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## CHAPTER 2 – KEY ENVIRONMENTAL ASPECTS AND ASSESSMENT METHODOLOGY

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### List of Amendments

- Section 2.5. added to summarise the pre-application consultation undertaken

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## List of Acronyms

Broad Energy	Broad Energy (Wales) Limited
KEA	Key Environmental Aspect
Cadw	Historic Environment Service of the Welsh Government
CEMP	Construction Environmental Management Plan
CPAT	Clwyd-Powys Archaeological Trust
DEFRA	Department for the Environment, Food and Rural Affairs
Development	All activities within the red line planning boundary (see Drawing ECL-BQ-000 in Technical Appendix TA1-1)
Development Site	The physical site on which the Development is to be located as defined by the red line planning boundary (see Drawing ECL-BQ-000 in Technical Appendix TA1-1)
DNS	Development of National Significance
ECL	Environmental Compliance Limited
EIA	Environmental Impact Assessment
EIA Directive	Environmental Impact Assessment Directive (85/337/EEC)
EIA Regulations	Town and Country Planning (Environmental Impact Assessment) (Wales)
EPR	Environmental Permitting Regulations
ERF	Energy Recovery Facility
ES	Environmental Statement
Ha	Hectares
HIA	Health Impact Assessment
HZI	Hitachi Zosen Inova
LVIA	Landscape and Visual Impact Assessment
LPA	Local Planning Authority
LDP	Local Development Plan
NRW	Natural Resources Wales
PINS	Planning Inspectorate for Wales
PCC	Powys County Council
ROMP	Review of Minerals Permissions
SSSI	Site of Special Scientific Interest
SWMP	Site Waste Management Plan

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## 2. KEY ENVIRONMENTAL ASPECTS AND ASSESSMENT METHODOLOGY

### 2.1. Introduction

- 2.1.1. This section discusses how key environmental aspects (“KEAs”) have been identified and provides the assessment methodology for the Environmental Statement (“ES”).
- 2.1.2. A KEA is defined as an environmental attribute or component of the environment that is valued by society as identified through the scoping process for example, Air Quality, Ecology, Transport etc. Each KEA identified is then assessed and forms an individual Chapter of the ES.
- 2.1.3. Regulation 4(2) of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (“the EIA Regulations”) states that:  
*The environmental impact assessment must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following:*
- (a) Population and human health
  - (b) Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;
  - (c) Land, soil, water, air and climate;
  - (d) Material assets, cultural heritage and the landscape; and
  - (e) The interaction between the factors listed in sub-paragraphs (a) to (d).
- 2.1.4. Consequently, there is a legal requirement to ensure that any likely significant effects of a development are appropriately assessed. Scoping is a key part of the EIA process in identifying potential likely significant effects to be considered within the ES, and it is the scoping phase that identifies the KEA’s for assessment.

### 2.2. Selection of Key Environmental Aspects

- 2.2.1. The selection of KEAs is an important step in the completion of the ES. It is a process that reflects a balanced and knowledgeable investigation into a wide range of information about a development, the environmental setting where it is to be located and an understanding of concerns and issues associated with the responsible development of the Installation.
- 2.2.2. The scoping process and identification of KEAs has a key role not just to identify likely significant environmental aspects but also to exclude those environmental aspects where there are no likely significant effects, either adverse or beneficial.
- 2.2.3. Scoping is undertaken with consultation with key stakeholders and using professional judgment. The EIA team have used a wide variety of information in the determination of a range of KEAs to reflect both the scope and scale of the Development and the potential Development-environment interactions. All information considered is provided in Figure 2-1.
- 2.2.4. Figure 2-1 lists all the areas considered when identifying KEAs.

**Figure 2-1: Identification of KEAs**

- 2.2.5. Broad Energy (Wales) Limited (“Broad Energy”) assembled a knowledgeable study team for this environmental impact assessment, as professional judgment is a reliable basis for helping identify focused and functional KEAs, potential environmental effects and the mitigation needed to reduce residual adverse environmental effects to acceptable levels.
- 2.2.6. Broad Energy has conducted an evaluation of its Development in the environmental setting and developed an informed perspective on the potential Development-environment interactions. Based on systematic and scientific technical analysis as well as input from its consultation efforts, Broad Energy has also developed an understanding of the concerns and issues associated with the Development in the context of the local area, its residents, industry and activities.

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## 2.3. Scoping Request

- 2.3.1. Once the EIA Team had identified potential KEA's, consultation on the KEAs' and the assessment methodology for each was undertaken with PINS.
- 2.3.2. The objectives of the scoping process were to identify:
- potential likely significant effects of the Development to be assessed within the Environmental Statement;
  - key points arising from relevant regulations and standards;
  - engineering design and environmental management strategies early in the project planning stage so that they can be factored into the Development and thereby avoid or minimise any adverse effects;
  - potential cumulative environmental effects early in the planning process so that they can be factored into the environmental assessment at the earliest stage.
- 2.3.3. Potential environmental effects for the Development were identified through consultation with the Planning Inspectorate Wales ("PINS") and the Local Planning Authority ("LPA") Powys County Council ("PCC").
- 2.3.4. A Scoping Request was sent to PINS in August 2018 and their Scoping Direction was dated 3rd October 2018. A copy of Scoping Direction is provided in Technical Appendix 2-1. The Scoping Direction requested a table summarising the responses from the various Statutory Consultees and how their responses have been addressed within the ES, together with the comments provided in the Scoping Direction. This is provided in Table 2-1.

**Table 2-1: Scoping Direction Summary**

Item and EIA Scoping Direction Paragraph Ref	Required Information	Location within ES
Proposed Development (4)	The scope of the ES should include all elements of the development as identified in the scoping report, both permanent and temporary.	Chapter 4 – Description of the Proposed Buttington Quarry Energy Recovery. The Development includes the Buttington Energy Recovery Facility all ancillary buildings and infrastructure and the site access road. In addition to describing the individual elements of the physical Development, the chapter also includes a description of the construction methods, the layout and design of the Development
Consultation (5)	A table should be provided in the ES summarising the scoping responses from the consultation bodies and how they addressed in the ES. Similarly, the ES should demonstrate how it has taken into account this Scoping Direction.	This table lists all the scoping responses from the consultation bodies and either details how they were addressed or cross references where in the ES the response may be found. In addition, each KEA chapter also comments on further consultation that has been undertaken where relevant. A Pre-Application Consultation Report is also provided with the DNS Application
EIA Approach (6)	The ES should include a chapter setting out the overarching methodology.	Chapter 2 – KEA Selection and Methodology sets out how each component of the environment was identified. Section 2.6. sets out the structure that each chapter has followed and the assessment methodology. Any deviations from this method are described in the individual KEA chapters.
ES Structure (6.1)	The ES should contain all information outlined in Schedule 4 of the Town and Country Planning (EIA) (Wales) Regulations 2017.	Table 2-2 of Chapter 2 – KEA Selection and Methodology lists all the requirements of the aforementioned regulations and either states how they have been addressed, or cross references the relevant section of this ES.
Baseline (6.2)	The ES should describe what works and impacts would be involved in preparing the site.	The Baseline for this ES is described in Section 2.5. of this Chapter. In addition, Chapter 4 describes the works required to prepare the development area, specifically Section 4.4. Construction Phase. In addition, further details on the Development access road are provided in Chapter 8 – Highways and Transportation; Chapter 13 Geotechnical and Materials Management and the associated Technical Appendices of both chapters.

**Table 2-1: Scoping Direction Summary (cont)**

Item and EIA Scoping Direction Paragraph Ref	Required Information	Location within ES
Reasonable Alternatives (6.3)	Any reasonable alternatives studied by the applicant should be presented in the ES.	Chapter 3 – Need and Alternatives, provides justification for the need for the Development (Section 3.1.); an Alternative Sites Assessment (Section 3.2.) and an assessment of the alternative types of technology (Section 3.3.). The Chapter should also be read in conjunction with the associated Technical Appendices.
	The Planning Inspectorate is supportive of addressing the need for the development in an accompanying Waste Planning Statement.	A Waste Planning Statement accompanies the DNS Application and may be found as Carter Jonas report CJ.J0036928Butt.
Currency of Environmental Information (6.4)	Survey data should be as up to date as possible and clearly set out in the ES the timing and nature of the data on which the assessment have been based.	Each KEA chapter details the survey data used for each assessment, both in terms of when and how it was collected. It should be noted that due to the COVID-19 pandemic, the DNS application submission was delayed, however, to mitigate any aged data, where it was considered that the survey data would be at risk of being out of date (e.g. ecological survey data), additional surveys were undertaken as far as was possible under Government Guidance. In other cases, for example, background air quality data, it was decided that aged data would actually provide a worst case assessment as background air quality has been improving over recent years, and particularly so in March 2020 – August 2020 where there was a marked decrease in road traffic emissions throughout the UK.
	Impacts of Construction, Operation and Decommissioning should be considered.	The Environmental Effects Assessment Section of each KEA Chapter (section X.4) provides a description of the effect of the Development Construction, Operational and Decommissioning Phase of the Development, together with any mitigation that is required for each phase.
	Consideration should be given to relevant legislation, planning policy and best practice guidance.	Each KEA Chapter includes a Section (Section X.2) detailing what legislation, planning policy and best practice guidance was considered.
	The ES topic chapters should report on any data limitations, key assumptions and limitations	Section 2.8. Assumptions and Limitations provides a list of the overarching assumptions and limitations that were used in the preparation of this ES. Where there are any KEA specific assumptions, these are provided in the individual chapters.

