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Hirwaun Power Project

Preliminary Environmental Information Report [PEIR]

Appendices

Hirwaun Power Limited

CONTENTS

APPENDIX A

CONSULTATION TABLES

Table 6 – Consultation Responses relating to Air Quality Impacts

Consultee	Location in Scoping Opinion	Comment	Response	Location in PEIR
PINS	3.20	The use of atmospheric dispersion modelling is welcomed. The SoS notes the intention to discuss the exact study area and detailed methodology with statutory consultees. The SoS recommends that both the assessment methodology and the sensitive receptors are agreed in consultation with Rhondda Cynon Taf County Borough Council (RCTCBC), Natural Resources Wales (NRW) and the Brecon Beacons National Park Authority (BBNPA). The Applicant's attention is drawn to the comments from the BBNPA (see Appendix 2) on the need to include methane in the air quality assessment.	It can be confirmed that atmospheric dispersion modelling has been used in this assessment. RCTBC, NRW and BBNP have all been contacted to discuss the requirements of the air quality assessment. Further correspondence from RCTBC is outlined in this table. Discussion of the 'relevant substances' is included in the PEIR. Methane will not be considered further in the assessment. Methane will only be produced if the plant is not operating properly. However, if this is the case it will be shut down immediately. No methane will be produced during normal operation. No methane limits are given in the latest Bref Guidance Notes.	Section 6.4 – Assessment Methodology and Significance Criteria
	3.21	It is noted that the air quality modelling and assessment will consider impacts at European and nationally designated wildlife sites and other ecological sites within 10km of the proposed development. The Applicant's attention is drawn to the comments from NRW (see Appendix 2) on the need to ensure that all the relevant wildlife sites and habitats are considered within the air quality assessment.	It can be confirmed that all relevant ecological sites will be considered within the Air Quality Assessment which will follow EA/NRW guidance for dispersion modelling with regards to the selection of receptors.	Section 6.4 – Assessment Methodology and Significance Criteria
	3.22	All assumptions and limitations to assessments, including the number, location and height of flue stacks should be clearly specified in all relevant sections of the ES. If	All assumptions have been clearly stated in the PEIR and will be in the subsequent ES. The operational 'worst case' scenario for air quality modelling has been considered (i.e. the	Section 6.4 – Assessment Methodology and

		details including the number, location and height of the flue stacks are not confirmed at the point of application the ES should assess operational air quality based on a worst case scenario, taking into account other nearby pollution sources (existing and proposed). The implications of stack height and dispersion of the discharge should also be clearly explained.	lowest possible stack height). The results of the atmospheric dispersion model have clearly been stated and other sources of pollution (e.g. cumulative impacts) have also been considered.	Significance Criteria
	3.23	Predicted pollutant concentrations should be assessed against the applicable standard guideline value (e.g. relevant European air quality limit values and National Air Quality Objectives).	It can be confirmed that all predicted pollutant concentrations will be assessed against applicable standards and guidance.	Section 6.4 – Preliminary Assessment of Potential Impacts
	3.24	The assessment should take account of the air emissions from the proposed development and emissions related to increased vehicular movements associated with the proposed development. Such information should also inform the ecological assessment.	It can be confirmed that vehicle emissions will be taken into consideration in both the air quality assessment and ecological assessment.	Section 6.4 – Assessment Methodology and Significance Criteria
	3.25	Changes in air quality and dust levels should be considered not only on site but also off site, including along access roads, local footpaths and other Public Rights of Way (PROW). The Applicant's attention is drawn to the comments from NRW (see Appendix 2). on the need to give particular consideration to the impacts of dust on habitats and designated wildlife sites.	It can be confirmed that air quality impacts during both construction and operation will be considered for both on-site and off-site receptors as per the guidance of both the EA (as above) and the IAQM Guidelines for the assessment of impacts of construction dust.	Section 6.4 – Assessment Methodology and Significance Criteria
	3.26	The SoS notes the references to embedded mitigation measures that will be employed during the construction phase of the project in addition to any project specific measures that may be required. The SoS advises that the ES must make it clear what mitigation measures are proposed, how they will be delivered, how effective they will be and what the residual effects would be.	It can be confirmed that mitigation measures will be set out in detail for each impact topic, as well as any residual impacts remaining after mitigation. In accordance with the IAQM Guidelines, appropriate mitigation will be defined by the relevant sections of the "*The control of dust and emissions from construction and demolition – Best Practice Guidance*" (Greater London Authority, 2006)	Section 6.4 – Assessment Methodology and Significance Criteria

	3.27	Consideration should be given to monitoring dust complaints.	A Construction Environmental Management Plan (CEMP) will be drafted as an outline as an Appendix to the ES and then prepared in detail prior to construction. This will set out requirements for dust monitoring and mitigation during construction which will be based on the assessed level of risk to identified receptors, as per the IAQM Guidelines.	Section 6.4 – Assessment Methodology and Significance Criteria
	3.28	The ES should also address the inter-relationships with other topics within the ES particularly ecology and water quality. The Applicant should also consider whether air quality and health issues should be addressed within the ES. The Applicant's attention is drawn to the advice from Public Health England in Appendix 2. The SoS notes that a worst case assessment of stack height in respect of air quality may not constitute a worst case assessment in respect of other topic areas.	The inter-relationships between air quality and other topic areas will be fully explored as required. Ecological impacts will be assessed in accordance with (amongst others) the EA guidance "*AQTAG 06 - Technical Guidance on detailed modelling approach for an appropriate assessment for emissions to air*" (2010). A separate public health section is included in the PEIR and will be finalised for the ES. Worst case scenarios will be addressed for each topic area and it is recognised that these 'worst cases' may differ between topics.	Section 6.4 – Assessment Methodology and Assessment Criteria Section 12 – Public Health.
BBNP	Appendix 2	The reference to BBNP as a receptor is welcomed. However, given that there will be emissions of air pollutants from the power plant, even if they are less than those from coal fired plant, the BBNPA believe that emissions of CO2, NOx and Methane should be scrutinised carefully. However low they may be, they will still contribute to the degradation of local air quality and continue to add to the cumulative deposition that has occurred and is still occurring.	CO_2 is not relevant with regards to air quality in respect of protection of human health and it is assumed that this is a typo intended to refer to carbon monoxide (CO). As per our response to PINS Paragraph 3.20, atmospheric dispersion modelling of 'relevant substances' (which are likely to be CO and NOx) will be considered. However, methane will not, as outlined in our response to the response from PINS at Paragraph 3.20.	Section 6.4 – Assessment Methodology and Assessment Criteria

		In relation to Paragraph 5.3.2, the EIA should also consider the release of methane because its contributions to air quality and greenhouse gases. Methane, a primary component of natural gas, can also be emitted into the air when natural gas is not burned completely or from leaks in the system.	Combustion in gas turbines usually takes place at between 200-300 per cent excess oxygen providing conditions were incomplete combustion is negligible. As above, methane will not be considered further as if there any operational issue with the plants operation; it will be automatically shut down, preventing the release of any methane.	Section 6.4 – Assessment Methodology and Assessment Criteria
		It is recognised that this project on it's own and in combination with other projects in the vicinity has the potential to further impact upon the degradation of sensitive receptors in the area including within the National Park. It should be recognised that some receptors are already at or nearing capacity and thus any additional pollutants must be heavily mitigated. The Scoping report is somewhat conflicting in this regard as the project description in Chapter 3 sets out that no flue gas cleaning equipment will be used, whereas paragraph 5.3.30 sets out that flue gas cleaning equipment will be used. These conflicting statements cast doubts over the potential magnitude of air quality impacts of this development and therefore needs to be formally clarified. Notwithstanding this, it is requested as part of the mitigation measures that an air quality monitoring network is set up to measure the in-combination actual impacts of the development and other developments within the vicinity when operational on ecosystems and communities upwind of the site within the National Park.	It can be confirmed that the potential impacts on sensitive receptors will be fully assessed. The Project will incorporate primary control measures for the emissions of 'relevant substances' to within the emissions levels associated with the Best Available Techniques. As such, secondary control measures such as bespoke flue gas cleaning equipment will be required. The EIA will consider the significance of the potential worst case impacts to all identified receptors within the 'zone of influence' of the emissions to air. The need for subsequent monitoring is considered unlikely at this stage however will form part of the in-going consultation discussions with relevant stakeholders.	Section 4 – Project Description.
NRW	Appendix 2	We strongly advise that the developer collect their own baseline data for NOx, NO2,	HPL do not intend to undertake monitoring studies in order to determine the baseline	Section 6.6 – Baseline

		nitrogen deposition, acid deposition and dusts as these would be the main aerial pollutants that would be of concern at the designated sites. On-going monitoring during construction would also provide important data to determine whether any on site embedded mitigation measures *(5.3.29)* are working, particularly for dusts.	conditions for the EIA. There is a range of current data available from the local authorities within the air quality study area supplemented by background mapping data supplied by DEFRA that is considered suitable for the purposes of the relevant assessments. Deposition data is available from the Air Pollution Information Service, the use of which is considered as best practice in undertaking these types of assessments.	Conditions and Receptors
		As stated in our advice in *5.3.5* we strongly recommend the developer collect their own data in addition to the available information from the websites listed as this would provide site specific data.	As above.	Section 6.6 – Baseline Conditions and Receptors
		As stated in *5.3.15* Horizontal Guidance Note H1 Annex (f): Air Emissions will be used then a screening distance of 10km is required. Cwm Cadlan SAC is approximately 3km to the northeast of this development and must be included in the assessment process. We agree that the impact of nitrogen deposition on the features of the designated sites will need to be assessed.	In accordance with the relevant guidance notes, all EU designated sites within 10 km, such as the SAC, will be included as sensitive receptors. In addition, all UK designated sites (e.g. SSSIs) will be assessed within 2 km of the Project.	Section 6.6 – Baseline Conditions and Receptors
		The majority of literature indicates that large dust particles (>30µm) deposit within 100m of source and deposit quite quickly, whereas intermediate sized particles (10 – 30µm) are likely to travel 200 – 500m and small particles (<10µm) may travel 1000m from source and deposit more slowly. Blaen Cynon SAC (also designated Cors Bryn-y-Gaer SSSI) is approximately 400m from the edge of development.	The assessment of dust associated with construction works will be undertaken in accordance with the IAQM Guidelines which specifies 'zones of influence' based on the types of receptor and the specific activities that are anticipated.	Section 6.4 – Assessment Methodology and Assessment Criteria
		For dust particles to become airborne the minimum wind speed must be 5.3m/s (19km/h). Also, precipitation rates of	As above	Section 6.4 – Assessment Methodology

