



By email only: Adriana.Gasparini@rwe.com

Adriana Gasparini
RWE Generation UK plc
Windmill Hill Business Park – Trigonos Building
Whitehill Way
Swindon
SN5 6PB

23 August 2024

Dear Adriana Gasparini,

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (ENGLAND AND WALES) REGULATIONS 2017 – REQUEST FOR A SCOPING OPINION

THE ELECTRICITY GENERATING STATIONS (VARIATION OF CONSENTS) (ENGLAND AND WALES) REGULATIONS 2013

**PEMBROKE POWER STATION DECARBONISATION
WEST PENNAR, DYFED, PEMBROKE, SA71 5SS**

1. I refer to your email of Wednesday 12 June 2024 and attachments requesting an environmental impact assessment (EIA) scoping opinion (“the scoping request”) from the Secretary of State as to the scope and level of detail of the information to be included in the EIA Report in respect of the proposed development referred to as “the Pembroke Power Station Decarbonisation” (“the Proposed Development”) under Regulation 18 of the Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2017 (“the 2017 Regulations”).
2. The scoping request contained an EIA Scoping Report (ref. 297711/PEMEIASCP) prepared by Ove Arup & Partners Limited on behalf of RWE Generation UK plc (“the Applicant”) dated June 2024 (the “Scoping Report”) and supporting figures.
3. The Scoping Report sets out the environmental information that the Applicant intends to provide in support of its proposed variation to the original section 36 consent and deemed planning permission for the Pembroke Power Station, commissioned in 2012 (“the Existing Consent”). It also provides details of the methodology to be used and topics to be scoped out of the EIA Report.

The Proposed Development

4. The Applicant proposes to make several changes to the existing Pembroke Power Station (“the power station”).
5. The Proposed Development aims to decarbonise the existing five combined-cycle gas turbine (CCGT) units that comprise the power station. This will be achieved via a combination of retrofit of post-combustion Carbon Capture Plant (CCP) and use of hydrogen fuel (initially blending of natural gas with up to 40% hydrogen, followed by conversion to 100% hydrogen fuel). A final decision on the number of CCGT units that

are retrofitted with CCP and the number of CCGT units converted to hydrogen has not yet been made, but the potential development options identified for EIA and consenting are:

- up to five CCP units each with a direct contact cooler to cool the flue gas, a flue gas blower, CO₂ absorber(s) with stack, a solvent stripper/ regenerator, and hybrid air and water cooling systems (referred to as Option A); and
 - up to three CCGT units to be converted to hydrogen firing, with the remaining units being fitted with CCP units (referred to as Option B).
6. The construction of the Proposed Development will be phased. It is currently anticipated that up to two CCGT units will be retrofitted with CCP in the first phase and the remaining CCGT units will be retrofitted with CCP or converted to hydrogen in a second phase. The CCP elements of the Proposed Development is likely to include the following additional components:
- up to five CCP units each with a direct contact cooler to cool the flue gas, a flue gas blower, up to two carbon dioxide (CO₂) absorber(s) per turbine, stack and solvent stripper/ regenerator, hybrid air and water cooling systems and an acid wash;
 - CO₂ compression and purification facility, to prepare the CO₂ for export off site;
 - a chemical store and storage tanks;
 - ducting to connect each CCP unit to an existing CCGT unit;
 - utilities connections;
 - demineralisation treatment water plant;
 - surface water drainage system;
 - wastewater treatment plant; and
 - construction laydown area and welfare facilities.
7. Should hydrogen firing make up part of the Proposed Development, the following components are anticipated to be included:
- a hydrogen supply pipeline, metering system and pre-filtration unit;
 - a hydrogen reducing station, final filtration, metering system, performance heater and regulating station for each CCGT unit; and
 - a blending unit to blend natural gas and hydrogen (until the CCGT units have been retrofitted to enable 100% hydrogen firing) for each CCGT unit.
8. The indicative location of the Main Development Area for both CCP units and hydrogen firing infrastructure is illustrated within Figure 3.1.
9. Due to the nature of the Proposed Development, the Applicant has considered that the development would be determined as an EIA Development having regard to the factors in Schedule 3 of the 2017 Regulations. Consequently, the Applicant has committed to undertaking an EIA and has not sought an EIA screening determination.

EIA Scoping Opinion

10. The Scoping Report contains a description of the nature and purpose of the Proposed Development, including its specific characteristics, location and technical capacity, an explanation of the likely impact on the environment of the Proposed Development and a plan of the site of the Proposed Development.
11. The topics identified in the Scoping Report to be scoped in are:
 - Air quality;
 - Climate change resilience;
 - GHG emissions;
 - Cultural heritage;
 - Ecology and nature conservation;
 - Geology, hydrology and land contamination;
 - Landscape and visual amenity;
 - Human health;
 - Major accidents and disasters;
 - Noise and vibration;
 - Socioeconomics;
 - Traffic and transport;
 - Materials and waste;
 - Water resources and flood risk; and
 - Cumulative and combined effects.
12. The Scoping Report provides details of the effects and receptors proposed to be scoped out of the EIA Report.
13. On 1 July 2024, officials acting on behalf of the Secretary of State undertook consultation, in accordance with Regulation 18(3) of the 2017 Regulations, on the scope and level of detail of environmental information proposed to be contained within the EIA Report, which will accompany the section 36C variation application.
14. Consultees were identified in accordance with Regulation 4 of the 2017 Regulations. Responses were received from:
 - Pembrokeshire County Council (PCC);
 - Natural Resources Wales (NRW);
 - Cadw; and
 - The Health and Safety Executive (HSE).
15. Pembrokeshire Coast National Park Authority was consulted but did not respond.

16. The consultees have provided standard advice and recommendations on environmental topics within their remit, to which the Applicant should have regard when conducting surveys and assessments and when preparing its EIA Report. These responses are provided to the Applicant. Specific comments from consultees on the scope and detail contained within the Scoping Report are considered further below and form part of this Scoping Opinion.
17. In considering this request for a Scoping Opinion and in accordance with Regulation 18 (6) of the 2017 Regulations, the Secretary of State has taken into account: the information provided by the Applicant; all representations received from the consultation bodies and public authorities consulted; the specific characteristics of this development; the specific characteristics of this type of development; and the environmental features likely to be affected by the Proposed Development.