**Table 2-1: Scoping Direction Summary (cont)**

Item and EIA Scoping Direction Paragraph Ref	Required Information	Location within ES
Cumulative Impact (6.5)	Based on the approach provided in the Scoping Request, the approach to cumulative impacts is considered largely appropriate. All other developments considered should be documented and the reasons for inclusion or exclusion should be stated.	Cumulative and Interactive effects are considered in each KEA Chapter where relevant within the Environmental Effects Assessment Section (X.4). In addition, Chapter 16 – Cumulative Impacts and Mitigation Summary considers those that have been granted planning permission, are not yet operational, have yet to be constructed or are submitted applications which are yet to be determined. Powys County Council were also consulted in relation to the developments to be considered, their response is discussed in Chapter 16.
Mitigation (6.6)	Any mitigation relied upon for the purposes of the assessment should be explained in detail within the ES	Incorporated mitigation is set out for each phase of the Development (i.e. construction, operational and decommissioning) within Section X.4. of each KEA Chapter. Section X.5. of each KEA Chapter details any additional mitigation that may be required. For ease of reference, Chapter 16 - Cumulative Impacts and Mitigation Summary, provides a summary of all environmental effects and the incorporated mitigation.
Transboundary Effects (6.7.)	The ES should address whether or not the Proposed Development is likely to have significant impacts on another European Economic Area State.	The Development will not have any impact on any European Economic Area States. Potential transboundary effects would only occur through the movement of waste on the highway network and atmospheric emissions to air from the main stack. Any other effects would be confined within the United Kingdom (locally, within circa 10km of the Development Site). Waste will be sourced from within Wales and from within a 2 hour drive time radius into England from the Development (see the Market Need Assessment in Technical Appendix 3-1), consequently there will be no Transboundary effects from transport. Emissions to atmosphere from the Development are considered to be not significant at the maximum point of impact (see Technical Appendix 6-1) which is within the Powys County Council borders, consequently there will be no Transboundary effects from emissions to air. Based on the above, and the full assessments contained within each relevant KEA Chapter, it is considered that the Development will not have any significant impact on another European Economic Area State.



**Table 2-1: Scoping Direction Summary (cont)**

Item and EIA Scoping Direction Paragraph Ref	Required Information	Location within ES
Air Quality (7.1) and NRW Response	Both construction and operational impacts on air quality should be included in the ES Moel y Golfa SSSI should be included in the air quality assessment	Section 6.4. of Chapter 6 – Air Quality assesses both the effects of construction and operation on air quality. Moel y Golfa has been included as a specified ecological receptor. The results of the assessment may be found in Chapter 6 of ECL Report ECL.001.01.02/ADM which is provided as Technical Appendix 6-1 of this ES.
	Powys CC’s latest Air Quality Progress Report for Powys should be used in conjunction with the local SLR data	Where background air quality data was required, it has been derived from a number of sources. These include DEFRA monitoring stations (see Section 4.2. of ECL Report ECL.001.01.02/ADM which is provided as Technical Appendix 6-1 of this ES) for Group 2 and Group 3 metals; and the local SLR data and DEFRA mapped concentrations (see Section 4.4. of ECL Report ECL.001.01.02/ADM which is provided as Technical Appendix 6-1 of this ES) for nitrogen dioxide and volatile organic compounds (as benzene) respectively. The Air Quality Report for Powys was reviewed; however, the locations of the diffusion tube monitoring sites were considered to be at too great a distance from the Development Site.
Powys County Council Consultee Response – Air Quality	Point source emissions of odour from the waste storage area should be addressed and the potential need for an odour impact assessment.	Further consultation with Powys County Council’s EHO was undertaken on this matter and a site visit to a similar Installation in Kidderminster was undertaken. Following this visit, in email correspondence, it was confirmed that “there were no unpleasant odours detectable at the site boundary” and “a qualitative assessment [of odour] would be acceptable”. Please see Section 6.4.16 of Chapter 6 for further detail and paragraphs 6.4.17. – 6.4.21. for the results of the qualitative odour assessment.

**Table 2-1: Scoping Direction Summary (cont)**

Item and EIA Scoping Direction Paragraph Ref	Required Information	Location within ES
Health Impact Assessment (7.2)	A Health Impact Assessment should be provided as part of the ES.	A Comprehensive Health Impact Assessment has been undertaken and is provided as ECL Report ECL.001.01.02/Comprehensive HIA which may be found as Technical Appendix 15-1 of this ES. A summary of the overall Health Impact of the Development, following completion of the Comprehensive Health Impact Assessment and review of all KEA Chapters is provided as Chapter 15 – Overall Health Impact. The intention of Chapter 15 is to pull together the human health considerations that arise in other KEA Chapters. The HIA was undertaken in accordance with the Wales Health Impact Assessment Support Unit.
	Continued consultation throughout the preparation of the HIA is advised	Consultation has been undertaken throughout the preparation of the HIA, see Section 15.5 and 15.7 of Chapter 15.
	The ES should address any signification effects on human health in light of changes in the 2017 Regulations.	Both Chapter 15, and Technical Appendix 15-1 consider the effects on Human Health.
Transport, Traffic and Highways (7.3), Powys County Council Consultee Response – Highways, and The Welsh Ministers (Department for Economy and Infrastructure [Transport])	Both construction and operational impacts on air quality should be included in the ES	Section 8.4. of Chapter 8 – Highways and Transportation assesses both the effects of construction and operation air quality.
	Assessment of site access in accordance with DMRB will be required.	The site access has been reviewed in line with the DMRB to ensure that it is suitable for the largest vehicle proposed to use the access. This has been undertaken and can be found in Technical Appendix 8-1, Transport Assessment. In addition, a geotechnical assessment of the site access has been undertaken and may be found in Appendix L of Technical Appendix 8-1.
	An extension of the study area to the west to review all arms of the A483 is required.	The study area was further discussed and agreed with the Transport Network Management Division at the Welsh Government Office and is fully described in Section 8.3. of this ES.
	A junction capacity assessment is required.	Junction capacity assessments have been undertaken and are discussed in full in Section 6 of the Transport Assessment which may be found as Technical Appendix 8-1 of this ES.
All movements to and from the site should be undertaken via trunk roads.	Access to the Development would be achieved via the A458 trunk road. The intended approach to routing of vehicles is discussed in of Chapter 8. It is intended that a vehicle routing scheme would be secured by either condition or section 106 obligation	

**Table 2-1: Scoping Direction Summary (cont)**

Item and EIA Scoping Direction Paragraph Ref	Required Information	Location within ES
Powys County Council Consultee Response – Planning	Cumulative effects, and worst-case effects of the existing businesses, and ERF should be considered.	Cumulative effects are considered in Section 8.4 (The Development in combination with Other Developments) in Chapter 8.
Landscape and Visual (7.4) and the Welsh Ministers (Cadw) Consultee Response	<p>The following additional viewpoints should be included:</p> <ul style="list-style-type: none"> <li>• Offa’s Dyke (Scheduled Monument MG034);</li> <li>• Offa’s Dyke (Scheduled Monument MG224);</li> <li>• Strata Marcella Abbey (Scheduled Monument MG120); and</li> <li>• The Breidden Hillfort</li> </ul>	The additional viewpoints requested have been considered within the Landscape and Visual Assessment. Please see Table 1, Section 2.4.3. of the Landscape and Visual Assessment which may be found as Technical Appendix 9-1 of this ES.
Landscape and Visual (7.4) and the Welsh Ministers (Cadw) Consultee Response	Consultation should be undertaken with the neighbouring planning authority in England on the approach to the LVIA, or if this is not considered necessary, justification provided.	The Zone of Theoretical Visibility includes areas of England as shown on Figure L2 within the Landscape and Visual Assessment which may be found as Technical Appendix 9-1 of this ES. In addition, discussions regarding the Development have been held with Shropshire County Council. In summary, the Project Team met with the Planning Policy and Strategy Manager to discuss their potential involvement in all aspects of the Development. One of the key issues discussed was the LVIA and the extent of the assessment from Shropshire. They confirmed that they were content with the approach proposed (i.e. that there are no obvious viewpoints in Shropshire).

