo5 software. This will comprise drilling of a series of boreholes to determine the underlying geology and to obtain geotechnical data and parameters.

16.1.3. The stabilisation of quarry faces and slopes will have been designed to ensure long term stability. Materials excavated out during re-profiling of the development area will have been classified in accordance with Technical Guidance WM3: Waste Classification – Guidance on the classification and assessment of waste.

16.1.4. Excavated materials will have been re-used on site or removed from site in accordance with a materials management plan taking in to account the proposed construction and landscaping scheme.

16.1.5. Following re-modelling of development area the site will be considered to have achieved baseline conditions. Consequently this planning application and EIA will not take account of any preparatory works that will be undertaken as these are considered to be encompassed within the restoration scheme of the existing planning permissions.

16.1.6. It is not anticipated that there will be any changes to baseline conditions during and post construction works.

16.2. Environmental Assessment Boundaries

16.2.1. The study area will include the direct Development area in the base of the quarry and surrounding quarry walls.

16.2.2. The area will be further defined by that that has been investigated and stabilised and levelled to prepare the site for development.

16.3. Methodology

16.3.1. Baseline conditions of the prepared Site will be clarified by reference to data acquired prior to and during geotechnical investigation and geotechnical construction works within the development area of the quarry.

16.3.2. Data to be reviewed will include:

- history of the Site and surrounding area
- hydrology and hydrogeology
- Site geology by reference to the geological map and borehole logs
- Site groundwater monitoring data
- laboratory test data for quarry materials
- Geo5 slope modelling conclusions
- details of quarry face and slope stabilisation works completed.

16.3.3. Where and how excavated materials have been used will be considered.

16.4. Existing Conditions

16.4.1. The baseline conditions will comprise a fully prepared and levelled site with stabilised quarry faces and slopes.

16.4.2. The ground conditions and underlying geology will have been determined both within the quarry and the immediate surrounding area.

16.4.3. Possible behaviour of remodelled quarry faces and slopes will have already been predicted and measures put in place to counteract any future movement or instability.

16.4.4. Baseline conditions are unlikely to change during and following construction.

16.5. Points for Clarification

16.5.1. Based on the information set out in Sections 16.1 – 16.4 it is respectfully requested that the following points be addressed in the response to this scoping request:

- confirmation of acceptance of the baseline conditions (i.e. the site is fully prepared and ready for development).

17. Cumulative Impacts

17.1. Overview

17.1.1. This Chapter of the ES will provide an assessment of the likely significant cumulative effects of the Development during its construction and operation.

17.1.2. The EIA regulations require that a description of the likely significant effects of the development on the environment should be included in the ES, including cumulative effects. There is no set definition of a cumulative effect, however, a commonly accepted definition is: *"Impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project"* (EC, 1999).

17.2. Environmental Assessment Boundaries

17.2.1. The type of developments to be considered in the cumulative assessment are those that have been granted planning permission, are not yet operational, or have yet to be constructed.

17.2.2. The assessment will only consider developments of one hectare or more in size (land take or floor space), or developments that have been subject to EIA. Developments that are in the planning system, but not yet approved will only be considered if specifically requested by PINs, or PCC.

17.2.3. The cumulative effect of existing developments comprise the existing baseline for the EIA and such would be assessed within each chapter.

17.2.4. A 5km search area will be used to identify projects to be included in the cumulative effects assessment. Developments beyond 5km are unlikely to give rise to significant cumulative effects. For some of the KEAs, the effects are more localised, e.g. Site Condition, consequently it may be necessary to exclude some developments where cumulative impacts are unlikely to occur.

17.3. Methodology

17.3.1. In assessing any potential cumulative effects should be assessed reference will be made to the following guidance:

- Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions (EC, 1999)
- Cumulative Effects Assessment Practitioners Guide (Canadian Environmental Assessment Agency, 1999);
- Guidelines for Environmental Impact Assessment (IEMA, 2006); and

- Environmental Impact Assessment: A guide to good practice and procedures – A consultation paper (DCLG, 2006).

17.3.2. The assessment of cumulative effects will be undertaken as follows:

1. Identification of potential developments which, together with the Development, could give rise to cumulative or in-combination effects based on the assessment boundaries identified in Section 17.2;
2. Further information will be obtained on each development in terms of scale, type and nature from the relevant Local Planning Authority (PCC or Shropshire Council). It is anticipated that this information will be sourced from publically available information, i.e. planning applications and supporting information; if environmental information is not available, reasonable assumptions will be made on the likely significant environmental effects of the Development based on professional experience;
3. The likelihood of significant cumulative effects (of the construction and operational phases of the project will be assessed for each KEA
    - Air Quality;
    - Health Impact Assessment;
    - Transportation, Traffic and Highway;
    - Landscape and Visual Impact;
    - Ecology;
    - Water Environment;
    - Archaeology and Heritage;
    - Site Condition;
    - Socio-Economics;
    - Noise and Vibration; and
    - Geotechnical and Materials Management.
4. If the initial assessment identifies that there is no potential for likely significant cumulative environmental effects to occur, then no further assessment will be undertaken.
5. If the initial assessment concludes that cumulative effects are likely, then the development is carried forward for more detailed assessment within the specific KEA it relates to.
6. Further detailed assessment of likely significant cumulative environmental effects will then be undertaken using a methodology relevant to the KEA under consideration.

17.4. Existing Conditions

17.4.1. For the avoidance of doubt it should be recognised that the baseline position against which this EIA has been undertaken assumes that:

- the application site is fully prepared site – i.e. is level to 90mAOD and works associated with slop stabilisation have been completed;
- the access road to the development has been constructed (Planning Permission Ref. P/2015/0439)
- the area is designated as employment land under the current LDP;

17.4.2. Consequently, this Chapter will not take these developments into consideration as they form part of the baseline for the purposes of this Environmental Impact Assessment.

17.5. Points for Clarification

17.5.1. Based the information provided above, it is requested that the following points be addressed in the response to this scoping request:

- if there are developments that are in the planning system, but not yet approved it is requested that a list of such developments, requiring cumulative assessment be provided.

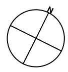
Appendix 1

Drawings

ECL Ref: ECL.001.01.02/RFS

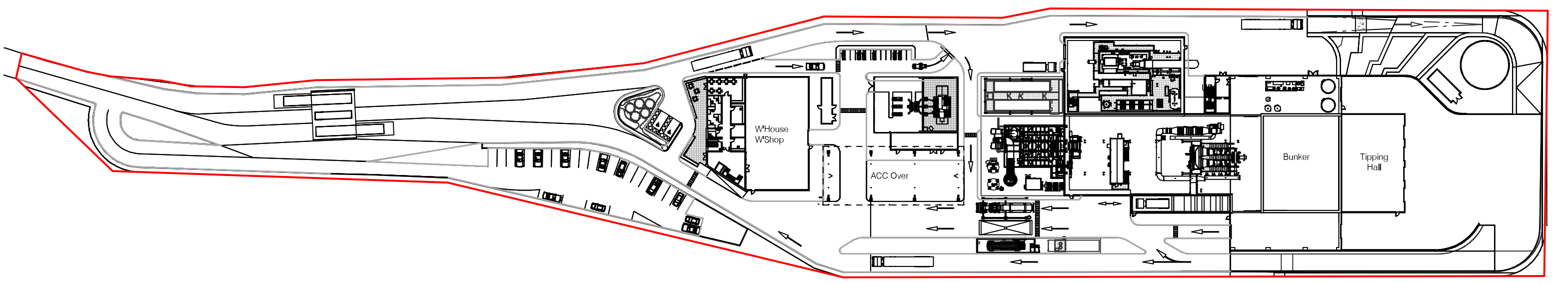
Issue: 1
August 2018

Stack Centre:
E = 326842,830 m
N = 310114,688 m



Drawn by :			Date :		Scale :	1 : 500 @ A1
Status	Preliminary	Presentation	Tender	Construction	Last Issue	
Date :						
Approved by :						

Revision		Date	Drawn	Approved
P1	First Issue	01.06.17	MDO	MDO
P2	Entrance area amended, amenity building developed, contours omitted, scale adjusted.	05.06.17	MDO	DJS
P3	ACC relocated, adjacent building and layout adjusted to suit.	02.08.17	MDO	DJS
P4	External hard surfaces and landscape added.	07.06.18	MDO	DJS



Client :
Broad Energy

Project :
Buttington Quarry EfW

Project No. : 3411-01
Drawing No. : 0202

Drawing Title :
BUT-RCA-00-ZZ-DR-A-0202-General_Arrangement_Plan S1 P4
[Project Code] [Originator] [Volume Div.] [Level Div.] [File Type] [Role] [File Number] [File Description] [Suitability.] [Rev.]

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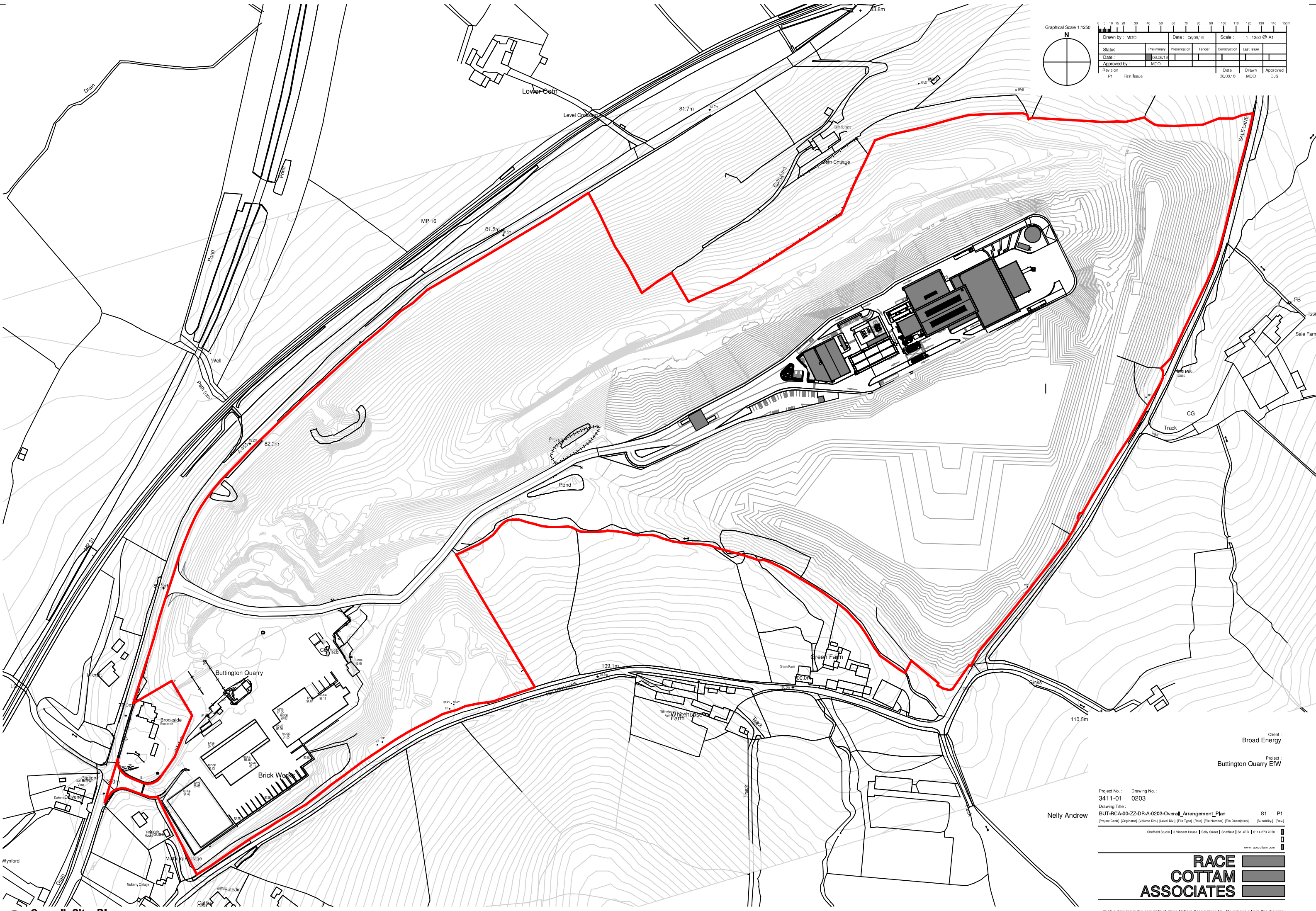
www.racecottam.com

RACE COTTAM ASSOCIATES

1 General Arrangement Site Plan
1 : 500



Drawn by : MDO	Date : 06.08.18	Scale : 1 : 1250 @ A1			
Status	Preliminary	Presentation	Tender	Construction	Last Issue
Date :	06.08.18				
Approved by :	MDO				

Revision		Date	Drawn	Approved
P1	First Issue	06.08.18	MDO	DJS

Client :
Broad Energy

Project :
Buttington Quarry EfW

Nelly Andrew

Project No. : 3411-01
Drawing No. : 0203

Drawing Title :
BUT-RCA-00-ZZ-DR-A-0203-Overall_Arrangement_Plan S1 P1
[Project Code] [Originator] [Volume Div.] [Level Div.] [File Type] [Role] [File Number] [File Description] [Suitability.] [Rev.]

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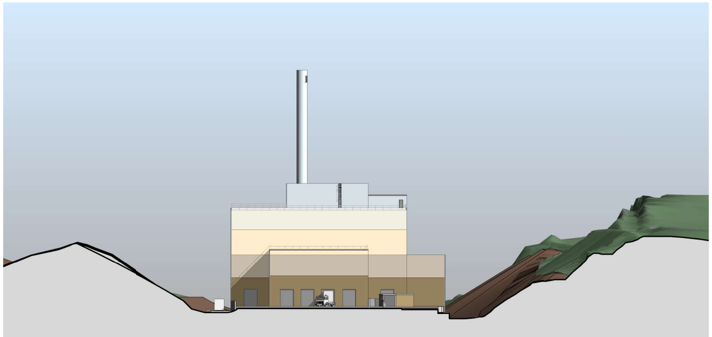
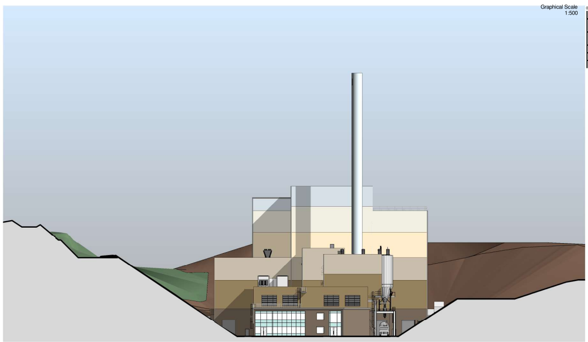
RACE COTTAM ASSOCIATES

1 Overall_Site_Plan
1 : 1250

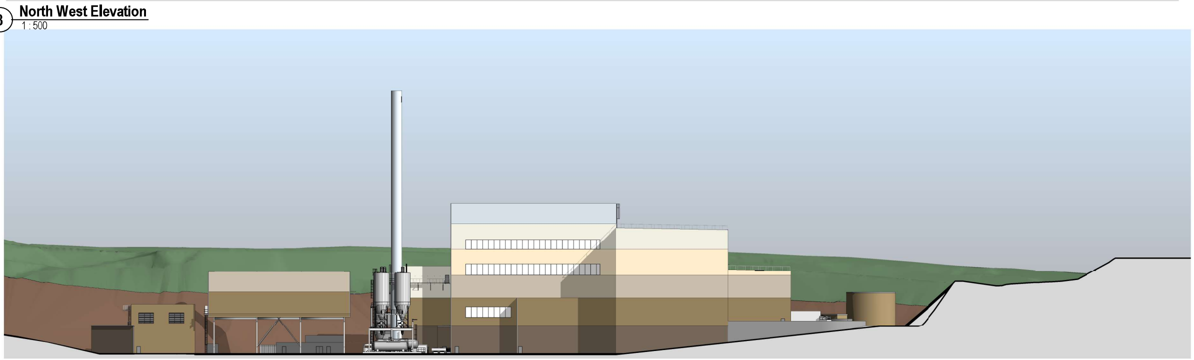


1 **North East Elevation**
1 : 500



2 **South West Elevation**
1 : 500

3 **North West Elevation**
1 : 500



4 **South East Elevation**
1 : 500

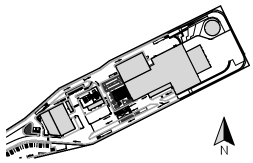
Graphical Scale
1:500

Drawn by : MDO		Date : 04.04.2017		Scale : As indicated @ A1	
Status	Preliminary	Presentation	Tender	Construction	Last Issue
Date :	04.04.17				
Approved by :	MDO				

Revision		Date	Drawn	Approved
P1	First Issue	04.04.17	MDO	MDO
P2	Building envelope developed follwing HZI layouts.	12.05.17	NS	MDO
P3	Envelope adjusted to suit design discussions.	01.06.17	MDO	MDO
P4	Main EfW stair modelled	09.06.17	MDO	DJS
P5	ACC moved to above workshop.	15.06.17	MDO	DJS
P6	ACC relocated, adjacent building and layout adjusted to suit.	02.08.17	MDO	DJS
P7	Topography amended, external landscape and fewatures added, stack reduced to +70m, enclosure to FGT added.	07.06.18	MDO	DJS

Colours selected are from Colourcoat HPS200 Ultra.

RAL 070 40 10
RAL 080 50 20
RAL 080 70 10
RAL 1015
RAL 9002
RAL 240 80 50



Client :
Broad Energy

Project :
Buttington Quarry EfW

Project No. : 3411-01
Drawing No. : 0210

Drawing Title :
BUT-RCA-00-ZZ-DR-A-0210-Elevations S1 P7
[Project Code] [Originator] [Volume Div.] [Level Div.] [File Type] [Role] [File Number] [File Description] [Suitability] [Rev.]