EIA Methodology

18. Table 1 presents the Secretary of State’s and consultees’ comments on Sections 1 to 5 and Section 8 of the Scoping Report, concerning EIA methodology, planning policy and consenting approach.
19. Unless otherwise mentioned below, the Secretary of State agrees with the scope and level of detail proposed in the Scoping Report.

Table 1. Sections 1 to 5 and 8 of the Scoping Report

Page	Scoping Report text	Comment
8	<i>“Following export from the Site, the CO₂ will be converted to a liquid at a liquefaction facility and shipped to another location in the UK for injection into a CO₂ transport and storage network (such as the Acorn project or Viking CCS). The CO₂ export from the Site, liquefaction, shipping, transport and storage facilities will be provided by third parties and do not form part of the Proposed Development.”</i>	<p>It is not clear from the Scoping Report how CO₂ is proposed to be exported from the site to a liquefaction facility, for example whether by a new pipeline specifically for this purpose or via ship. The Secretary of State (SoS) notes that the Proposed Development’s red-line boundary does not appear to extend below the Mean High Water Springs. However, he is acutely aware of the interaction of the Proposed Development and any associated works to enable export of captured CO₂ from the Proposed Development.</p> <p>Similarly, the arrangements for reception of hydrogen at the Proposed Development are not clear from the Scoping Report. For example, if a new pipeline to the Proposed Development would be required.</p> <p>The nature and stage of development of any such functionally interdependent projects must be clearly explained, and the potential for cumulative likely significant effects arising from the Proposed Development and export infrastructure as a whole must be considered in the EIA Report to the extent that such information is available. This is the case even if the</p>

		projects are being pursued separately by different developers.
14	<i>“The exact location of the construction laydown areas is not known at this stage, as such it is assumed that these may be located anywhere within the Proposed Development Scoping Boundary, taking into consideration other developments at the Pembroke site as well as any ecological constraints.”</i>	It should be made clear for each relevant topic in the EIA Report what implication this has for the worst-case scenario.
15	<i>“Before construction of the Proposed Development, a series of environmental management plans will be produced”</i>	These should be provided at least in an outline form as part of the EIA Report, to enable consultees and SoS to consider the appropriateness of avoidance and mitigation measures relied upon to reach reasoned conclusions on the likely significant effects of the Proposed Development, and to secure such measures as part of any consent (if granted).
	<i>“For the purposes of this EIA, it is proposed that decommissioning effects are not assessed at this stage. They will be assessed at the time of decommissioning in line with the applicable guidance and regulations at the time.”</i>	The SoS agrees that decommissioning effects do not need to be assessed at this stage, subject to a Decommissioning Plan (including Decommissioning Environmental Management Plan).
17	4. Project alternatives	It is not clear if alternative technologies, such as solvents used and carbon capture technology and alternative configurations or layout of the Proposed Development have been / will be considered, but the SoS considers that they should.
	<i>“Under the EIA Regulations there is no requirement to assess alternatives, only a requirement to provide a review of those alternatives that have been considered.”</i>	Whilst the EIA Regulations place no specific obligation to study alternatives beyond describing them in the manner specified, the identification and consideration of alternatives is relevant to the mitigation hierarchy and avoiding potentially significant environmental effects where possible.
18	<i>“The emerging LDP (limited weight) is currently under review following public consultation. The new LDP is due to be submitted to the Welsh Government in September 2024 for examination and adopted in October 2025. As such the</i>	The Applicant is advised to seek an update on the progress to adoption of the replacement Local Development Plan (LDP) prior to application submission. Planning Policy Wales Edition 11 has been referenced; this has now been replaced by Edition 12.

	<i>2013 LDP is the adopted and most up to date local policy when making a planning assessment of the Proposed Development.”</i>	
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Topics proposed to be scoped in and out

20. Table 2 presents the Secretary of State’s and consultees’ comments on topics, receptors and effects proposed to be scoped into and out of the EIA Report, relevant to Sections 6 and 7 of the Scoping Report.
21. Unless otherwise mentioned below, the Secretary of State agrees with the scope and level of detail proposed in the Scoping Report.

Table 2. Sections 6 and 7 of the Scoping Report

Page	Scoping Report text	Comments
Air quality		
26	<i>“The assessment will consider the potential impact of NOx, CO, ammonia, amines and their degradation product, including N- amines, using the latest version of the dispersion modelling software ADMS 6.”</i>	<p>The SoS is aware of recent developments and work undertaken by the Environment Agency (in England) to understand the implications of amines in solvents used in carbon capture processes and potential updates to Environment Assessment Limits (EALs) for amines. He agrees with the proposed scope of the assessment of aerial emissions in this instance.</p> <p>As the issue of amines is of particular interest in relation to environmental permitting, the SoS would encourage the Applicant to engage with NRW to agree the methodology for assessment of amines and amine degradation products in detail in dispersion modelling.</p> <p>The EIA Report should include consideration of any likely significant effects on other receptors (notably sensitive habitats and waterbodies and sensitive human receptors) resulting from the deposition of amines and amine degradation products.</p>
	<i>“The existing Environmental Permit for the Power Station will be varied to include the operation of the Proposed Development. As part of the permitting process, a Best Available Technology (BAT) assessment will be conducted on the proposed technologies.”</i>	<p>NRW consider that the Scoping Report provides sufficient references outlining the requirement of a substantial variation to RWE’s existing EPR permit that would need to be submitted to NRW for technical assessment. In addition to an application for a Section 36C variation under the Electricity Act 1989, the activity of carbon capture and storage will require the operator to apply for an EPR permit under Section 6.10 Part A (1) capture of carbon dioxide streams from an installation for the purposes of geological storage.</p> <p>A permit variation application would also need to include any proposal to fuel switch from natural gas to hydrogen. NRW recommends that the Applicant engages with NRW as early as possible on any EPR permitting pre application advice required.</p>