**Table 2-1: Scoping Direction Summary (cont)**

Item and EIA Scoping Direction Paragraph Ref	Required Information	Location within ES
Ecology (7.5) and Habitats Regulation Assessment (8.1)	Baseline data for the ecological assessment are robust and provide all data necessary to assess any likely significant effects	Baseline data for the ecological assessments were initially undertaken in July 2018. However, due to the COVID-19 pandemic, the DNS application submission was delayed. Consequently, where required, ecological surveys were updated in April-September 2020. The works surveys undertaken are discussed in Section 10.3 of Chapter 10 – Ecology. There were some restrictions to the April and May bat activity transects and to the great crested newt surveys due to the COVID-19 restrictions, however, it was not considered a significant limitation due to the previous survey works which had been undertaken.
	A Habitats Regulations Report should be submitted.	A Shadow Habitats Regulations Assessment has been undertaken and is submitted with the DNS Application. This may be found as BSG Ecology report P18-456, August 2020. The Shadow Habitats Regulations assessment has been undertaken to provide information to help Welsh Ministers discharge their duties as the competent authority.
	Continued liaison with NRW and Powys County Council's Ecologist is advised.	The comments on the original scoping response from Powys County Council for the Development in April 2017 were used to inform the Scoping Request submitted to PINS in August 2018. There were no additional comments from Powys County Council's Ecologist nor NRW contained within the Scoping Direction from PINS, consequently no further consultation was considered necessary. Both Powys County Council and NRW will be provided with the full ES and associated technical appendices as part of the pre-application consultation phase.
Water Environment (7.6)	Liaison is required with NRW and PCC in relation to the requirement, or otherwise, for a Water Framework Directive Assessment.	A screening assessment undertaken concluded that a Water Framework Directive Assessment can be screened out based on the fact that there are no pathways between the Development and either the Lower Palaeozoic groundwater body nor the Pwll Trewen. Please see Chapter 11 – The Water Environment, Section 11.4.63 – 11.4.73, for further details.

**Table 2-1: Scoping Direction Summary (cont)**

Item and EIA Scoping Direction Paragraph Ref	Required Information	Location within ES
Water Environment (7.6)	Details of any dewatering pumping that is required to maintain a water table below the quarry void should be provided Liaison with NRW and PCC is recommended.	Details of dewatering required can be found in Section 11.4 of Chapter 11 – The Water Environment for the construction phase. A site meeting was held Powys County Council Land Drainage Engineer and Powys County Council Ecologist, on 18 <sup>th</sup> March 2020 to discuss the surface water management proposals for the Development.
Historic Environment (7.7) and the Welsh Ministers (Cadw) Consultee Response and Clwyd-Powys Archaeological Trust (CPAT)	Welsh Government’s best proactive guidance Setting of Historic Assets in Wales (2017) should be followed. Together with Managing Change to Registered Historic Parks and Gardens in Wales (2017). There are two registered Historic Parks and Gardens within 3km of the site – both should be considered in the assessment. CPAT suggests a number of additional sources for the desk based assessment and advises that this is supplemented by a walkover survey of the site. CPAT should be included in consultation where appropriate The additional view points for the visual assessment should be also dealt with in the Historic Environment Chapter.	Section 12.2. of Chapter 12 – Archaeology and Heritage details all guidance used in the assessment including the Setting of Historic Assets in Wales 2017 and Managing Change to Registered Historic Parks and Gardens in Wales (2017). Maesfron is situated within 1km of the Development has been considered in the assessment. In addition The Garth, Trelydan Hall and Powis Castle which are all within 5km have also been considered. The effect of the Development on all four are considered in Section 12.4. of Chapter 12. The additional sources considered are described in Technical Appendix 12-1. A walkover survey was undertaken in July 2019 (again see para 1.6 of TA12-1). The scope of the search was agreed with Clwyd-Powys Archaeological Trust (CPAT) via email correspondence <sup>1</sup> . Offa’s Dyke (MG034 and MG224), Strata Marcella Abbey and The Breidden Hillfort have been considered in Section 12.4. of Chapter 12.
Site Condition (7.8)	Liaise with NRW and PCC with regard to the scope of any contaminated land assessment	An assessment of contaminated land was undertaken as part of the Geoenvironmental Site Investigation Report which may be found in Technical Appendix 13-1. Both Powys County Council and NRW will be provided with the full ES and associated technical appendices as part of the pre-application consultation phase.

**Table 2-1: Scoping Direction Summary (cont)**

Item and EIA Scoping Direction Paragraph Ref	Required Information	Location within ES
Socio-Economic (7.9)	PCC to be consulted with regard to impacts on land use and recreation within the LSA.	A number of stakeholders were contacted as part of the socio-economic assessment including Welshpool Airport, the telescope at Knockin and the Rights of Way Officers for Powys and Shropshire. No responses were received from those contacted, in addition, no consultation responses were highlighted to the socio-economic assessor as being a potential issue for consideration. See Section 7.3.35. of Chapter 7 Socioeconomic.
Noise (7.10)	Continued liaison with PCC required	Consultation with Powys County Council's EHO has been undertaken. See Section 14.1.5. of Chapter 14 – Noise and Vibration.
	The Inspectorate directs that vibration is Scoped Out of the ES	Vibration has therefore not been considered as part of this ES, see Section 14.1.5. of Chapter 14 – Noise and Vibration.
Geotechnical and Materials Management (7.11)	The ES should include the impacts of preparatory works and then assess impacts of construction, operation and decommissioning.	The physical effects of the construction, operational and decommissioning phase of the Development has been considered in Section 13.4. of Chapter 13 – Geotechnical and Materials Management and in the associated Technical Appendices.
	Comments regarding geotechnical assessment, land contamination and materials management covered within the PCC 2017 Scoping Opinion should also be considered and further consultation and refinement with the relevant consultees is necessary.	The comments regarding geotechnical assessment, land contamination and materials management covered within the PCC 2017 Scoping Opinion were used to inform the scope of the Geoenvironmental Site Investigation Report, and as with the contaminated land assessment, no further consultation was considered necessary. Both Powys County Council and NRW will be provided with the full ES and associated technical appendices as part of the pre-application consultation phase.
	Details of how the Buttington Brickwork SSSI will be maintained must be submitted.	Further to direction from NRW, the Buttington Brickworks SSSI has been excluded from the planning boundary. Responsibility for maintenance of the SSSI will remain with the Landowner.
	The Buttington Brickwork SSSI must be protected during the construction phase and not damaged by the construction of screening embankments and drainage	As mentioned above, the SSSI has been excluded from the planning boundary. A site visit to discuss protection measures was postponed, however, the Construction Environmental Management Plan which may be found as Technical Appendix 4-3 provides a high level description of the protection measures to ensure the SSSI is protected.

**Table 2-1: Scoping Direction Summary (cont)**

Item and EIA Scoping Direction Paragraph Ref	Required Information	Location within ES
Powys County Council Consultee Response – Contaminated Land	Historic land uses adjacent and within the quarry should be considered as potential sources of land contamination. Details of how this will be investigated, assessed and mitigated should be included in the ES.	A Site Investigation to assess any potential land contamination has been undertaken and is provided as Technical Appendix 13-1: Geotechnical and Geoenvironmental Site Investigation Report. The findings of this report are summarised in Chapter 13, Section 13.3.54.
Natural Resources Wales Consultee Response	NRW require a Construction Environmental Management Plan (“CEMP”) to be comprehensive and site specific and to address all relevant environmental issues. NRW require a Site Waste Management Plan (“SWMP”) to be comprehensive and site specific and to address all relevant environmental issues.	Further consultation with NRW was undertaken with regard to the requirement for both a CEMP and SWMP. NRW confirmed in an email to ECL <sup>ii</sup> that <i>“At this stage in the process we would be happy with an outline CEMP and SWMP that would provide sufficient information to support the Environmental Statement, so that an informed decision on the effects of the development can be assessed when it comes in for full planning permission under an EIA. These would be live documents throughout the construction phase of the project”</i> . Consequently the outline CEMP and SWMP have been combined as one document, to avoid repetition, and this document is provided in Technical Appendix 4-3 of this ES. A more detailed CEMP/SWMP will be provided as part of a planning condition.