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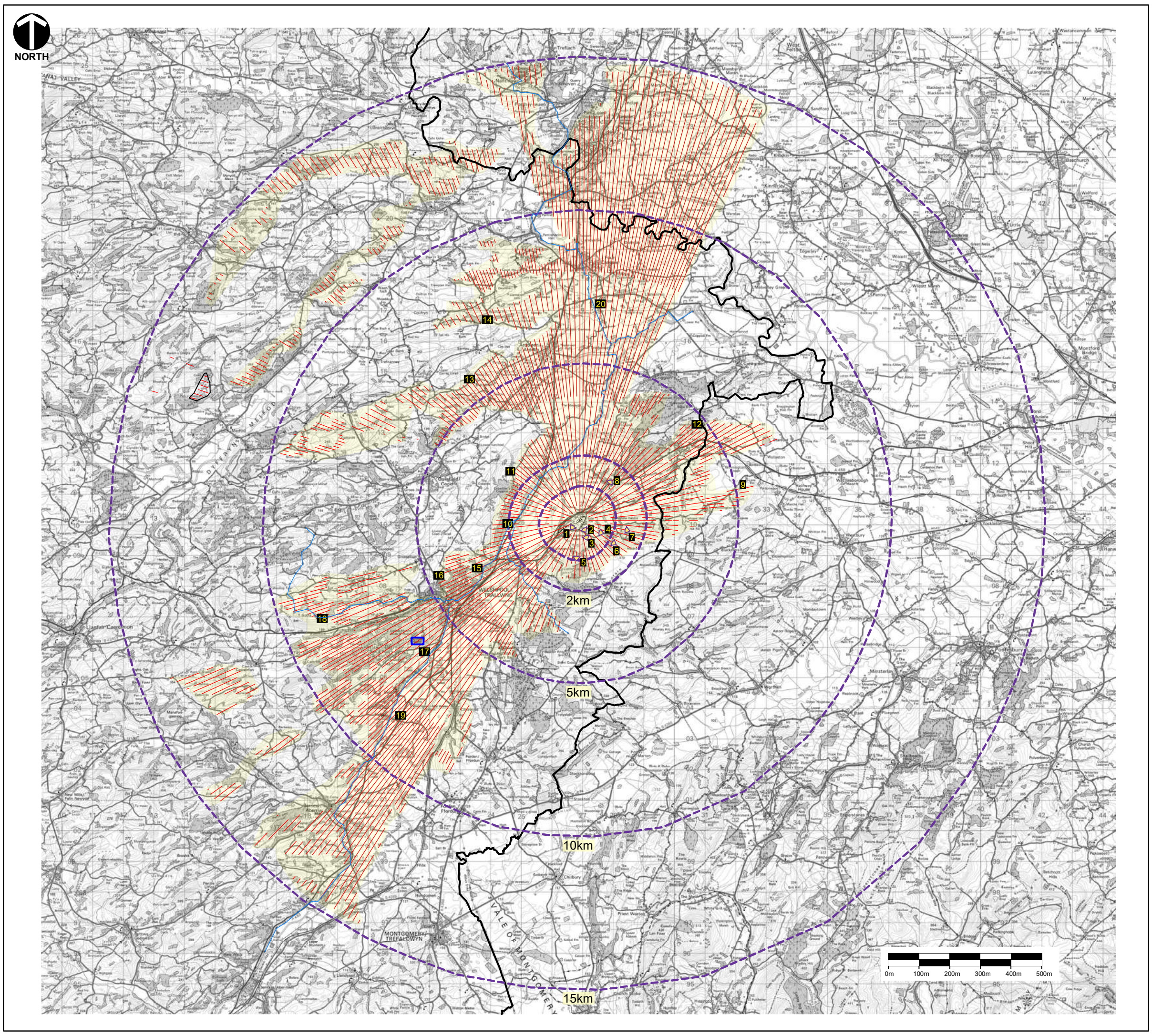


Key

- Planning Application Boundary (the Site)
- 5km — Distance Markers
- English-Welsh Border
- Study Area (defined as 1km offset from ZVI)
- Principal area of stack visibility
- 1 — Proposed locations for representative viewpoints
- National Trust Property
- Long distance footpaths

Client: **BROAD ENERGY (WALES) LTD**

Project: Buttington Quarry
Landscape and Visual Impact Assessment

Title: Proposed Locations for Representative Viewpoints

CAD Ref:	Version:	Drawn by:	Plot size: A1 / Scale:	Issue Date:
BT1021-D1v3	3	RB	Plan 1:60,000	January 2017

bright & associates
landscape and environmental consultants
Pear Tree House, Dovaston, Oswestry, Shropshire, SY10 8DP
01691 682 773 www.bright-associates.co.uk

Drawing: **BT1021-D1**

Appendix 2

PCC Scoping Opinion Response

ECL Ref: ECL.001.01.02/RFS

Issue: 1
August 2018

Powys

Mr Chris Lowden
Technical Director
Environmental & Social Impact Assessment
SLR Consulting Limited
Aspect House
Aspect Business Park
Bennerley Road
Nottingham, NG6 8WR

Sue Bolter
Pennaeth Adfywio, Eiddo a Chomisiynu / Head of Regeneration, Property & Commissioning

The Gwalia
Ithon Road
Llandrindod Wells
Powys
LD1 6AA

Our ref: SC/2017/00002
Your ref: 407.05577.00001
Date: 07/04/2017
If calling ask for: Mr Robin W. Williams
Direct line: 01286 679833
E mail: robinwynnewilliams@gwynedd.gov.uk

Dear Sir,

Town & Country Planning (Environmental Impact Assessment) (Wales) Regulations 2016 – Regulation 13: Scoping Opinion
Proposal: Energy Recovery Facility
Location: Buttington Quarry, Buttington, Welshpool, Pows, SY21 8SZ

Thank you for your correspondence of 6th February 2017 requesting the Council's Scoping Opinion for the above proposal. Please find enclosed the Council's Scoping Opinion for the proposal described.

In adopting this Scoping Opinion the County Council has taken into account its consultation responses and considered the specific characteristics of the proposal, the type of development and the environmental features likely to be affected by the development. The application should be assessed and referred to within the environmental statement when the planning application is submitted.

This Scoping Opinion seeks to ensure that any environmental statement submitted with respect to a planning application for the development proposal described in the scoping request includes information that is reasonably required to assess the environmental effects, and allow a determination to take place. The statement must address the baseline conditions, likely significant impacts, the probability of effects and the proposed mitigation measures. The information provided should be that which is necessary to demonstrate the risks, likelihood of occurrence, likelihood of any significant impact and an outline of the main

alternatives studied by the applicant. Please note that further information may still be required once the statement has been submitted.

The Council broadly agrees that the scoping report addresses the main issues for consideration with the key points being:

- The Proposed Development
- Transportation, Traffic and Highways
- Air Quality including Human Health Impact Assessment
- Noise and Vibration
- Landscape Character and Visual Impact Assessment
- Ecological Impact Assessment and Protected Sites
- Water Environment
- Archaeology and Cultural Heritage
- Planning and Sustainability

Notwithstanding the main issues as noted within the Scoping Report, the Council also considers that the following key points should also be addressed within the ES:

- Exporting Energy and Heat
- Nuisance
- Contaminated Land
- Geotechnical
- Materials Management and the development of the ERF
- Socio-Economic
- Cumulative Impact
- Alternatives

The following will consider the content of the Scoping Report as submitted and will outline the matters which require modification, augmentation or clarification as part of any subsequent planning application and environmental statement.

Proposed Development

The environmental statement should include a description of the development, the site, in terms of location, physical features, land use and should identify sensitive receptors within the locality. It should also include a description of surroundings and proposed development together with likely hours of operation of the construction phase of the development, consideration will need to be given to the disposal/treatment of IBA which will be produced as part of the ERF Process. Consideration should be taken of the proposed decommissioning and subsequent site restoration once the facility is no longer required. This should also include proposed hours of operation of decommissioning, a restoration

scheme to ensure safety of benches and that the site does not become derelict once the facility is no longer required.

Transportation, Traffic and Highways

The Authority is in broad agreement with the contents of the Scoping report in relation to highway and transport issues.

Air Quality including Human Health Impact Assessment

The Authority is in broad agreement with the contents of the Scoping report. It is also considered that results from the air quality modelling and assessments should be used to undertake a Health Impact Assessment as advocated within TAN 21 to ensure that human health issues are not overlooked (suggest that early dialogue is undertaken with the Wales Health Impact Assessment Support Unit). As well as the consideration of potential human receptors, the air quality assessment should also consider the effect on National Air Quality Objectives.
Information and results should be used to determine the proposed effects on protected sites. This will assist the planning authority in carrying out an appropriate assessment under Regulations 61 and 62 of the Habitats Regulations 2010.
An odour impact assessment will be required as Buttington / Trewern and individual properties are in close proximity to the proposal.

Noise and Vibration

The Authority is in broad agreement with the contents of the Scoping report and a suitable noise and vibration assessment should be undertaken for both the construction and operational phases of the development, and to also include night time operational noise. It is recommended that a baseline noise survey is undertaken to establish current ambient noise levels and predicted noise and vibration levels at sensitive receptors. Locations should be agreed in consultation with Powys Council Public Protection Department.

Landscape Character and Visual Impact Assessment

The Authority is in broad agreement with the contents of the Scoping report in relation to the landscape and visual amenity. In addition to the viewpoints suggested in section 7.1.1 it is suggested that additional viewpoints from Brieddon Forest, Scheduled Ancient Monuments MG081 and MG021 with further viewpoints along public footpaths that are within close proximity to the site (refer to plan reference attached to the PROW officers comments) are taken. With the exception of the stack, the site may be more visible from south western viewpoints with glimpsed views along the A483 and it is suggested that further viewpoints are selected from this direction. The assessment should also consider the visual impact of the plume arising from the stack and the incremental visual impact of possible 24 hour

lighting on site including any lighting on the stack.

In relation to "Potential Impacts and Mitigation" it is noted that mitigation will be focused on the layout of the facility, the site's bunding and planting together with a review of the quarry restoration where it applies to the red line area. Landscaping and restoration should be considered for the Buttington site as a whole and how the proposal ties in with the restoration concept for the quarry. The LVIA will need to consider the magnitude of effect and it is encouraged that pre application advice is sought on the design and colour of the proposed structures together with the landscaping and restoration proposal and selection of viewpoints that would be subject to the photomontages.

Ecological Impact Assessment and protected sites

As noted within the Scoping report, there are various protected sites within 5km of the site. The proposal may have implications for those which are European designated sites. Therefore, as part of any planning application submitted, the local authority will need to carry out a test of likely significant effects under regulation 61 of the Conservation of Habitats and Species Regulations 2010 (as amended). This will be done in consultation with NRW. If the assessment concludes there is likely to be a significant effect upon the conservation status of these sites, the Local authority will need to carry out an appropriate assessment under the Regulations.

As a competent authority for the purposes of the 2010 Regulations, the local planning authority must not normally agree to any plan or project unless sure beyond reasonable scientific doubt that it would not adversely affect the integrity of a European designated site (SAC, SPA or Ramsar site). Therefore, the information contained within the environmental statement will need to be of a sufficient detail to enable this assessment to be carried out. With regard to the planning regime, permission can only be granted if it can be demonstrated that there is no likely significant effect on the designated features. Under the precautionary principle if there is an element of doubt then permission cannot be granted.

Buttington Brickworks SSSI is a Geological SSSI – the ES should consider the SSSIs list of Potentially Damaging Operations and the potential to damage the site and it's designated features; this will identify appropriate Reasonable Avoidance Measures and mitigation if required.

Any planning application and environmental assessment should provide information regarding the emissions from the proposed unit and the impacts of deposition of emissions on sensitive nature conservation sites including both statutory designated sites and non-statutory designated sites i.e. Local wildlife sites, Ancient woodland.

The ES will need to consider the impact of the proposal on protected species and demonstrate that the proposal will not impact on the favourable conservation status of European and Nationally protected species. It is important to note that surveys following

National guidelines at the appropriate time of year will be required for any protected or priority species that are found or have potential to be present. These surveys would need to be carried out prior to determination of the planning application. Mitigation and compensation strategies will be required for any impacts upon protected species and loss of habitat.

The applicant should be mindful that in accordance with Powys County Council's duty under Part 1 Section 6 of the Environment (Wales) Act 2016, TAN 5, UDP policies and biodiversity IDBG, as part of the planning process Powys LPA need to ensure that there is no net loss of biodiversity or unacceptable damage to a biodiversity feature.

Water Environment

The Authority is in broad agreement with the contents of the Scoping report in relation to the water environment. Sufficient information relating to the management and containment of potential polluted water should be included in the application. The proposed development will be in the bottom of the existing quarry and the drainage strategy should include details of any dewatering pumping that is required to maintain a water table below the quarry void especially during the winter months or during / as a consequence of heavy rainfall. It should be noted that any groundwater abstraction over 20 m^3 a day will require a Water Resource Licence from NRW to abstract the groundwater.

Archaeology and Cultural Heritage

The methodology proposed in the scoping report is appropriate with a 2km search zone proposed for Listed Buildings (refer to comments received from Powys Built Heritage Conservation Officer). However, in accordance with SCHEDULE 4 I of The Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016 the search zone for scheduled monuments should be extended to 5km to take into account all such designated monuments from which the development will be visible.

For onsite archaeology a systematic walkover survey of the whole application area will be required to confirm the presence and level of preservation of currently recorded sites and to locate any previously unrecorded archaeological sites. The survey will then form an assessment demonstrating the current extent, nature, potential impact and suggested mitigation for the above site.

If Historic England guidance is to be adopted in the assessment's preparation, it is suggested that the assessment considers the relevant policies contained within Planning Policy Wales. CADW have prepared guidance on Managing Change " the setting of historic assets " that was recently out for public consultation and currently not yet adopted. However, the guidance may be useful in the consideration of this application.

Key Planning Policy

The ES should include an assessment of policy which includes consideration of waste, energy and mineral policies (sterilization). In undertaking a comprehensive assessment this should avoid the need to resubmit the same information under the guise of a Waste Planning Assessment as required by TAN 21 and should also include evidence of compliance with the R1 Formula. Therefore the chapter should cover what is required as part of a Waste Planning Assessment in being appropriate and proportionate to the nature, size and scale of the development proposed and should provide all of the information necessary for the local planning authority to make a decision on the application. Proposals for developments falling under disposal and recovery operations should explain in the Waste Planning Assessment, set out in Annex B, where the proposal fits within the waste hierarchy and why it represents the best overall environmental outcome.

Any environmental statement should take account of revisions and new guidance, policy or legislation which may be published. The Scoping submission refers to Planning Policy Wales edition 8, this should be amended to edition 9. Powys' Local Development Plan is in the Examination in Public Stage with hearings commencing on the 28th March. The weight to be attached to the LDP is limited at the moment because there is no certainty of the Inspector's Report (in line with PPW).

The following issues /matters have not been included within the scoping document as separate chapters, but should be included within the ES

Exporting energy and heat

Details of the infrastructure which would be required to export energy to grid and surplus heat to potential end users should be included as part of the application / ES.

Nuisance (litter, lighting, birds, flies and vermin)

Brushed upon in section 2.6 of the Scoping Report, an assessments of debris, litter, pests (birds, rats, flies) and lighting, including that associated with vehicular traffic and the immediate local access to the site should be undertaken. Although it is stated that these matters would be regulated under the Environmental Permitting regime, they are nevertheless, material planning considerations (refer to section Environmental Permit below). Ideally, the development should not be releasing dust or litter, however, failures and human error must be factored in, as a number of surrounding industrial processes are highly reliant on high volume air intakes for cooling and air conditioning, and are at risk of choking and blockages, therefore proactive design and control features and means of mitigating dust and litter beyond the site should be built into the assessment. Bird control and the potential to attract scavenging birds must also be considered. The issue of flyblown waste needs to be considered as the operator may not have control of the waste being delivered to the site and

have no control of the length of time this waste will have been stored in bulking stations by waste and bulking companies. Controls and measures to mitigate against this shall need to be included in the assessment.

Contamination / Land Quality

There is no reference within the Scoping report to the contaminative historic uses of the site and potential impacts that may arise. It is recommended that discussions are commenced with the Council's Contaminated Land Officer on how potential land contamination issues are to be investigated, assessed and mitigated as part of the ES.

Geotechnical assessment

The Buttington quarry void is an extremely narrow site with the quarry floor no more than approximately 20 – 25 metres abutted by steeply graded slopes. It appears from the indicative drawings and sections submitted, substantial amount of material including soils, overburden, clay and rock are to be excavated as part of the proposal. Because of land stability (brick clay sites are susceptible to land slippage), confinement of area, health and safety, the protection of the SSSI on site and potential other geological issue it is considered that a geotechnical assessment of the site will be required demonstrating and mitigating possible effects throughout the lifetime of the project.

Materials management and the development of the ERF

It is acknowledged that "proposed construction phase" is referred to within the proposed development as described within part 2 of the Scoping Report. It may be beneficial for this element be a standalone chapter within the ES to assess how the proposal is to be built, what is to happen with excavations on site, what is the material balance associated with the proposal, full details of pollution prevention and incident response plan, the timing associated with different elements of the work and how this would be tied to a Materials Management Plan, Construction Environmental Management Plan and Waste Management Plan.

Socio Economic

This is touched upon within section 2.7 of the Scoping Report. Consideration of the potential socio-economic effects associated with the development and operation of the proposal is to be considered as part of the ES. This should include details of employment across all phases of development together with indirect employment and economic development that could potentially be developed through distribution, deliveries, use of waste heat and utilisation of bottom ash etc. This should be balanced against baseline conditions and possible social elements and other economic factors that may arise as a consequence.

Cumulative Impact

It is agreed that the consideration of cumulative impact is an integral part of the EIA process and it is not fully understood how it will be considered on a "qualitative" basis rather than also quantitatively. It should be noted that there are other developments on site and in the local area that should be considered cumulatively with this project and will need to be assessed. This will assist the planning authority in carrying out an appropriate assessment under Regulations 61 and 62 of the Habitats Regulations 2010.

Alternatives

Again this is referred to within section 2 of the Scoping Report under the heading Proposed Development and it is agreed that it is an important part of the EIA process. It is noted that as a result of case law certain aspects of alternatives including technology and other sites are to be considered as part of the Planning Statement with other considerations covered within the D&S. However, as stated previously and within the Duplication and Repetition section, for consistency and to avoid confusion and repetition, it is urged that alternatives are discussed comprehensively within the ES with referencing as to relevance to the EIA process and to wider application requirements.

Other considerations and advice in preparing both ES and planning application

Environmental Permit

It is noted that it is your intention to twin track both planning and environmental permit applications. It is stated within section 1.4 of the scoping report that Welsh Government's advice is to avoid unnecessary / unnecessary duplication of control, something the LPA and NRW will strive to achieve. However the EIA process will be subject to both regime applications. As the ES sets out the results of the EIA process; for consistency of decision, the avoidance of doubt and possible legal challenge, it is trusted that both ES's where there are both permitting and planning considerations; that those chapters will be identical in content and format.

Duplication and Repetition

Generally some applications that require the submission of Environmental Statements have contained superfluous information relating to issues that are irrelevant or of little importance to the proposed development. Competent Authorities, consultees and the public should not have to deal with large volumes of material and repetition which is irrelevant to the decision making process.