		Further advice on matters raised by NRW can be provided prior to the submission of the variation application. Details are available on NRW's website ¹ .
	<i>“From an air quality perspective, Option A would result in a higher mass release of amines compared to Option B. However, hydrogen firing results in a higher concentration of NOx in the flue gas and there may also be differences in flue exhaust characteristics based on the differing processes. As such, both options will be modelled to assess the air quality impacts of both Options A and B.”</i>	The SoS agrees that both options should be modelled to assess and compare air quality impacts of Options A and B.
Climate change resilience		
No comments		
GHG emissions		
31	<i>“A quantitative assessment of GHG emissions associated with the Proposed Development will be presented and the aim [of reducing GHG emissions compared to current operations] confirmed as part of the ES.”</i>	The SoS agrees that a detailed and robust quantification of GHG emissions, clearly explaining and presenting the methodology and calculations, should be carried out and presented in the EIA Report, to include all sources of emissions during construction and operation thus enabling whole-life total GHG emissions to be estimated.
33	<i>“From a GHG emissions perspective, both options achieve decarbonisation of the Power Station's operation but Option A would have greater embodied GHG emissions because the infrastructure is larger. Option A is therefore considered to be the</i>	Whilst embodied GHG emissions for Option A may be larger due to larger infrastructure, it is not clear to the SoS from the Scoping Report whether operational emission would vary significantly between Options A and B to such an extent as to outweigh the differences in embodied emissions of the physical structures. This should be quantified and justified further in the EIA Report, including quantifications of whole-life GHG emissions for both Options A and B.

¹ <https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/advice-for-developers/our-service-to-developers/?lang=en>

	<i>‘worst case’ in terms of construction GHG emissions and this development option will therefore be the focus of the GHG assessment.”</i>	
	<i>“The production of hydrogen and the transport and final storage of captured carbon beyond the Proposed Development is outside the scope of this assessment as it will be covered by a separate consent, although as noted above the assessment will provide a qualitative assessment of indirect upstream and downstream effects where appropriate. The wider transport and storage infrastructure would be consented under a separate application. This application does not seek consent for carbon dioxide transport or storage. However, the Applicant is working closely with partners to identify the most appropriate transport solution.”</i>	<p>Whilst outside the scope of this specific <i>consent</i>, the SoS does not agree that the transport of CO₂ and hydrogen and storage of captured carbon should be outside the scope of this <i>EIA</i>.</p> <p>Whilst any such infrastructure would be covered by a separate consent, the EIA Report should, to the extent that such information is available, include an assessment (including quantitatively, even if doing so requires broad assumptions) of the indirect upstream and downstream transport and storage emissions, as the transport of CO₂ and hydrogen and storage of CO₂ is integral in enabling this Proposed Development. Proposed Development could be seen as one component of a wider ‘project’.</p> <p>Whilst the SoS considers that it is not reasonable or necessary for the EIA Report to include an assessment of cumulative effects of GHG emissions at a national scale on climate change, the EIA Report must assess the nature and magnitude of emissions of the Proposed Development and any necessary transport and storage infrastructure, to the extent that such information is available. This could include, for example, potential emissions arising from leakage from pipelines, from exhaust emissions from exporting ships, in the event that ships might be used, or trucks importing hydrogen.</p>
	<i>“The GHG Emissions assessment described will consider the embedded design mitigation. Relevant embedded mitigation measures will be described.”</i>	The EIA Report should include a description of the steps taken to minimise GHG emissions during construction (e.g. from plant machinery) and how operational emissions have been reduced as much as possible through the application of best available techniques.
12	<i>“The CCP will be designed for 95% CO₂ capture during steady state operation.”</i>	It is not clear in the Scoping Report whether a quantification of periods of non-operation of the CCP (due to, for example, maintenance down time) and the consequence of this on GHG emissions will be included in the assessment of emissions. Further information and a justification for the use of a worst-case capture rate at steady state and full load of

		95% should be provided. The capture rate achieved will have implications for the magnitude of GHG emissions and should be factored in.
Cultural heritage		
34	6.4.1 Baseline conditions. Policy, Legislation and guidance overview	<p>PCC and Cadw note that the guidance '<i>Setting of Historic Assets in Wales, Cadw, 2017</i>' should be used in the assessment of the impact of the Proposed Development on the setting of designated historic assets.</p> <p>References to "Designated and non-designated Heritage Assets" should be corrected to the correct term in Wales, "Historic Assets of National Importance or Local Interest".</p> <p>Cadw note that the enactment of the Historic Environment (Wales) Act 2023 in Autumn 2024 will lead to new editions of <i>Technical Advice Note 24: The Historic Environment</i> and other Cadw guidance documents being issued.</p>
N/A	N/A	Generally, Cadw agree with the approach to assessment of potential likely significant effects on cultural heritage.
34	Existing baseline	<p>However, in line with a number of other EIAs that have been carried out at the Pembroke Power Station and its immediate area, the search area for designated historic assets should be 3km not 2km.</p> <p>Cadw provide a list of Scheduled Ancient Monuments, Listed Buildings, Registered Parks & Gardens and Conservation Areas which it considers may be affected by the Proposed Development using a search area of 3km.</p> <p>Cadw would expect a stage 1 assessment to be carried out for all of the above designated historic assets, which will determine the need, if necessary, for stages 2 to 4 to be carried out for specific historic assets.</p> <p>The Proposed Development will have a direct impact on the Registered Milford Haven Landscape of Outstanding Historic Interest. The scale of this impact should be determined by following the methodology outlined in the Welsh Government document '<i>Guide to Good Practice on using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process</i>', commonly known as ASIDOHL. Cadw can assist in the preparation of this assessment in particular, by agreeing the Historic Landscape Character Areas that should be included in the assessment and also by checking the first four stages to confirm there are no factual errors in the work.</p>
Ecology and nature conservation		
N/A	N/A	NRW provides generic advice to the Applicant on the assessment of effects on internationally and nationally designated sites, marine conservation zones, regionally and locally important sites, protected species (under the Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations)) and priority habitats.