		>2mm/hour will reduce dust migration. Conversely, precipitation rates <2mm/hr will not discourage dust movement. Therefore, it is important to determine how often the wind speed is ≥5.3m/s with a rainfall of <2mm/hr in the direction of the designated sites. From this the rate of dust deposition (in g/m2/day) and can be calculated and also how often it could occur in the direction of the designated sites.		and Assessment Criteria
		The DMRB uses the volume of traffic as an indicator of significance. This may be entirely appropriate for determining nuisance to humans but it is inappropriate for determining the impact on sensitive habitats. It is the pollution produced by the traffic that is of concern rather than the volume of traffic, though the two are correlated. We therefore advise that NOx concentrations and nitrogen deposition be assessed against the relevant critical level and critical loads. This form of assessment was completed recently for the A465 dualling.	The DMRB methodology provides an estimate of the contribution to annual mean ground level concentrations of NOx/NO_2 from traffic. This contribution will, where appropriate, be incorporated into the assessment of ecological receptors based on the AQS Regulations and the EA AQTAG Guidance (as above) which will include NOx concentrations and nitrogen deposition be assessed against the relevant critical level and critical loads.	Section 6.4 – Assessment Methodology and Assessment Criteria
		We welcome the use of the H1 Annex (f) guidance to assess impacts from aerial emissions. Annex (f) also highlights the need to assess nitrogen deposition and acid deposition against the relevant critical loads of the features in the designated sites.	As above	Section 6.4 – Assessment Methodology and Assessment Criteria
		Please clarify the meaning of 'base load'. Worst case scenarios are usually assessed on full load running continuously 24 hours per day, 365 days per year. A realistic scenario would be based on the expected actual running of the installation. Please clarify the meaning of 'realistic worst case scenario'.	Base load does mean running continuously 24 hours per day, 365 days per year. Realistic worst case scenario means that because the plant could operate at any time during the year, and could feasibly operate continuously, this worst case has been assessed. In reality it is unlikely that the plant will run continuously	

			but a worst case has been presented here with typical load factors of around 75% for a CCGT plant. It is also noted that, as part of the EMR, that the Government anticipates that this may be of the order of 27% in the future	
		It is encouraging to note that both EPUK 2010 and EA H1 will be used in conjunction with one another. We remind you that EPUK accept the use of a contribution of 1% or less as the criterion for an 'imperceptible' change and this is consistent with the screening methods promoted by the Environment Agency, Natural England and Natural Resources Wales (i.e. H1).	Comment acknowledged.	
		See advice *5.3.8* for screening distance. We welcome the use of AQTAG06 and that an assessment of acid and nutrient nitrogen deposition will be completed.	Comment acknowledged.	
		We do not agree that dust is 'unlikely to have any impact upon…ecological receptors' but we welcome the fact that an assessment will be completed.	Comment acknowledged.	
		NRW assumes that construction dust will primarily consist of cement dusts and, like dusts in general, will affect vegetation by both physical and chemical processes. Physically, dust may cover the leaf surface and reduce the amount of light available for photosynthesis, or it may occlude stomata. Occlusion may lead to increased resistance to gas exchange, or may prevent full stomatal closure, leading to water stress. Increased transpiration is a common response to dust exposure. Chemically, cement dusts are strongly alkaline, and may have detrimental effects on leaf surfaces. Infestation by pests and pathogens is also likely to be enhanced.	A full assessment will be undertaken of construction air quality which will include an assessment of dust on sensitive ecological receptors including sensitive areas of vegetation. There are no areas of sensitive vegetation within the site itself and mitigation measures will be applied to limit dust generation from the site. Additionally, a CEMP will be produced outlining the methods of dust monitoring during construction.	

		Trees and woodlands receive greater deposition of dust than adjacent short vegetation because of increased air turbulence. In extreme cases, dust deposition may lead to tree death, but less severe symptoms are changes in pigments, sugars, and overall growth, detectable over a few km from a major source (Mandre *et al.,* 1999).	As above.	
		Indirect effects may be caused through the soil, especially on acid soils, where the cement dust can increase the pH and available calcium, leading to changes in vegetation composition. The subject has been reviewed in depth by Farmer (1993).	As above.	
		Effects of cement dust have been observed for deposition rates as low as 0.5 g/m2/day. Often, deposition rates are not measured, and exposure is judged by amounts retained on leaves. Removal of dust from leaves by rain however, varies very greatly among plant species, from those that are 'self-cleaning' (the lotus effect) to those that accumulate large quantities. Most industrial processes are regulated to prevent the emission of cement dust.	As above.	
RCTBC	Separate Scoping feedback – late response which was not included in the formal Scooping Response document.	I would require that they undertake their own air quality monitoring in order that they may calibrate their model effectively.	As discussed above, HPL do not intend to undertake monitoring studies in order to determine the baseline conditions for the EIA. There is a range of current data available from the local authorities within the air quality study area supplemented by background mapping data supplied by DEFRA that is considered suitable for the purposes of the relevant assessments.	

Table 7 – Consultation Responses in relation to potential Noise and Vibration Impacts

Consultee	*Location in Scoping Opinion*	*Comment*	*Response*	*Location in PEIR*
Planning Inspectorate	3.9	The SoS notes the comments regarding the assessment of noise during operation for the gas and the electricity connections. Based on the assumption that the connections will be below ground, the SoS agrees to this. The noise generated by the operation of all above ground installations will require assessment within the ES.	Comment acknowledged. A preliminary assessment of the impacts of the gas AGI have been provided in the PEIR at Section 7.7 and will be further expanded as part of the ongoing EIA studies.	Section 7.7
	3.29	The SoS recommends that the methodology and choice of noise receptors should be agreed with the relevant Environmental Health Department of RCTCBC and with NRW. The extent of the study area should be justified; at present the Scoping Report states that it will be defined as the region within 1000m of the proposed Power Generation Plant but does not explain the reasoning for this choice. It is also not clear, given that the site layout and technology have not been finally identified, how the 1000m study area would be established. These points must be addressed in the ES.	The noise sensitive receptors for baseline monitoring and the methodology for assessment have been agreed with the Environmental Health Officer at RCTCBC.	Section 7.4 and 7.6.
	3.30	Information should be provided on the types of vehicles and plant to be used during the	The types of vehicles likely to be present during construction have been outlined in	Section 7.7

		construction phase. The noise and vibration assessments should take account of the traffic movements along access routes, especially during the construction phase. The results from the noise and vibration assessments will also provide information to inform the ecological assessments. Exceptional but essential operations should be included in the assessment.	Table 7.8. Further assessment will be undertaken to quantify noise impacts on sensitive ecological sites.	
	3.31	The SoS notes that noise monitoring will be undertaken to establish the baseline which will then be used in a model, together with the sound power levels of proposed plant. Where sound power levels are not available suitable data will be substituted although a realistic worst case scenario would always be considered. The SoS advises that the choice of data for use in the model and the worst case scenario must be clearly defined and justified in the ES. If aspects of the project have not been fully defined at the time of justification (such as the choice of technology or electrical connection) then the ES should cover each of the likely scenarios.	Any assumptions and justifications for the worst case scenario are explained.	Section 7.3 and Table 7.1
	3.32	Noise impacts on people should be specifically addressed, and particularly any potential noise disturbance at night and other unsocial hours such as weekends and public holidays.	The baseline noise survey has considered nearest sensitive receptors. The noise assessment will also consider both daytime and night time noise disturbance.	Section 7.4, 7.6 and 7.7.

	3.33	Where appropriate, effective measures should be provided to mitigate against noise nuisance. Negative effects of any proposed mitigation on other areas of assessment in the EIA should also be assessed, such as the contribution of noise barriers or bunds to visual impact. The ES should clearly identify what these measures are, how they will be delivered and any residual effects.	Preliminary mitigation measures have been identified. These will be further explored as part of the ongoing EIA.	Section 7.8
	3.34	Consideration should be given to monitoring noise complaints during construction and when the development is operational.	Comment acknowledged.	
Natural Resources Wales	p.9	Noise Impact Assessment The limitation of the proposed operational noise assessment to within 1000 m of the development should be justified, in particular with reference to abnormal operating conditions, including commissioning, full load steam turbine by-pass operation for CCGT option and plant trip scenarios. Noise mitigation measures should also include reference to use of acoustic enclosures and cladding for plant and pipe work or ducting likely to produce noise under all operating conditions including abnormal operation.	The assessment methodology for the noise impact study is clearly set out. Preliminary mitigation measures are also put forward, although these will be further developed as part of the ongoing EIA studies.	Section 7.4 and 7.8.

Table 8 – Consultation Responses in relation to Ecological Impacts

Consultee	*Location in Scoping Opinion*	*Comment*	*Response*	*Location in PEIR*
The Planning Inspectorate	3.28	The ES should also address the interrelationships with other topics within the ES particularly ecology and water quality.	It can be confirmed that the interrelationships with other topics with the ES will be addressed. In particular an assessment will be made of critical loads of sensitive ecological receptors which could be impacted by emissions from the Power Generation Plant.	
	3.35	The SoS recommends that surveys should be thorough, up to date and take account of other development proposed in the vicinity. The Applicant's attention is drawn to the comments from NRW in Appendix 2. The SoS also recommends that the methodology for any surveys should be agreed with NRW and the ecologist from RCTCBC.	Consultation is ongoing with NRW and RCTCBC. Survey methodologies will follow best practice guidelines. It can be confirmed that all surveys will be up to date and specific to this Project.	Section 8.4
	3.36	The reference to Extended Phase 1 Habitat Survey in paragraph 5.5.23 of the Scoping Report appears to be incorrect; from the context it appears that this should actually refer to the Desk Based Analysis. The SoS welcomes the intention to carry out extended Phase 1 habitat surveys of the gas and electrical connections. The results of these surveys, along with	Comment acknowledged. All survey results will be reported in the ES. Preliminary results are included in the PEIR.	Section 8.7

		the existing Phase 1 survey and any Phase 2 surveys should be reported in the ES.		
	3.37	The potential impacts on international and nationally designated sites should be addressed as well as county level habitats. The SoS notes the possible need for Statement to Support an Appropriate Assessment in view of the development site's location in relation to Blaen Cynon Special Area of Conservation. The Applicant's attention is also drawn to the comments from NRW in Appendix 2 on the need to consider potential effects on Coedydd Nedd a Mellte and Cwm Cadlan Special Areas of Conservation, Cwm Cadlan National Nature Reserve and various Sites of Special Scientific Interest. The Applicant should also take note of the Advice in Section 4 of this report.	It can be confirmed that impacts on all designated sites within the vicinity of the Project will be addressed.	Section 8.6 and 8.7
	3.38	The operational and decommissioning phases of the works should be addressed. The SoS recommends the need to consider Cumulative and combined impacts and advises this is particularly relevant in terms of assessing the impacts on ecology.	It can be confirmed that the construction, operation and decommissioning phases of the project will be addressed, along with their potential impacts to ecological receptors. Cumulative and in-combination impacts will also be addressed.	Section 8.4
	3.39		It can be confirmed that the Project will	Section 8.4,