It is noted within your scoping application that the application is to contain a Planning Statement, Waste Planning Assessment and Environmental Statement. From the information submitted, it appears that these documents will contain overlapping information. To avoid repetition, it is strongly suggested that certain statements and assessments that are required as part of the planning application are amalgamated within the contents of the Environmental Statement with clear referencing stating where to discover the necessary information and what information relates to the different elements of the application. In doing so, it is trusted that this is clearly stated within the contents of the ES.

Regulation 15

For the purposes of the requirements of Regulation 15 of the above regulations, the following bodies/individuals were consulted as part of this Scoping Request and are aware that you are intending to submit a planning application which is to be accompanied by an environmental statement. Responses to the consultation are enclosed (No correspondence received from consultees labelled with a *).

Powys County Council Internal Consultees:-

*Ecologist; Rachel Probert - rachel.probert@powys.gov.uk *(Informal e-mails between both officers in drawing up the ecological advice)*
*Highways; - Simon Crew - simon.crew@powys.gov.uk *(telephone conversation stating that they would not be issuing a response as the highway is a Trunk Road)*
Built Heritage; Debra Lewis - debra.lewis@powys.gov.uk
Planning Policy; Peter Morris - peter.morris@powys.gov.uk
Rights of Way; Calum Carr - calum.carr@powys.gov.uk
Public Protection; Daniel Stykuc - daniel.stykuc1@powys.gov.uk
Contaminated Land; Anthony Bullen - anthony.bullen@powys.gov.uk
*Drainage; Graham Astley – graham.astley@powys.gov.uk

External Consultees

Natural Resources Wales; Geraint Blayney - NorthPlanning@cyfoethnaturiolcymru.gov.uk
Welsh Government, Trunk Roads; Alun Wyn Jones - NorthandMidWalesDevelopmentControlMailbox@Wales.GSI.Gov.UK
Clwyd and Powys Archeological Trust; Mark Walters - Mark@cpat.org.uk
CADW; Nichola Davies – amadminplanning@wales.gsi.gov.uk
*Welsh Water; developer.services@dwrcymru.com
*Public Health Wales; Liz Green - Liz.Green@wales.nhs.uk

For clarity It is encouraged that prior to submission, pre application discussions are undertaken through the formal process.

I trust that the North Wales Minerals and Waste Planning Service and Powys County Council's position is explained above and please do not hesitate in contacting should you wish to discuss any issue further.

Yours faithfully,

Robin Wynne Williams
Senior Planning Officer (Minerals and Waste)

Ar ran Gwasanaeth Cynllunio Mwynau a Gwastraff Gogledd Cymru /
On behalf of the North Wales Minerals and Waste Planning Service

Enc.

Robin Wynne Williams

robinwynnewilliams@gwynedd.gov.uk

Sue Bolter
Pennaeth Adfywio, Eiddo a Chomisiynu / Head of Regeneration, Property & Commissioning

The Gwalia
Ithon Road
Llandrindod Wells
Powys
LD1 6AA

Our ref: SC/2017/002
Date:29 March 2017
If calling please ask for:
Debra LewIS/Louise Williams
Direct line: 01938 551301

Dear Sir/Madam,

The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulation 13 Scoping Opinion
Proposed Planning Application for Scoping Opinion.

SC/2017/ 0002, Grid Ref: 326365.7/309812.73 for Scoping opinion under regulation 13 of the EIA (Wales) regulations 2016 for construction and operation of Energy Recovery Facility (ERF) at , Buttington Quarry, Buttington, Welshpool, Powys.

Thank you for your request for comments on the above, and further to our telephone conversation on 29th March.

These views provided are in connection with built heritage issues only and are without prejudice on Powys County Council's consideration of the matter should an application be submitted formally for determination.

Our records show that a number of the following historic assets are potentially affected by the proposal.

Within 2 KM

Scheduled Ancient Monuments

MG120 Strata Marcella Abbey

MG224 Offas Dyke south of School House Buttington

Listed Buildings

Buttington Old Hall Farmhouse – Cadw ID 7903 – grade II

Cletterwood Farmhouse Cadw ID 15649 – grade II

Garbetts Hall - Cadw ID 7905 – grade II

The Green Dragon Inn - Cadw ID 7908 – grade II

Church of All Saints – Cadw ID 7902 – **grade I**

Buttngton Vicarage – Cadw ID 15648 – grade II

Middle Hendre – Cadw ID 15646 – grade II

Trewern Hall – Cadw ID 7920 – grade II*

Maesfron – Cadw ID 7911 – grade II

Grotto at Maesfron – Cadw ID 15641 – grade II*

Gazebo at Maesfron – Cadw ID 15640

Bryn Caredig – Cadw ID 15642 – grade II

The Olde Post Office – Cadw ID – grade II

Outbuilding at The Old Post Office – Cadw ID 15644 – grade II

Outbuilding at The Old Post Office – Cadw ID 15643 – grade II

Buttington Bridge – Cadw ID 15647 – grade II

The Malthouse – Cadw ID 87516 – grade II

Severn View – Cadw ID 16779 – grade II

Manor House – Cadw ID 7882 – grade II

Ivy House with Outbuildings – Cadw ID 16774 – grade II

Lock Cottage Cadw ID 16771 – grade II

Bridge III over Montgomeryshire Canal – Cadw ID 16773 – grade II

Top Lock – Cadw ID 16772 – grade II

Church of St John – Cadw ID 16770 – grade II

Registered Historic Parks and Gardens

Maesfron Registered Historic Park and Garden

This advice is given in response to a scoping request for an Energy Recovery Facility at Buttington Brickworks which would require the following development;

- Waste reception hall 11-15m in height
- Waste Bunker
- The Energy Recover Hall 33 m to eaves height
- Flue Gas Treatment Area – 18-33m in height
- Silos for above 30m in height
- Turbine Building – 15, in height
- Air Cooled Condensor – 10m in height on a frame 10m in height
- 3 storey control room
- 85m high flue stack

As the height of the flue stack would be over 75m it is noted that SCHEDULE 4 of The Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016 requires that consultation with the Welsh Ministers in relation to development likely to be visible from scheduled monument and which meets one of the following criteria;

d) it is within a distance of 3 kilometres from the perimeter of a scheduled monument and is 75metres or more in height, or has an area of 1 hectare or more; or

e) it is within a distance of 5 kilometres from the perimeter of a scheduled monument and is 100 metres or more in height, or has an area of 1 hectare or more.

It is therefore suggested that the cultural heritage study area is extended to include the relevant distances included in the above Procedure Order. It is noted that a Zone of theoretical visibility has been included in the submission, and as such it is assumed that the cultural heritage study over the wider distance will be contained within that zone and the not assessed outside the Zone of Theoretical Visibility. However, it is noted that Welshpool has a high number of listed buildings within a small area. In the instance of Welshpool it may not be considered reasonable to consider that all of the listed buildings are assessed individually, and in this instance the collection of listed buildings could be assessed within the impact on the Welshpool Conservation Area rather than individually.

In addition to the viewpoints suggested in section 7.1.1 I would also suggest that a viewpoint from Brieddon Forest and the Scheduled Ancient Monuments MG081 and MG021 are undertaken.

Cadw have prepared guidance on Managing Change " the setting of historic assets " that was recently out for public consultation and currently not yet adopted. However the guidance may be useful in the consideration of this application. In addition to advice on how to assess the visual setting of listed buildings, advice on less tangible elements, including sensory perceptions such as noise and smell are included in the guidance. I am attaching a hyperlink to the document for ease of reference.

http://cadw.gov.wales/historicenvironment/policy/historicenvironmentbill/guidancedocuments/?lang=en

Whilst this application is for a development inside Wales there may be designated assets inside England and the impact of the proposed development on their settings will also need to be considered in the environmental impact assessment.

Yours faithfully

Debra Lewis
Built Heritage Conservation Officer

Llywodraeth Cymru
Welsh Government

Plas Carew, Uned 5/7 Cefn Coed
Parc Nantgarw, Caerdydd CF15 7QQ
Ffôn 01443 33 6000 Ffacs 01443 33 6001
Ebost cadw@cymru.gsi.gov.uk
Gwefan www.cadw.cymru.gov.uk

Plas Carew, Unit 5/7 Cefn Coed
Parc Nantgarw,Cardiff CF15 7QQ
Tel 01443 33 6000 Fax 01443 33 6001
Email cadw@wales.gsi.gov.uk
Web www.cadw.wales.gov.uk

Robin Wynne Williams
Senior Minerals and Waste Planning Officer

robinwynnewilliams@gwynedd.llyw.cymru

Eich cyfeirnod
Your reference

Ein cyfeirnod
Our reference

Dyddiad
Date: 30 March 2017

Llinell uniongyrchol
Direct line: 03000 256007

Ebost
Email: amadminplanning@wales.gsi.gov.uk

Dear Robin Wynne Williams,

SCOPING OPINION
LOCATION: BUTTINGTON QUARRY, WELSHPOOL, POWYS

Thank you for your email of 21 March 2017 inviting our comments on the above.

Scheduled Monuments

MG120 Strata Marcella Abbey

MG143 Crowther's Coppice Camp

Registered Parks and Gardens:

PO53 Maesfron

A scoping report has been produced by SLR for the proposed environmental impact assessment and this identified that this will include a chapter on Archaeology and Cultural Heritage. The methodology proposed in the scoping report for that chapter is appropriate with a 2km search zone proposed. However, in accordance with SCHEDULE 4 I of The Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016 the search zone for scheduled monuments should be extended to 5km to take into account all such designated monuments from which the development will be visible.

We also note that it is intended to supplement the available Welsh guidance with that produced by Historic England. Whilst in general the Historic England guidance is also appropriate in Wales it should be noted that in some instances it does refer to policies applicable in England but contrary to those contained in Planning Policy Wales.

It would assist the assessment if photos and ideally photomontages could be produced and included in the final Environmental Impact Assessments from the above designated and registered historic assets.

Yours sincerely

Nichola Davies
Diogelu a Pholisi/ Protection and Policy

Cyngor Sir Powys County Council

Adfywio, Eiddo a Chomisiynu / Regeneration, Property & Commissioning
Gwasanaeth *Iechyd yr Amgylchedd /* Environmental Health Service

M E M O R A N D U M

To: Robin Wynne Williams, Minerals and Waste Planning Officer, North Wales Minerals and Waste Planning Service

From: Anthony Bullen (Contaminated Land Officer), Environmental Health, Neuadd Maldwyn, Welshpool

Date: 22 February 2017

Ref: WK/201627499

Your ref: SC/2017/0002

Subject: **Buttington Quarry, Buttington, Welshpool, Powys Scoping Opinion under regulation 13 of the EIA (Wales) Regulations 2016 for construction and operation of Energy Recovery Facility (ERF).**

In relation to the request for a Scoping Opinion (ref: SC/2017/0002) the following advice is provided for the consideration of North Wales Minerals and Waste Planning Service.

Advice

The proposed application site is associated with an area of former quarrying furthermore, historic ordnance survey (OS) maps identify the presence of areas of unknown filled ground and former manufacturing (clay bricks and tiles) located adjacent to and within the application site boundary.

The historic land uses located adjacent to and within the proposed application site boundary could be potential sources of land contamination that may be a risk to the proposed development.

Therefore, any Environmental Impact Assessment (EIA) produced in support of an application for planning permission could include information on how potential land contamination issues will be investigated, assessed and mitigated.

…….

Anthony Bullen
Contaminated Land Officer

Williams Robin Wynne (Rh-CTGC)

From: Mark Walters <Mark@cpat.org.uk>
Sent: 13 February 2017 11:42
To: Williams Robin Wynne (Rh-CTGC)
Subject: SC/2017/0002 Scoping Opinion for ERF Facility at Buttington Quarry, Buttington - Cultural Heritage

Dear Mr Williams

Thank you for the consultation on this scoping opinion.

I have noted the suggested components of the Archaeology and Cultural Heritage EIA (Section 10) within the scoping document. We are broadly in agreement with the suggested procedures and search area of the study.

The study should also include a systematic walkover survey of the whole application area to confirm the presence and level of preservation of currently recorded sites and to locate any previously unrecorded archaeological sites.

The only sites currently recorded within the development area include:

PRN 6658 – Former ridge and furrow field system of medieval or post medieval date, now largely or wholly quarried away.

PRN 6659 – Buttington Brick Kiln – A former brick kiln structure related to the Buttington Brickworks. Located near the entrance office buildings.

PRN 19236 Buttington Brickworks and former WWI/WWII munitions storage area. Located near the entrance area buildings.

The current extent, nature, potential impact upon and suggested mitigation for the above sites should be addressed within the assessment.

With the addition of the requirements above we therefore agree that Archaeology and Cultural Heritage should form part of the EIA scope.

The chosen archaeological contractor must forward a written scheme of investigation (WSI) document to me for approval before the assessment commences.

All subsequent archaeological reports must be forwarded to me for additional comments as they become available. I would appreciate it if you could also keep me in the loop with further developments relating to the final nature and layout of the scheme as it progresses through the planning process.

Kind regards

Mark Walters

Mark Walters
Development Control Archaeologist / Swyddog Rheoli Datblygiad

Ffôn / Tel: 01938 553670

E-bost / E-mail: markwalters@cpat.org.uk

Ymddiriedolaeth Archaeolegol Clwyd-Powys, 41 Stryd Lydan, Y Trallwng, SY21 7RR Swyddfa Gofrestredig fel yr uchod. Rhif Cwmni 1212455, Rhif Elusen 508301, Sefydliad Cofrestredig IfA, Rhif 6.

Clwyd-Powys Archaeological Trust, 41 Broad Street, Welshpool, SY21 7RR Registered Office as above. Company No 1212455, Charity No 508301. Chartered Institute for Archaeologists Registered Organisation No 6.

Please note that I do not work Fridays

Williams Robin Wynne (Rh-CTGC)

From: Daniel Stykuc (CSP - Environmental Health) <daniel.stykuc1@powys.gov.uk>
Sent: 28 February 2017 09:23
To: Williams Robin Wynne (Rh-CTGC)
Subject: SC/2017/0002 Buttington Quarry

Hi Robin,

Re: Scoping opinion under regulation 13 of the EIA (Wales) Regulations 2016 for the construction and operation of Energy Recovery Facility (ERF).

I would recommend that the impacts of the following issues be included in the Environmental Impact Assessment:

Noise

A noise assessment for both the construction and operational phases of the development, to include night time operational noise.

Air Quality

Air quality effects relating to facility emissions, dust and odour. As well as the consideration of potential human receptors, the assessment should also consider the effect on national Air Quality Objectives.

It would be useful if the report could include a schedule of mitigation which details the commitments made to mitigate the effects of any of the issues assessed.

Regards,

Dan Stykuc
Swyddog Iechyd yr Amgylchedd (Gwarchod yr Amgylchedd)
Environmental Health Officer (Environmental Protection)
☎ 01938 551113
Cyngor Sir Powys County Council
Neuadd Maldwyn
Welshpool, Powys. SY21 7AS

Cyfoeth Naturiol Cymru
Natural Resources Wales

Ein cyf/Our ref: SJ20/GB/CAS-29410-T6G3
Eich cyf/Your ref: SC/2017/0002

Dyddiad/Date: 01/03/2017

Swyddfa Llywodraeth Cymru/Welsh Government Building,
Rhodfa Padarn, Llanbadarn Fawr, Aberystwyth SY23 3UR

Er sylw / For the attention of: Robin Wynne Williams,
The Gwalia,
Ithon Road,
Llandrindod Wells,
Powys,
LD1 6AA.

Annwyl / Dear Robin Wynne Williams,

RE: Scoping opinion under Regulation 13 of the EIA (Wales) regulations 2016 for construction and operation of Energy Recovery Facility (ERF) at Buttington Quarry, Buttington, Welshpool, Powys (SJ263098).

Thank you for referring the above proposal for a scoping opinion, which we received on 08/02/2017. NRW has reviewed the information provided in the 'Request for Scoping Opinion' document (SLR Ref: 407.05577.00001 draft v3, February 2017) and the associated plans (BQ 2/1: Site Location Plan, BQ 2/2: Site Plan, Conceptual Future Masterplan for Buttington Quarry (Bright and Associates).

Please note that our comments are without prejudice to any comments we may wish to make when consulted on any subsequent planning applications or on the submission of a more detailed scoping report or the full Environmental Statement. At the time of any planning application there may be new information available which we will need to take into account in making a formal response to the planning authority.

These comments include those matters NRW consider will need to be taken into consideration ad applied to the Environment Impact Assessment (EIA) and the resulting Environmental Statement (ES).

Protected Sites
The site plan submitted (titled 'Conceptual future masterplan for Buttington Quarry to demonstrate location of proposed ERF within the wider site uses') shows that the Gwaith Brics Buttington Brickworks Site of Special Scientific Interest (SSSI) falls within the proposal boundary. The protected site is acknowledged by the proposal plan, and states that the area will remain undeveloped and that interpretation boards and access to the site will be provided. The details of the interpretation boards and access must be submitted as part of the full application.

Any planning application should include details of how access to the Buttington Brickworks SSSI, which is located within the existing quarry area, will be maintained as part of the proposed development.

The buildings should not be located close to the quarry faces where they could obscure or prevent access to the exposed geological strata. Also, the faces of the geological interest should be protected during the construction phase and not damaged by the construction of screening embankments and new site drainage facilities.

Should any advice on the protected site be required, please contact NRW.

Any formal planning submission would need to demonstrate that the proposal will not be likely to result in a significant effect on a European site, either alone or in combination with other plans or projects.

We note that the 'Request for Scoping Opinion' document identifies that lay-down areas for the temporary storage of site equipment and materials are to be provided under Permitted Development Rights. The applicant should be aware that should these lay down areas be located within the protected site area they will need consent from NRW. We request that details for the proposed lay down areas are submitted to NRW at the earliest convenience so that we can provide comment on any likely impact on the protected site area and confirm if consent is required from NRW.

Geoscience

We note that Section 9 'Water Environment' of the 'Request for Scoping Opinion' document includes the baseline survey details of geology and drainage. It also details the general guidance for pollution prevention which will be relevant for the development.

We note that the ERF will be in the bottom of an existing quarry. The drainage strategy should include details of any dewatering pumping that is required to maintain a water table below the quarry void especially during the winter months or heavy rainfall.

Please note that any groundwater abstraction over 20 m3/day will require a Water Resource Licence to abstract the groundwater – contact our Permitting Team for further information.

Protected Species

Any planning application will need to consider the impact of the proposal on protected species and demonstrate that the proposal will not impact on the Favourable Conservation Status of European and Nationally protected species.