50	<p><i>“As there are several designated European-level statutory sites within a 15 km radius of the Site (see Table 15), consideration will therefore be given to Habitats Regulations Assessment (HRA) matters, including in the context of air quality and water quality. A Shadow HRA report will be prepared by reference to best practice procedural guidance [Tyldesley & Chapman (2013); The Habitats Regulations Assessment Handbook (as updated). UK: DTA Publications Ltd.] to accompany the consent application.”</i></p>	<p>The Applicant may also wish to consider the 2021 GOV.UK guidance² and European Commission guidance³ on HRA of projects.</p> <p>The SoS welcomes the approach as outlined by the Applicant including a commitment to provide information necessary to enable the SoS, as the Competent Authority, to determine whether Likely Significant Effects or adverse effects on the integrity of protected sites can be excluded. Evidence of engagement with the relevant stakeholders should be provided.</p> <p>It may be helpful for the Applicant to produce a ‘Shadow HRA Report’ which not only signposts to all relevant information to support an HRA, but also provides a shadow assessment of the possible implications of the Proposed Development on Special Protection Areas (“SPAs”), Special Areas of Conservation (“SACs”) and Ramsar sites. This could be provided as a standalone HRA Report (as an appendix to the EIA Report) which assesses effects from all potential sources and pathways on each relevant feature. A standalone report could also assist consultation with NRW and other relevant stakeholders.</p> <p>The Applicant should note that as per Regulation 63(3) of the Habitats Regulations, NRW must be consulted on appropriate assessments (“AA”). If an AA is required and included in the shadow HRA report, this could be shared with NRW during consultation on the EIA Report. Whilst Regulation 63(3) requires that the Competent Authority (i.e. the SoS) must consult NRW in this regard, the SoS considers it reasonable that the Applicant may wish to consult NRW on his behalf, with the written advice and views of NRW submitted to the SoS to fulfil this duty and to avoid repetitive consultation.</p> <p>The SoS understands that a 15km screening distance is commonly used as an appropriate Zone of Influence (“ZOI”) for natural gas fired combustion plants with an output greater than 50MW to determine which SACs, SPAs and Ramsar sites may need to be screened into the HRA, in accordance with Environment Agency guidance⁴. Confirmation on how this ZOI has been determined would be helpful (i.e. whether the Applicant has had regard to this EA guidance).</p> <p>Whilst the SoS agrees that a 15km ZOI is generally appropriate for air pollution effects, the Applicant should explain whether it considers this ZOI is appropriate for all effects and features, e.g. mobile features with large foraging /</p>
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² <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>

³ <https://op.europa.eu/en/publication-detail/-/publication/11e4ee91-2a8a-11e9-8d04-01aa75ed71a1>

⁴ Environment Agency (2024). ‘Air emissions risk assessment for your environmental permit’ [Online].

Available at: <https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit>

		<p>migratory distances and any potential for effects on Functionally Linked Land.</p> <p>A source-pathway-receptor approach could be used to determine the scope of the HRA.</p>
48	<p><i>“a Biodiversity Enhancement Scheme will be implemented, including wildlife corridors across the wider Applicant’s landholding at Pembroke to ensure a net benefit to biodiversity from the Proposed Development. These biodiversity improvements will also inform a Green Infrastructure Statement, which will accompany the consent application.”</i></p>	<p>The mandatory BNG requirement came into effect on 12 Feb 2024 per the Environment Act 2021 (Commencement No. 8 and Transitional Provisions) Regulations 2024. Regulation 2(2) states: <i>“The purposes referred to in paragraph (1)(d) of this regulation relate to planning permission granted on an application made under Part 3 of the 1990 Act, other than planning permission relating to development to which section 73A of the 1990 Act (planning permission for development already carried out)(1) applies.”</i></p> <p>A variation to a deemed planning permission or variation to a section 36 consent is not granted under Part 3 of the TCPA 1990. Further, Government guidance⁵ states that <i>“Biodiversity net gain has not been commenced yet for planning permissions which have been granted through other routes to permissions. These include... deemed planning permission”</i>. Therefore, the SoS considers that BNG is not yet mandatory for applications to vary a deemed planning permission or to vary a section 36 consent.</p> <p>Nevertheless, whilst a minimum 10% BNG is not yet mandatory for this Proposed Variation Application, the SoS welcomes the Applicants commitment to delivering a biodiversity enhancement. Delivery of BNG also accords with the Environment (Wales) Act 2016 and planning policy, such as Paragraph 180 of the NPPF which states that decisions should contribute to and enhance the natural and local environment by minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.</p> <p>The SoS agrees with the proposed methodology and a Biodiversity Net Gain assessment, together with a copy of the completed Defra BNG Metric and supporting habitat maps, should be submitted with the EIA Report.</p> <p>PCC consider that, as this proposal is one of many schemes proposed in the area, it is recommended that a strategic approach to biodiversity enhancement at a landscape scale is considered. This would allow meaningful enhancements to be provided which allow for bigger, better, more connected habitats. Any habitats adjacent to the site boundary must be considered when proposing an enhancement scheme.</p> <p>PCC consider that a Green Infrastructure (GI) statement must be submitted with the application. This must be proportionate to the scale and nature of the development proposed and</p>