		The SoS recommends that the proposals should address fully the needs of protecting and enhancing biodiversity. The assessment should cover habitats, species and processes with the sites and surroundings. The Applicant's attention is drawn to the comments from NRW (see Appendix 2) on the particular need to consider legally protected species. The Applicant should also take note of the advice in Section 4 of this report on European Protected Species.	address the needs of protecting and enhancing biodiversity. So far this has included conducting a range of Phase 2 European Protected Species Surveys.	8.6 and 8.7
	3.40	The SoS welcomes the proposal to undertake assessment and reporting using the Institute of Ecology and Environmental Management's 'Guidelines for Ecological Impact Assessment'. The SoS draws the Applicants attention to the requirements of this guidance, which includes definition of a Zone of Ecological Influence, based on the distance over which ecological effects occur, rather than on an arbitrary distance.	Comment acknowledged. A zone of influence has been assessed.	
	3.41	The SoS notes the references to embedded mitigation measures that will be employed during the construction phase of the project in addition to any project specific measures that may be required.	Comment acknowledged. Potential mitigation measures are set out in Section 8.8. These will be further assessed as part of the final ES.	Section 8.8

		The SoS advises that the ES must make it clear what mitigation measures are proposed, how they will be delivered, how effective They will be and what the residual effects would be. The ES should make clear which measures are being proposed for the mitigation of the effects of the project and which are being proposed as compensation where mitigation is not possible. Paragraph 5.5.29 appears to confuse mitigation and compensation.		
	3.42	The proposal to produce a Method Statement for undertaking works within the Hirwaun Industrial Estate Site of Importance for Nature Conservation (SINC) is welcomed. At least a preliminary Method Statement should be attached to the ES to provide the SoS with the confidence that any effects from the project on the SINC will be adequately addressed.	Comment acknowledged, although this has not been undertaken as part of the PEIR.	N/A
	3.43	The ES should also address the interrelationships with other topics within the ES particularly air and water quality.	As per response to 3.28	
	4.11	The Applicant should also be aware that the decision maker under the Planning Act 2008 (PA 2008) has, as the CA, a duty to engage	Comment Acknowledged	

		with the Habitats Directive.		
	4.12	The SoS considers that there is potential for the presence of EPS Within the study area for the proposed development. Where a potential risk to an EPS is identified and before making a decision to grant development consent the CA must, amongst other things, address the derogation tests in Regulation 53 of the Habitats Regulations. Therefore the Applicant may wish to provide information which will assist the decision maker to meet this duty. Where required the Applicant should, in consultation with NRW, agree appropriate requirements to secure necessary mitigation.	Comment acknowledged. Preliminary results of EPS surveys and potential mitigation measures to address impacts are set out in the PEIR and will be further developed as part of the ongoing EIA.	Section 8.7 and 8.8.
	4.13	If the Applicant has concluded (in consultation with NRW) that an EPS licence is required the SoS will need to understand whether there is any impediment to the licence being granted. It would assist the examination if the Applicant could provide with the application confirmation from NRW whether they intend to issue the licence in due course.	If a license is necessary, confirmation will be sought from NRW in due course.	
	Appendix 3 p.11	<u>Transboundary Effects</u>	Comment acknowledged. As per the response to point 3.28, impacts from air quality on sensitive ecological sites will be assessed.	

		The SoS recommends that consideration should be given in the ES to any likely significant effects on the environment of another Member State of the European Economic Area. In particular, the SoS recommends consideration should be given to discharges to the air and water and to potential impacts on migratory species and to impacts on shipping and fishing areas. The Applicant's attention is also drawn to the Planning Inspectorate's Advice Note 12 'Development with significant transboundary impacts consultation' which is available on the Advice Notes Page of the National Infrastructure Planning website.	There will be no direct discharges to water as a result of the Project and no transboundary impacts are predicted.	
Natural Resources Wales	p.2-4	In general terms, we advise that the EIA considers the potential impact on the following issues for all phases of the project (e.g. construction, operation and decommissioning phases). • Statutory Nature Conservation Sites (SAC, SPA, SSSI, NNR, LNR etc.) • Non-statutory Nature Conservation Sites of importance (e.g. SINC or sites containing UKBAP habitats) • Air Quality (impacts on the above receptors) • Legally Protected Species • UK and Local Biodiversity Action Plan Habitats and Species • Water Management (to include water resources, foul water disposal, surface water	Comment acknowledged. It can be confirmed that the impacts on all sites listed will be assessed. A preliminary assessment has been made in the PEIR which will be further expanded as part of the ES.	Section 8.4, 8.6 and 8.7

		management and impact on receiving waters) • Land affected by contamination • Pollution prevention • Flood risk • Landscape and visual impact • Access and recreation. Further detail for each is provided in turn below: <u>Statutory Nature Conservation Sites</u> There are a number of statutory designated sites within 15km of the proposals site. Special Areas of Conservation (SAC) and Sites of Special Scientific Interest (SSSI) within 15 and 10km radii of the main proposed power plant building respectively are illustrated on the maps provided in Appendix 1. In particular, sufficient information is required to assist the determining authority in reaching a view on the possible significant effect of these proposals in the context of Regulation 61 (3) of the Conservation of Habitats and Species Regulations 2010 (as amended). The relevant sites are also listed below: (in addition an interactive map of protected statutory sites can be found on the CCW website)		

		Sites of Special Scientific Interest (SSSI) Blaen Nedd - Blaenrhondda Road Cutting - Bryn-Bwch - Bryncarnau Grasslands, Llwydcoed - Caeau Nant y Llechau - Caeau Ton y Fildre - Cors Bryn-y-Gaer - Craig-y-Llyn - Cwm Cadlan - Cwm Glo a Glyndyrys - Cwm Gwrelych and Nant Llyn Fach Streams - Cwm Taf Fechan Woodlands - Daren Fach - Dyffrynnoedd Nedd a Mellte a Moel Penderyn - Gorsllwyn, Onllwyn - Gweunydd Dyffryn Nedd - Mynydd Ty Isaf, Rhondda - Ogof Ffynnon Ddu-Pant Mawr - Penmoelallt - Plas y Gors - Tir Mawr a Dderi Hir, Llwydcoed - Waun Ton-y-Spyddaden - Woodland Park and Pontpren National Nature Reserves - Cwm Cadlan National Parks - Brecon Beacons National Park Where potential significant impacts are identified, measures to avoid and mitigate impacts should be identified and the residual impacts		

		assessed. Compensation should be identified where residual impacts remain. Assessments should be made using good quality information and enhancements should also be identified, in accordance with TAN5: Nature Conservation and Planning September 2009. Similarly, this approach/requirement will apply to all other environmental impacts or sites, habitats, species, aspects affected, whether outlined below or otherwise identified. <u>Non-Statutory Nature Conservation Sites</u> The EIA should identify any impacts and necessary measures on any non-statutory nature conservation sites/Sites of Importance for Nature Conservation (SINC), identified/designated because of their importance at the county level for their biodiversity/nature conservation interest.		
	p.7-	<u>Legally Protected Species</u> A request should be made to the South-East Wales Biological Records Centre (Sabre) and the ecologists of the relevant local planning authorities should be consulted for records to provide a full scoping of species and sites for species that may need to be addressed within the EIA. The EIA should include a detailed and comprehensive assessment of those	Consultation has taken place with relevant authorities to establish the most relevant baseline for assessment. It can be confirmed that all Phase 2 surveys have been undertaken based on best practice guidance and were informed by specific and up to date phase 1 surveys.	Section 8.4 and 8.6

		protected species likely to be significantly affected. New surveys should be undertaken where their presence is likely but existing records are insufficient to allow a meaningful assessment. Survey work should be carried out in Accordance with published guidance, where this exists and at the appropriate time(s) of year. It is possible that survey may be required in more than one year to allow proper assessment. Surveys should be undertaken by suitably qualified ecologists, under licence as required. UK and Local Biodiversity Action Plan (BAP) Habitats & Species Phase II habitat surveys using standard National Vegetation Classification (NVC) methodology of any semi natural habitats to be affected by the proposed development and its associated infrastructure should be carried out and a search/survey for notable plant and animal species undertaken. Surveys should be carried out at appropriate times of year and in appropriate weather conditions. This information should be used to identify the presence of and scale of impact upon National and Local Biodiversity Action Plan Species.		

Table 9 – Consultation Responses in Relation to potential impacts on Water Quality and Resources

Consultee	*Location in Scoping Opinion*	*Comment*	*Response*	*Location in PEIR*
Planning Inspectorate	3.44	The methodology used and any assumptions behind the conclusions of the assessment should be clearly stated in the ES. The SoS recommends that the methodology used for assessing the effects of the project on water resources are agreed with NWR and Dwr Cymru Welsh Water.	Noted Ongoing consultation is being carried out with NRW and Dwr Cymru Welsh Water. The methodology used for assessing potential impacts on water quality and resources is clearly set out	Section 9.4
	3.45	The intention to identify surface water bodies in the vicinity of the Power Generation Plant is noted. The SoS advises that the ES must address potential effects on the water environment, particularly in relation to potable water. The Applicant's attention is drawn to the comments from Dwr Cymru Welsh Water in relation to the Penderyn Reservoir and the Hirwaun Treatment Works and also to the general comments from Public health England (Appendix 2).	Noted Please see below for responses to the comments provided by Dwr Cymru Welsh Water and Public Health England. Details of surface water bodies in close proximity to the Project are provided in the PEIR, as are details of existing water abstractions and discharges. It is not proposed to discharge any water directly to water bodies as part of the Project, nor is it proposed to abstract water from ground water or surface water bodies.	Section 9.6
	3.46	NRW (Appendix 2) also advise of the existence of licensed groundwater abstractions and private water supplies within the local area. The SoS notes that	Noted Ongoing consultation is being carried out with NRW. Details of groundwater abstractions and private water supplies are	Section 9.6

		abstraction points and licences in the area will be investigated and potential impacts on these abstractions quantified in the ES. The SoS recommends that the scope of the investigation is agreed with NRW.	provided in the PEIR.	
	3.47	Potential sources of pollution should be identified, as well as pathways to potential hydrological and surface water receptors. The Applicant's attention is drawn to the advice from NRW in Appendix 2 on the presence of a Secondary A aquifer, and the existence of a Source Protection Zone 1 approximately 2km to the north east of the site.	A Conceptual Site Model (CSM) has been presented in the PEIR to identify potential impacts of pollution on watercourses, and groundwater. The presence of a Secondary Aquifer A and Source Protection Zone are noted and a preliminary assessment of this has been made in the PEIR.	Section 9.7
	3.48	The intention to produce a Water Framework Directive Report if required by NRW is noted. The Applicant should take note of the advice from NRW in Appendix 2 on the presence of the River Camnant consults NRW on the requirements for a Water Framework Directive Report.	A Water Framework Directive report will be provided as an Appendix to the full ES in respect of the River Camnant.	N/A
	3.49	The rates of potable use at each stage of development should be fully assessed. Sufficient evidence must be provided for the SoS to be able to assess the effects of the development on the abstraction could be licensed. The Applicant's attention is drawn to the comments from NRW in Appendix 2.	It is not intended to use potable water for the Project given the limited water requirement and the fact that there is already a good mains supply to the site.	Section 9.4 and 9.7