**Table 2-1: Scoping Direction Summary (cont)**

Item and EIA Scoping Direction Paragraph Ref	Required Information	Location within ES
Natural Resources Wales Consultee Response	The details of the interpretation boards and access to the Buttington Brickwork SSSI must be submitted as part of the application.	<p>Further consultation with NRW was undertaken with regard to the Buttington Brickworks SSSI. To summarise these discussions<sup>iii</sup>:</p> <ul style="list-style-type: none"> <li>• there are no issues with the geological SSSI (Buttington Brickworks);</li> <li>• From a brief review, interpretation boards are not really suitable due to the location of the site – NRW were concerned that boards could potentially cause Health and Safety issues given steeply sided quarry faces.</li> <li>• General public access is not encouraged by NRW, however, access to NRW and others with professional interest has always been granted and it is requested by NRW that this could be continued. It is confirmed by Broad Energy (Wales) Limited that this arrangement can continue with pre-arranged visits for NRW and other professional/university visits.</li> <li>• The SSSI is above the quarry floor so is unlikely to be impacted by construction or operational activities.</li> <li>• The SSSI will be excluded from the red line planning boundary.</li> <li>• NRW would welcome the opportunity to attend a site visit is to be arranged when HZI's execution team attend site to discuss any mitigation measures for the construction phase. Unfortunately due to COVID-19 travel restrictions, a site visit planned for March 2020 has been postponed.</li> <li>• NRW welcome the fencing off the SSSI to avoid any damage during the construction and operational phase of the Development.</li> </ul>
	The site will require an Environmental Permit under Schedule 1, Chapter 5, Section 5.1 of the Environmental Permitting (England and Wales) Regulations 2016.	An Environmental Permit Application will be submitted to NRW in tandem with the DNS Application. Pre-application discussions have been held with NRW.



2.3.5. In addition, the Scoping Direction requested that the ES should contain all information outlined in Schedule 4 of the Town and Country Planning (EIA) (Wales) Regulations 2017. A list of this information, together with where it can be found in the ES is provided in Table 2-2.

**Table 2-2: Requirements of Schedule 4 of the Town and Country Planning (EIA) (Wales) Regulations 2017**

Schedule 4 Paragraph No.	Required Information	Location within ES
1	<p>Description of the development, including in particular</p> <p>(a) a description of the location of the development;</p> <p>(b) a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works and the land-use requirements during the construction and operational phases;</p> <p>(c) a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used;</p> <p>(d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, oil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during the construction and operational phases.</p>	<p>Chapter 1.</p> <p>Chapter 4</p> <p>Chapter 4</p> <p>Chapters 3,4,6,11,13,14,15 and 16</p>
2	A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the applicant or appellant which are relevant to the proposed development and its specific characteristics and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.	Chapter 3
3	A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.	Chapter 5
4	A description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape	All KEA Chapters, Chapters 6-16.

**Table 2-2: Requirements of Schedule 4 of the Town and Country Planning (EIA) (Wales) Regulations 2017 (cont)**

Schedule 4 Paragraph No.	Required Information	Location within ES
5	<p>A description of the likely significant effects of the development on the environment resulting from, inter alia</p> <p>(a) the construction and existence of the development, including, where relevant, demolition works;</p> <p>(b) the use of natural resources in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;</p> <p>(c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances and the disposal and recovery of waste,</p> <p>(d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);</p> <p>(e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;</p> <p>(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;</p> <p>(g) the technologies and the substances used.</p>	<p>Chapter 4</p> <p>Chapter 4, 9,10 and 11.</p> <p>Chapter 4, 6, 14, 15 and 16.</p> <p>Chapter 6, 12 and 15.</p> <p>Chapter 16</p> <p>Chapter 3 and 11</p> <p>Chapter 3 and 4</p>
5	<p>The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the environmental protection objectives established at European Union or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC(1) and Directive 2009/147/EC(2).</p>	<p>Each KEA Chapter 6-14 provides and Environmental Effects Assessment and Analysis of all stages of the Development and considers interactive and in combination effects.</p>
6	<p>A description of the forecasting methods or evidence used to identify and assess the effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.</p>	<p>Chapter 2 and each KEA Chapter 6-14.</p>

**Table 2-2: Requirements of Schedule 4 of the Town and Country Planning (EIA) (Wales) Regulations 2017 (cont)**

<b>Schedule 4 Paragraph No.</b>	<b>Required Information</b>	<b>Location within ES</b>
7	A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.	No significant adverse effects were identified.
8	A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to European Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of the Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies	Chapter 16
9	A non-technical summary of the information provided under paragraphs 1 to 8.	ECL Document ECL.001.01.02/NTS
10	A reference list detailing the sources used for the descriptions and assessments included in the environmental statement.	A list of references is provided at the end of each ES Chapter.

## 2.4. Identified Key Environmental Aspects

- 2.4.1. Based on the information collated as part of the identification of KEAs and the Scoping Direction received from PINS, Figure 2-2 lists all the KEAs to be assessed in the ES.

Figure 2-2: KEAs for ES Chapters



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## **2.5. Pre-Application Consultation Responses**

- 2.5.1. A Pre-Application Consultation Response has been prepared by Newgate Communications and is submitted with this DNS Application. Section 4 of that report discusses the main issues raised by the public and how they have been addressed. Section 5 details the responses from Statutory Consultees and summarises how they have been addressed.
- 2.5.2. For ease of reference, where changes have been made to the ES following the both the public and statutory consultees comments, those changes are noted in the introductory section of each chapter.
- 2.5.3. A summary of the responses that are relevant to the ES and how they have been addressed is provided in This is provided in Table 2-3.

**Table 2-3: Pre-Application Consultation Summary**

Consultee	Required Information	Location within ES
Powys County Council	Demonstrate compliance with Planning Policy	This is provided in the Waste Planning Statement.
	Amend the Waste Planning Statement to focus on waste within Wales	Discussion on how the Development deals with waste within Wales and the wider catchment area is provided within the Waste Planning Statement.
	The information contained within the Market Appraisal Report and Waste Planning Statement fails to convince that there is an actual need for this facility within the confines of National and Local Planning Policy and consequently it is difficult to understand how such a proposal can be considered to accord with sustainability objectives of the Wellbeing and Future Generations Act as noted within the WPS.	The Waste Planning Statement has been updated accordingly. In addition, Chapter 3 – Need and Alternatives has been updated to demonstrate the need for waste infrastructure in the area and the benefits that a development of this nature could bring to Powys and Wales as a whole.
	The proposal is for a permanent ERF, however the Welsh Government are seeking to achieving zero waste by 2050	The Waste Planning Statement has been updated to discuss how the development accords with planning policy.
	Explanation of the rationale for the alternative sites assessment.	The project has always been focussed on Wales and a Facility for Wales. It is recognised that although Powys has a low population density, it covers a large land area with very little capacity for waste collection. The Alternative Sites Assessment focused on sites in Powys not only for the need for waste recovery and the lack of existing recovery capacity, but also the opportunities to bring employment to a rural area. This also ensures that Wales is dealing with its waste within its borders and not transferring waste – Wales would be therefore be self-sufficient and globally responsible for the waste it generates. In addition, under the Wellbeing and Future Generations Act, there is an emphasis on considering a more local or regional approach to waste management. This approach is focused on the concept of place making and what is best for particular locations, taking to consideration the local pressures whether they be social, environmental, business etc. Consequently, the search was restricted to Powys as the proposed Development has advantages for the locality which are further discussed in the Waste Planning Statement and Chapter 3 of this ES.
	How will the proposal be a catalyst for future development of the site.	Chapter 3 – Need and Alternatives has been updated to detail what is envisaged should planning permission be granted. However, it should be noted that any development outside the planning boundary is beyond the control of the applicant and does not form part of this DNS application.

**Table 2-3: Pre-Application Consultation Summary (cont)**

Consultee	Required Information	Location within ES
Powys County Council	How does the proposed development contribute towards renewable energy targets.	The development will produce 12.8MW of renewable energy which will assist towards Wales's renewable energy targets. This is further discussed in the Waste Planning Statement.
	Any air quality modelling should also account for the local phenomenon of significant temperature inversions which are common in the River Severn Valley and which can trap emissions if the stack design is not capable of dispersing the plume above the inversion ceiling.	Chapter 6 – Air Quality has been updated to include a section on temperature inversions.
	Vehicle movements associated with the pre-construction works (i.e. reprofiling of the quarry) to be provided.	Clarification of the pre-construction works (i.e. those works required to re-profile the quarry) and the associated vehicle movements are provided within Chapter 4 – Description of the Development and Chapter 8 – Transport.
	Is the plume reflective of the analysis undertaken and that of worst case?	The visual representation of the plume was created based on plume visibility modelling undertaken. Both the length and transparency are based on model outputs. Further discussion on the methodology is provided in Chapter 9 – Landscape.
	Contaminated Land Officer – satisfied with content.	N/a.
	The ecology chapter is to be updated with the results of the bat surveys that were still in progress at the time of the pre-application consultation.	Chapter 10 – Ecology has been updated.
	The Ecology Chapter details limitations encountered with regards to the GCN surveys undertaken in 2020- it was agreed that the standard methodology would not be feasible and that torching surveys alone would be acceptable. Due to COVID-19 restrictions it is considered that sufficient information has been gathered to enable an appropriate assessment of the nature of use and likely impact of the proposed development to GCN.	N/a.