⁵ <https://www.gov.uk/guidance/biodiversity-net-gain>

		<p>described how GI has been incorporated into the proposal. The GI Statement must use the stepwise approach to demonstrate how well designed spaces can deliver multi-functional outcomes (e.g. biodiversity mitigation and enhancement, landscaping, SUDs highways drainage etc.) The biodiversity enhancement scheme must play a key role in the GI design and be included within the statement. It is recommended that any green infrastructure and biodiversity enhancement scheme is mindful of the presence of dormice nearby and any planting proposed is suitable.</p>
42	<p><i>Badger surveys</i></p> <p><i>The Main Development Area will affect two single-hole outlier badger setts (exact locations not specified here on animal welfare grounds). In addition, frequent badger push-throughs were noted in association with the scrub edge and hedgerows, suggesting that the Main Development Area is used by foraging badgers. Only the edges of the scrub area accessible due to dense vegetation cover, so it is possible more badger setts may be uncovered when this area is de-vegetated.</i></p>	<p>NRW note the presence of some areas of dense scrub which have been difficult to access; where this is the case NRW advise that consideration is given to alternative survey methods (Eg. deployment of trail cameras) to assess presence/extent of use of an area by badgers. NRW advise that survey methodology and level of effort for badgers are agreed with the LPA Ecologist.</p> <p>The EIA must include consideration of the requirements for a licence and set out how the works will satisfy the three requirements as set out in the Conservation of Habitats and Species Regulations 2017 (as amended). Where a European Protected Species is present and a development proposal is likely to contravene the legal protection they are afforded, the development may only proceed under licence issued by NRW, having satisfied the three requirements set out in the legislation. These requirements are also translated into planning policy through Planning Policy Wales (PPW) February 2021, section 6.4.22 and 6.4.23 and Technical Advice Note (TAN) 5, Nature Conservation and Planning (September 2009). [The Secretary of State] will take them into account when considering the EIA where a European Protected Species is present.</p> <p>PCC note that a license from NRW will be required to undertake the works and the following condition must be placed on any consent:</p> <ul style="list-style-type: none"> • A method statement for works near to badger setts must be submitted in support of any application <p>and that standard advice⁶ must be included in any consent notice.</p> <p>The SoS agrees and encourages early engagement with NRW and PCC Ecology regarding protected species and licence requirements, to inform the EIA and any subsequent consent decision.</p>
42	<p><i>“The nearby Greenlink scheme commissioned a dormouse Muscardinus</i></p>	<p>PCC acknowledge that the surveys found no dormice to be present despite nearby records. To be confident in this conclusion the full report and methodology for the dormouse surveys must be submitted.</p>

⁶ <https://www.gov.wales/european-protected-species-licence-and-planning-permission>

	<p><i>avellanarius</i> survey in 2018, which noted the presence of ten ‘dormouse nests or probable dormouse nests’ to the south and south-south-east (with the nearest being approximately 900 m away, and separated from the Main Development Area by a road). Dormouse surveys undertaken by Bioscan Ltd (Bioscan) in 2023 have noted no confirmed dormouse nests.”</p>	<p>NRW note that habitat suitable for dormice continues to be present in the vicinity and there are records of dormice in the area. NRW advise that the application is supported by dormouse surveys of relevant habitats in accordance with the guidance set out in ‘<i>Dormouse Conservation Handbook 2nd Ed (English Nature, 2004)</i>’.</p> <p>Whilst NRW note the comments regarding the 2023 Bioscan surveys, please note that NRW does not dispute the evidence of dormice presented in the Greenlink Interconnector report and, as such, they advise that dormice should be a consideration for this application and therefore scoped into the assessment.</p> <p>The SoS agrees that dormice should be scoped in, insofar as survey reports supporting a conclusion in the EIA Report of no likely significant effects should be provided, perhaps provided as Appendices to the EIA Report.</p>
46	<p>“... on balance of evidence dormice are assessed to be absent from the Main Development Area.”</p>	
42	<p>“Beneath the footprint of the Main Development Area there have been maximum counts of six slow worms <i>Anguis fragilis</i>, one grass snake <i>Natrix natrix</i> and one common lizard <i>Zootoca vivipara</i>, associated with the grass verges around the arable field edge. Within the Site the reptile survey recorded total maximum counts of 23 slow worms, 18 grass snakes and eight common lizards. The Site also encompasses a prior reptile receptor site from a previous translocation (which was not included in the reptile survey area or the above counts) – impacts on this area will be avoided if possible.”</p>	<p>PCC Ecology consider that it will be essential and necessary for the reptile receptor site from a previous translocation area to be avoided and the scheme should be designed as such.</p>
42	<p>“13 trees with significant bat roosting potential</p>	<p>NRW note that the Proposed Development site supports habitat with significant roosting potential. NRW are aware of</p>

	<i>(comprising 12 PRF-I and 1 PRF-M) have been identified within the Main Development Site. The Site in its entirety includes many more areas of woodland and trees with significant bat roosting potential.”</i>	<p>bat roosts at Pwllcochran Church and Greenhill Farm, and other sites are present nearby which comprise components of the Pembrokeshire Bat Sites and Bosheston Lakes SAC and Limestone Cliffs of South-West Wales SAC. NRW advise that these are scoped into the assessment. The SoS agrees.</p> <p>NRW advise that the EIA is supported by surveys that accord with best practice survey guidance in <i>Bat Surveys for Professional Ecologist: Good Practice Guidelines (4th Edition)</i> by Bat Conservation Trust⁷.</p> <p>Where trees will need to be removed, felled or pruned to accommodate the proposed development, the application should be supported by the results of climbed, endoscope surveys of the affected trees.</p>
46	<i>“Particular consideration will be given to the effects of lighting (and to a lesser extent noise) on bats.”</i>	PCC consider that, as with dormice, a methodology and report for the bat surveys must be submitted. Any key areas for foraging and commuting identified must be retained as dark areas and a detailed lighting scheme must be submitted to demonstrate these areas will remain dark. PCC suggests matters to be included in such scheme, such as a plan illustrating illuminance levels across the development site and at the boundary and an impact assessment against the conservation requirements for protected species and designated landscapes.
43	<i>“The adjoining Greenlink scheme commissioned water vole <i>Arvicola</i> and otter <i>Lutra lutra</i> surveys in 2018, which noted no evidence of water vole, but signs of otter associated with a stream and pond included within the south-eastern area within the Site (N.B. well removed from the Main Development Area itself). Bioscan’s 2023 surveys yielded no confirmed evidence of water vole or otter.”</i>	<p>NRW are aware of records of otters for the area, a species which is also a notified feature of the nearby Pembrokeshire Marine SAC. NRW note that otter (and water vole) surveys were carried out in June 2018 for the Greenlink scheme, but also that these surveys recorded evidence of otters in the vicinity including otter feeding remains around a pond south of Pembrokeshire Power Station. NRW also note that Bioscan have conducted further surveys of the area in 2023 and are aware of the results of those surveys.</p> <p>Surveys should be sufficient to ascertain whether or not the proposed works shall impact upon a more significant resting place such as a natal site which may be located in dense scrub within 200m of the proposed works. NRW refer the applicant to NRW’s statutory pre-application advice on this matter regarding the Pembroke Net Zero project. As such NRW advise that otters are scoped into the ecological impact assessment (EclA). The SoS agrees that otters should be scoped into the EclA.</p>
45	<i>“Impacts on water quality from construction-phase runoff will be carefully controlled by measures</i>	PCC note that that Scoping Report identifies the need for a CEMP and this will be submitted with any application. The CEMP must clearly demonstrate how any pathway to impacts on the nearby protected sites during construction will be avoided.