We note that chapter 8 of the 'Request for a Scoping Opinion' document provides details of the ecological surveys that are to be undertaken. We are in agreement with the chosen approach and recommend that all national, regional and local biodiversity issues are adequately considered, particularly those habitats and species listed in the relevant Local Biodiversity Action Plan and under Section 7 of Part 1 of the Environment Act, 2016.

The site must be comprehensively assessed for its potential to support protected species such as (but not exclusive of) bats, great crested newts, otters, badgers, water voles, dormice, birds and reptiles.

We would expect the developer to contact the relevant Local Records Centre and other organisations such as the local Wildlife Trust and the RSPB, for biological information/records relevant to the site and its surrounds.

We hold multiple records of active badger setts on site, though mainly within the woodland adjacent to the proposal and under ownership of the quarry. We are also aware of bat roosts within 500m of the proposal. We therefore advise that comprehensive surveys must be carried out to assess if and to what extent bats and badgers will be affected by the proposal.

Surveys must be undertaken by qualified, experienced and where necessary, licensed surveyors in accordance with published guidance, where this exists, and best practice. If the legal protection afforded to bats, badgers and any other protected species found to be present is likely to be compromised by the proposed development, full details of mitigation and/or compensation schemes along with Reasonable Avoidance Measures that are to be implemented should be provided in the Environment Statement .

The applicant should be aware that the development may only proceed under derogation licence should surveys confirm presence of European Protected Species.

Air Quality

We note that chapter 5 of the 'Request for a Scoping Opinion' document provides details of the assessment that will be undertaken in respect of the potential effect of the development on air quality. NRW will comment on any likely significant effects of the development on protected sites in respect to air quality impacts.

We have noted that the applicant will be using the EA H1 annex F air emissions guidance to assess the impacts from aerial emissions. This is the most appropriate guidance to use. We acknowledge and agree with the AQ scope outlined in this Chapter.

Construction Environmental Management Plan (CEMP)

We note that the submission confirms that a Construction Environmental Management Plan is to be prepared as well as a Site Waste Management Plan (SWMP).

We will require a comprehensive and site specific CEMP and SWMP to be produced in support of the ES and address all relevant environmental issues. Details shall include strategies relating to the management of soil, silt and materials and full details of pollution prevention, pollution incident response plan and waste management plan.

The submission should refer to and incorporate best practice to ensure environmental safeguards are in place.

All waste arising needs to comply with the Environmental Permitting Regulations 2016.
NRW require waste arising from the works to be disposed or recycled at a suitably permitted site. Waste movements must show duty of care under Section 34 of EPA '90. All waste carriers must be upper tier registered.

Environmental Permitting Regulation 2016

Please note that the development will require a permit under the Environmental Permitting Regulations 2016.

We recommend that the planning application and permit application is submitted in parallel. This will also allow any potential issues to be resolved together for both applications. All necessary NRW consents, or exemptions must be obtained prior to works progressing on site.

We recommend that the applicant discuss the permit application with the local NRW officer as soon as possible in order to scope the assessment requirements. The officer can be contacted by phone on 0300 065 3000 or by email at enquiries@naturalresourceswales.gov.uk

The applicant should be aware that a permit may not be granted. Additional guidance on 'Environmental Permitting' can be accessed by using the following link;
https://www.gov.uk/environmental-permit-check-if-you-need-one.

Foul Drainage

Government policy states that, where practicable, foul drainage should be discharged to the mains sewer. Where this is not possible and private sewage treatment / disposal facilities are utilised, they must be installed and maintained in accordance with British Standard 6297 and Approved Document H of the Building Regulations 2000. You should also have regard to Welsh Office Circular 10/99 in respect of planning requirements for non mains sewerage.

The written consent of NRW or registration for exemption by the developer will be required for any discharge e.g. foul drainage to a watercourse/ditch etc, from the site and may also be required for certain categories of discharges to land. All necessary NRW consents, or exemptions must be obtained prior to works progressing on site.

The applicant will need to apply for a Permit or Exemption, if they wish to discharge anything apart from uncontaminated surface water to a watercourse/ditch. They may also need to apply for a Permit from our National Permitting Team to allow certain discharges into ground. They must obtain any necessary Permit prior to works starting on site. The permitting process is a separate process to planning, and the applicants are advised the granting of planning permission does not guarantee that a permit will be granted.

The Welsh Government has also advised that all septic tanks and small sewage treatment plant discharges in Wales will need to be registered. More information, including a step by step bilingual guide to registering, is available on our website at the following link https://naturalresources.wales/apply-for-a-permit/water-discharges/register-your-septic-tank-package-sewage-treatment-plant/?lang=en.

Please do not hesitate to contact us if you require further information or clarification on any of the above.

Our comments above only relate specifically to matters that are included on our checklist "Natural Resources Wales and Planning Consultations" (March 2015) which is published on our website: (https://naturalresources.wales/planning-and-development/planning-and-development/?lang=en). We have not considered potential effects on other matters and do not rule out the potential for the proposed development to affect other interests, including environmental interests of local importance. The applicant should be advised that, in addition to planning permission, it is their responsibility to ensure that they secure all other permits/consents relevant to their development.

Yn gywir / Yours sincerely

Geraint Blayney

Development Planning Advisor
Dealu uniongyrchol/Direct dial: 03000 65 4680
Ebost uniongyrchol/Direct email: geraint.blayney@cyfoethnaturiolcymru.gov.uk

Williams Robin Wynne (Rh-CTGC)

Subject: FW: Buttington Quarry - Proposals for an ERF

From: Peter Morris (CSP - Regeneration and Corporate Property) [mailto:peter.morris@powys.gov.uk]
Sent: 16 March 2017 10:42
To: Williams Robin Wynne (Rh-CTGC)
Cc: Gwilym Davies (CSP - Development Control)
Subject: RE: Buttington Quarry - Proposals for an ERF

Robin,

Thanks for the email. Little bit busy with the LDP – hearing sessions are coming.

Sorry for not replying sooner.

I've had a very quick look at the policy section which I assume is what you needed my input on – if its something else, pl say.

My quick comments:

Planning Policy Wales – its now edition 9, Nov 2016. Scoping report refers to edition 8.

LDP section – Powys LDP is in the Examination in Public Stage with hearings commencing on the 28th March. I would expect us to be consulting on Matters Arising Changes to the LDP in late summer and with luck we should have the Inspector's report either late 2017 or early 2018. The weight to be attached to the LDP is limited at the moment because we have not got the certainty of the Inspector's Report (in line with PPW).

Hope that's what you need, but if its more, pl. say.

Thanks,
Peter

CYNGOR SIR ***POWYS*** COUNTY COUNCIL

GWASANAETHAU CEFN GWLAD
COUNTRYSIDE SERVICES

Y GWALIA, FFORDD IEITHON, LLANDRINDOD /
GWALIA, ITHON ROAD LLANDRINDOD WELLS, POWYS, LD1 6AA

From : Calum Carr
Countryside Services
The Gwalia

To : Robin Wynne Williams
Planning Services
The Gwalia

Dear Robin

Re: SC2017 0002 Scoping Report Buttington Quarry

Date / Dyddiad: 6 March 2017

Thank you for your consultation, received 9th February 2017, concerning the proposed development of Buttington Quarry.

Countryside Services would like to point out that a public footpath abuts the north eastern edge of the site. We note that whilst the proposal would not directly affect the footpath, associated landscaping works may affect it. Therefore we would make clear that development over, or illegal interference with, a public right of way is an offence and enforcement action will be taken against a developer who ignores the presence of affected public rights of way.

It is strongly recommended that the applicant checks their proposals against the Definitive Map, which is the legal record of the location and status of public rights of way, and give full consideration to redesigning the proposed development so that it does not obstruct the public right of way.

The Definitive Map is held in the Council's Gwalia Offices, Ithon Road, Llandrindod Wells, and can be viewed by appointment.

If redesigning the layout of the development is not a possible option, the applicant will need to apply for a legal diversion (Public Path Order) of the public right of way affected. However, this is a complex and lengthy legal procedure, which takes a minimum of six months to process and costs at least £2,000. The County Council is not obliged to make a diversion order and success of a Public Path Order cannot be guaranteed.

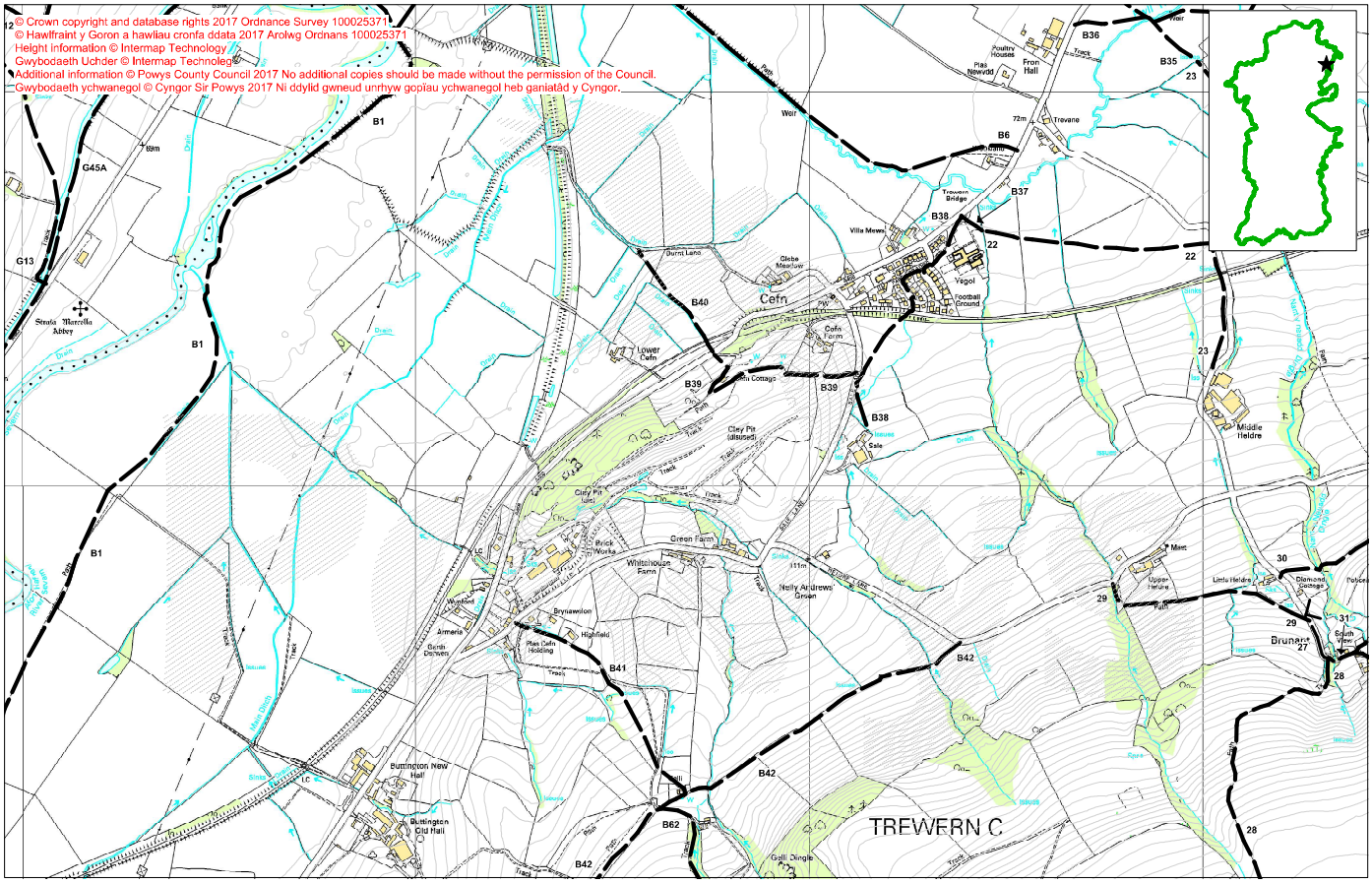
The Council will also expect any new or diverted routes to be created to a minimum width and of a suitable surface, at the developer's expense.

Development over, or illegal interference with, a public right of way before a diversion order application has been fully processed, is a criminal offence and enforcement action will be taken against a developer who ignores the presence of affected public rights of way.

It is expected that all development proposals will be in-line with the guidance set out in the Powys County Council's '*Rights of Way and Development - A Practitioners Guide*', available from Countryside or Planning Services' upon request or on-line at
http://www.powys.gov.uk/index.php?id=1756&L=0

For more information and an application form for a Public Path Order please contact the Rights of Way Officer, Sian Barnes (01597 827595)
sian.barnes@powys.gov.uk

Calum Carr
Gwasanaethau Cefn Gwlad
Countryside Services



Cyngor Sir Powys County Council

Public Footpath B39 Trewern Community

Printed by: calumc Date: 30/03/2017

Adran yr Economi, Gwyddoniaeth a Thrafnidiaeth
Department for Economy, Science and Transport

Llywodraeth Cymru
Welsh Government

Robin Wynne Williams
Development Control
Powys County Council
The Gwalia
Ithon Road
Llandrindod Wells
Powys

Eich cyf . Your ref **SC/2017/0002**
Ein cyf . Our ref

1 March 2017

Dear Mr Williams

Buttington Quarry , Buttington, Welshpool, Powys
Scoping opinion under regulation 13 of the EIA (Wales) regulations 2016 for construction and operation of Energy Recovery Facility (ERF)

I refer to your consultation of 8 February 2017 regarding the above application and advise that the Welsh Government as highway authority for the A458 trunk road is in agreement with the Scoping report in relation to Highway and transport issues.

If you have any further queries, please forward to the following Welsh Government Mailbox NorthandMidWalesDevelopmentControlMailbox@Wales.GSI.Gov.UK.

Yours sincerely

Alun Wyn Jones

Sarn Mynach
Cyffordd Llandudno
LL31 9RZ

Sarn Mynach
Llandudno Junction
LL31 9RZ

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Appendix 3

Health Impact Assessment Screening Record Sheet

ECL Ref: ECL.001.01.02/RFS

Issue: 1
August 2018

Screening Record Sheet	Determinants of Health		Vulnerable Groups / Distribution
	Lifestyles		
	(Positive) +	(Negative) -	
Diet			
Physical Activity			
Use of Alcohol, Cigarettes, Non-Prescribed Drugs			
Sexual Activity			
Other Risk-Taking Activity			
Others?			
	Social and Community Influences on Health		
	(Positive) +	(Negative) -	
Family Organisation & Roles			
Citizen Power & Influences			
Social Support & Social Networks			
Neighbourliness			
Sense of Belonging			
Local Pride			
Divisions in Community			
Social Isolation			
Peer Pressure			
Community Identity			
Cultural & Spiritual Ethos			
Racism			
Other Social Exclusion			
Others?			

Screening Record Sheet	Determinants of Health		Vulnerable Groups / Distribution
	Living / Environmental Conditions Affecting Health		
	(Positive) +	(Negative) -	
Built Environment			
Neighbourhood Design			
Housing			
Indoor Environment			
Noise			
Air & Water Quality			
Attractiveness of Area			
Green Space			
Community Safety			
Smell / Odour			
Waste Disposal			
Road Hazards			
Injury Hazards			
Quality & Safety of Play Area			
Others?			
	Economic Conditions Affecting Health		
	(Positive) +	(Negative) -	
Unemployment			
Income			
Economic Inactivity			
Type of Employment			
Workplace Conditions			
Others?			

Screening Record Sheet	Determinants of Health		Vulnerable Groups / Distribution
	Access and Quality of Services		
	(Positive) +	**(Negative) -**	
Medical Services			
Other Caring Services			
Careers Advice			
Shops & Commercial Services			
Public Amenities			
Transport Including Parking			
Education & Training			
Information Technology			
Others?			
	Macro-Economic, Environmental and Sustainability Factors		
	(Positive) +	**(Negative) -**	
Government Policies			
Gross Domestic Product			
Economic Development			
Biological Diversity			
Climate			
Others?			

The above lists of areas of discussion and consideration are not definitive and can be expanded / amended depending on local circumstances, concerns or considerations.

Some information will be obtained through elements of the EIA, such as Transport Statement, Air Quality Assessment and other environmental assessments. Health based information will be obtained through the Wales Indices of Multiple Deprivation (WIMD) and via the Wales Health Observatory datasets.

Particular local concerns or opportunities will try to be gathered through the local public consultation and engagement process and requesting participation from local residents, councillors, businesses, and relevant local authority departments. Wider stakeholder engagement may be required either as part of the Screening exercise, or through the formal HIA process.

Your
Multi
Disciplinary
Consultancy

The Planning Inspectorate
Yr Arolygiaeth Gynllunio

DNS: EIA Scoping Direction

3201953: Buttington Quarry, Proposed Energy Recovery Facility

03/10/2018

Contents

Prepared by:

Kym Scott BSc, MSc
Robert Sparey MPlan
Chris Sweet MPlan

'Scoping' is the process of determining what information must be included in the Environmental Statement for a particular project.

This Scoping Direction is provided on the basis of the information submitted to the Planning Inspectorate on 03 August 2018, in addition to consultation responses received. The advice does not prejudice any recommendation made by an Inspector or any decision made by the Welsh Ministers in relation to the development, and does not preclude the Inspector from subsequently requiring further information to be submitted with the subsequent Development of National Significance (DNS) application under Regulation 24 of The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 ("The 2017 Regulations").

1. Introduction

The Planning Inspectorate received a request by Broad Energy (Wales) Limited under regulation 33 of the 2017 Regulations for a Scoping Direction in relation to a proposed development for:

- An Energy Recovery Facility (ERF) generating approx. 13MW of electricity through treatment of 150,000 tonnes / annum of residential, commercial & industrial wastes.

The request was accompanied by a Scoping Report (SR) [Scoping Direction Request - Buttington Quarry, ERF - ECL.001.01.02RFS] that outlines the proposed scope of the Environmental Statement (ES) for the proposed development. The Inspectorate is satisfied that the request meets the requirements of regulation 33(2) of the 2017 Regulations.

The North Wales Minerals and Waste Planning Service on behalf of Powys County Council (PCC) provided pre-application advice on a previous version of the proposal on 27 October 2015. At that time the capacity was quoted as "up to 100,000 tonnes per annum of residual municipal solid wastes and commercial and industrial wastes".

Appendix 2 of the SR is a Scoping Opinion, dated 7 April 2017, which was previously prepared in connection to this proposal by the North Wales Minerals and Waste Planning Service on behalf of PCC. At that time the scale was still in the order of when the pre-application advice was given ("generating around 9MW of low carbon and renewable energy through the thermal treatment of up to 100,000 tonnes per annum of residual wastes"), so PCC would have been the determining authority. In some instances, consultees have opted to rely on the content of their previous consultation responses to PCC when responding to the Inspectorate's consultation in relation to this Screening Direction. The Scoping Opinion Request that was sent to PCC in 2017 and the consultation responses received were all submitted to the Planning Inspectorate for information in September 2018.