**Table 2-3: Pre-Application Consultation Summary (Cont)**

Consultee	Required Information	Location within ES
Powys County Council	PCC Ecologist confirmed that ecological features which have been identified and considered within the scope of the ES are appropriate. Likewise sound reasoning has been provided for those scoped out.	N/a
	PCC Ecologist would normally expect more detailed survey reports to be included as technical appendices to the ES rather than just in the ES text.	The detailed survey information was included within the main body of the text to avoid duplication.
	Further detail is needed in relation to any specific locations and extents of impacts or mitigation/enhancement measures that will take place.	Chapter 10 – Ecology has been updated in include a table showing the habitat loss/gain and a further plan showing these areas more clearly.
	The need for a Habitat Management Plan for the site is appropriate, however, further detail is required.	Chapter 10 – Ecology has been updated to provide further detail on the content of the Habitat Management Plan.
	A habitat loss/gain assessment and indicative plan is required.	Chapter 10 – Ecology has been updated to provide such an assessment and plan.
	It is noted that native woodland planting appears to be identified within the submitted landscaping plan however the Ecology Chapter makes no reference as to whether this planting would provide compensation habitat or whether other measures are proposed to ensure this requirement is met.	Chapter 10 – Ecology has been updated to include further detail on the woodland planting.
	PCC Ecologist having reviewed the outline CEMP considered that the outline measures identified are appropriate and in line with current best practice this approach is considered to be acceptable and common practice with developments of this nature where the main contractor has not yet been appointed.	Noted.
	PCC Ecologist recommends consultation with NRW with regard to impacts on protected sites.	This has been undertaken. NRW have provided responses which are discussed within this table.



**Table 2-3: Pre-Application Consultation Summary (Cont)**

Consultee	Required Information	Location within ES
Powys County Council	<p>PCC Ecologist has reviewed the sHRA and considers that the scope and content of the document is appropriate and agrees with the conclusions reached with regards to potential for likely significant effects with regards to the Granllyn SAC and Midland Meres and Mosses Ramsar Site. With regards to the conclusion reached in respects of the Montgomery Canal SAC it is considered that confirmation with regards to the correct Critical Load for the SAC from NRW is required to enable the conclusion present in the sHRA to be adopted by the competent authority.</p>	<p>NRW have provided further comment on the Critical Loads for the SAC and their responses are discussed further in this table.</p>
	<p>Clarification should be provided to demonstrate that all ancient woodland habitat within the zone of influence has been appropriately considered under the assessment.</p>	<p>It is confirmed that all ancient woodland habitats have been appropriately considered in both the Chapter 6 – Air Quality and Chapter 10 – Ecology.</p>
	<p>No details have been provided as to what measures would be proposed with regards to newt friendly road design it is recommended that further clarification is provided with regards to this.</p>	<p>Chapter 4 – Description of the Development has been updated to include details of newt friendly road design.</p>
	<p>Whilst reference to consideration of invasive non-native species (INNS) is made within the Ecology Chapter no further details to confirm the results of such an assessment is provided – it is therefore not clear whether the surveys found these species to be absent or not. No mention is made to the need to consider biosecurity during either the construction, operation or decommissioning phases – it is recommended that the outline CEMP is amended to include reference to INNS and biosecurity protocols.</p>	<p>The CEMP (which may be found as Technical Appendix 4-3) has been updated to include reference to INNS and biosecurity.</p>

**Table 2-3: Pre-Application Consultation Summary (Cont)**

Consultee	Required Information	Location within ES
Powys County Council	Table 10-9 page 10-40 Vegetation removal and groundworks section – requires attention.	Table 10-9 within Chapter 10 has been updated, as has Section 10.7.2.
	PCC recommend that any planning permission should contain a condition to provide an odour management plan which details all measures to be taken to minimise odour release off site, and to include the keeping in stock of all essential spare parts relied upon to minimise such odours.	All odour control measures will be detailed within the Environmental Permit Application which will be submitted in tandem with the DNS application. These can also be provided in the form of an Odour Management Plan should planning conditions required one.
	PCC recommend that a dust assessment and abatement report should be submitted for approval for the construction phase as part of the planning process, and adherence to the report made a condition of permission.	A Dust Assessment has been prepared and is provided as Technical Appendix 6-3.
	PCC EHO has requested a low frequency and total noise assessment.	Further consultation has been undertaken and planning conditions suggested which would provide comfort that low frequency noise and total noise will not have any impact on potentially sensitive noise receptors. A detailed response to the comments raised, and subsequent discussions is provided as Technical Appendix 14.7.
	Numerous comments were made by a Geotechnical Consultant engaged by PCC – their complete response is provided as TA13-3.	A full response is provided in TA13-3. However, it is confirmed that the recommendations laid out in Chapter 13 and supporting Technical Appendices are valid.
	Provide further clarity on the relationship between the proposed development and existing site profiles.	Drawing ECL-BQ-000 (Planning Boundary) in Technical Appendix 1-1 shows the existing site contours. Drawing BT1180-D14 has been included in Technical Appendix 4-1 to show the levels of cut and fill required. ECL Drawing ECL-BQ-001 shows the final site levels. These three drawings viewed together provide the before, during and after which therefore provide clarity on the existing site levels and the proposed development. ECL-BQ-000 has also being included in Technical Appendix 4-1 for ease of reference.
	Provide details of the volume of material to be excavated.	The total volume of material to be moved off site is 162,235m <sup>3</sup> (approximately 292,023 tonnes). This figure has been included in Chapter 4 and made clearer in Chapter 8 that the first 6 months of construction allows for the removal of material.

**Table 2-3: Pre-Application Consultation Summary (Cont)**

Consultee	Required Information	Location within ES
Powys County Council	Detail the material to be re-used on site and how the cut and fill will be achieved.	Drawing BT1180-D14 has been included in Technical Appendix 4-1 to show the levels of cut and fill required. It has been calculated that it would be necessary to excavate in the order of 334,635m <sup>3</sup> of material of which in the order of 172,400m <sup>3</sup> would be re-used on site (i.e. over 50% of the excavated material will be reused on site). This leaves a volume of 162,235m <sup>3</sup> of material to be removed. This information has been included in Chapter 4.
	Provide wireframes for a selected number of the photomontage viewpoints, with the wireframes superimposed over the photographs.	Discussions have been held with PCC Landscape consultant and the additional wire frames provided and contained within Technical Appendix 9-1 – Landscape and Visual Impact Assessment, Appendix 13.
	Prepare a number of longer cross sections to be prepared through the quarry base/the plant and the quarry surrounds out to the various local roads.	Discussions have been held with PCC Landscape consultant and the cross sections have been provided and contained within Technical Appendix 9-1 – Landscape and Visual Impact Assessment, Appendix 3.
Natural Resources Wales	Requirement 1 – Consider the Cumulative Impact of other developments and assess transport impacts on ecological sites.	<p>The ADMS Roads Assessment (ECL report ECL.001.01.02/ADM Roads – Technical Appendix 6.2 of the ES) has been updated to include the impact of the highways movements associated with the ERF on protected ecological sites.</p> <p>The ADMS Roads Assessment (ECL report ECL.001.01.02/ADM Roads – Technical Appendix 6.2 of the ES) has been updated to include the impact of the highways movements associated with the ERF and the impact of emissions from the A1 stack at the maximum point of ground level concentration, human sensitive receptor locations and protected ecological sites.</p> <p>The ADMS 5 assessment (ECL report ECL.001.01.02/ADM – Technical Appendix 6.1 of the ES) has been updated to model the impact of the ERF and the Intensive Livestock Unit on airborne ammonia concentrations at the maximum point of impact of the ERF.</p>
	Requirement 2 - Submission of detailed ammonia and nitrogen assessment for Montgomery Canal SAC and SSSI	The ADMS 5 assessment (ECL report ECL.001.01.02/ADM – Technical Appendix 6.1 of the ES) has been updated to model the impact of the ERF and the Intensive Livestock Unit on airborne ammonia concentrations at the maximum point of impact of the ERF.