⁷ <https://www.bats.org.uk/resources/guidance-for-professionals/bat-surveys-for-professional-ecologists-good-practice-guidelines-4th-edition>

	<p><i>within a CEMP (these measures confirmed for application within an Outline CEMP to be provided), and it is understood there will be no increase in cooling water intake beyond existing consented levels. As such, no significant impacts on aquatic ecology via these routes are anticipated.”</i></p>	<p>NRW note that a CEMP will be submitted to mitigate the risk of uncontrolled run off that may enter surface or groundwaters. NRW recommend the applicant ensures the CEMP is robust in nature and offers the necessary environmental protection to sensitive receptors. NRW also advise that the operator ensures that sufficient laydown area is made available on site.</p> <p>The SoS agrees with the importance of the CEMP as a key control document, but considers that for the CEMP to be robust and contain adequate site-specific mitigation, the EIA Report must first define the baseline and assess the potential for likely significant effects on the water environment. He therefore considers that impacts on water quality and resultant aquatic ecology during construction should be scoped in.</p>
46	<p><i>“The following operational effects are proposed to be scoped out:</i></p> <p><i>water outflow. Outflows into the estuary, and associated chemistry, are controlled via the existing operational permit;</i></p> <p><i>abstraction of water. It is understood that no significant increase in water extraction beyond existing levels will be required.”</i></p>	<p>PCC note there will be no increase in cooling water intake beyond existing consented levels and so it is not anticipated that there will be any impacts on the Marine SAC from extraction or discharge. However, it is recommended that this is made clear in any application as this will need to be considered under HRA.</p> <p>NRW agree with the marine receptors scoped in/ out during the various stages of the Proposed Development. NRW note that no significant increase in water extraction beyond existing levels will be required and advise that any increase in water extraction should be given full consideration for impacts to migratory fish. We also note that existing infrastructure will accommodate any boat-based deliveries during construction.</p> <p>The SoS is cautious that a ‘significant increase’ has not been defined and it is not clear what the actual changes in outflow and abstraction may be, or whether this may necessitate a variation to existing operational permits, specifically noting that the Scoping Report suggests that a new waste water treatment plant may be required. It is not clear whether there could be any changes to, for example, surface water flows, heat and Total Residual Oxidant discharged to surface water and changes to fish entrapment from abstraction. This should be scoped in and included in the EIA Report as technical details become further refined during the EIA.</p>
46	<p><i>“non-physical disturbance to protected species resulting construction-phase noise (and vibration) impacts (potentially including the use of explosives)”</i></p>	<p>The SoS assumes this will include potential impacts on birds and bats resulting from piling.</p>

Geology, hydrogeology and land contamination		
N/A	N/A	Only effects from contamination of surface water and groundwater resources and Unexploded Ordnance on human health/ the built environment during construction are scoped in. NRW agree and direct the Applicant to its standard advice on land contamination and groundwater ⁸ .
Landscape and visual amenity		
N/A	N/A	<p>PCC note that there is no mention of nighttime working and the potential for light pollution.</p> <p>The SoS notes that disturbance of species (including bats) resulting from construction and operational lighting is scoped into the EIA Report (Section 6), and that the Applicant references GLVIA3 para 3.20-21 which states that lighting may affect how the wider landscape is perceived. The SoS would expect the EIA Report to consider the landscape effects of lighting as well as ecology.</p> <p>PCC note that Figures 2.5 (b), 6.1 and 6.3 do not indicated woodlands subject to Tree Preservation Orders (TPOs) within the search area.</p> <p>The SoS notes that the EIA Report references '<i>Welsh Government (2009) Technical Advice Note 10: tree preservation orders</i>' as relevant guidance, but the location and potential for effects on TPO woodland is not clear. This should be included within the scope of the impact assessment.</p> <p>NRW note that components of the Proposed Development are set out in 3.2 of the Scoping Report, however, details of height, scale, details and massing of buildings, cooling towers or associated infrastructure are not yet available. Neither is a Zone of Theoretical Visibility (ZTV) analysis, nor a Plume Visibility Assessment (PVA).</p> <p>Whilst these details are not yet available, the Scoping Report cites relevant guidance for the preparation of the Landscape and Visual Impact Assessment (LVIA).</p> <p>Section 6.7.2 confirms that a ZTV will be prepared based on the tallest component of the Proposed Development (the CCP absorbers, which may be slightly taller than the existing power station stacks) to establish if the proposed built development would be visible from within the Pembrokeshire Coast National Park (PCNP).</p> <p>The LVIA will also need to confirm whether the plumes described in 6.7.2 would be visible from within the PCNP through the provision of a PVA undertaken by an appropriately qualified person. The Scoping Report does not state whether photomontages will be prepared. NRW advise photomontages and photography should be prepared and</p>

⁸ <https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/advice-for-developers/land-contamination/?lang=en>