	3.50	If, at the time the application is submitted, it has not been confirmed that the Power Generation Plant will use air cooling then the extra requirements for cooling water should also be addressed in the ES. If the choice of technology has not been finalised at the time of application then the different water requirements of each of the likely technologies should be assessed, or a realistic worst case scenario assessed. The choice of the scenario should be fully defined and justified in the ES.	It can be confirmed at this stage that air cooling will be employed at the site.	Sections 4, 5 and 9.6
	3.51	Mitigation measures should be addressed and the SoS advises that reference should be made to other regimes (such as pollution prevention from NRW). On-going monitoring should also be addressed and agreed with the relevant authorities to ensure that any mitigation measures are effective.	Some preliminary mitigation measures are established in the PEIR. These will be refined further as part of the ongoing EIA process.	Section 9.8
	3.52	The SoS welcomes the commitment to provide a Flood Risk Assessment (FRA) in accordance with the Applications Prescribed Forms and Procedures Regulations (APFP). The FRA should cover ground water, surface water and fluvial impacts and the scope should be agreed with NRW. The SoS recommends that a Surface Water Management Plan should be	An FRA and surface water management plan will be provided as an Appendix to the full ES.	N/A

		prepared which may include a review of existing drainage facilities and the prevention of interceptors on site.		
	3.53	The FRA should form an appendix to the ES. The SoS recommends that the sections considering the water environment in the ES should be cross referenced to the FRA.	Noted As above	
	3.54	The ES should also address the inter-relationships with other topics within the ES particularly air quality and ecology.	Noted	
Welsh Water	-	Our Hirwaun Water Treatment Works (WTW) and Penderyn Reservoir are close to the proposed development site. This WTW is of strategic importance providing water supplies to approximately 15,000 properties along the Cynon Valley to Aberdare and the surrounding areas.	The Penderyn Reservoir is approximately 800 m north of the proposed Power Generation Plant site. No abstraction will be required from the reservoir and there will be no discharges of water to the reservoir or surrounding water bodies during construction, operation or decommissioning of the Project.	Section 9.7
	-	As a statutory water undertaker we have a duty to provide wholesome water to our customers with water quality regulated by the Drinking Water Inspectorate. This enables us to abstract and treat raw water to the required potable standards. Any changes to the raw water quality could make the water untreatable and/or have an impact upon control of our WTW. Should there be a potential derogation of water supply,	Noted. As above	Section 9.7

		then our customers would suffer severe disruption with loss of supply from a prolonged works shut down.		
	-	In light of the above, our comments in relation to the submitted EIA Scoping Report are as follows: • The Environmental Statement (ES) should acknowledge the existence and possible impacts of the development on Penderyn reservoir as a public water supply reservoir and Hirwaun Water Treatment Works.	Noted. As above	Section 9.7
	-	• The Scoping Report does not proposed any monitoring of water quality of Penderyn reservoir and its tributaries during the construction, operation and decommissioning phases. In the absence of a scheme of monitoring the impact of the proposed development on the identified water resources cannot be fully considered. Accordingly, we would expect the ES to include a programme of water quality monitoring for the reservoir and its tributaries.	Further consideration to this request will be given in the final ES and based on further consultation.	
	-	• We would expect details of proposed mitigation and/or	Preliminary mitigation measures are outlined in the PEIR. These will be	Section 9.8

		contingency measures in the event that the proposed development has a detrimental impact on air quality and/or water quality to be fully considered and included in the Environmental Statement.	further developed and refined as part of the ongoing EIA studies.	
	-	• Further details are required in respect of the 'blowdown' process, including details of the chemical composition, volume and frequency of the discharge.	The Power Generation Plant will be air cooled and thus there will be no blowdown water generated.	Section 9.6
Natural Resources Wales	-	In general terms, we advise that the EIA considers the potential impact on the following issues for all phases of the project (e.g. construction, operation and decommissioning phases). • Water Management (to include water resources, foul water disposal, surface water management and impact on receiving waters) • Pollution prevention • Flood risk	Noted. A preliminary assessment of these potential impacts is provided in the PEIR and this will be further developed as part of the ongoing EIA studies.	Section 9.7
	Water Management	The Environmental Statement will need to assess how the proposed development is likely to affect water resources. Information is needed on how the proposed development intends to be supplied with water, during the construction phase and subsequent operation of the	As the plant will be air cooled, there is a minimal requirement for water use. However, it is likely that water use for construction and for sanitation will be supplied from the existing mains water connection which currently serves the site. Process water during operation	Section 9.7

		development. The Environmental Statement should also address how the proposed development will make the most efficient use of water on the site.	would most likely be tankered in and stored on site in tanks.	
		If water is to be abstracted directly from the environment then this should be detailed in the Environmental Statement; an abstraction licence is likely to be required. If this is the case, we recommend that the applicant contacts our Permitting Support Centre on 08708 506 506 to discuss this matter.	Noted. However, at present it is not intended to abstract water.	Section 9.6
		The proposed development site is located on Secondary A aquifer. There is a Source Protection Zone 1 approximately 2 km to the north east of the site for the Dwr Cymru Welsh Water abstraction at Penderyn. There are also licensed groundwater abstractions and private water supplies within the local area. We advise that a water feature survey should be undertaken as part of the Environmental Statement. This should have a radius of 1 km from the site boundary (also including the proposed development site). The Water Feature Survey should include the following:	An identification of all watercourses, abstractions and discharges within the vicinity of the Project has been made as part of the PEIR and will be developed as part of the ongoing EIA studies.	Section 9.6 and 9.7
	-	• Identification of all water features both surface and groundwater (ponds,		

		springs, ditches, culverts etc.) within a 1000 m radius of the site. • Use made of any of thise water features. This should include the construction details of wells and boreholes and details of the lithology in which they are installed. • An indication of the flow regime in the spring or surface water feature, for example whether or not the water feature flows throughout the year or dries up during summer months. • Accessibility to the spring/well.		
		This information should be identified on a suitably scaled map (i.e. 1:10,000), then tabulated and submitted to Natural Resources Wales. It would be useful for the developer to photograph each of the identified water features during the survey.	These water features have been presented on a map for the PEIR. Further photographic evidence will be provided as part of the final ES.	Figure 9.1
		Based on the results of the survey the developer should assess the likely impacts from the development on both quantity and quality of the surface water and groundwater. This should take into consideration both the preferred methods of construction and the assumed hydrogeology in the vicinity of the	Noted This will be included as part of the full EIA.	

		development.		
		We may require identified groundwater features to be monitored during the proposed workings. We would therefore recommend that the survey be undertaken as soon as possible to enable the developer to carry out suitable baseline monitoring prior to the commencement of workings at the site.	Noted	
		Full details will be required of the pollution prevention and environmental controls to be deployed during the following phases of the proposed development: • Demolition of the existing buildings and removal/making good infrastructure. As the proposed site has a historic industrial use, have the appropriate contamination assessments been undertaken? Will remediation techniques need to be deployed prior to construction? • Construction process to include: temporary vehicle parking arrangements, welfare facilities, material lay down area, access route, pipeline and cable route installation.	A preliminary assessment of potential mitigation measures has been included in the PEIR for all stages of the Project and will be further refined as part of the ongoing EIA works.	Section 9.8

		• Full details relating to the proposed design of the: surface water, foul water and effluent collection and treatment systems will be required. • Decommissioning and site restoration post construction phase and site operation.		
		The River Camnant appears to be culverted directly under the proposed development site. The scoping report appears not to have referred to the existence of this watercourse, whilst other surface water bodies have been identified within the project outlines. NRW would expect a WFD assessment to be carried out on this waterbody by the developer.	Reference to the River Camnant has been made in the PEIR. A WFD Assessment will be carried out and provided as an appendix to the full ES.	Section 9.6
		We require further information and proposals relating to the implications on water resources as a consequence of this development, such as: identification of the source (abstraction) and potential water supply, will water require treatment prior to use within the process, what are the estimated volumes of water required and volumes of effluent produced, what is the composition of the effluent likely to be? What are the effluent treatment and disposal options?	This information has been provided in the PEIR. Quantities of water use have been provided, as have the composition of any effluents.	Section 9.4, 9.6 and 9.7