**Table 2-3: Pre-Application Consultation Summary (Cont)**

Consultee	Required Information	Location within ES
Natural Resources Wales	Requirement 3 - Submission of a detailed ammonia assessment for Moel Y Golfa SSSI	The ADMS 5 assessment (ECL report ECL.001.01.02/ADM – Technical Appendix 6.1 of the ES) has been updated with a detailed ammonia assessment.
	Requirement 4 – Submission of a Surface Water Management Plan (“SWMP”)	A comprehensive SWMP is included as Technical Appendix 11-2 of this ES. The SWMP has been developed following a SuDS Approving Body (“SAB”) approval pre-application advice request to PCC. A site meeting was held with PCC’s Land Drainage office and the outcome of that meeting, together with PCC SAB pre-application response has informed the final SWMP. Construction drawings for the drainage design detailed within the SWMP would be prepared post planning and following SAB approval. It is confirmed that no long-term dewatering is required.
	Requirement 5 – Submission of a Construction Environmental Management Plan.	NRW have since confirmed (via email 16.11.2020) that they are content with the information provided and Requirement 5 is considered to be resolved. An outline CEMP is provided as Technical Appendix 4-3.
	Requirement 6 – Submission of Preliminary Contaminated Land Assessment,	NRW have since confirmed (via email 18.11.2020) that they are content with the information provided and Requirement 6 is considered to be resolved as the Preliminary Contaminated Land Assessment submitted as Technical Appendix 13-1 is considered to be appropriate for planning.
	Requirement 7 – Amended information required in respect of groundwater modelling.	<p>There is no current, or historic, management of groundwater levels at Buttington Quarry.</p> <p>ES Chapter 11 summarises the local hydrogeological regime based on site-specific monitoring data and infers that any limited groundwater flow within the mudstones beneath the site predominantly occurs within the near-surface weathered horizon and within discontinuities in the bedrock.</p> <p>The site-specific groundwater level monitoring data and site observations indicate that incident rainfall readily infiltrates to ground where weathered mudstone is exposed. Beneath the weathered horizon, groundwater flow will preferentially occur via discontinuities including bedding planes and fractures, but the potential for groundwater movement and storage will diminish with depth as the bedrock becomes more competent. The local topography confirms there is no significant up-gradient groundwater catchment area.</p> <p>There is no visual evidence of groundwater seepages within the exposed quarry walls, with site personnel confirming there is no evidence of seepages even during or immediately following periods of prolonged rainfall events. Whilst shallow, ponded water is seasonally present within low-lying areas of the quarry floor, this represents a combination of rainfall-runoff and limited, isolated perched groundwater.</p>

**Table 2-3: Pre-Application Consultation Summary (Cont)**

Consultee	Required Information	Location within ES
Natural Resources Wales	Requirement 7 – Amended information required in respect of groundwater modelling (Cont)	<p>Groundwater level monitoring is detailed within ES Chapter 11, Table 11-4. Boreholes BH1 and BH6 are located within the quarry floor and confirm shallow groundwater levels, between 0.0m and 0.3m below ground level (88.41mAOD to 89.17mAOD). Whilst the groundwater level monitoring record is limited, data are available for March 2019 and March 2020, periods of seasonally high groundwater levels, following Winter recharge.</p> <p>The site-specific monitoring data confirm that the base of the quarry is currently at, or just above, local perched groundwater levels. Any limited groundwater inflows through the quarry floor gravity drain, with rainfall-runoff, via the site’s existing surface water management system. This system discharges to the tributary watercourse which flows through the site.</p> <p>The existing quarry void will be re-profiled to accommodate the proposed ERF with the quarry floor widened towards the south-east and raised from the existing elevation of approximately 89mAOD to 90mAOD. This raising of the quarry floor to 90mAOD (0.83m above the maximum recorded groundwater level in this locality) will reduce the potential for groundwater inflows from the current baseline conditions. Any potential groundwater seepages around the perimeter of the development platform would be managed via the proposed surface water drainage scheme, which incorporates sustainable drainage (SuDS) techniques and discharges to the on-site tributary watercourse. This replicates existing baseline conditions, although the introduction of SuDS elements would result in enhanced water quality and flow rate control.</p> <p>No dewatering is anticipated during the construction phase of the ERF and no long-term dewatering would be required during the operational phase. If temporary dewatering is required during the construction phase, it is anticipated such works would be undertaken in accordance with Regulation 5 of The Water Abstraction and Impounding (Exemptions) Regulations 2017 (‘small scale dewatering in the course of building or engineering works’). Works would be completed in accordance with the Environment Agency’s guidance on temporary dewatering from excavations to surface water<sup>1</sup>.</p> <p>Any groundwater abstracted during the construction phase would be appropriately managed on site to ensure no detrimental impact, in terms of water quality or flow rate, within the receiving watercourse. As outlined above, any limited groundwater inflows to the quarry floor and shallow groundwater throughflow currently discharges to the on-site tributary watercourse. Therefore, the proposed works will not significantly alter the existing baseline hydrogeological and hydrological regimes, other than introducing appropriate controls regarding discharge water quality and flow rate.</p>

<sup>1</sup> [www.gov.uk](http://www.gov.uk) Guidance – Temporary dewatering from excavations to surface water, updated 30<sup>th</sup> April 2020

**Table 2-3: Pre-Application Consultation Summary (Cont)**

<b>Consultee</b>	<b>Required Information</b>	<b>Location within ES</b>
Natural Resources Wales	Requirement 8 – Assess Impact on Dormouse	Chapter 10 – Ecology has been updated with an assessment of impact on dormice.
Clwyd-Powys Archaeological Trust	Update references to Policy.	Chapter 12 – Archaeology and Cultural Heritage has been updated accordingly.
Canal and River Trust	Any assessments to consider the impact on the Montgomery Canal	Chapter 6 – Air Quality and Chapter 10 – Ecology and the Shadow Habitats Regulations Assessment all consider the impact on the Montgomery Canal.
HSE	Confirm that the development does not fall within any COMAH	Noted.
CADW	Include the impact of plume visibility on heritage sites.	Chapter 12 – Archaeology and Cultural Heritage has been updated accordingly.

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## 2.6. Baseline for the EIA

- 2.6.1. 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*”. Schedule 4, Paragraph 3 also requires that the ES must include a description of the Development Site at the time the application is submitted, and must also consider outline how the baseline would evolve without the Development (based on the availability of environmental information and scientific knowledge).
- 2.6.2. The Development Site comprises an operational quarry and an area of rough ground to the south of the quarry with various stone stockpiles. To the south of the Development area, elevated from the main quarry void is an area where disused lorries and several lorry trailers are parked. A more detailed description may be found in Chapter 5, The Existing Environment.
- 2.6.3. ECL Drawing ECL-BQ-003 in Technical Appendix provides an indication of the existing planning boundaries. In accordance with the existing planning permissions for the site (shown on ECL-BQ003), the quarrying operations can continue until 2042 within the area described as Mineral Planning Permission and there is also a permission for quarrying within the area described as Extension Planning until 2025.
- 2.6.4. Figure 2-3 shows the Development Site.