		<p>presented in accordance with the principles set out in TGN 06/19.</p> <p>If the Proposed Development or its emissions are expected to be visible from within the PCNP, NRW would expect the LVIA to identify and describe any potential impacts, including cumulative impacts, on characteristics and qualities of the PCNP and the views and visual amenity of people within the Park. The ZTV and PVA will provide clarity on appropriateness of scoping for the 3km study area, viewpoints and receptors. Receptors are listed in 6.7.2 (page 60) based on effects of physical infrastructure. NRW advise that the effects described suggest that further receptors may be appropriate including visitors/ users of the Daugleddau waterway and from within the PCNP itself.</p> <p>Regarding landscape character, NRW advise that whether the Proposed Development is likely to affect the purposes of the PCNP will depend on the specific details (currently unspecified), particularly the scale and height of any buildings and structures, and consequently, whether the development and operational plumes would be visible from within the PCNP and at what frequency/ occurrence. It may also be appropriate to stipulate the number of hours the plume is visible outside the site boundary during daylight hours/ days of week etc.</p>
Human health		
N/A	N/A	<p>The SoS agrees that most receptors and effects can be scoped out, as they will be assessed where appropriate as part of other topics, and the potential for significant effects on health are limited.</p> <p>However, employment generation is scoped into the socioeconomic chapter but scoped out of the human health chapter. The SoS considers that employment generation should be scoped into both chapters. Education and training, and access to health and wellbeing services should also be scoped in; the Scoping Report does not mention access to healthcare services, but given the significant number of temporary workers during construction, the SoS considers this should be scoped in.</p>
Major accidents and disasters		
N/A	N/A	<p>HSE Land Use Planning Advice team - Chemicals Explosives Microbiological Hazards Division note that the facility will store and / or produce CO₂ and hydrogen. CO₂ is not currently classed as a hazardous substance under the Planning (Hazardous Substances) (Wales) Regulations 2015 and the Control of Major Accident Hazard (COMAH) Regulations 2015. However, hydrogen is classed as a hazardous substance under the Planning (Hazardous Substances) (Wales) Regulations 2015 and the Control of Major Accident Hazard (COMAH) Regulations 2015 and has the potential for industrial major accidents. Such major accidents are of low likelihood but could have significant</p>

	<p>effects on the population at the Proposed Development and on local populations. The Applicant should therefore consider whether they need to apply for planning consent for the presence of hazardous substances under the Planning (Hazardous Substances) (Wales) Regulations 2015.</p> <p>The SoS agrees, and notes that Schedule 4 paragraph 8 concerning major accidents and disasters states that <i>“Relevant information available and obtained through risk assessments under requirements imposed in accordance with retained EU law and relevant assessments undertaken under any other law of any part of the United Kingdom may be used for this purpose [the purpose of providing a description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and disasters that are relevant to the development] provided that the requirements of any law of any part of the United Kingdom that implemented the EIA Directive are met.”</i> Schedule 4 paragraph 5(1)(g) also requires that the EIA Report includes a description of the likely significant effects of the Proposed Development on the environment resulting from the technologies and substances [emph. Added] used.</p> <p>The EIA Report should, to the extent that it is possible to determine at that time, quantify and assess the risks associated with storing and firing on hydrogen, and make clear whether hazardous substances consent is required. If it is, the EIA Report should incorporate any relevant risk assessment undertaken.</p> <p>If consent for hazardous substances is required, HSE is a statutory consultee for such planning consent applications. The assessment done by HSE is complex and underpins HSE’s statutory advice to the planning authority. It is aimed at mitigating the effects of a major accident on the population around a major hazard site. Applicants should allow for 6-12 months to obtain a hazardous substances consent. In July 2012, as part of the government’s response to the Penfold Review, HSE agreed to deliver its statutory advice within 13 to 26 weeks rather than the 21-28 days set out in legislation. This reflects the detailed assessment work needed and HSE continues to work to those agreed timeframes. HSE has introduced a queuing system where applications are dealt with on a first come first served basis. If an application is required, you are directed to https://www.hse.gov.uk/landuseplanning/application-forms-hazardous-consent.htm.</p> <p>If consulted on planning consent for hazardous substances, HSE considers the compatibility of representative major accidents at the proposed development (from HSE’s assessment of the hazardous substances planning</p>
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		<p>application) with existing development in the vicinity. For example, in general, what would be of concern to HSE in the vicinity of a hazardous substances site proposal are: sensitive developments (hospitals, care homes, schools); dwelling units if close by or many; large populations of the general public. If an application for hazardous substances consent is required, the compatibility with existing development in the vicinity should be considered by the Applicant.</p> <p>HSE advise that operators of sites which come under the COMAH Regulations are required to notify information on the establishment, processes and inventory to the Competent Authority. In this case early engagement with HSE under the COMAH Regulations is required. There is further information at https://www.hse.gov.uk/comah/notification/index.htm and enquiries can be sent to comah.notifications@hse.gov.uk.</p> <p>The Proposed Development is located in the consultation zones of a major accident hazard pipeline, the Blackbridge to Pembroke Power Station pipeline operated by RWE nPower PLC. There is potential to initiate a major accident at the major accident hazard pipeline, for example during the development construction phase and potentially the operational phase, because the development area intersects the route of the major accident hazard pipeline. HSE suggests that the EIA should show that the operator of the pipeline has been consulted regarding the following issues or that these issues have been considered in the assessment:</p> <ul style="list-style-type: none"> • the development restricted area due to the pipeline; and • ensuring the integrity of the pipeline and protecting the pipeline from development and operational works. <p>The Proposed Development is not located within a safeguarding zone of an explosives site licensed under the Explosives Regulations 2014 or the Dangerous Goods in Harbour Area Regulations 2016.</p> <p>The Proposed Development is not located within any of HSE's land-use-planning consultation zones for existing major hazard sites.</p>
N/A	Appendix A.2	<p>The SoS notes that risk of industrial accidents including explosion at a nearby COMAH site causing a fire and/ or explosion at the Proposed Development is scoped in, but it is not clear if the risk of explosion originating at the Proposed Development is scoped in; it should be.</p> <p>The SoS agrees that further information and further mitigation detail is required (Appendix A.2).</p>
Noise and vibration		
N/A	N/A	<p>PCC consider that, in conjunction with the Noise and Vibration Assessment and the Cumulative and Combined Effects, a section on "Creeping Background and Ambient Noise" should be included in this section.</p> <p>Noise creep can occur in situations where there are an increasing number of noise sources, each of which make a small contribution which may result in an overall increasing/</p>