		A surface water management plan should be included as part of the Environmental Statement to address the management of any risk of polluting the water environment, This should link to and/or incorporate any surface water drainage strategy, and consider matters such as any on-site treatment and interceptors for hardstanding areas such as car parks.	This information will be produced as part of the Flood Risk Assessment which will form an appendix to the final ES.	N/A
	Water Quality (WQ) impact assessment	Assessment of WQ impacts should also include consideration of periodic or intermittent waste water effluent arising from commissioning procedures, HRSG make up water treatment, plant maintenance and cleaning procedures and cooling system blow down in the event that wet or hybrid cooling technology is considered to be appropriate.	A preliminary assessment of water impacts from commissioning has been undertaken, which mainly relates to commissioning of the Gas Connection. A preliminary assessment of the impact of turbine blade washing has been undertaken. No wet cooling or HRSG is required and therefore this has not been considered further.	Section 9.7
		Water treatment and recovery options should be considered in addition to treatment and discharge.	Noted. This will be further assessed in the ES.	N/A
	Flood Risk	The proposed development site is in Zone A, as indicated by the Welsh Government's Development Advice Maps. This Zone is considered to be at little or no risk of fluvial flooding. Where there is reason to believe that proposed developments in Zone A or B would be prone to	A Flood Risk Assessment will be produced as an Appendix to the ES.	N/A

		flooding, or that such developments could have an impact on other people or their property, we would advise that A Flood Consequence Assessment (FCA) be undertaken.		
		Although our understanding is that guidance set out in TAN15 would not require a detailed FCA to be undertaken for this proposed development, we do no note the intention to provide one as part of the Environmental Statement (see Section 5.6 of the EIA Scoping Report). We are pleased to note this as we consider it to be good practise as there will need to be an assessment of the surface water implications of this proposed development on the catchment, and consideration of flooding from other sources. The assessment will need to demonstrate that surface water discharges will not cause or exacerbate any flooding within this area of the catchment. We encourage investigation of improvements/enhancements where existing problems of flooding have been identified in the catchment.	Comment acknowledged.	N/A
		We advise that a surface water assessment should consider the following: • How the principles of Sustainable Drainage Systems (SuDS) have been applied to the development	Noted. This information will be included in the final FRA.	N/A

		and identify what techniques will be used. • Estimate the discharge rate for the site. Greenfield discharge rates should be sought on Greenfield sites, and also on Brownfield sites (where possible). Notwithstanding this, the local sewerage undertaker or drainage operating authority may specify a lower maximum discharge rate. • Estimate the volume of 1 in 100 year attenuation to be provided and what techniques will be used to provide the attenuation. • Take into account TAN 15 climate change requirements.		
South Wales Fire and Rescue Service	Water supplies for fire fighting	The existing output of the statutory water supply network may need to be upgraded in certain parts of the local plan area to cater for firefighting needs of new developments. It is recommended that this provision be a condition of planning consent.	Noted. This may form a requirement attached to the final DCO.	N/A
		Access to open water supplies Where development of water front sites takes place, the need for permanent and unobstructed access for firefighting appliances to the water should be made a	The development site is not situated in close proximity to any large water bodies.	N/A

		condition of any planning consent.		
		Consultation must take place with the Fire Authority during the earliest planning stages of any development to ensure access for fire pumping appliances is satisfactory.	Noted	N/A

Table 10 – Consultation Responses Relating to Potential Impacts on Geology and Ground Conditions

Consultee	*Location in Scoping Opinion*	*Comment*	*Response*	*Location in PEIR*
Planning Inspectorate	3.55	The SoS welcomes the proposal to undertake assessment of ground and groundwater contamination. The baseline for the ES should explain in detail the extent of the study area, ensuring that the effects are considered over a sufficiently wide area.	Noted Baseline ground and groundwater contamination data is presented in the PEIR. A study radius of 1km from the site has been assessed.	Section 10.6
	3.56	The SoS also welcomes the proposal to investigate the underlying ground conditions and to obtain a Coal Authority Report. The Applicant's attention is drawn to the advice from the Coal Authority in Appendix 2.	Noted. A Coal Authority Report has been purchased which covers the Project Site.	Section 10.6
	3.57	The SoS recommends that the methodology used for the assessment should be agreed with NRW and RCTCBC. The Applicant is referred to the comments from NRW (Appendix 2).	Ongoing consultation is being held with NRW and RCTCBC to agree the final methodology of the ES.	N/A
	3.58	The Scoping Report states that the main impact of the gas connection is the sterilisation of agricultural land and that an assessment of the amount of land affected will be included in the ES. The Applicant is reminded of the requirements in paragraph 5.10.8 of National Policy	Although the route corridor options presented in the Scoping Report are relatively wide ranging, the final route will be narrowed down and will be designed, amongst other things to avoid unnecessary impacts on good quality agricultural land.	Section10.7

		Statement EN-1 to seek to minimise impacts on the best and most versatile agricultural land. The SoS advises that the ES should identify the grade of land likely to be affected by the project and the measures taken to minimise impacts on land grades 1, 2 and 3a of the Agricultural Land Classification.	A preliminary assessment of the impacts of both route corridor options is presented in the PEIR.	
	3.59	The SoS notes the reference to embedded mitigation measures that will be employed in addition to any project specific measures that may be required. The SoS advises that the ES must make it clear what mitigation measures are proposed, how they will be delivered, how effective they will be and what the residual effects would be.	Noted. Details of mitigation measures are provided in the PEIR. These will be further refined during the ongoing EIA process.	Section 10.8
Coal Authority	The Coal Authority Response	The proposed EIA development is located within the defined Development High Risk Area; the site therefore has been subject to past coal mining activity and is located within an area of surface coal resource.	Noted. A Coal Authority Report has been purchased which covers the Project Site. A preliminary assessment of potential ground stability issues is presented in the PEIR.	Section 10.7
		In accordance with the agreed risk-based approach to development management in Development High Risk Areas, the past coal mining activities and the presence of surface coal resources within the site should be fully considered as part of the Environmental	As above.	Section 10.7

		Statement (ES); this should take the form of a risk assessment, together with any necessary mitigation measures.		
		The Coal Authority is therefore pleased to note that Section 5.7 of the Scoping Report submitted acknowledges the coal mining legacy of the site and commits to assessing the impacts of ground conditions on the proposed development and identifying appropriate remedial measures, if necessary.	Noted	
	Consideration of Coal Mining Issues in the ES	There are a number of coal mining legacy issues that can potentially pose a risk to new development and therefore should be considered as part of an Environmental Statement for development proposals within coalfield areas: • The location and stability of abandoned mine entries • The extent and stability of shallow mine workings • Outcropping coal seams and unrecorded mine workings • Hydrogeology, minewater and minegas	Noted As above.	
		In addition, consideration should be afforded as part of development proposals and the ES to the following: • If surface coal resources	Noted As above.	

		are present, whether prior extraction of the mineral resource is practicable and viable • Whether Coal Authority permission is required to intersect, enter, or diturb any coal or coal workings during site investigation or development work		
HSE	Hazardous Substances Consent	As this is indicated as a 'gas-fired power generating station', the applicant may need to consider whether or not they need Hazardous Substances Consent, if the qualifying quantity of a dangerous substance is reached or exceeded. If this is the case, they should apply to the local hazardous substances authority who should consult HSE in the usual manner.	No hazardous substances consent will be required as only very limited quantities of hazardous substances will be stored at the site. No gas will be stored on site.	Section 10.6
Natural resources Wales	-	Within the proposed red line boundary (as defined in Figure 1 of the EIA Scoping report), there is a historical landfill on the industrial estate. If works are to be undertaken in this area then site investigation and risk assessment will be required,	It is not intended to carry out any works in this area. Nevertheless the landfill has been considered as part of preliminary assessments.	Section 9.6 and 9.7
		We also note from section 3.2 of the Scoping Report that the site has previously been a Royal Ordnance Factory, electrical goods manufacturing factory and a distribution and storage centre. Given the potentially contaminative	This PEIR presents an initial Conceptual Site Model and risk assessment which will be further developed with site investigation works as necessary as part of the EIA.	Section 10.6 and 10.7

		nature of the previous uses if the site we will require, as a minimum, a preliminary risk assessment and preferably site investigation and risk assessment (as required) to establish whether contamination is present within the soil and groundwater that may have an impact on controlled water within the local area. These investigations should follow British Standards, CLR11 and our guidance "Guiding Principles for Land Contamination (2010)".		
	Land potentially affected by contamination	We recommend that developers should: A. Follow the risk management framework provided in CLR11, Model Procedures for the management of Land Contamination, when dealing with land affected by contamination. B. Refer to Natural Resources Wales guiding principles for land contamination for the type of information that we require in order to assess risks to controlled waters from the site. The Local Authority will be able to advise on risks posed to other receptors, such as human health.	Noted. This will be further developed as part of the ongoing EIA works.	
		Emissions to and from the ground should be considered in terms of previous history of the site and the potential of the site, once operational, to give rise to issues. Public health impacts associated	Noted. This will be further developed as part of the ongoing EIA works.	

		with ground contamination and/or the migration of material off-site should be assessed and the potential impact on nearby receptors and control and mitigation measures should be outlined.		

Table 11 – Consultation Responses to Potential Impacts on Landscape and Visual Amenity

Consultee	*Location in Scoping Opinion*	*Comment*	*Response*	*Location in PEIR*
The Planning Inspectorate	3.60	Landscape and Visual The SoS notes that the landscape assessment will be undertaken using the second edition of the 'Guidelines for Landscape and Visual Impact Assessment' (Landscape Institute and Institute of Environmental Management). The Applicant's attention is drawn to the recent publication of the third edition of the guidance; the SoS recommends that this edition is used rather than the second edition.	Noted, the Third edition of the GLVIA has been used for the PEIR.	Throughout Section 11
	3.61	The ES should identify landscape planning designations, landscape character areas and potentially sensitive receptors. The choice of receptors should be explained and justified in the ES. Reference to any LANDMAP landscape character assessment produced for the area is also recommended.	A preliminary assessment of landscape character areas has been undertaken for the PEIR. LANDMAP has been consulted and the justification for receptors has been set out.	Section 11.6
	3.62	The SoS advises that the assessment within the ES must address the full range of visual effects from the project, including the construction and decommissioning phase. Effects at night as well as during the day should be addressed, particularly in view of the Brecon Beacons National Park status as an International Dark Sky Reserve.	Noted. The assessment of visual impacts is still at an early stage, but this will be further developed and refined as part of the ongoing EIA studies.	Sections 11.4 and 11.7

	3.63	The SoS draws the attention of the Applicant of the need to liaise with the local planning authorities to ensure use is made in the EIA of the most up to date policy documents.	Noted. Consultation is ongoing with RCTCBC, NRW and BBNPA.	
	3.64	The landscape and visual assessment in the scoping report refers to the Zone of Theoretical Visibility (ZTV). The SoS advises that the ES should describe the methodology and model used, provide information on the area covered and the timing of any survey work. Having regard to local topography, the ZTV should seek to ensure that all potential sensitive receptors are considered and viewpoints are agreed with RCTCBC and BBNPA. The Applicant's attention is drawn to the comments from BBNPA and NRW in Appendix 2.	The assessment methodology is described in the PEIR and consultation is ongoing as to the locations chosen for viewpoints.	Section 11.4
	3.65	All parameters, including the assumptions for the number and heights of stacks used in the assessment should be clearly detailed and justified. Care should be taken to ensure that the worst case scenario for stack height is reflected as appropriate. The SoS notes that this may represent a different worst case to that considered for other topic areas.	The worst case scenario for assessment for landscape and visual impacts is set out in the PEIR. There will be no visible plume from the Power Generation Plant.	Sections 11.3 and 11.7.