This Direction has taken into account the requirements of the 2017 Regulations, Welsh Office Circular 11/99: Environmental Impact Assessment, as well as current best practice towards preparation of an ES. In accordance with the 2017 Regulations the Inspectorate has consulted on the SR and the responses received from the consultation bodies have been taken into account in adopting this Direction (see Section 5 below).

The Inspectorate is authorised to issue this Scoping Direction on behalf of the Welsh Ministers.

2. Site Description

The site is shown on Drawing BUT-RCA-00-ZZ-DR-0203-Overall_Arrangement_Plan in Appendix 1 of the SR. A site description is given in section 4.3 of the SR.

3. Site History

The site history is detailed in section 4.3 of the SR, which details previous and extant quarrying operation on site, and confirms that part of the quarry is allocated in the Local Development Plan for the area for B1, B2 and B8 employment uses.

4. Proposed Development

The proposed development is described in section 4.1 and section 4.6 (Development Layout) of the SR.

Section 4.5 of the SR describes the construction phase and the extent of the land that would be used as a temporary 'lay down' area during construction.

The scope of the ES should include all elements of the development as identified in the SR, both permanent and temporary, and this Scoping Direction is written on that basis.

5. Consultation

In line with Regulation 33(7) of the 2017 Regulations and Schedule 5 of the Developments of National Significance (Procedure) (Wales) Order 2016, before making this Scoping Direction, the Planning Inspectorate consulted the following bodies:

- Relevant Local Authority: Powys County Council (PCC)
- Natural Resources Wales (NRW)
- Cadw
- Clwyd & Powys Archaeological Trust (CPAT)
- Welsh Government: Department for Economy and Infrastructure (Transport)

Responses received are appended to this Direction. The SR states that the applicant intends to continue consultation with statutory and non-statutory consultees for the duration of the EIA process.

Consultee	Role	PDF Page Number
Powys County Council	Statutory Consultee: Relevant Local Planning Authority	14 – 18
Natural Resources Wales	Statutory Consultee	19 – 23
The Welsh Ministers (Cadw)	Statutory Consultee: Historic Environment	24 – 27
The Welsh Ministers (Welsh government: Department for Economy and Infrastructure [Transport])	Statutory Consultee: Development likely to affect a trunk road.	28
Clwyd & Powys Archaeological Trust	Non-Statutory Consultee	29

The legislative requirements for publicity in relation to the ES are set out by Part 5 of The 2017 Regulations. Specific examples of where the applicant may benefit by liaising over

details of methodology may be cited under the relevant topics later in the Screening Direction.

The ES submitted by the applicant should demonstrate consideration of the points raised by the consultation bodies. It is recommended that a table is provided in the ES summarising the scoping responses from the consultation bodies and how they are, or are not, addressed in the ES. Similarly, the ES should demonstrate how it has taken into account this Scoping Direction.

6. Environmental Impact Assessment Approach

The Inspectorate is generally supportive of the approach outlined in the SR.

The ES should include a chapter setting out the overarching methodology for the assessment, which clearly distinguishes effects that are 'significant' from 'non-significant' effects. Any departure from that methodology should be described in individual aspect assessment chapters. Where professional judgement has been applied this should be clearly stated. The ES topic chapters should report on any data limitations, key assumptions and difficulties encountered in establishing the baseline environment and undertaking the assessment of environmental effects.

6.1 Environmental Statement Structure

The Applicants should satisfy themselves that the ES includes all the information outlined in Schedule 4 of the 2017 Regulations. In addition, the Applicant should ensure that the Non-Technical Summary includes a summary of all the information included in Schedule 4. Consider a structure that allows the author of the ES and the appointed Inspector and Decision Maker to readily satisfy themselves that the ES contains all the information specified Regulation 17 and Schedule 4 of the 2017 Regulations. Cross refer to the requirements in the relevant sections of the ES, and include a summary after the Contents page that lays out all the requirements from the Regulations and what sections of the ES they are fulfilled by.

As the assessments are made, consideration should be given to whether standalone topic chapters would be necessary for topics that are currently proposed to be considered as part of other chapters, particularly if it is apparent that there are significant effects and a large amount of information for a particular topic.

6.2 Baseline

Schedule 4 of the 2017 Regulations states that the 'baseline scenario' is "A description of the relevant aspects of the *current* state of the environment" (my emphasis). Therefore the Planning Inspectorate disagrees with the suggestion in section 13.4.2 that the baseline for the ES should be taken as a level, fully prepared site, unless that is the actual state of the site at the time of submission of the application. The baseline should reflect actual current conditions at that time. The same principle applies to the access to the site; although this is consented through an extant planning permission, it has not yet been implemented, and if that remains the case at the time the application is submitted, it should therefore be reflected in the ES. The ES should describe what works and impacts would be involved in preparing the site, even if that is covered under a separate, extant planning permission. The applicant may wish to clarify which aspects are covered by that other consent, but the impacts should be covered in the ES.

6.3 Reasonable Alternatives

Section 3 of the SR deals with alternatives considered in relation to the Proposed Development. In line with the requirements of Regulation 17 and Schedule 4 to the 2017 Regulations, any reasonable alternatives studied by the applicant should be presented in the ES. The reasons behind the selection of the chosen option should also be provided in the ES, including where environmental effects have informed the choices made.

It is worth bearing in mind that under the Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations") unless it can be clearly shown to the Welsh Ministers that the project would have no adverse effect on the integrity of any designated sites, it would have to be shown that there is no feasible alternative solution (see advice note from IEMA). Further advice regarding the Habitats Regulations is provided in the final chapter of this Screening Direction.

The SR identifies that the applicant intends to address the need for the development in the accompanying Waste Planning Statement. The Planning Inspectorate is supportive of this approach; if necessary this can be cross referenced in the ES.

6.4 Currency of Environmental Information

For all environmental aspects, the Applicant should ensure that any survey data is as up to date as possible and clearly set out in the ES the timing and nature of the data on which the assessment has been based. Any study area applied to the assessments should be clearly defined. The impacts of construction, operation and decommissioning activities should be considered as part of the assessment where these could give rise to significant environmental effects. Consideration should be given to relevant legislation, planning policies, and applicable best practice guidance documents throughout the ES.

The ES should include a chapter setting out the overarching methodology for the assessment, which clearly distinguishes effects that are 'significant' from 'non-significant' effects. Any departure from that methodology should be described in individual aspect assessment chapters. Where professional judgement has been applied this should be clearly stated.

The ES topic chapters should report on any data limitations, key assumptions and difficulties encountered in establishing the baseline environment and undertaking the assessment of environmental effects.

6.5 Cumulative Effects

Based on the information set out in the SR, the approach to the assessment of cumulative impacts is considered largely appropriate. The intention to carry out assessment in line with relevant professional guidance is acknowledged and recommended.

The criteria for inclusion set out at paragraph 17.2.2 of the SR may be appropriate in relation to certain topic areas within the ES, but when seeking to exclude other development from further assessment, the Applicant should adopt a nuanced approach to exclusion and inclusion criteria. Effects deemed individually not significant from the assessment, could cumulatively be significant, so inclusion criteria based on the most likely significant effects from this type of development may prove helpful when identifying what other developments should be accounted for. The criteria may vary from topic to topic.

All of the other development considered should be documented and the reasons for inclusion or exclusion should be clearly stated. Professional judgement should be used to avoid excluding other development that is close to threshold limits but has characteristics likely to give rise to a significant effect; or could give rise to a cumulative effect by virtue of its proximity to the proposed development. Similarly, professional judgement should be applied to other development that exceeds thresholds but may not give rise to discernible effects. The process of refinement should be undertaken in consultation with the relevant LPA and other consultees, where appropriate.

As the proposed development would be located on an operational quarry site with other businesses, the applicant will need to establish a 'worst case scenario' for assessment which takes account of existing and consented development at the site. Given that the site is allocated in the Powys LDP for further employment uses, best practice suggests that an allowance should be made for 'reasonably foreseeable' traffic movements arising from future development. However, this is only likely to be possible where some degree of certainty exists and it is acknowledged that the applicant will need to apply professional judgement when establishing criteria for assessment.

As noted above, the baseline conditions for the EIA should not exclude site preparation works that are necessary to facilitate the proposed development.

Although intended for larger schemes, the Planning Inspectorate's NSIP Advice Note 17: Cumulative Effects Assessment sets out a staged process for assessing cumulative impacts that may prove useful to the Applicant.

6.6 Mitigation

Any mitigation relied upon for the purposes of the assessment should be explained in detail within the ES. The likely efficacy of the mitigation proposed should be explained with reference to residual effects. The ES should provide reference to how the delivery of measures proposed to prevent / minimise adverse effects is to be secured (through legal requirements or other suitably robust methods) and whether relevant consultees agree on the adequacy of the measures proposed.

6.7 Transboundary Effects

Schedule 4 Part 5 of the 2017 Regulations requires a description of the likely significant transboundary effects to be provided in an ES. The SR has not indicated whether the Proposed Development is likely to have significant impacts on another European Economic Area (EEA) State. The ES should address this matter as appropriate.

7. Environmental Impact Assessment Topics

This section contains the Inspectorate's specific comments on the scope and level of detail of information to be provided in the applicant's ES. Environmental topics or features are not scoped out unless specifically addressed and justified by the applicant, and confirmed as being scoped out by the Inspectorate. In accordance with Regulation 17(4)(c) of the 2017 Regulations the ES should be based on this Scoping Direction in so far as the Proposed Development remains materially the same as the Proposed Development described in the applicant's SR.

The Inspectorate has set out in this Direction where it has / has not agreed to scope out matters on the basis of the information available at this time. The Inspectorate is content that the receipt of a Scoping Direction should not prevent the applicant from subsequently agreeing with the relevant consultees to scope such matters out of the ES, where further evidence has been provided to justify this approach. However, in order to demonstrate that the matters have been appropriately addressed, the ES should explain the reasoning for scoping them out and justify the approach taken.

The Inspectorate is supportive of the clear structure set out in Table 2 of the SR for the Topic / Key Environmental Aspects chapters of the ES.

7.1 Air Quality

The Applicant should ensure that a thorough assessment of both construction and operational impacts on air quality is included in the ES. Subject to the comments below, the approach to air quality assessment set out in the SR is largely considered appropriate; the approach to be taken, basing the assessment on the 'worst case scenario' is recommended.

Based on NRW's consultation response the Inspectorate directs that the applicant should include the Moel y Golfa SSSI in the air quality assessment.

To note, the EA H1 Annex F Air Emissions guidance, although still the appropriate guidance, is now contained in Air Emissions Risk Assessment for your Environmental Permit, held on GOV.UK.

Powys CC has provided the latest Air Quality Progress Report for Powys, for the Applicant's attention (Appendix 2 to this Screening Direction). The Council's Environmental Health Officer (EHO) has pointed out that the local diffusion tube network only covers the Newtown area and recommends that it is therefore used in conjunction with local SLR monitoring data. The Inspectorate directs that this approach be adopted.

The EHO also raises a concern regarding point source emissions of odour, with particular reference waste to be stored prior to combustion. The Applicant should take account of this and ensure that this issue is thoroughly addressed and the potential need for odour impact assessment considered.

7.2 Health Impact Assessment

Having considered the information contained within the SR and the nature of the Proposed Development, it is agreed that a Health Impact Assessment (HIA) should be provided as part of the ES. The Applicant identifies the Wales Indices of Multiple Deprivation (WIMD) and the Wales Health Observatory datasets as sources of health based information in order to inform the HIA. In particular, the toolkit and guidance developed by the Wales Health Impact Assessment Support Unit, which should ensure a holistic approach to assessment. The use of these resources is endorsed by the Inspectorate.

Continued consultation throughout the preparation of the HIA with relevant bodies as set out in the SR is advised. The Applicant also identifies other assessments produced as part of the ES will inform the HIA, such as the Transport Statement and Air Quality Assessment. The Inspectorate is supportive of this approach; the HIA helping to pull together the human health considerations that may arise in other sections of the ES.

The Inspectorate does not have any specific advice on the questions raised at paragraph 7.5.1 of the SR. The applicant is advised to consult with PCC regarding those issues and with a view to establishing whether the Council holds further evidence or can suggest relevant local sources of knowledge that might be used to inform this section of the ES.

Subject to further refinement and recommendations received from consultees, the general approach to HIA is acceptable. The Applicant should ensure that the ES addresses any significant effects on human health, in light of changes in the 2017 Regulations.

7.3 Transportation, Traffic and Highways

The Planning Inspectorate is in broad agreement with the contents of the SR in relation to transport issues. Consideration of both construction and operational traffic should be included in the Transport Assessment.

The response received from WG Transport advises that site access will require further assessment to assess suitability in line with the Design Manual for Roads and Bridges (DMRB). Their response also advises the study area is extended to the West to review all arms of the A483, and should include any permitted developments along the route to the development site, and adjacent to the A483 Welshpool Bypass. WG Transport also recommends that a junction capacity is required. The Applicant is hereby directed to undertake these steps when preparing the ES.

In addition to comments from WG Transport, the Applicant should note the response for PCC. The Council's view is that the local highway network is substandard and it advises that movements to and from the site should be undertaken via trunk roads. The applicant will need to take a view on this and factor anticipated routes into the Transport Assessment. The approach taken should be fully explained and justified in the ES.

7.4 Landscape and Visual Impact

In its scoping consultation response, Cadw suggests additional viewpoints to be included in the LVIA when cross-referencing from the CHA and advises on how the information should be presented in the ES. The Clwyd Powys Archaeological Trust (CPAT) also suggests an additional viewpoint. The Inspectorate directs that the applicant incorporates viewpoints in the LVIA as follows (exact locations to be agreed with the relevant consultee):

- Offa's Dyke (Scheduled Monument MG034)
- Offa's Dyke (Scheduled Monument MG224)
- Strata Marcella Abbey (Scheduled Monument MG120)
- The Breidden Hillfort

The applicant should also heed the advice from Cadw regarding Viewpoints 8 and 11 in Table 8 of the SR.

The SR confirms that the proposed stack height is not yet finalised. If the outcome of the air quality study determines that the stack height should exceed the 70 m currently proposed for the LVIA, and the development proposal is amended to reflect that increase, then the applicant should ensure that the LVIA reflects the amended proposal.

The SR also raises the issue of the proximity of this proposal to the border between England and Wales. The applicant should consider consulting the neighbouring planning authority in England on the proposed approach to the LVIA; if this is not considered to be a necessary step, a reasoned justification should be provided in the ES.

7.5 Ecology

In the SR, the Applicant identifies a number of current ecological assessments that have been carried out that will inform the Ecology section of the ES, and these seem largely appropriate. The Applicant should ensure that the baseline data for the assessments conducted are robust, and provide the data necessary to assess any likely significant effects arising from the Proposed Development.

It is noted that the Applicant intends to submit a Habitats Regulations Report (HRA) in order to address the requirements of the Conservation of Habitats and Species Regulations 2017.

The applicant is advised to continue to liaise with NRW and PCC's ecologist as the ES is being prepared.

7.6 Water Environment

The statutory SuDS regime comes into force in Wales on 7 January 2019. While this is a separate legislative regime from the planning regime, there may be practical considerations for the design of the scheme that should be reflected in the ES. If the applicant has any questions regarding the regime they are advised to contact the Water Policy section of the Environment and Rural Affairs division of Welsh Government.

As the site is located entirely within Flood Zone A, there is no requirement for a Flood Consequences Assessment.

NRW have provided detailed feedback on this section of the SR, and the applicant is advised to continue to liaise with NRW on this section of the ES as work progresses. NRW advise that no enough information has been provided to screen out the requirement for a Water Framework Directive Assessment at this stage.

The Inspectorate recommends that the applicants liaise closely with NRW and PCC as this section of the ES is progressed.

7.7 Historic Environment (including Archaeology)

The proposed search areas for archaeology and designated historic assets (1km and 5km respectively) are considered appropriate. The approach and methodology for Cultural Heritage Assessment (CHA) are considered largely appropriate, subject to the following points.

At paragraph 12.2.5 the SR refers to guidance published by Historic England. However, the relevant guidance for Wales in this respect is Welsh Government's best-practice guidance Setting of Historic Assets in Wales (2017). This guidance should be followed by the applicant when producing the CHA.

The section of the SR that deals with methodology (12.3) states that guidance contained in the Design Manual for Roads and Bridges, Volume II, Section 3, Part 2 (2007) will be used for the purposes of assessing the sensitivity of heritage assets. However, as indicated by Cadw, that guidance is not appropriate for use in relation to designated historic assets. The applicant should instead follow the guidance contained in Welsh Government's Setting of Historic Assets in Wales (2017) when preparing their CHA.

Cadw also draws attention to the fact that, contrary to paragraph 12.4.5 of the SR, there are in fact two Registered Historic Parks and Gardens within 3km of the site, details of which are contained in its response. The applicant should include these assets in their assessment and should take account of the Welsh Government's Guidance Managing Change to Registered Historic Parks & Gardens in Wales (2017) when doing so.

CPAT, in its response, suggests a number of sources for the proposed desk-based assessment and advises that it should be supplemented by walkover survey of the site and associated areas. This advice is endorsed and the applicant is advised to take account of it when preparing their assessment.

The approach to consultation set out at paragraph 12.2.6 of the SR is acknowledged and recommended. The CPAT should be included in consultation, where appropriate.

As referenced above, both Cadw and CPAT suggested additional viewpoints for incorporation into the LVIA. In line with the advice from Cadw, the applicant should ensure that relevant viewpoints are also dealt with in the Historic Environment / Cultural Heritage section of the ES.

7.8 Site Condition / Contaminated Land

PCC has relied on its earlier Scoping response (provided at LPA Scoping Opinion stage in February 2017) regarding the need for the ES to address contaminated land. The Inspectorate agrees with that position, and the topic is Scoped In. However, PCC have not given any comments on the matters set out in the SR submitted in relation to this SR. The applicant is advised to continue to liaise with NRW and PCC over this section of the ES. If it is considered by the relevant consultees that a desk based assessment is appropriate, a justification should be included in the ES.

7.9 Socio-Economic

Based on the information provided in the SR, the approach to the assessment of socio economic impacts is considered appropriate. The applicant should consider consulting PCC with regard to impacts on land use and recreation within the LSA.

7.10 Noise

PCC have confirmed that they will continue to liaise with the applicant's acoustic consultant over the approach to this section.

In line with the SR and PCC's response, the Inspectorate directs that vibration is Scoped Out of the ES.