		deteriorating noise climate. RWE have been collecting noise data for a number of years and will have data available as a baseline to enable such an assessment. This data in conjunction with other relevant Noise Impact Assessments can be used to identify any increasing trends in background and ambient noise creep
Socioeconomics		
81	<i>“It is assumed that, for the purposes of the socio-economic assessment, without the Proposed Development, the existing operations on the Site would continue and so the existing baseline will remain the same”</i>	PCC note that, whilst the Proposed Development baseline may stay the same, the socio-economic assessment will consist of the geographical area of Pembrokeshire County Council. This is unlikely to stay the same. Most notable would be likely major infrastructure development associated with the recently designated Celtic Freeport.
81	<i>“During construction, there will be an estimated peak workforce of approximately 2,300 people, with an average workforce of approximately 1,600. This is likely to have a significant beneficial effect on the study area labour market which is likely to result in an uplift in gross value added (GVA) productivity. It is anticipated that the majority of the construction workforce will be sourced from within the study area”</i>	PCC note that there would need to be robust evidence as part of the EIA to confirm or otherwise the extent of the local workforce. It is acknowledged that the potential economic benefits are to be assessed. However there may also be significant adverse effects on the local rental market, including affordable housing availability, and this should be fully assessed as part of the EIA, as should the likely effect on local services and amenities. The consideration of any necessary mitigation would clearly form part of this assessment. These effects should also be considered as part of the inter project cumulative effects.
Traffic and transport		
86	<i>“It is anticipated that there would be an average workforce of around 1,600 per day (with a peak of approximately 2,300 staff). Further information on staff vehicle movements, including measures to transport workers to minimise single occupancy car trips, and</i>	The Local Highway Authority (LHA) give recommendations on the design of access points and considerations in the Construction Traffic Management Plan (CTMP). With such a large anticipated workforce, the LHA would expect a full traffic impact assessment to be submitted, with mitigation measures to reduce traffic to the site and increase sustainable and active travel options. The SoS notes that the Scoping Report states that mitigation measures and measures to increase sustainable and active travel will be considered.

	<i>likely shift patterns, will be presented in the assessment. The assessment will consider the impact of potential minibuses/shuttle bus services and other measures to transport staff to/ from Site.”</i>	
	<i>“Abnormal loads such as cranes, large items of construction plant, and factory assembled plant components such as parts of the CCS absorber would be delivered by sea to the existing heavy loads berth within the Site as far as practicable. The requirement for abnormal loads to be delivered by road would be confirmed as the design progresses.”</i>	The Scoping Report notes that abnormal loads may be part of the construction transportation, with Barge access via the power stations existing jetty. However if the Highway network is used then the applicants will be required to submit an Abnormal Indivisible Load (AIL) Management Strategy and Routing, will need to be included in the CTMP including any required additional traffic management.
Materials and waste		
No comments		
Water resources and flood risk		
N/A	N/A	The SoS agrees that the EIA Report should assess whether the Proposed Development has the potential to impact a Water Framework Directive (WFD) water body within a relevant River Basin Management Plan (RBMP) and whether a WFD compliance assessment should be undertaken.
		All receptors are scoped in for construction and operation. The SoS agrees with the proposed scope and detail of the assessments forming this section and welcomes the Applicants proposal to engage NRW, the LLFA and Internal Drainage Body on coastal and fluvial hydraulic modelling.
Cumulative and combined effects		
98	<i>“Some of these are projects on which the Proposed Development may rely (e.g. CO2 liquefaction and export facilities and blue hydrogen production) and which are being brought forward by third parties”</i>	The SoS agrees and considers that, owing to the inherent connection between the Proposed Development hydrogen / CO ₂ transport infrastructure, it is essential that the likely significant effects of these work in their totality are clearly assessed, to the extent that such information is available.

N/A	N/A	The SoS is aware of other potential developments within the red line boundary of the power station, including potential battery storage areas, hydrogen electrolyser areas, synchronous condenser areas and substation expansion. The potential cumulative effects of all works within must be clearly assessed, as relevant to each topic. This should include clearly explaining any temporal and spatial overlap of works, and any potential for likely significant cumulative effects.
98	Table 36	PCC updates Table 36: <ul style="list-style-type: none"> • PNZC Pembroke Green Hydrogen Project (RWE) – undetermined planning application with LPA. • Greenlink Interconnector (Greenlink Interconnector Ltd) – substantially constructed. Operation likely to commence Q1 2025. • Lambeeth Battery Energy Storage System (BESS) (Sirius Renewable Energy Ltd) – undetermined planning application with LPA. • Goldborough Road BESS (Enso Energy) – undetermined planning application with LPA. • Three Wind Turbines and related infrastructure – Welsh Government DNS application determination awaited.
N/A	N/A	NRW advise the combined impact of the Proposed Development on receptors including LCA 25 and the Pembrokeshire Coast Path National Trail (also part of the Wales Coast Path) should be included in the LVIA.

Conclusion

22. The Secretary of State has considered the information within the supplied documentation and consultation responses received and is of the opinion that the environmental information included in the Scoping Report, plus the addition of the matters and comments above, will be sufficient for the Applicant to submit in an EIA Report alongside its proposed variation application.
23. The Secretary of State agrees that the effects and receptors proposed to be scoped out, unless otherwise expressed above, do not need to be included in the EIA Report.
24. The EIA Report must be based on the most recent scoping opinion, so far as the Proposed Development remains materially the same as the development in respect of which this scoping opinion is given.
25. The Secretary of State would like to make the Applicant aware that when submitted, the Section 36C variation application and supporting documents including the EIA Report will need to be advertised and consulted upon, with opportunity given for representations to be made and will be subject to further consideration by the Secretary of State. This could also include a request under Regulation 25 of the 2017 Regulations for further environmental information if deemed necessary by the Secretary of State at that time, and this Scoping Opinion does not prevent the Secretary of State from requesting further information or evidence in respect of the EIA Report.

26. Please do not hesitate to contact me should you have any queries about the opinion expressed above.
27. In accordance with Regulation 19 of the 2017 Regulations, this letter has been copied to those consultees identified at paragraph 14 above and will be published on the Department's Energy Infrastructure Decision page of GOV.UK:

<https://www.gov.uk/government/collections/energy-infrastructure-development-applications-decisions>

Yours sincerely,

Noah Wright

Environmental Manager
Energy Infrastructure Planning Delivery
Department for Energy Security and Net Zero