		The effect of visible vapour plumes should also be considered.		
	3.66	The proposals will be for large structures. The SoS requests that careful consideration should be given to the form, siting, and use of materials and colours in terms of minimising the adverse visual impact of these structures. This should include night time views, including the impact of lighting.	Noted. Careful consideration will be given to the final finish of the Project.	
	3.67	Appropriate use of photomontages will help to illustrate the views prior to development, upon completion and at an agreed future date when mitigation measures are fully established. Photographs Photomontages and wireframes should be presented in a clear and readable format that includes clear points of reference to allow the reader to readily identify and fully understand the potential effects of the proposed development.	Noted. Photomontages will be completed with reference to Advice Note 01/11: Photography and Photomontage in Landscape and Visual Impact Assessment, Landscape Institute (2011).	Section 11.4
	3.68	The SoS recommends that the location and the timing of viewpoints, photographs and visualisations should be agreed with RCTCBC and BBNPA.	Consultation is ongoing with NRW, BBNPA and RCTCBC as to the most appropriate location for photomontages.	
	3.69	The SoS notes the references to embedded mitigation measures that will be employed in addition to any project specific measures that may be required.	Noted. Preliminary mitigation measures are outlined in the PEIR. These will be further developed and refined as the EIA process progresses.	Section 11.8

		The SoS advises that the ES must make it clear what mitigation measures are proposed, how they will be delivered, how effective they will be and what the residual effects would be.		
Natural Resources Wales		The EIA should consider protected landscapes in the vicinity of the proposals. With respect to the Brecon Beacons National Park this should also consider the statutory purposes of the designation. The landscape and visual impact assessment (LVIA) should utilise appropriate viewpoints to consider the impacts of the proposals on these protected landscapes, particularly given the potential for the proposals to be visible from a wide area. *5.8.3 Introduction - Power Generation Plant* Much of the Hirwaun Industrial Estate, although reasonably well assimilated by blocks and belts of maturing woodland, is highly visible in medium to long range views, as a direct consequence of the pale colours of the roof and wall cladding used on many of its larger buildings, including apparently recent developments. Therefore, it will be essential that the LVIA and CLVIA elements of the ES deal comprehensively with this very important aspect of the proposed development, including the potential visual impacts of reflective glazed and metallic surfaces and their potential to exacerbate visual intrusion in certain climatic conditions.	The PEIR has identified protected landscapes within the vicinity of the Project and made a preliminary assessment of how these landscapes may be impacted by the Project. These protected landscapes will be taken into consideration when determining locations for photomontages. A preliminary assessment of the potential landscape and visual impacts of the Electrical and Gas Connection is presented in the ES.	

		This factor is especially important for chimney stacks and other tall structures. Potential effects of any proposed materials and finishes will need to be fully assessed. *5.8.4 to 5.8.6 Introduction - Gas and Electricity Connections* We note that it is not anticipated the connections would give rise to 'significant visual impacts', since they would be mostly placed underground, although the report states in 5.8.6 that there is an option to use an overhead connection for electricity. We would advise that there is the potential for significant landscape and visual effects arising during the construction stage of these works. In addition, there are potentially significant adverse cumulative landscape and visual effects in the operational stage of the project in the event of an overhead electricity connection being constructed. These would be likely to occur in combination with the existing and proposed high-voltage overhead lines infrastructure in the locality - especially the new grid connection and sub-station to be constructed to serve the consented Pen y Cymoedd wind farm. *5.8.8 Introduction - Electrical Connection* NRW welcomes the fact that 'a full visual impact assessment of this infrastructure will be carried out following guidelines set out in EN-1 and EN-5.' 1.		

		5.8.10 Baseline - Power Generation Plant In the scoping report it is noted that the Brecon Beacons National Park (BBNP) would be 'situated approximately 0.3km to the north of the proposed Power Generation Plant site at its closest point.' NRW agrees that the BBNP rural setting and protected landscape is a major landscape receptor and we would add that the potential impacts upon it are significant. However, we disagree with the implication that the presence of the Pen y Cymoedd wind farm on the higher ground 5km beyond the industrial developments to the south has the effect of degrading the local baseline landscape condition. We would comment on two specific matters in this regard: - The stated area of 46.8 km2 of the Pen y Cymoedd wind farm is not seen in full from this location. - There will be turbines visible above a proportion of the ridge forming the southern horizon, but this is only a small proportion of the total area of the wind farm, so the scale argument is misleading. - Views from the high ground on the ridge - including the promoted viewpoint car park above Craig y Llyn on the A4061 Treherbert to Rhigos mountain road have the turbines behind and therefore not in the view; so the		

		cumulative landscape and visual effects of the proposed Power Generation Plant and associated electricity grid connection infrastructure are potentially significant in views northwards towards the BBNP, which forms the northern horizon and the land backdrop to the Hirwaun Industrial Estate. To have regard for wider enjoyment of the countryside the LVIA and CLVIA documents will need to address potential impacts upon views towards the BBNP from the higher ground to the south. This should consider, in particular promoted viewpoint areas easily accessible by the public with a wide range of levels of personal mobility in addition to Open Access Land as well as land within identified Special Landscape areas in the wider locality. *5.8.13 Baseline - Electricity Grid Connection* In the scoping report it is written that, in the event of an overhead line grid connection being implemented, 'the visual impact would be considerably greater, and it would be likely be visible from number of viewpoints'. We note that no supporting text is provided to either qualify or clarify this statement and no viewpoints are described. The viewpoints to be used in the LVIA and CLVIA should take account of this potential impact. *5.8.18 Assessment - Power Generation Plant* We would recommend that the stated 'desk review of all related documents and landscape planning policy and guidance' specifically		

		includes reference to the following documents: - Managing Change Together: Brecon Beacons National Park Draft Management Plan 2009 – 2014; 2008, Brecon Beacons National Park Authority; - Brecon Beacons National Park Authority Landscape Character Assessment - we understand that this document is currently in draft form and it is intended to become Supplementary Planning Guidance in due course, following appropriate consultations. We consider this to be important information in describing the baseline condition of nearby areas of the BBNP and identifying landscape and visual sensitivities to developments outwith but adjoining the National Park; - Current LANDMAP data - with reference to all 5 constituent Aspect data sets, not just the Visual & Sensory Aspect. We consider that this is essential material for proper description of the landscape baseline condition in the wider landscape of the proposed study area. *5.8.19 Assessment – Power Generation Plant* Reference is made to use of the 'Guidelines for Landscape and Visual Impact Assessment 2nd Edition, 2002'. This Guidance was superseded by the Guidelines for Landscape and Visual Impact Assessment 3rd Edition		

		(GLVIA3), with effect from April 2013. Recent information on the use of the Guidance has been issued by the Landscape Institute, to the effect that all assessments being undertaken from April 2013 should use GLVIA3. We welcome the proposal to use, in addition to the above, the Countryside Council for Wales/Cadw (2007) Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process. *5.8.21 Assessment – Power Generation Plant* NRW welcomes the intention to produce a Zone of Theoretical Visibility (ZTV) Plan as part of the assessment. We would suggest that the minimum radius for the ZTV should be 7.5km from the edge of the proposed Power Generation Plant site. This plan should indicate the differences in theoretical visibility for a 30-metre and a 90-metre high chimney stack. We would also expect the assessment of the scheme to comment upon the potential for enhanced visual effects arising from vapour plumes issuing from stacks during particular atmospheric conditions. *5.8.24 to 5.8.27 Assessment – Power Generation* Plant NRW considers the list of viewpoints provided to be inadequate; viewpoints relevant to the remit of both NRW and the BBNPA will need to be agreed with each of the organisations prior to the commencement of the assessment work. We		

		suggest that the starting point for these discussions should be the viewpoints used for the LVIA and CLVIA for the nearby 'Enviroparks' scheme. With regard to photomontages, we consider that it is premature to suggest that 'up to six photomontages would be produced to illustrate the development from key views' would be adequate or reasonable without further dialogue with NRW and BBNPA. The precise number and location of the viewpoints from which photomontages will be produced should be agreed between the relevant parties.		

Table 12 – Consultation Responses relating to Waste and Public Health

Consultee	*Location in Scoping Opinion*	*Comment*	*Response*	*Location in PEIR*
NHS Wales	Page.3	The Welsh Government regards the inclusion of a Health Impact Assessment within the scoping and environmental assessments as a best practice requirement. The applicant is therefore advised that any subsequent application for a Development Consent Order must include detailed Health Impact Assessment as part of supporting documentation.	A preliminary assessment of potential health impacts resulting from the development of the Project is presented in the PEIR. This will be further developed and refined as the EIA process progresses.	Section 12
The Planning Inspectorate	3.28	The ES should also address the inter-relationships with other topics within the ES particularly ecology and water quality. The Applicant should also consider whether air quality and health issues should be addressed within the ES. The Applicant's attention is drawn to the advice from Public Health England in Appendix 2. The SoS notes that a worst case assessment of stack height in respect of air quality may not constitute a worst case assessment in respect of other topic areas.	Section 12 of the ES considers potential impacts on human health and draws on other impact sections including air quality.	Section 12
	Appendix	The EIA should give consideration to best practice such as the governments good practice guide for EIA. It is important that the EIA identifies and assesses the potential public health impacts of the activities at, and emissions from, the installation, Assessment should consider the development, operational and decommissioning phases. The EIA directive requires that ES's include a description of the aspects of the environment likely to be significantly affected by the development,	A preliminary assessment of potential health impacts resulting from the development of the Project is presented in the PEIR. This will be further developed and refined as the EIA process progresses.	