7.11 Geotechnical and Materials Management

As mentioned in section 6 of this Direction under 'Baseline', the ES should include the impacts of preparatory works. As the SR identifies, the quarry floor requires stabilisation to create a level and stable plateau for construction. Although it may be the case that these work are permitted via extant planning permissions, they still constitute a part of this project, and as described above, the ES should capture the current baseline of on-site conditions and clearly describe the impacts involved in bringing the site to a level, fully prepared state, and then go on to assess the impacts from that point through construction, operation and decommissioning of this proposal. If the works have actually been carried out before the application is submitted, then the ES should confirm that and reflect that baseline.

Comments regarding geotechnical assessment, land contamination and materials management contained within the previous Scoping Opinion issued by PCC in 2017 should be considered by the Applicant in production of the ES. The Applicants should satisfy themselves that geological and material management issues have been adequately addressed as part of the ES, including the mitigation of any possible effects throughout the lifetime of the project. The Inspectorate advises further consultation and refinement with the relevant consultees is necessary to inform the approach to assessment.

8. Other Matters

This section does not constitute part of the Scoping Direction, but addresses other issues related to the proposal.

8.1 Habitats Regulation Assessment

The Conservation of Habitats and Species Regulations 2017 require competent authorities, before granting consent for a plan or project, to carry out an appropriate assessment (AA) in circumstances where the plan or project is likely to have a significant effect on a European site (either alone or in combination with other plans or projects). The competent authority in respect of a DNS application is the relevant Welsh Minister who makes the final decision. It is the Applicant's responsibility to provide sufficient information to the competent authority to enable them to carry out an AA or determine whether an AA is required.

When considering whether or not significant effects are likely, applicants should ensure that their rationale is consistent with the CJEU finding that mitigation measures (referred to in the judgment as measures which are intended to avoid or reduce effects) should be assessed within the framework of an AA and that it is not permissible to take account of measures intended to avoid or reduce the harmful effects of the plan or project on a European site when determining whether an AA is required ('screening'). The screening stage must be undertaken on a precautionary basis without regard to any proposed integrated or additional avoidance or reduction measures. Where the likelihood of significant effects cannot be excluded, on the basis of objective information the competent authority must proceed to carry out an AA to establish whether the plan or project will affect the integrity of the European site, which can include at that stage consideration of the effectiveness of the proposed avoidance or reduction measures.

Where it is effective to cross refer to sections of the ES in the HRA, a clear and consistent approach should be adopted.

The Planning Inspectorate's guidance for Nationally Significant Infrastructure Projects – Advice Note 10: Habitat Regulations Assessment relevant to Nationally Significant Infrastructure Projects may prove useful when considering what information to provide to allow the Welsh Ministers to undertake AA.

Appendix 1: Consultation Responses

Consultee	Role	PDF Page Number
Powys County Council	Statutory Consultee: Relevant Local Planning Authority	14 – 18
Natural Resources Wales	Statutory Consultee	19 – 23
The Welsh Ministers (Cadw)	Statutory Consultee: Historic Environment	24 – 27
The Welsh Ministers (Welsh government: Department for Economy and Infrastructure [Transport])	Statutory Consultee: Development likely to affect a trunk road.	28
Clwyd & Powys Archaeological Trust	Non-Statutory Consultee	29

Appendix 2: Powys County Council 2017 Air Quality Progress Report

From: Williams Robin Wynne (Rh-CTGC) [mailto:robinwynnewilliams@gwynedd.llyw.cymru]
Sent: 11 September 2018 15:32
To: Sparey, Robert
Cc: crews@powys.gov.uk
Subject: FW: 3201953 - EIA Scoping Consultation: Urgent Response Required DNS Energy Recovery facility at Buttington Quarry

Hi Rob,

Would also agree with Daniel's response below.

I would add that the proposed highway access that is to be used has been consented but is not operational. Given the response received from Simon Crew (Highways) and concern re the substandard nature of the surrounding Highway Network. I would draw your attention that other businesses are located on the Buttington site, it is also an operational quarry and it is also designated within the Powys LDP as employment land. What would be the cumulative effects of all these + ERF on the substandard Highway Network, Residential Amenity etc? I think that cumulative and worst case will need to be assessed as part of the EIA process.

I have copied in Simon Crew in case he has further comments to make re highway.

I will chase up Ecology on your behalf.

Kind regards,

Robin

Robin Wynne Williams – BA, MA, MPLAN, MRTPI

Uwch Swyddog Cynllunio Mwynau a Gwastraff
Senior Minerals and Waste Planning Officer

Ar ran Gwasanaeth Cynllunio Mwynau a Gwastraff Gogledd Cymru /
On behalf of the North Wales Minerals and Waste Planning Service

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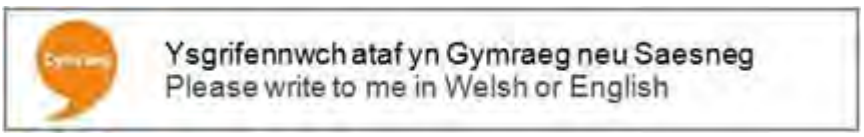

From: Daniel Stykuc (CSP - Environmental Health) <daniel.stykuc1@powys.gov.uk>
Sent: Dydd Mawrth, 11 Medi 2018 14:41
To: dns.wales <dns.wales@pins.gsi.gov.uk>; Planning Services (CSP - Generic) <planning.services@powys.gov.uk>
Cc: Williams Robin Wynne (Rh-CTGC) <robinwynnewilliams@gwynedd.llyw.cymru>; Paul Bufton (CSP - Environmental Health) <paul.bufton@powys.gov.uk>
Subject: RE: 3201953 - EIA Scoping Consultation: Urgent Response Required DNS Energy Recovery facility at Buttington Quarry

Hi Rob,

As far as the aspects being considered fall within the remit of Environmental Health, I can respond as follows.

Air quality

I am satisfied that the method for assessing construction dust is acceptable.

I am satisfied with the method for assessing air quality by comparison to national air quality standards. The latest Air Quality Progress Report (2017) for Powys is attached. Our diffusion tube network only covers the Newtown area so I would recommend that this is used in conjunction with the local SLR monitoring data from 2015.

However, I am not satisfied with the statement at section 6.1.4 that "there will be no point source emissions of odour associated with the development." This may be the case but I will require more information to validate the above statement. I would suggest that if any waste is to be stored prior to the combustion process then there is going to be the potential for odour emissions, which will require quantitative odour impact assessment.

Health Impact Assessment

There are no designated air quality management areas (AQMAs) in Powys. I have no further comments to make regarding the Health Impact Assessment.

Noise

Due to the distance to sensitive receptors I am satisfied that vibration can be scoped out of the noise assessment process.

I am in agreement to liaise with the acoustic consultant with regard to the noise impact assessment process.

Cumulative effects

I agree that it would be more appropriate to use the existing site condition as the baseline position, therefore any works involved in site preparation process will fall within the scope of the ES.

The Planning department is best placed to provide a list of other applications in the area that have the potential to contribute to cumulative effects, however I cannot think of any other relevant applications nearby.

Regards,

Dan Stykuc

Swyddog Iechyd yr Amgylchedd (Gwarchod yr Amgylchedd)
Environmental Health Officer (Environmental Protection)

Gwarchod yr Amgylchedd – Cyngor Sir Powys
Environmental Protection – Powys County Council

01938 551113

daniel.stykuc1@powys.gov.uk

From: Anthony Bullen (CSP - Environmental Health) [mailto:anthony.bullen@powys.gov.uk]
Sent: 28 August 2018 16:16
To: dns.wales
Cc: Williams Robin Wynne (Rh-CTGC)
Subject: Potential DNS Application (Ref: 3201953) Buttington Quarry, Buttington, Welshpool, Powys, SY21 8SZ

Dear Sir/Madam,

RE: TOWN AND COUNTRY PLANNING ACT 1990, THE DEVELOPMENTS OF NATIONAL SIGNIFICANCE (PROCEDURE) (WALES) ORDER 2016, TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT (WALES) REGULATIONS 2017 Potential DNS Application, Site Address: Buttington Quarry, Buttington, Welshpool, Powys, SY21 8SZ Proposed Development: Energy Recovery Facility (ERF) generating approx. 13MW of electricity through treatment of 150,000 tonnes / annum of residential, commercial & industrial wastes.

Please find attached the advice that was given when we were previously consulted in respect of this proposed development.

Regards

Anthony Bullen
Swyddog Tir Llygredig / Contaminated Land Officer

Powys

Cyngor Sir Powys County Council
lechyd yr Amgylchedd / Environmental Health
Neuadd Maldwyn
Ffordd Hafren / Severn Road
Y Trallwng / Welshpool
Powys
SY21 7AS

Tel: 01938 55 1115

Cysylltwch â ni yn Gymraeg neu yn Saesneg. Ni fydd cysylltu yn Gymraeg yn arwain at oedi.
Contact us in Welsh or in English. Contacting in Welsh won't lead to a delay.

Cyngor Sir Powys County Council

Adfywio, Eiddo a Chomisiynu / Regeneration, Property & Commissioning
Gwasanaeth *Iechyd yr Amgylchedd* / Environmental Health Service

M E M O R A N D U M

To: Robin Wynne Williams, Minerals and Waste Planning Officer, North Wales Minerals and Waste Planning Service

From: Anthony Bullen (Contaminated Land Officer), Environmental Health, Neuadd Maldwyn, Welshpool

Date: 22 February 2017

Ref: WK/201627499

Your ref: SC/2017/0002

Subject: **Buttington Quarry, Buttington, Welshpool, Powys Scoping Opinion under regulation 13 of the EIA (Wales) Regulations 2016 for construction and operation of Energy Recovery Facility (ERF).**

In relation to the request for a Scoping Opinion (ref: SC/2017/0002) the following advice is provided for the consideration of North Wales Minerals and Waste Planning Service.

Advice

The proposed application site is associated with an area of former quarrying furthermore, historic ordnance survey (OS) maps identify the presence of areas of unknown filled ground and former manufacturing (clay bricks and tiles) located adjacent to and within the application site boundary.

The historic land uses located adjacent to and within the proposed application site boundary could be potential sources of land contamination that may be a risk to the proposed development.

Therefore, any Environmental Impact Assessment (EIA) produced in support of an application for planning permission could include information on how potential land contamination issues will be investigated, assessed and mitigated.

……

Anthony Bullen
Contaminated Land Officer

Adrian Jervis,
Pennaeth Priffyrdd, Trafnidiaeth ac Ailgylchu (Dros Dro)
Acting Head of Highways, Transport & Recycling

Priffyrdd, Trafnidiaeth & Ailgylchu
Highways, Transport & Recycling
Cyngor Sir Powys County Council
Neuadd y Sir/County Hall
Llandrindod Wells, Powys, LD1 5LG

Planning Inspectorate Wales

Os yn galw gofynnwch am / If calling please ask for:
Enw / Name: Simon Crew
Ffôn / Tel : 01597826663
Ffacs / Fax :
Llythyru electronig / Email : crews@powys.gov.uk
Eich cyf / Your Ref : APP/T6850/A/18/3201953
Ein cyf / Our Ref :
Dyddiad / Date: 02 October 2018

RE: Energy From Waste Facility located at Buttington Quarry, Buttington, Powys

Whilst the Local Highway Authority (County) do not object to the principle of development, we do wish to alert both the applicant and the Planning Inspectorate to the substandard nature of the surrounding County Highway Network. The Highway Authority therefore do not support any HGV movements along the County Highway and advise that all such movements should access to and from the site, from the NMWTRA Trunk Roads.

Yours sincerely,

Simon Crew

For Highways, Transport, and Recycling

Cyfoeth Naturiol Cymru
Natural Resources Wales

Ein cyf/Our ref: CAS-67232-N2D6
Eich cyf/Your ref: 3201953

Dyddiad/Date: 06/09/2018

Ebost/Email: northplanning@cyfoethnaturiolcymru.gov.uk
Ffôn/Phone: 03000 65 4682

Er sylw / For the attention of: Robert Sparey,
Adeilad y Goron,
Parc Cathays,
Caerdydd,
CF10 3NQ

Annwyl / Dear Robert Sparey,

TOWN AND COUNTRY PLANNING ACT 1990
THE DEVELOPMENTS OF NATIONAL SIGNIFICANCE (PROCEDURE) (WALES) ORDER 2016
TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT (WALES) REGULATIONS 2017

Potential DNS Application

Site Address: Buttington Quarry, Buttington, Welshpool, Powys, SY21 8SZ
Proposed Development: Energy Recovery Facility (ERF) generating approx. 13MW of electricity through treatment of 150,000 tonnes / annum of residential, commercial, & industrial wastes.

Thank you for referring the above proposal for a scoping opinion, which we received on 09/08/2018. NRW has reviewed the information provided in the 'Request for Scoping Direction' document (Broad Energy ECL Ref: ECL.001.01.02/RFS Issue 1, August 2018)

Please note that our comments are without prejudice to any comments we may wish to make when consulted on any subsequent planning applications or on the submission of a more detailed scoping report or the full Environmental Statement. At the time of any planning application there may be new information available which we will need to take into account in making a formal response.

These comments include those matters NRW consider will need to be taken into consideration ad applied to the Environment Impact Assessment (EIA) and the resulting Environmental Statement (ES).

Waste Management and Disposal and Environmental Management

1. We note that the submission confirms in section 4.5.8 and 4.5.9 that a Construction Environmental Management Plan (CEMP) is to be prepared as well as a Site Waste Management Plan (SWMP).

2. We will require a comprehensive and site-specific CEMP and SWMP to be produced in support of the ES and address all relevant environmental issues. Details shall include strategies relating to the management of soil, silt and materials and full details of pollution prevention, pollution incident response plan and waste management plan.

3. The submission should refer to and incorporate best practice to ensure environmental safeguards are in place. All waste arising needs to comply with the Environmental Permitting Regulations 2016. NRW require waste arising from the works to be disposed or recycled at a suitably permitted site. Waste movements must show duty of care under Section 34 of EPA '90. All waste carriers must be upper tier registered.

Air Quality (AQ)

4. NRW advise that both construction and operational impacts on protected sites are fully assessed in the ES.

5. We note that section 6 of the 'Request for a Scoping Opinion' document provides details of the assessment that will be undertaken in respect of the potential effect of the development on air quality.

6. NRW will comment on any likely significant effects of the development on protected sites in respect to air quality impacts. Any formal planning submission would need to demonstrate that the proposal will not be likely to result in a significant effect on a European site, either alone or in combination with other plans or projects.

7. Table 4 does not include Moel y Golfa SSSI, which is less than 2km NW from the application site boundary but 2.05 km from the main stack (see section 10.2.1). As a precautionary approach we advise that Moel y Golfa SSSI should be included in the assessment. The sensitive receptor here is broadleaved woodland which might be affected by emissions due to the prevailing wind direction.

8. We have noted that the applicant will be using the EA H1 annex F air emissions guidance to assess the impacts from aerial emissions (to note that this guidance is no longer available but is now under the banner of gov.uk - Air emissions risk assessment for your environmental permit. This is the most appropriate guidance to use. We acknowledge and agree with the AQ scope outlined in this section.

Landscape

9. NRW note section 9, we advise that you should consult with the Local Authority's internal landscape advisor with regards to the Landscape and Visual Impact Assessment.

Concept Masterplan

10. NRW advise that both construction and operational impacts on protected sites are fully assessed in the ES.

11. Section 9.3.6 Concept master plan and the overall site plan (appendix 1) submitted shows that the Gwaith Brics Buttington Brickworks Site of Special Scientific Interest (SSSI) falls within the proposal boundary. The protected site is acknowledged in this section, and states that the area will remain undeveloped and that interpretation boards and access to the site will be provided. The details of the interpretation boards and access must be submitted as part of the full application.

12. Any planning application should include details of how access to the Buttington Brickworks SSSI, which is located within the existing quarry area, will be maintained as part of the proposed development.

13. The buildings should not be located close to the quarry faces where they could obscure or prevent access to the exposed geological strata. Also, the faces of the geological interest should be protected during the construction phase and not damaged by the construction of screening embankments and new site drainage facilities.

14. We note that the 'Request for Scoping Opinion' document identifies that lay-down areas for the temporary storage of site equipment and materials are to be provided under Permitted Development Rights. The applicant should be aware that should these lay down areas be located within the protected site area the impact needs to be assessed. We request that details for the proposed lay down areas are submitted to NRW at the earliest convenience so that we can provide comment on any likely impact on the protected site.

Ecology

15. NRW advise that the ES should clearly set out any effects on protected species and, where adverse effects are identified, should propose and deliver appropriate mitigation and/or compensation schemes to ensure the Favourable Conservation Status of the affected species is maintained.

16. With regards to section 10.3, NRW are in agreement with the scope of the ecological survey and assessments that have been carried out for the purposes of informing the planning decision making process. The component ecological submission appropriately and proportionately considers protected species.

17. With regards to section 10.3.6, NRW are in agreement with the approach of the ecological impact assessment ("EcIA"), and a separate approach to inform an assessment of impacts on the Montgomery Canal and Granllyn SACs (in accordance with the Conservation of habitats and Species Regulations 2017); a Habitats Regulations Assessment ("HRA") report.

Water Environment

18. We note that Section 11 'Water Environment' of the 'Request for Scoping Opinion' document includes the baseline survey details of geology and drainage. It also details the general guidance for pollution prevention which will be relevant for the development.

19. We note that the ERF will be in the bottom of an existing quarry. The drainage strategy should include details of any dewatering pumping that is required to maintain a water table below the quarry void especially during the winter months or heavy rainfall.

20. Please note that any groundwater abstraction over 20 m^3/day will require a Water Resource Licence to abstract the groundwater – contact our Permitting Team for further information.

21. NRW note that within section 11.5. Points of Clarification there are a number of aspects that require our input.

22. In this section, Natural Resource Wales have been asked to provide environmental data. The applicant is advised to contact data distribution http://naturalresourceswales.gov.uk/evidence-and-data/access-our-data/?lang=en .

23. NRW have also been asked to provide confirmation that the requirement for a Water Framework Directive (WFD) Assessment can be screened out. The applicant should be aware that consideration must be given as to whether the proposed works could prevent any mitigation measures or actions intended to achieve Good Ecological Status (GES) / Good Ecological Potential (GEP) from being implemented, which could result in the water body failing to meet its objectives. Where a scheme is considered to cause deterioration, or where it could contribute to a failure of the water body to meet GES or GEP, then an Article 4.7 assessment would be required.

24. At present there is insufficient information to assess whether there is a risk that the activity may cause deterioration of the waterbody status classification or prevent it from achieving its objectives in the future. The applicant must provide all relevant information on the proposed activity at all stages, so that each component can be considered in the assessment. Further details on how surface water will be managed at each stage of the activity would need to be provided, particularly in relation to any proposed discharge activity. Confirmation is sought that none of the substances on the Environmental Quality Standards Directive list for WFD would be released.