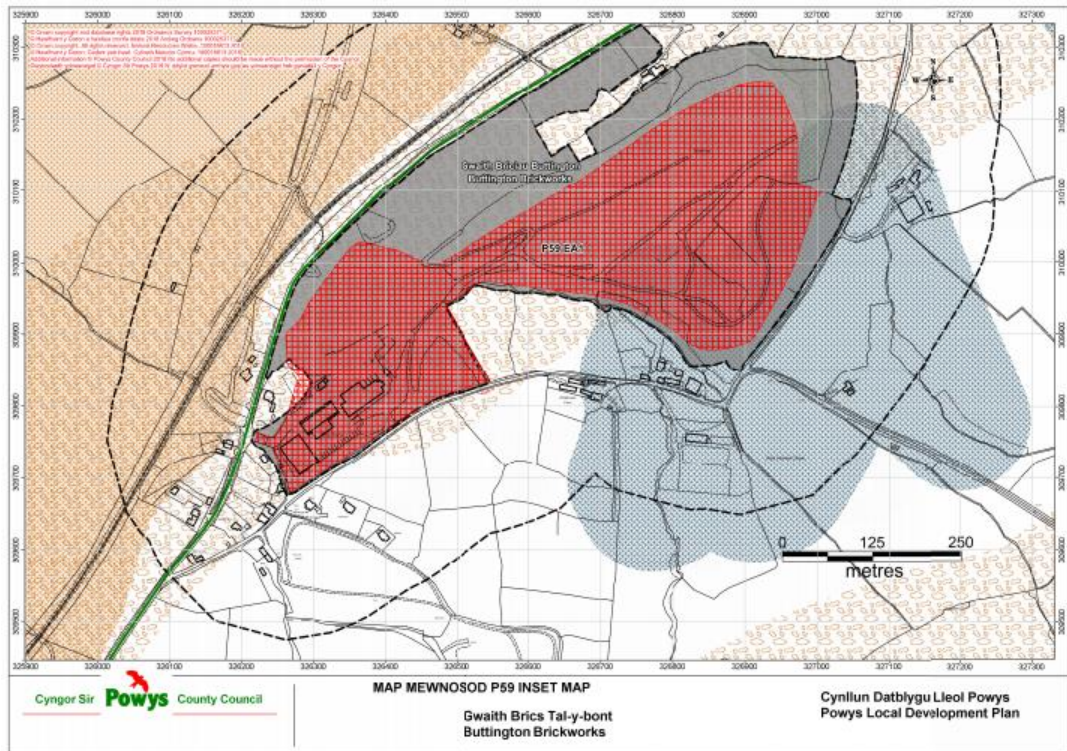
Figure 2-3: Development Area





- 2.6.5. Land excluded from the application to the west of the Development area is currently occupied by several buildings, including three large warehouse type buildings and offices, and a small quarry. There is also a weighbridge. Most of this area is surfaced with hardstanding, however the staff car park is gravelled. Border Hardcore operate the quarry and also provide storage of classic cars in one of the large units. Speed Welshpool Limited, a pallet and parcel delivery company, occupy the other large unit. In this western region of the site there is also an area of rough land east of the warehouse buildings, which lies at a higher topographic level and is accessed via a rough track. Planning Permission has also been granted for a further industrial unit in this area (Planning Permission Ref 20/0045/FUL).
- 2.6.6. Planning permissions have been granted for an improved access approximately 155m north east of the existing quarry access - Planning Permission Ref. P/2015/0439). A Section 73 application (Planning Permission Reference 20/0575/REM) was submitted in April 2020 to request an extension of time which was approved in September 2020.
- 2.6.7. In accordance with paragraph 3 of Schedule 4 of the 2017 Regulations and paragraph 6.2 of the Scoping Direction, for the purpose of this ES the baseline scenario used for assessment purposes is the existing physical current state of the environment. This ES will therefore describe the works and fully assess the impacts that would arise in preparing the site for both the consented site access and for the Development itself. In accordance with the Scoping Direction (para 6.2), relevant topic chapters will clarify where impacts could arise in any event from other consents without the Development. However, the ES will fully assess all impacts of the Development against the current baseline position regardless of which consent the works could be carried out pursuant to. This includes fully describing and assessing impacts arising from:
- removal of 294,500 tonnes of material from the quarry itself;
  - construction of a level platform for the development, including all works required for slope stabilisation;
  - construction of the new site access; and
  - construction of the ERF and associated ancillary buildings.
- 2.6.8. For the consideration of the future baseline, the Buttington quarry is allocated in the PCC Local Development Plan as land suitable for employment use (P59, EA1) as shown in Figure 2-5. The extent of the employment use is shown on Figure 2-5 as the red hatched area. It is described in the LDP<sup>iv</sup> as a:
- brownfield site, partly in employment use, allocated for further expansion for General Industrial Uses. Expansion dependant on new access (extant p.p.). Heritage/Ecology Value. The site is adjacent to a geological SSSI, the design of development must be sympathetic to the SSSI so that the protected area is not significantly affected. Development proposals should be identified through the preparation of a development brief that takes account of all issues including constraints. \*Project level HRA screening required - Montgomery Canal SAC (hydrological connections). Buttington Brickworks SSSI. The site contains significant industrial remains as regards the sites of railway related features and development here may require prior archaeological intervention and possibly post consent works (consult and involve CPAT)*

**Figure 2-4: Extract from Powys LDP**



- 2.6.9. Consequently, if the Development did not proceed, then it is envisaged that the quarrying activities would continue at the permitted levels. Traffic movements would substantially increase as the material is worked out and the site is prepared for future development. Once the quarry is depleted and a flat development platform has been provided, it is likely that planning permission would be sought for large storage and distribution warehouses and office accommodation in accordance with the allocation.
- 2.6.10. It should be noted that the EIA is considering the effect of the development on the current site conditions, however, as the site is zoned for employment use, a qualitative assessment of the potential future effects has also been considered for completeness.

## 2.7. KEA Chapter Structure

2.7.1. Each KEA chapter consists of eight sections. The general outline of each KEA chapter is shown in Table 2-4. Where there are any departures from this method, it is clearly stated in the Chapter.

**Table 2-4: Structure of the KEA Chapters**

No.	Section	Contents						
<b>X.</b>	<b>KEA Title</b>							
<b>X.1.</b>	<b>Introduction</b>	Brief introduction as to why the KEA was selected and any specific consultation						
<b>X.2.</b>	<b>Relevant Legislation &amp; Policy</b>	What is the relevant legislation pertaining to the KEA, e.g., air quality standards, protected species, planning policy etc						
<b>X.3.</b>	<b>The Existing Environment</b>	<table border="1"> <tr> <td>Environmental Assessment Boundaries</td> <td>Description of environmental assessment boundaries reflecting Project, ecological and/or socio-economic boundaries where relevant</td> </tr> <tr> <td>Baseline Conditions</td> <td>A KEA specific description of the existing baseline situation</td> </tr> <tr> <td>Likely Future Conditions</td> <td>A statement of likely condition of the environment within expected lifespan of Project if the Project is not approved</td> </tr> </table>	Environmental Assessment Boundaries	Description of environmental assessment boundaries reflecting Project, ecological and/or socio-economic boundaries where relevant	Baseline Conditions	A KEA specific description of the existing baseline situation	Likely Future Conditions	A statement of likely condition of the environment within expected lifespan of Project if the Project is not approved
Environmental Assessment Boundaries	Description of environmental assessment boundaries reflecting Project, ecological and/or socio-economic boundaries where relevant							
Baseline Conditions	A KEA specific description of the existing baseline situation							
Likely Future Conditions	A statement of likely condition of the environment within expected lifespan of Project if the Project is not approved							
<b>X.4.</b>	<b>Environmental Effects Assessment</b>	<p>A description of the effect of the Development on the KEA being considered against the current baseline. Effects are considered for the Construction, Operational and Decommissioning Phase of the Development, together with the effects of the Development Overall (i.e. all phases) and the Development in Combination with Other Developments (i.e. cumulative).</p> <p>Interactive effects between the various KEA being assessed are also considered and the location of the various assessments within the ES are signposted.</p> <p>The findings of the assessments are presented by Development phase, supported by research, reference data etc.</p> <p>This section also provides all the incorporated mitigation and any environmental management initiatives, again for all three main phases of the Development.</p> <p>This section will provide an assessment of the effects but does not provide commentary on the significance of the effects.</p>						

**Table 2-4: Structure of the KEA Chapters (cont)**

No.	Section	Contents
X.5	<b>Environmental Effects Analysis</b>	<p>It is important to have clearly defined criteria to be able to analyse the effects. A description of how the environmental effects will be evaluated is provided. The potential effects will be described for each phase of the Project, using the following factors:</p> <ul style="list-style-type: none"> <li>• magnitude;</li> <li>• geographic extent;</li> <li>• duration;</li> <li>• frequency;</li> <li>• reversibility; and</li> <li>• ecological, cultural and socio-cultural context.</li> </ul> <p>The evaluation criteria used in the effects analysis is specific to each KEA and will be specific to the technical assessments that have been undertaken.</p> <p>Professional judgement is then used to consider all the impact descriptors and then class the impact as “significant” or “not significant”. Where effects are classed as significant, mitigation measures, where relevant can be provided.</p>
X.6.	<b>Residual Environmental Effects</b>	<p>This section considers the residual environmental effects of the project, i.e. those effects which remain after the application of mitigation or engineering design.</p> <p>Overarching significance criteria, specific to each KEA is used to describe the residual (post mitigation) environmental effects significance by Development phase (construction, operation and decommissioning).</p>
X.7	<b>Summary</b>	<p>A concluding summary of the chapter.</p>
X.8	<b>References</b>	<p>A list of all references used in the Chapter.</p>

2.7.2. It is considered that this approach fulfils the requirements of the EIA Regulations in terms of addressing significance. Regulation 18(3) of the EIA Regulations requires:

*(b) a description of the likely significant effects of the proposed development on the environment;*

*(c) a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce and, if possible offset likely significant adverse effects on the environment.*

2.7.3. Paragraph 7 of Schedule 4 suggests that the likely significant effects should be assessed before and after mitigation:

*“A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.”*

- 2.7.4. A description of the likely significant effects of the Development on each KEA considered is found in the Environmental Effects Analysis tables for the KEA under consideration. Each potential effect, discussed in the Environmental Effects Assessment section, is analysed to determine the overall significance of the impact, prior to any mitigation. Should the effect be considered significant, then mitigation measures are provided. Mitigation measures are discussed in the Environmental Effects Assessment section and summarised within the Environmental Effects Analysis tables. It should be noted that there may be occasions where effects are considered not-significant, however, mitigation measures are proposed to demonstrate best practice.
- 2.7.5. The Residual Environmental Effects section then assesses each potentially significant effect, post mitigation. Overarching significance criteria is provided which defines how the post mitigation significance has been assessed.
- 2.7.6. Chapter 15 – Overall Health Impact does not follow the methodology adopted for other KEA chapters. This is because any likely significant effects to population and human health have been assessed in detail within specific KEA chapters of this ES insofar as they are relevant to specific topics (for example, the Air Quality chapter).
- 2.7.7. Chapter 16 of this ES provides a summary of the effects of the Development, for each KEA, and lists the significance of the effect both pre and post mitigation. It also looks at cumulative impacts and major accidents and disasters.
- 2.7.8. It is therefore considered that this methodology will provide a comprehensible and transparent assessment which fulfils the requirements of the EIA Regulations.
- 2.7.9. Key mitigation and environmental design features specific for each KEA are highlighted in this section to show how all the key anticipated environmental concerns associated with the Development are captured in the either in design features or the environmental management of the Development.