		including “population”. The EIA should provide sufficient information for PHE to fully assess the potential impact of the development on public health. PHE will only consider information contained or referenced in a separate section of the ES summarising the impact of the proposed development on public health: Summarising risk assessments, proposed mitigation measures, and residual impacts. This section should summarise key information and conclusions relating to human health impacts contained in other sections of the application (e.g. in the separate sections dealing with: air quality, emissions to water, waste, contaminated land etc) without undue duplication. Compliance with the requirements of national policy statements and relevant guidance and standards should be highlighted. It is not PHE’s role to undertake these assessments on behalf of promoters as this would conflict with PHE’s role as an impartial and independent body. The ES should clearly identify the developments location and distance from the development of off-site human receptors that may be affected by emissions from, or activities at, the development. Off-site human receptors may include people living in residential premises; people working in commercial, and industrial premises and people using transport infrastructure (such as roads and railways), Recreational areas, and publicly-accessible land. Consideration should also be given to the environmental receptors such as the surrounding land, watercourses, surface and groundwater, and		

		drinking water supplies such as wells, boreholes and water abstraction points.		
	p.93	We would expect the promoter to follow best practice guidance during all phases from construction to decommissioning to ensure appropriate measures are in place to mitigate any potential impact on health from emissions (point source, fugitive and traffic related). An effective construction environmental management plan (CEMP) (and Decommissioning Environmental Management Plan (DEMP)) will help provide reassurance that activities are well managed. The promoter should ensure that there are robust mechanisms in place to respond to any complaints of traffic-related pollution, during construction, operation, and decommissioning of the facility.	An outline CEMP will be produced as part of the final DCO documentation. This will form the basis of a more detailed CEMOP which will be developed by construction contractors. Further, detailed mitigation measures are set out in Section 12 and in other impact sections of the PEIR.	
Public Health England	p.90	The Welsh government regards the inclusion of a Health Impact Assessment scoping report (Cummulative Assessment) Outlines the intention to take into account the potential cumulative impact the plant will have on local air quality and sensitive receptors. The Applicant is advised that any other sources of local air pollution (existing or planned) should be included in the assessment and in any air dispersion modelling undertaken as part of the application process.	Noted. Cumulative air quality impacts will be considered as part of the ES.	Section 6

	p.99	Liason with other stakeholder, comments should be sought from: • The local authority for matters relating to noise, odour, vermin and dust nuisance • The local authority regarding any site investigation and subsequent construction (and remeditation) proposals to ensure that the site could not be determined as 'Contaminated Land' under Part2A of the Environmental Protection Act • The Local Authority regarding any impacts on existing or proposed air quality management areas • the food standards agency for matter relating to flood risk and releases with the potential to impact on surface and groundwaters • The environment agency for matters relating to flood risk and releases with the potential to impact on surface and groundwaters • the environment agency for matters relating to waste characterisation and acceptance	Consultations are ongoing as part of the EIA process.	

	p.100	Amongst other permits and consents; the development will require an environmental permit from the environment agency to operate (under the Environmental Permitting (England and Wales) Regulations 2010). Therefore the installation will need to comply with the requirements of best available techniques (BAT). PHE is a consultee for bespoke environmental permit applications and will respond separately to any such consultation	Noted, The EP application has not yet progressed.	
	Annex 1	The points below are cross-cutting and should be considered when undertaking a human health risk assessment: • The promoter should consider including chemical abstract service (CAS) numbers alongside chemical names, where referenced in the ES • Where available, the most recent United Kingdom standards or the appropriate media (e.g. air, water, and/soil) and health-based guideline values should be used when quantifying the risk to human health from chemical pollutants. Where UK standards or guideline values are not available, those recommended by the European Union or World Health Organisation can be used. • When assessing the human health risk of a chemical emitted from a facility of operation, the background exposure to the chemical from other sources should be taken into account • When quantitatively assessing the health risk of genotoxic and carcinogenic chemical pollutants PHE does not favour the use of mathematical models to extrapolate from		

		high dose levels used in animal carcinogenicity studies to well below the observed region of a dose-response relationship. When only animal data are available, we recommend that the "Margin of Exposure" (MOE) approach is used.		
Health and Safety Executive	p.59	As this is indicated as a "gas fired" power generating station, the application may need to consider whether or not they need Hazardous Substances Consent, if the qualyfing quantity of a dangerous substances is reached or exceeded. If this is the case, they should apply to the local hazardous substances Authority who should consult HSE in the unusual manner. This project may create or have an impact on existing generation, transmission and distribution assets. It needs to satisfy general UK health and safety legislation (i.e Health and Safety at work etc Act 1974 and supporting regulations), and the proposed design and future operations must comply with the electricity at work regulations 1989 and electrical safety, Quality and Continuity regulations 2002, as amended. Generators, distributors, their contractors and others have defined duties in order to protect members of these regulations.	No hazardous substance consent will be required given the limited amount of potentially hazardous substances which will be stored on Site. Construction of the Project will comply with general UK health and safety legislation (i.e Health and Safety at work etc Act 1974 and supporting regulations), and the proposed design and future operations must comply with the electricity at work regulations 1989 and electrical safety, Quality and Continuity regulations 2002, as amended.	

South Wales Fire and Rescue Service	p.102	The developer should consider the need for the provision of:- a. adequate water supplies on the site for firefighting purposes; and b. access for emergency firefighting appliances. Should the applicant require further information in relation to these matters they should contact the above named fire safety officer.	It will be ensured that the Power Generation Plant Site has adequate water supplies and access for fire fighting.	

Table 13: Consultation Responses to Potential Impacts on Traffic, Transport and Access

Consultee	Location in Scoping Opinion	Comment	Response	Location in PEIR
The Planning Inspectorate	3.75	The SoS welcomes the proposal to develop the assessment of transport impacts in association with the local highways authority (RCTCBC) and the body responsible for the strategic road network. It should be noted that this is the Welsh Government and not the Highways Agency as stated in the Scoping Report. The SoS would expect on-going discussions and agreement, where possible, with such bodies.	A meeting was held on 17th September with RCTCBC and the Welsh Government to discuss the scope of the Transport Impacts and proposed assessment. Ongoing dialogue is being held with all parties to confirm the scope of the assessment	N/A
	3.76	Information should be provided on the types of vehicles and plant to be used and the number of vehicle trips during construction and operation phases. This should include vehicular movements required during shut down and maintenance periods, and any requirements for the delivery of abnormal indivisible loads.	Information on likely plant requirements will be provided in the TA. Information will be provided in the TA of the ES on trip numbers for construction and operational transport including vehicles likely to be used for materials, delivery, disposal and construction. Maintenance and shut down requirements will be considered. Where detail cannot be defined at the planning stage an indicative range of trips generated will be provided. Abnormal loads will be considered in the Transport Assessment.	Preliminary indications given in Sections 13.6 and 13.7
	3.77	The SoS welcomes the proposals to take account of potential impacts on pedestrians.	The TA will consider the impact for all transport users including pedestrians and	Preliminary assessment at

		The SoS recommends that the ES should take account of the location of footpaths and any public rights of way (PROW) including bridleways and byways. The ES should clearly set out impacts on them including within the wider area. It is important to minimise hindrance to them where possible.	cyclists. Desire lines through the study area will be identified to inform where infrastructure improvements may be required. This will be reported in the TA of the ES.	Section 13.7
	3.78	The SoS welcomes the proposal to produce a Travel Plan for the construction and operational phases of the proposed development. If this is to form a separate document to the ES, the Applicant should ensure that sufficient information is contained within the ES for it to be a stand alone document.	A TP will be produced as part of the application submitted with the TA of the ES. Sustainable modes of travel will be explored and SMART initiatives proposed.	N/A
	3.79	The ES should also address the inter-relationships with other topics within the ES particularly air quality, noise and vibration, socio-economics and waste assessments.	Agreed. To be incorporated in the TA of the ES.	N/A
	4.19	Schedule 4 Part 2 • A description of the development comprising information on the site, design and size of the development • A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects • The data required to identify and assess the main effects which the development is likely to have on the environment • An outline of the main alternatives studies by the applicant and an indication of the main	The TA will cover all of the topics raised.	Preliminary assessment in Section 13.7

		reasons for the applicant's choice, taking into account the environmental effects, and • A non-technical summary of the information provided [under the four paragraphs above]. Traffic and transport is not specified as a topic for assessment under Schedule 4; although in line with good practice the SoS considers it is an important consideration per se, as well as being the source of further impacts in terms of air quality and noise and vibration.		
National Grid	p.65	Pipeline Crossings • Where existing roads cannot be used, construction traffic should ONLY cross the pipeline at previously agreed locations.	It is not anticipated that construction traffic will cross existing pipelines. Further details will be presented in the TA and the ES.	N/A

Table 14 – Consultation Responses in relation to potential impacts on Cultural Heritage and Archaeology

Consultee	*Location in Scoping Opinion*	*Comment*	*Response*	*Location in PEIR*
The Planning Inspectorate	3.80	The SoS notes that the archaeological investigations will be based on a Desk Based Assessment (DBA); intrusive investigations will be considered if the DBA suggests they are required and in consultation with the Glamorgan and Gwent Archaeological Trust (GGAT)and CADW. The ES should confirm the role of GGAT, and whether they are acting on behalf of RCTCBC and BBNPA. If this is not the case then the SoS recommends that these bodies are also consulted on the approach that should be used for archaeological assessment. It is noted that the Scoping Report states that land affected by the gas and electrical connections is less likely to be disturbed by past activities on the site than the land in the industrial estate. The SoS advises that these areas should be subject to detailed assessment if necessary.	A DBA has been completed, the scope of which has been agreed with GGAT. GGAT are independent of BBNPA but oversee archaeological works undertaken in RCTCBC. As part of the DBA, a mitigation strategy has been suggested. However, this is yet to be agreed with GGAT and BBNPA. A preliminary assessment of both remaining Gas and Electrical route is presented in the PEIR.	Section 14
	3.81	The setting of cultural heritage resources could be affected; this includes historic buildings, historic landscapes and archaeological sites and the SoS considers that these should	An initial site visit and desk based assessment has provided the basis for a preliminary assessment of setting impacts. However, this will be further developed and refined as the EIA progresses.	Section 14.7

		be addressed in the ES. The Applicant's attention is drawn to the comments from BBPNA in Appendix 2 on the need to fully consider the various statutory and non-statutory historic monuments and landscapes.		
	3.82	The Scoping Report states (paragraph 5.11.27) that an initial study will be undertaken making reference to desk-based research and the Zone of Theoretical Visibility. However paragraph 5.11.29 states that the search area for historic assets will be limited to 5 km from the centre of the proposed Power Generation Plant. The ES should clearly explain what approach has been used and justify the extent of the search area.	The DBA covered a 1km study area from the Project Site, whilst the setting impacts will look at assets within a 5km study area including a ZTV. This will aid the assessment of the settings of the heritage assets.	Section 14.4
	3.83	The ES should identify the names and characteristics of the important heritage assets that could be affected by the proposed development. Any cultural heritage or archaeological features likely to be affected, directly or indirectly, by the project should be clearly identified in the plans of the ES. This should include assets considered to be of national, regional or local importance.	This has been provided in the PEIR.	Section 14.6 and Figure 14.1
	3.84	The SoS advises that the ES must make it clear what mitigation measures are proposed, how they will be delivered, how effective they will be and what the residual effects would be.	An initial indication of potential mitigation measures has been outlined in the PEIR. This will be further refined as the EIA progresses.	Section 14.8

<table>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Parc Cenedlaethol Bannau Brycheiniog – Brecon Beacons National Park</td><td>p.49</td><td>The proposal has the potential to affect the setting of archaeological resources within the BBNP, therefore the assessment o the potential impacts of the development on the setting of a variety of heritage asset types, including a 5km theoretical zone of visibility is welcomed.