25. It is likely that a permit to discharge treated surface water would be required. There is currently no permit in place for the discharge from the existing surface water if this is still in use.

26. Consideration must also be given to the management of foul water as the site is not on main drainage. It is unclear as to what the current arrangements are on site with respect to foul drainage. With respect to the discharge of effluent to ground or surface water, the applicant will need to apply for an environmental permit or register an exemption with us. The applicant must obtain any necessary permit or exemption prior to commencement of work on site. Septic tanks and small sewage treatment works may be registered as exempt from the requirement to obtain an environmental permit if certain criteria are met. Please note, should a permit be required, further information may be required as part of that application and the Applicant is therefore advised to hold pre-application discussions with our Permitting Team on 0300 065 3000, at the earliest opportunity, to try to ensure that there is no conflict between any planning permission granted and the permit requirements. More information, including a step by step guide to registering and the relevant application forms are available on our website. Where private sewage treatment/disposal facilities are utilised, they must be installed and maintained in accordance with British Standards 6297 and Approved Document H of the Building Regulations. We also refer the Applicant to Pollution Prevention Guideline 4 which provides further information.

27. The site boundary is completely within zone A as per the Development Advice Maps accompanying TAN15, this is considered to be at little or no risk of fluvial flooding and as such a Flood Consequence Assessment is not required for the development. All watercourses within the site boundary are classified as those of ‘ordinary’ watercourses (rather than main rivers) and as such any culverting/crossings would be subject to a consent from the relevant Lead Local Flood Authority.

Cumulative Impacts

28. NRW does not have any comments to make. We consider that the local authority is best placed to advise on list of relevant projects.

Please do not hesitate to contact us if you require further information or clarification on any of the above.

Our comments above only relate specifically to matters that are included on our checklist "Natural Resources Wales and Planning Consultations" (March 2015) which is published on our website: (https://naturalresources.wales/media/5271/150302-natural-resources-wales-and-planning-consultations-final-eng.pdf). We have not considered potential effects on other matters and do not rule out the potential for the proposed development to affect other interests, including environmental interests of local importance.

Permitting

The proposed energy from waste facility falls under Schedule 1, Chapter 5, Section 5.1 (incineration and co-incineration of waste) Part A(1)(b) of the Environmental Permitting (England & Wales) Regulations 2016. It will therefore require an installation permit in order to operate and an application must be submitted to Natural Resources Wales accordingly.

The incineration plant must meet the requirements of Chapter IV and Annex 6 of the Industrial Emissions Directive and also Best Available Techniques (BAT) as defined in the BAT Reference Document (BRef) for Waste Incineration.

NRW has already engaged in permit pre-application discussions with the consultant acting on behalf of the operator.

The applicant should be advised that, in addition to planning permission, it is their responsibility to ensure that they secure all other permits/consents relevant to their development.

Yn gywir / Yours sincerely,

Siôn M. Williams

Siôn M. Williams
Uwch Gynghorydd Cynllunio Datblygu / Senior Development Planning Advisor
Cyfoeth Naturiol Cymru / Natural Resources Wales

Llywodraeth Cymru
Welsh Government

Plas Carew, Uned 5/7 Cefn Coed
Parc Nantgarw, Caerdydd CF15 7QQ
Ffôn 0300 025 6000
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Tel 0300 025 6000
email cadw@gov.wales
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The Planning Inspectorate

dns.wales@pins.gsi.gov.uk

Eich cyfeirnod Your reference	3201953
Ein cyfeirnod Our reference	
Dyddiad Date	24 August 2018
Llinell uniongyrchol Direct line	03000 256007
Ebost Email:	amadminplanning@wales.gsi.gov.uk

Dear Mr Sparey,

Potential DNS Application
Site Address: Buttington Quarry, Buttington, Welshpool, Powys, SY21 8SZ
Proposed Development: Energy Recovery Facility (ERF) generating approx. 13MW of electricity through treatment of 150,000 tonnes / annum of residential, commercial & industrial wastes.

Thank you for your letter of 9 August 2018 inviting our comments on the scoping direction in relation to the proposed Energy Recovery Facility (ERF) generating approx. 13MW of electricity through treatment of 150,000 tonnes / annum of residential, commercial & industrial wastes. Located on land at Buttington Quarry, Buttington, Welshpool, Powys, SY21 8SZ.

These views are provided without prejudice to the Welsh Government's consideration of the matter, should it come before it formally for determination.

The application area is c 25 hectares and the maximum height of the proposal is c 70m. Within a 3km buffer and zone of theoretical visibility of the application area and proposal are:

Scheduled monuments:

MG034 Offa's Dyke: Section extending 760m N from centre of Goppas Wood to Hope By-Road
MG120 Strata Marcella Abbey
MG143 Crowther's Coppice Camp
MG224 Offa's Dyke: South of School House

Registered Historic Parks and Gardens:

PGW (Po) 39(POW) Trelydan Hall (grade II)
PGW (Po) 53(POW) Maesfron (grade II)

Listed Buildings:

15640	GAZEBO AT MAESFRON, A 458 (T) N SIDE, TREWERN	II
15641	GROTTO AT MAESFRON, A 458 (T) N SIDE, TREWERN	II*
15642	BRYN CAREDIG, GARREG BANK, TREWERN	II
15643	1. OUTBUILDING AT THE OLDE POST OFFICE, GARREG BANK, TREWERN	II
15644	2, OUTBUILDING AT THE OLDE POST OFFICE, GARREG BANK, TREWERN	II
15645	LLWYN MELYN FARMHOUSE, TREWERN	II*
15646	MIDDLE HELDRE FARMHOUSE, HELDRE LANE, TREWERN	II
15647	BUTTINGTON BRIDGE, A 458 (T), BUTTINGTON	II
15648	BUTTINGTON VICARAGE, B 4388 (W SIDE), BUTTINGTON	II
15649	CLETTERWOOD FARMHOUSE, CLETTERWOOD	II
15650	HOPE FARMHOUSE, B 4388 (W SIDE), HOPE	II
16737	Bank Lock	II
16739	Bridge 109 over the Montgomeryshire Canal	II
16740	Barn with Horse Engine House at Bank Farm	II
16752	Bridge 115 over the Montgomeryshire Canal	II
16753	Buttington Limekilns	II
16754	Mount Pleasant	II
16764	Cabin Lock	II
16765	Crowther Hall Lock	II
16766	Lock Cottage at Crowther Hall Lock	II
16767	Bridge 110 over the Montgomeryshire Canal	II
16768	Crowther Hall	II
16769	School House	II
16770	Church of Saint John Evangelist	II
16771	Lock Cottage	II
16772	Top Lock	II
16773	Bridge 111 over the Montgomeryshire Canal	II
16774	Ivy House with outbuildings	II
16779	Severn View	II
7742	Gungrog Farmhouse	II
7882	Manor House	II
7902	CHURCH OF ALL SAINTS (FORMERLY LISTED AS BUTTINGTON PARISH CHURCH),A 458 (T) S SIDE, BUTTINGTON	I
7903	BUTTINGTON OLD HALL FARMHOUSE (FORMERLY LISTED AS BUTTINGTON HALL NORTH FARMHOUSE) A 458 (T) S SIDE	II
7905	GARBETT'S HALL, WELSH HARP HOLLOW, BUTTINGTON	II
7906	UPPER FARM FARMHOUSE (FORMERLY LISTED AS	II

	GARREG FARMHOUSE), GARREG BANK (W SIDE), TREWERN	
7908	THE GREEN DRAGON INN, A 458 (T) N SIDE, BUTTINGTON	II
7911	MAESFRON, A 458 (T) N SIDE) TREWERN	II
7914	OLD HOPE FARMHOUSE, HOPE ROAD (W SIDE), HOPE	II
7915	THE OLDE POST OFFICE, GARREG BANK, TREWERN	II
7916	TREWERN COTTAGE, TREWERN	II
7917	TREWERN HOUSE A 458 (T) N SIDE (ALSO KNOWN AS TREWERN FARMHOUSE) (SOUTH)	II*
7918	BARN TO EAST OF TREWERN HOUSE, A 458 (T) N SIDE	II
7919	TREWERN FARM (NORTH) FARMHOUSE, TREWERN	II
7920	TREWERN HALL, A 458 (NW SIDE), TREWERN	II*
87516	The Malthouse	II

Further details are available on Cof Cymru.

The above scheduled monuments, registered historic parks and gardens and listed buildings are located within a 3km buffer of the application area, are theoretically in view of the proposed development, and therefore the proposed development could have an impact on the settings of these designated historic assets. These impacts will need to be carefully considered in the preparation of an environmental impact assessment.

The Request for Scoping Direction report produced by Environmental Compliance Limited sets out in Chapter 12 the Key Environmental Aspects for Archaeology and Heritage.

Section 12.2 Environmental Assessment Boundaries proposes a search area of a 1km and a 5km for all archaeological assets and designated historic assets respectively (para 12.2.1 and para 12.2.2). These search parameters would be acceptable. Paragraph 12.2.4 lists national and local legislation and planning policy that will be consulted and suggests (12.2.5) the use of additional guidance produced by Historic England in assessment of the significance and setting of historic assets. However the appropriate guidance for Wales should be consulted: this is contained in the Welsh Government's best-practice guidance Setting of Historic Assets in Wales (2017).

Section 12.3 Methodology in paragraph 12.3.2 indicates a preferred use of Design Manual for Roads and Bridges, Volume II, Section 3, Part 2 (2007) for the assessment of the sensitivity of heritage assets. This guidance is not appropriate for use in relation to designated historic assets and as above, the appropriate guidance is contained in Setting of Historic Assets in Wales (2017).

Paragraph 12.3.6 refers to cross reference with proposed methodology for the Landscape Visual Impact Assessment (LVIA) (Chapter 9). We recommend that in addition to the viewpoints listed in Table 8 specific viewpoints are chosen to reflect the locations of the two sections of Offa's

Dyke (scheduled monuments MG034 and MG224), both of which are in regular use as part of the Offa's Dyke Path National Trail; and a viewpoint from the scheduled monument MG120 Strata Marcella Abbey to assist in assessment of setting. Viewpoint 8 should as stated include the view from the Registered Historic Park and Garden at Trewen (PGW (Po) 53(POW) Maesfron) and Viewpoint 11 should do the same for potential views from scheduled monument MG143 Crowther's Coppice Camp. Viewpoints should ideally be presented as a combination of wireframe and photographic analysis including the supposition onto these of a representation of the proposed development. These viewpoints should be discussed as an integral part of the Archaeology Culture and Heritage section of an Environment Impact Assessment aside from the LVIA.

Section 12.4 Existing Conditions states (para 12.3.5) that online information indicates there are no Registered Historic Parks and Gardens within 5km of the site (contra the mention of the same in Section 9). Within the required search buffer of 3km (Schedule 4 of the Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016) there are two registered parks and gardens, as indicated in the list above. In assessing the effect of the proposed development on these Registered Historic Parks and Gardens it is strongly recommended that the Welsh Government's document Managing Change to Registered Historic Parks & Gardens in Wales (2017) is consulted as an additional source of guidance in addition to those already discussed. Paragraphs 12.4.7 & 12.4.8 discuss a number of listed buildings within 2km of the site. We refer again to the minimum required search buffer for designated historic assets (including listed buildings) of 3km whilst noting as stated buffer of 5km (para 12.2.2) is acceptable.

Yours sincerely,

Nichola Davies
Diogelu a Pholisi/ Protection and Policy

Adran yr Economi a'r Seilwaith
Department for Economy and Infrastructure

Llywodraeth Cymru
Welsh Government

Development Control
Powys County Council
The Gwalia
Ithon Road
Llandrindod Wells
LD1 6AA

Eich cyf / Your ref 3201953

Ein cyf / Our ref 18/NM-1474

30 August 2018

Dear Sir/Madam,

TOWN AND COUNTRY PLANNING (DEVELOPMENT MANAGEMENT PROCEDURE) (WALES) ORDER 2012:

Buttington Quary, Buttington, Welshpool, SY21 8SZ
EIA Scoping Direction - Energy Recovery Facility (ERF) generating approx. 13MW of electricity through treatment of 150,000 tonnes / annum of residential, commercial, & industrial wastes.

I refer to your consultation of 09 August 2018 regarding the above planning application and advise that the Welsh Government as highway authority for the A458 trunk road wishes to respond with the following comments:

- The site access will require further assessment to deem if it is suitable for the proposed development in accordance with the Design Manual for Roads and Bridges (DMRB).
- The proposed study area is acceptable to the east, however to the west the study must review all arms of the A483 for a minimum 500m.
- The study should include any permitted developments along the route to the site and in addition any permitted developments adjacent to the A483 Welshpool bypass listed on the Powys County Council Planning Portal.
- A junction capacity assessment will be required.

If you have any further queries, please forward to the following Welsh Government Mailbox NorthandMidWalesDevelopmentControlMailbox@gov.wales

Yours faithfully

[redacted]

Casey Dunn

From: Mark Walters [mailto:mark.walters@cpat.org.uk]
Sent: 13 August 2018 16:25
To: Sparey, Robert
Subject: 3201953 - DNS Application at Buttington Quarry - EIA Scoping Direction Consultation - LVIA and Cultural Heritage Assessment Content

Dear Mr Sparey

Thank you for the consultation on the scoping opinion for the cultural heritage assessment chapter of this EIA.

Having noted the content of Section 12 Archaeology and Cultural Heritage (pages 76-79) and Section 9 – LVIA (pages 51-58) we have the following comments:

9. LVIA - With regard to the LVIA viewpoints listed in 9.3.3.3 and Table 8 we would wish to see The Breidden Hillfort and Monument added to the list. This is a visually prominent hill in the landscape to the north with a hillfort scheduled monument covering its summit. The ZVA indicates the hillfort and summit would be within the zone of visibility. The photomontage should be taken from the summit at the monument looking south with an unobstructed view to the development site.

12.2 Assessment Boundaries – we agree with the assessment boundaries of 1km from the application boundary for non-designated sites and 5km from the boundary for designated sites.

12.2.4 Should include the Cadw Best Practice Guidance: Managing the Setting of Historic Assets in Wales (May 2017)

12.2 and 12.3 only mention a desk based assessment. We previously advised that the application boundary will also need a systematic search by walkover survey to identify both known and any previously unrecorded archaeological sites which may be visible at the surface. This should include adjacent fields which will be developed with bunded material for visual screens and any potential borrow pit areas to create these bunds. The desktop study will need to include sources from :

- Historic Environment Record
- RCAHMW National Monuments Record
- National Library of Wales Maps and Documents Section for cartographic and documentary records
- Powys County Archives
- Any NRW LiDAR data available

We look forward to seeing a revised scoping document for approval and future consultation on any archaeological reports which may arise from the assessment so that we can discuss appropriate mitigation.

Kind regards

Mark Walters

Powys County Council
2017 Air Quality Progress Report

In fulfillment of Part IV of the Environment Act 1995
Local Air Quality Management

Date (September, 2017)

Local Authority Officer	Paul Bufton
Department	Environmental Protection
Address	Neuadd Maldwyn, Welshpool SY21 7AS
Telephone	01938 551273
E-mail	Paul.bufton@powys.gov.uk
Report Reference number	PCC/AQ/PR2017
Date	15/09/2017

Executive Summary

This progress report further supports the revocation of the New Road Air Quality Management Area (AQMA) on the 15th February 2017.

The report summarises new monitoring data collected in 2016 and confirms that there is no need to proceed to a Detailed Assessment.

Table of Contents

1 Introduction

1.1 Description of Local Authority Area

Powys is an extensive, largely upland and extremely rural county covering 2000 square miles,that is about a quarter of the area of Wales. With only 1 person in every 10 acres (4 hectares) it is one of the most sparsely populated local authority areas in England and Wales.

The economy is based on agriculture and tourism, with high self-employment and small businesses predominating, and an important contribution to employment opportunities from the public sector.

The main source of air quality pollution in the county is caused by vehicle emissions from the road network. In addition there are some small pockets of industrial sources, most notably in the towns of Newtown and Welshpool

1.2 Purpose of Progress Report

This report fulfils the requirements of the Local Air Quality Management (LAQM) process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 and the relevant Policy and Technical Guidance documents. The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where exceedences are considered likely, the local authority must then declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives.

For Local Authorities in Wales, Progress Reports are required in the intervening years between the three-yearly Updating and Screening Assessment reports. Their purpose is to maintain continuity in the LAQM process.

They are not intended to be as detailed as Updating and Screening Assessment Reports, or to require as much effort. However, if the Progress Report identifies the

risk of exceedence of an Air Quality Objective, the Local Authority (LA) should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment.

1.3 Air Quality Objectives

The air quality objectives applicable to LAQM **in Wales** are set out in the Air Quality (Wales) Regulations 2000, No. 1940 (Wales 138), Air Quality (Amendment) (Wales) Regulations 2002, No 3182 (Wales 298), and are shown in Table 1.1. This table shows the objectives in units of microgrammes per cubic metre μg/m^3 (milligrammes per cubic metre, mg/m^3 for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).