## **2.8. Strategic Use of Models and Test Work**

- 2.8.1. A range of effects analysis and scoping tools have been used in the various assessments to not only help identify potential KEAs and the nature of potential Development–environment interactions but also to help describe the potential environmental effect.
- 2.8.2. A number of models were used to support the environmental effects analysis and are detailed in each KEA Chapter.

## **2.9. Assumptions and Limitations**

- 2.9.1. The principal assumptions that have been made and any limitations that have been identified in preparing the ES are set out below:
- baseline conditions have been established from a variety of sources, including historical data, but due to the dynamic nature of certain aspects of the

environment, conditions will change during the construction and the operation of the proposed Development;

- information received by third parties is complete and up to date (at time of writing);
- the Development will satisfy relevant environmental standards, consistent with contemporary legislation, practice and knowledge;
- construction of the Development is intended to commence 2022 (subject to being granted planning permission) and will be constructed in stages and will be fully operational by 2025;
- conditions will be attached to the planning permission that will control disturbance during construction and will be implemented via the Construction Environmental Management Plan which will be submitted to the Local Authority for approval prior to the start of the construction period;
- necessary off-site services infrastructure for the proposed Development will be provided by statutory undertakers; and
- planning permission, subject to approval, will contain conditions that will be sufficient to cover the proposed development, as assessed.

2.9.2. Any KEA specific assumptions and limitations are also described in each KEA Chapter.

## 2.10. References

<sup>i</sup> Email from LP Archaeology to CPAT July 2018.

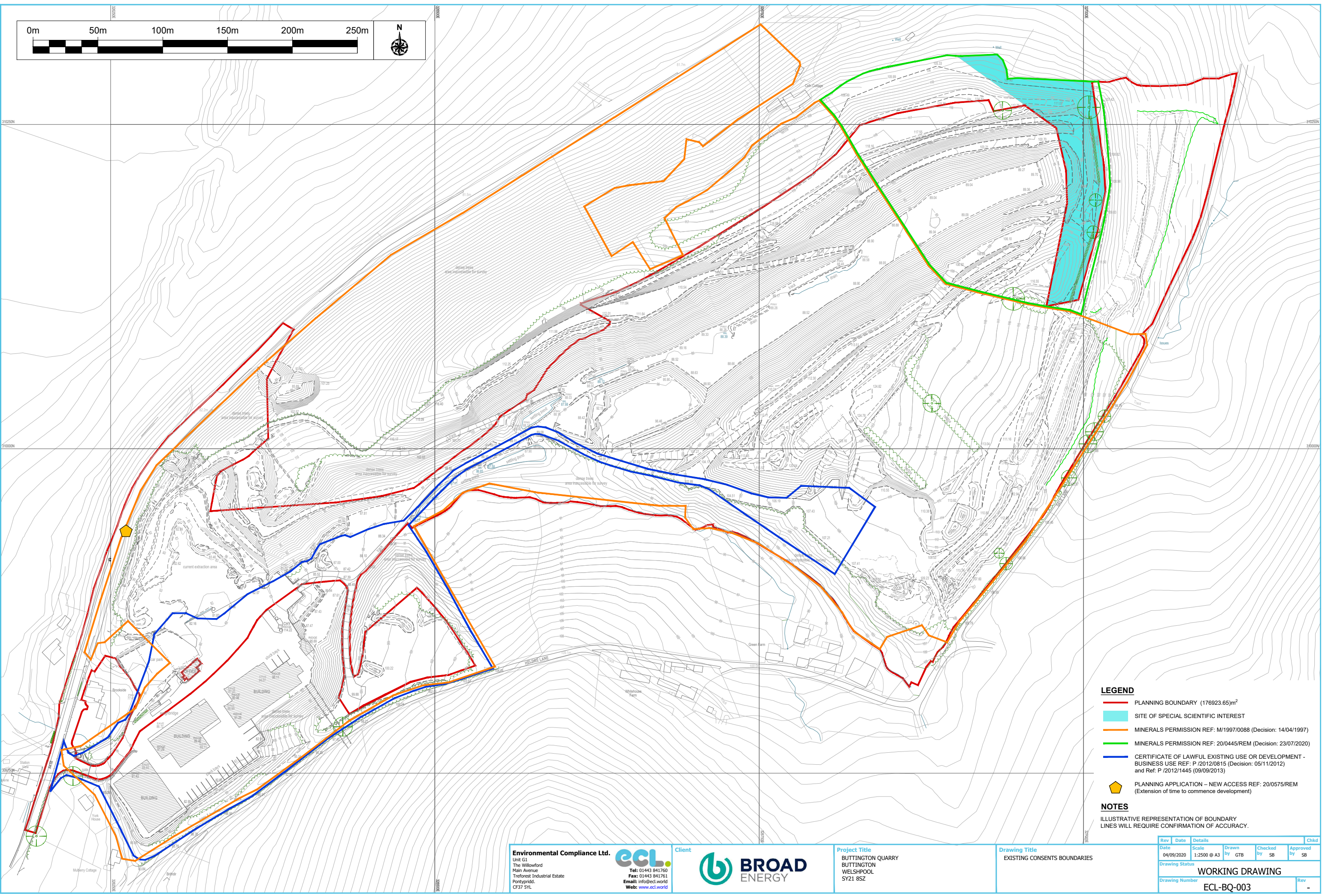
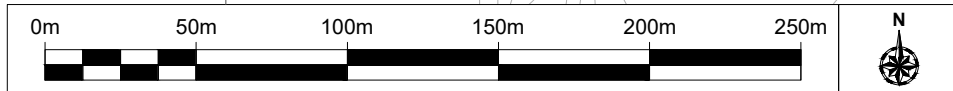
<sup>ii</sup> Email from NRW to ECL 12.12.2018

<sup>iii</sup> Email to NRW from ECL 7<sup>th</sup> April 2020.

<sup>iv</sup> Powys Local Development Plan (2011-2026), Powys County Council, 17<sup>th</sup> April 2018.

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## **Technical Appendix 2-1 Existing Consents Boundaries**



- LEGEND**
- PLANNING BOUNDARY (176923.65)m<sup>2</sup>
  - SITE OF SPECIAL SCIENTIFIC INTEREST
  - MINERALS PERMISSION REF: M/1997/0088 (Decision: 14/04/1997)
  - MINERALS PERMISSION REF: 20/0445/REM (Decision: 23/07/2020)
  - CERTIFICATE OF LAWFUL EXISTING USE OR DEVELOPMENT - BUSINESS USE REF: P/2012/0815 (Decision: 05/11/2012) and Ref: P/2012/1445 (09/09/2013)
  - PLANNING APPLICATION - NEW ACCESS REF: 20/0575/REM (Extension of time to commence development)

**NOTES**  
 ILLUSTRATIVE REPRESENTATION OF BOUNDARY  
 LINES WILL REQUIRE CONFIRMATION OF ACCURACY.

**Environmental Compliance Ltd.**  
 Unit G1  
 The Willowford  
 Main Avenue  
 Treforest Industrial Estate  
 Pontypridd,  
 CF37 5YL

**ecl.**  
 Tel: 01443 841760  
 Fax: 01443 841761  
 Email: info@ecl.world  
 Web: www.ecl.world

**BROAD ENERGY**

**Project Title**  
 BUTTINGTON QUARRY  
 BUTTINGTON  
 WELSHPOOL  
 SY21 8SZ

**Drawing Title**  
 EXISTING CONSENTS BOUNDARIES

Rev	Date	Details	Drawn by	Checked by	Approved by	Chkd
	04/09/2020	Scale 1:2500 @ A3	GTB	SB	SB	
<b>Drawing Status</b>						
<b>Drawing Number</b>						
<b>WORKING DRAWING</b>						
<b>ECL-BQ-003</b>						