The 5km zone would include the archaeological significant area of Mynydd-y-Glog: an area with a proliferation of Bronze Age ritual activity including round cairns and ring cairns, as well as later activity including medieval and industrial activity. The archaeological significance of Mynydd-y-Glog is highlighted by the concentration of scheduled ancient monuments in close proximity to each other on the mountain. These include:

<table><tr><th>SAM No.</th><th>SAM Name</th></tr><tr><td>GM562</td><td>Wernlas hut Circle</td></tr><tr><td>GM558</td><td>Wernlas ring cairn and Cairnfield</td></tr><tr><td>GM520</td><td>Pant Schynbant Medieval Hamlet</td></tr><tr><td>GM521</td><td>Round Cairn North of Mynydd-y-Glog</td></tr><tr><td>GM522</td><td>Four Round Cairns on the Southern Side of Mynydd-y-</td></tr></table></td><td>Noted.

A preliminary assessment of impacts on these assets has been included within the PEIR and will be developed further as part of the ongoing EIA.

Mitigation will be included in the ES in consultation with the BBNPA.</td><td>Section 14.7</td></tr>
</table>

	Glog
GM525	Three Round Cairns on the Southern side of Mynydd-y-Glog
GM526	Two Round Cairns on the Summit of Mynydd-y-Glog
GM524	Ring Cairn and Round Cairn on Southern Side of Mynydd-y-Glog
GM523	Round Cairn and Ring Cairn South of Twyn-y-Glog

It is requested that the impact of the proposed development on these SAMs should be considered in the EIA.

The scoping report does not include the need to assess the impact of the development on the setting of many undesignated archaeological remains. The national parks first purpose is to conserve and enhance the special qualities of the National Park, which includes its heritage (undesignated as well as designated remains), as such it is requested that the impact of the development on the setting of undesignated as well as designated sites that fall within the 5km theoretical zone of visibility is undertaken; particularly those undesignated archaeological remains on the south and south-east facing slopes of Mynydd-y-Glog.

		The scoping report does not include as part of the EIA the need to assess the impact of the development on the setting of the nationally important and designated East Fforest Fawr and the Mynydd-y-Glog registered historic Landscape of Special historic Interest just 2km from the proposed development site. As the proposed development may potentially impact upon the setting of and views from the registered historic landscape as a heritage asset in its own right, as well as from individual sites and SAMs within it, it is important that this impact is assessed in the EIA As well as assessing the impact of the proposed development on the setting of the heritage assets (designated and Undesignated) within the Brecon Beacons National Park, appropriate mitigation strategies to minimise such impacts also need to be considered in the EIA. In Summary the applicant is requested to contact the BBNPA to discuss the proposals further, particularly in relation to the landscape and visual impacts of the proposal on the special qualities on the national park to ensure that a robust and fully informed assessments is undertaken from the outset		

Table 15: Consultation responses in relation to potential impacts on socio-economics

Consultee	Location in Scoping Opinion	Comment	Response	Location in PEIR
The Planning Inspectorate	3.86	The SoS recommends that the types of jobs generated should be considered in the context of the available work force in the area, this applies equally to the construction and operational stages.	The socio-economic baseline presents a detailed examination of the labour market context. This examines the workforce profile within various drive times from the development (30 minutes, 45 minutes and 1 hour).	Chapter 15
	3.87	The SoS notes the proposal to study the socio-economic impacts for construction, operation and decommissioning, with a potential workforce of between 150 and 250 persons during construction and up to 30 full time staff during operation. Subject to procurement rules, much of this workforce will be recruited locally. The SoS recommends that the assessment includes direct and indirect impact with full explanation and justification for any presumptions used.	The creation of Full Time Equivalent (FTE) jobs is considered in the Preliminary Assessment of Potential Impacts section. The assessment approach in the ES will follow HM Treasury guidelines and takes account of displacement, leakage and additionality factors Socio-economic impacts (direct and indirect) will be examined at construction, operation and decommissioning phases in the ES assessment.	Chapter 15
	3.88	The SoS recommends that the assessment criteria should be locationally specific and consider the potential significance of the impacts of the proposal within the local and regional context.	In addition to the response to 3.86 above, socio-economic baseline information is presented at a Rhondda Cynon Taff, South East Wales or national level. Community Infrastructure provision is examined within a 5km radius of the proposed development, including Hirwaun, Cwmdare and Penderyn. Impacts will be assessed at these levels in the ES chapter	Chapter 15

APPENDIX B

ARCHAEOLOGY GAZETEER

Heritage Asset Number	*01*
Asset Name	Bridge on Trappenden's Tramroad West
NGR	SN 92460 06199
Asset Type	Bridge
Period	Industrial
Statutory Designation	None
HER No	03225.2m
Value/Importance	Local
Description	Arched stone tramroad bridge on Tappenden's tramroad West, which is squared off at one end.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	02
Asset Name	Spearhead
Grid Ref	SN 9265 0590
Asset Type	Findspot
Period	Bronze Age
Statutory Designation	None
HER No	00008m
Value/Importance	Local
Description	Bronze spearhead found in open cast coal site. The implement is in a badly corroded condition.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	03
Asset Name	Hughes's Patch
NGR	SN 9290 0600
Asset Types	Colliery
Period	Industrial
Statutory Designation	None
HER No	01795m
Value/Importance	Local
Description	Hughes's Patch colliery with remaining working faces and spoilheaps.It is annotated on the 1921 OS map and is marked on the modern OS map.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	04
Asset Name	Caer-Llwyn Cottage
NGR	SN 9320 0710
Asset Types	House
Period	Industrial
Statutory Designation	None

HER No	01256m
Value/Importance	Local
Description	The cottage has been altered over the years internally and some walls have been demolished. The N-E wall still contains the original chimney. It lies within the BBNP and is annotated on the 1921 OS map.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	05
Asset Name	Llwyncelyn Cairn Group
NGR	SN 9325 0663
Asset Types	Cairnfield
Period	Bronze Age
Statutory Designation	None
HER No	00005m
Value/Importance	Local
Description	A possibly sepulchral cairnfield of ten cairns, five of which have been excavated. The excavated examples were built of small stones, but all had been robbed; three of them had small central hollows. Confirmed as destroyed by inspection. It is annotated as 'Tumuli' on the 1921 OS map.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	06
Asset Name	Royal Ordnance Factory, Hirwaun
NGR	SN 9373 0629
Asset Types	Munitions Factory
Period	Modern
Statutory Designation	None
HER No	06322m
Value/Importance	Local
Description	Site of former Royal Ordnance Factory, constituted between approximately 1940 and 1945. The site is understood to have been an engineering works, producing .303 cartridges and other metal based components. A number of the original buildings are extant.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	07
Asset Name	Twyn Bryn-Hir Cairnfield
NGR	SN 9377 0662
Asset Types	Cairnfield
Period	Bronze Age
Statutory Designation	None
HER No	0006m
Value/Importance	Local
Description	A possibly sepulchral cairnfield consisting of seventeen mounds in an area 165m long from E to W by 69m wide; twelve were

	excavated by A Fox and M E Murray Threipland (1942). None yielded signs of burials or grave goods. It is annotated as 'Tumuli' on the 1921 OS map.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	08
Asset Name	Tappenden's Tramroad West
NGR	SN 9372 0602
Asset Types	Tramroad
Period	Industrial
Statutory Designation	None
HER No	03225.1m
Value/Importance	Local
Description	The tramroad was opened in 1805 after being built in two sections. The first by the Neath Canal Company commenced in 1802 from the canal head at Glyn Neath to Wyfra bridge, the second by Homfray, Birch and the Tappendens eastwards from the bridge to the ironworks.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	09
Asset Name	HIrwaun Toll House
NGR	SN 9412 0589
Asset Types	Toll-house
Period	Industrial
Statutory Designation	None
HER No	01796m
Value/Importance	Local
Description	Toll house on Merthyr to Neath Pike road.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	10
Asset Name	Trebanog Fach
NGR	SN 94437 07377
Asset Types	House
Period	Industrial
Statutory Designation	Listed Building Grade II
HER No	26832 (Cadw Listed Building Number)
Value/Importance	Local
Description	Old house with attached byre and barn.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	11
Asset Name	Bryn y Gaer
NGR	SN 9444 0649

Asset Types	Farmstead
Period	Industrial
Statutory Designation	None
HER No	01092m
Value/Importance	Local
Description	A ruined farm sited in an excellent position for a small fort, although there is no evidence of an Iron Age enclosure. It is annotated on the 1921 OS map and is annotated as 'ruins' on the 1978-1990 OS map.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	12
Asset Name	Hirwaun Ponds
NGR	SN 9480 0599
Asset Types	Reservoir
Period	Industrial
Statutory Designation	None
HER No	01809m
Value/Importance	Local
Description	The ponds may have been header reservoirs which were used for enhancing the flow in the Afon Cynon and leats lower down the Valley which served Hirwaun iron works. The ponds are annotated on the 1921 OS map and on the modern OS map.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	13
Asset Name	The Hirwaun Common Mineral Line
NGR	SN 9495 0618
Asset Types	Railway
Period	Industrial
Statutory Designation	None
HER No	03220m
Value/Importance	Local
Description	The Hirwaun Common Mineral Railway was marked as a tramroad on the tithe map of *c*1840 and a conventional locomotive-operated railway on the OS map of *c*1880.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	14
Asset Name	Stone Road Bridge
NGR	SN 9512 0620
Asset Types	Bridge
Period	Industrial
Statutory Designation	None
HER No	01808m
Value/Importance	Local

Description	This is a good example of Brunel's style of Road Bridge and Cutting designed for the 7ft broad gauge.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	15
Asset Name	Building, Glyneath to Aberdare Tramway
NGR	SN 9516 0550
Asset Types	Building
Period	Industrial
Statutory Designation	None
HER No	01798m
Value/Importance	Local
Description	Small building alongside the Glynneath - Aberdare Tramway, possibly used for stables or for housing a weighing machine.
Assessment	The heritage asset lies within the Study Area.
Heritage Asset Number	16
Asset Name	Hirwaun Ironworks Water Pump
NGR	SN 9525 0590
Asset Types	Leat
Period	Industrial
Statutory Designation	None
HER No	01800m
Value/Importance	Local
Description	Cast iron water pump still in situ.
Assessment	The heritage asset lies within the Study Area.