Table 1.1 – Air Quality Objectives included in Regulations for the purpose of LAQM in Wales

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 µg/m^3	Running annual mean	31.12.2003
	5.00 µg/m^3	Annual mean	31.12.2011
1,3-butadiene	2.25 µg/m^3	Running annual mean	31.12.2003
Carbon monoxide	10 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.50 µg/m^3	Annual mean	31.12.2004
	0.25 µg/m^3	Annual mean	31.12.2008
Nitrogen dioxide	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m^3	Annual mean	31.12.2005
Particulate matter (PM_{10}) (gravimetric)	50 µg/m^3, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 µg/m^3	Annual mean	31.12.2004
Sulphur dioxide	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m^3, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

1.4 Summary of Previous Review and Assessments

Title of Report	Date Produced	Brief Outcomes
Updating and Screening Assessment	2003	No Need to proceed to a Detailed Assessment was identified.
Progress Report	2004	Agreed with the findings of the Updating and Screening Assessment
Progress Report	2005	Further monitoring of NO_2 diffusion tube monitoring to be undertaken on New Road, Newtown
Updating and Screening Assessment	2006	Detailed Assessment required in respect of NO_2 at New Road, Newtown
Detailed Assessment for New Road, Newtown	2007	Exceedence area defined and need to declare an Air Quality Management Area (AQMA) identified.
Progress Report	2008	The Boundaries of the AQMA remain relevant and the order should not be revoked.
Updating and Screening Assessment	2009	No Need to proceed to a Detailed Assessment was identified.
Progress Report	2010	The Boundaries of the AQMA remain relevant and the order should not be revoked.
Further Assessment	2011	The Boundaries of the AQMA remain relevant, however additional

		monitoring sites should be set up on New Road
Updating and Screening Assessment	2012	No need to proceed to a Detailed Assessment was identified
Progress Report	2013	The Boundaries of the AQMA remain relevant and the order should not be revoked.
Progress Report	2014	The Boundaries of the AQMA remain relevant and the order should not be revoked.
Updating and Screening Assessment	2015	No need to proceed to a detailed assessment and the existing AQMA should be revoked
New Road AQMA Revocation Order	15th February 2017	AQMA revoked
Progress Report	2016	No need to proceed to a Detailed assessment

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

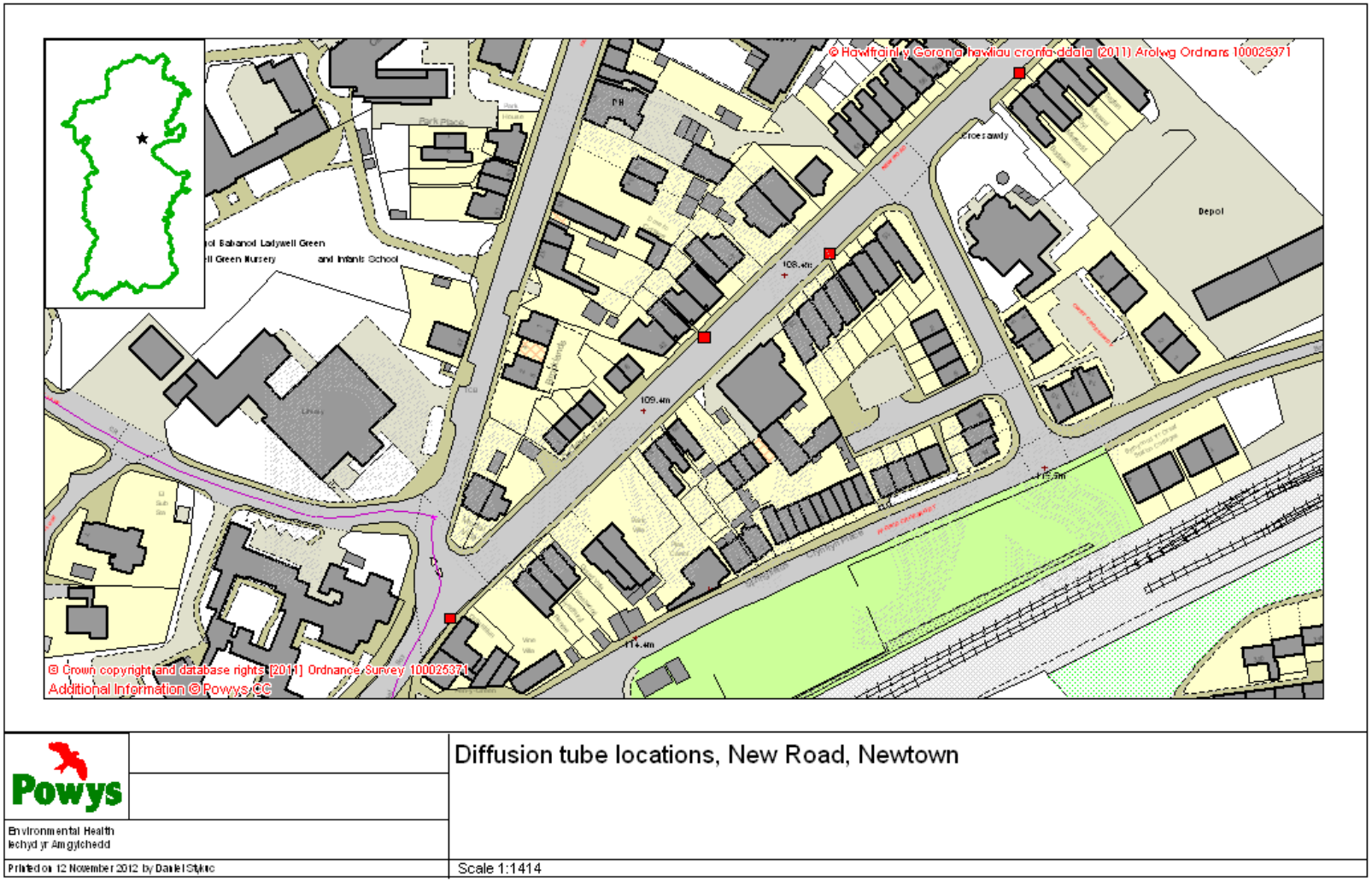
2.1.1 Automatic Monitoring Sites

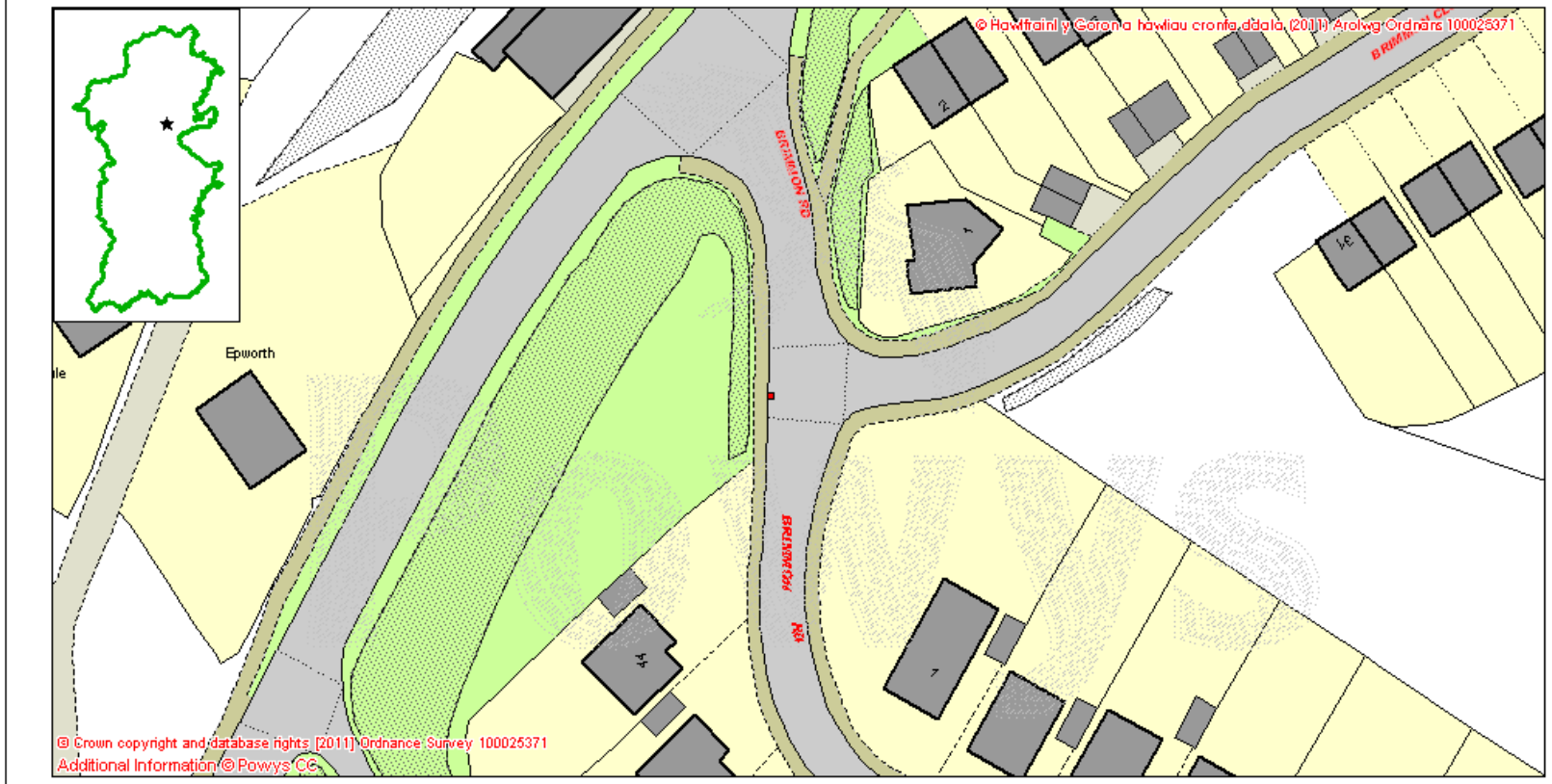
There are currently no automatic monitoring sites operating within Powys. Automatic monitoring was undertaken in respect of NO_2 at New Road, Newtown during 2006/7 and is reported in the Detailed Assessment.

2.1.2 Non-Automatic Monitoring Sites

Powys County Council is currently operating 7 Nitrogen Dioxide diffusion tube monitoring sites. These sites all operate within or in close proximity to the former New Road AQMA in Newtown. Details of the diffusion tube sites can be seen in the following maps and table:

Figure 2.2 – Map(s) of Non-Automatic Monitoring Site





Powys

Environmental Health
Iechyd yr Amgylchedd

Printed on 9 November 2012 by Daniel Stone

Brimmon Road, Newtown

Scale 1:707

Table 2.2 – Details of Non- Automatic Monitoring Sites

Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Is monitoring collocated with a Continuous Analyser (Y/N)	Relevant Exposure? *(Y/N with distance (m) to relevant exposure)*	Distance to kerb of nearest road *(N/A if not applicable)*	Does this location represent worst-case exposure?
19 New Road	Kerbside (single)	310799	291268	NO_2	N	N	Y(5m)	2m	Y
Dollarddun, New Road	Façade (triplicate)	310693	291165	NO_2	Y	N	Y(0m)	2m	Y
Eryl, New Road	Kerbside (single)	310854	291320	NO_2	N	N	Y(5m)	2m	Y
45 New Road	Roadside (single)	310761	291246	NO_2	N	N	Y(5m)	0m	Y
Brimmon Road, Newtown	Urban Backgorund (single)	310798	290984	NO_2	N	N	N	2m	Y

The above nitrogen dioxide diffusion tubes are supplied and analysed by Environmental Scientifics Group (ESG). Our chosen Laboratory follows the procedures set out in the Harmonisation Practical Guidance and uses a 50% TEA in acetone method of preparing the tubes.

2.2 Comparison of Monitoring Results with Air Quality Objectives

The following section compares monitoring data collected against the air quality objectives. During 2016 there has only been need to collect diffusion tube data for NO_2 and therefore this is the only objective level that consideration has been given to in this section.

2.2.1 Nitrogen Dioxide (NO_2)

Below is the data collected for the 7 diffusion tube sites based on New Road close to the former AQMA

Diffusion Tube Monitoring Data

A summary of the Nitrogen Dioxide diffusion tube data collected within Powys during 2016 (full data set in appendix A) can be seen in the following table:-

Table 2.5 – Results of NO_2 Diffusion Tubes 2016

Site ID	Location	Site Type	Within AQMA?	Triplicate or Collocated Tube	Data Capture 2016 (Number of Months or %)	Data with less than 9 months has been annualised (Y/N)	Confirm if data has been distance corrected (Y/N)	Annual mean concentration (Bias Adjustment factor = 0.78) 2016 (µg/m^3)
POW(M)1	Eryl, New Road	Kerbside	N	N	12 months	**N**	Y	31
POW(M)2	19 New Road	Kerbside	N	N	12 months	**N**	Y	32
POW(M)3	Dollarddun, New Road	Façade	Y	Y (Triplicate)	12 months	N	N	39
POW(M)4		Façade	Y	Y (Triplicate)	12 months	N		41 39
POW(M)5		Façade	Y	Y (Triplicate)	12 months	N		38
POW(M)6	45 New Road	Roadside	N	N	12 months	N	N	32
POW(M)7	Brimmon Road	Kerbside	N	N	12 months	N	N	11

In bold, exceedence of the NO_2 annual mean AQS objective of 40µg/m^3

Underlined, annual mean > 60µg/m^3, indicating a potential exceedence of the NO_2 hourly mean AQS objective

[a] Means should be "annualised" as in Boxes 7.9 and 7.10 of LAQM.TG16, if full calendar year data capture is less than 75%

[b] If an exceedence is measured at a monitoring site not representative of public exposure, NO_2 concentration at the nearest relevant exposure should be estimated based on the "NO_2 fall-off with distance" calculator (http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html), and results should be discussed in a specific section. The procedure is also explained in paragraphs 7.77 to 7.79 of LAQM.TG16.

Table 2.6 – Results of NO_2 Diffusion Tubes (2012 to 2016)

Table 2.6 Results of Nitrogen Dioxide Diffusion Tubes (2011 to 2015)

Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
			2012 (Bias Adjustment Factor = 0.79)	2013 (Bias Adjustment Factor = 0.8)	2014 (Bias Adjustment Factor = 0.81)	2015 (Bias Adjustment Factor = 0.79)	2016 (Bias Adjustment Factor = 0.78)
POW(M)1	Kerbside	N	**3**7.6	31.9	28.8	29	31
POW(M)2	Kerbside	N	32.4	32.9	33.9	29	32
POW(M)3,4,5	Façade	Y	39.8	39.5	38.1	38	39
POW(M)6	Roadside	N	35.4	36.6	33.0	30	32
POW(M)7	Kerbside	N	10	10.4	9.4	9	11

In bold, exceedence of the NO_2 annual mean AQS objective of 40µg/m^3

Underlined, annual mean > 60µg/m^3, indicating a potential exceedence of the NO_2 hourly mean AQS objective

[a] Means should be "annualised" as in Boxes 7.9 and 7.10 of LAQM.TG16, if full calendar year data capture is less than 75%

2.2.2 Summary of Compliance with AQS Objectives

Whilst monitoring data indicates that currently there is no exceedance of the objective levels it is recognised that levels are close to the objective level, particularly in the vicinity of the former AQMA, it would therefore be diligent to continue the monitoring network in Newtown.

Powys County Council has examined the results from monitoring in Powys. Concentrations are all below the objectives, therefore there is no need to proceed to a Detailed Assessment.

3 New Local Developments

The only new development likely to have a significant impact on Air Quality in Powys is the opening of the Newtown Bypass in late 2018. This is predicted to have a significant positive impact on Air Quality in Newtown and particularly in the area of the former AQMA.

Powys County Council confirms that there are no new or newly identified local developments which may have an impact on air quality within the Local Authority area.

Powys County Council confirms that all the following have been considered:

- **Road traffic sources**
- **Other transport sources**
- **Industrial sources**
- **Commercial and domestic sources**
- **New developments with fugitive or uncontrolled sources.**

4 Conclusions and Proposed Actions

4.1 Conclusions from New Monitoring Data

New monitoring data for NO2 does not indicate an exceedance of the objective and therefore there is no need to proceed to a detailed assessment. Levels are close to the objective level on New Road and therefore monitoring should continue until it demonstrates lower levels which will be expected following the opening of the Newtown Bypass

4.2 Conclusions relating to New Local Developments

There is no need to proceed to a Detailed Assessment as a result of new Local Developments.

4.3 Proposed Actions

Powys County Council intends to continue to monitor NO2 levels using diffusion tubes in New Road Newtown

Powys County Council will review in the next round of reporting current road traffic sources to ensure that roads previously assessed do not require any further assessment.

5 References

1. DEFRA (February 2009) LAQM. TG(09) Local Air Quality Management Technical Guidance

Appendices

Diffusion Tube Bias Adjustment Factors

The nitrogen dioxide diffusion tubes used by Powys County Council are supplied and analysed by Environmental Scientifics Group (ESG) Didcot. Our chosen Laboratory follows the procedures set out in the Harmonisation Practical Guidance and uses a 50% TEA in acetone method of preparing the tubes.

No local bias adjustment figures exist so a bias adjustment factor of 0.78 has been used, based on the national database.

Appendix B: Results of Nitrogen Dioxide diffusion tube network for 2016

Tube ID	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean	Bias correction factor	Corrected mean
POW(M)1	51.5	54.5	55.4	53.3	56.9	45	36.7	41.2	45.2	58.8	52.1	58.4	50.75	0.78	39.585
POW(M)2	58	59.7	57.4	54.3	59.3	46.7	33.3	40.5	45.3	58.6	61.8	64.3	53.26667	0.78	41.55
POW(M)3	48.7	57.6	59.4	53.8	50.4	48.4	37.4	38	44	49.9	54.7	54.2	49.70833	0.78	38.77
POW(M)4	47.4	60.5	60.4	56	60.1	53.6	41.3	41.1	43.4	53.7	59.9	53.3	52.55833	0.78	40.99
POW(M)5	54.5	55.5	57.5	57.1	48.9	46.5	34.2	34.9	41.7	44.1	53.6	54.7	48.6	0.78	37.91
POW(M)6	43.2	44.5	47.5	52.4	4.6	40.2	37.8	35	38.7	42.9	53.7	53.4	41.15833	0.78	32.1
POW(M)7	15.5	17	14.8	14.7	12.1	11.3	8.5	7.5	8.6	19.5	15.9	19.8	13.76667	0.78	10.74
Blank	1.7	1.1	2.2	2.8	0.7	1.9	1.7	0.9	1.8	3.7	*	*			

Appendix C: Façade level calculation

In order to calculate the façade level for the diffusion tube the following methodology, taken from AQC report *"NO_2 Concentrations and Distance from Roads"* dated 18th July 2008, has been used:

Cz = ((Cy-Cb) / (-0.5476 x Ln(Dy) + 2.7171)) x (-0.5476*Ln(Dz)+2.7171) + Cb

Where:
Cz is the total predicted concentration (µg/m3) at distance Dz;
Cy is the total measured concentration (µg/m3) at distance Dy;
Cb is the background concentration (µg/m3);
Dy is the distance from the kerb at which concentrations were measured;
Dz is the distance from the kerb (m) at which concentrations are to be predicted;
and
Ln(D) is the natural log of the number D

Eryl

Placing the relevant figures in for the diffusion tube the façade level has been calculated:

Cz = ((39.6-9) / (-0.5476 x Ln(2) + 2.7171)) x (-0.5476xLn(7)+2.7171) + 9

Cz = 30.6μg/m^3

Therefore the façade level at Eryl is predicted to be 31.9 μg/m^3 and below the air quality objective level for Nitrogen Dioxide

19 New Road

Placing the relevant figures in for the diffusion tube the façade level has been calculated:

Cz = ((41.55-9) / (-0.5476 x Ln(2) + 2.7171)) x (-0.5476xLn(7)+2.7171) + 9

Cz = 32 μg m^{-3}

Therefore the façade level at 19 New Road is predicted to be 32.9 μg m^{-3} and below the air quality objective level for Nitrogen Dioxide.

Appendix 3

Consultation Report

To be included at time of submitting planning application to PINS