

From: Sparey, Robert (COOG - Planning & Environment Decisions Wales)

On Behalf Of PEDW – Seilwaith / Infrastructure

Sent: Tuesday, August 22, 2023 8:30 AM

To: Mena van der Vyver

Cc: Anne Dugdale; Tim Doggett;

Cadw Planning <CadwPlanning@gov.wales>

Subject: RE: Trecwn Green Energy Hub - DNS CAS-02171-X3W6Z0 - Scoping Direction

Dear Mena,

Thank you for your e-mail. I am sorry for the discrepancy between the comment in ID.39 of the Scoping Direction and the advice in Cadw's response to PEDW. I confirm that this is an error and that you are correct to follow Cadw's advice in their response, i.e. that ASIDOHL is not required in this instance.

Kind regards

Rob

Robert Sparey

(fe | he / him)

Rheolwr Cynllunio a'r Amgylchedd | Planning & Environment Manager

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<https://gov.wales/planning-and-environment-decisions-wales>

From: Mena van der Vyver

Sent: Monday, August 21, 2023 4:59 PM

To: PEDW – Seilwaith / Infrastructure <PEDW.Infrastructure@gov.wales>; Sparey, Robert (COOG - Planning & Environment Decisions Wales)

Cc: Anne Dugdale; Tim Doggett;

Subject: Trecwn Green Energy Hub - DNS CAS-02171-X3W6Z0 - Scoping Direction

Dear Planning and Environment Decisions Wales (PEDW),

We welcome your EIA Scoping Direction dated 14 July 2023 regarding the Trecwn Green Energy Hub proposals.

We are currently working through the several technical points raised. Following a review of the Cultural Heritage section, in particular comment reference ID.39, we noted there were conflicting comments with Cadw's response letter regarding the requirement for the ASIDOHL methodology. ID.39 states that '(...) A thorough assessment using the ASIDOHL methodology will therefore be required as part of the ES. (...)'. However, the Cadw response letter dated 02 May 2023 states that "The ZTV indicates that the turbines may be visible from the registered Newport and Carningli landscape of outstanding historic interest. Whilst the impact of a development on a historic landscape can be assessed using the ASIDOHL methodology, **in this case it would be more appropriate for the impact of the proposed development on this historic landscape to be assessed using the methodology given in "The Setting of Historic Assets in Wales"**".

We agree with the comments made by Cadw and propose to assess potential impacts on the Registered Landscape as part of our detailed settings assessment, as well as taking into consideration other comments by Cadw and PEDW.

We would greatly appreciate confirmation that the approach taken, in line with Cadw's response is acceptable and the ASIDOHL methodology is not required.

We look forward to your response and thank you in advance.

Kind regards,
Mena

Mena van der Vyver (*she/her/hers*)
Project Planning Consultant - Planning

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DNS: EIA Scoping Direction

CAS-02171-X3W6Z0: Trecwn Green Energy Hub

Prepared by:

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This Scoping Direction is provided on the basis of the information submitted to Planning and Environment Decisions Wales on 03 March 2023, in addition to consultation responses received. The advice does not prejudice any recommendation made by an Inspector or any decision made by the Welsh Ministers in relation to the development, and does not preclude the Inspector from subsequently requiring further information to be submitted with the submitted DNS application under Regulation 24 of [The Town and Country Planning \(Environmental Impact Assessment\) \(Wales\) Regulations 2017](#) (as amended) (“The 2017 Regulations”).

1. Introduction

Planning and Environment Decisions Wales (PEDW) received a request under [Regulation 33](#) of the 2017 Regulations for a Scoping Direction in relation to a green energy hub facility comprising of a green hydrogen facility in the form of an electrolyser, solar panels and wind turbines. There are therefore three main elements to this proposal; two renewable energy generation developments comprising of Wind and Solar energy, and an electrolyser. Energy for the electrolyser will be from both the solar farm and wind turbines. The overall generating capacity of the solar and wind elements alone is approximately 30 MW. The proposal is brought forward by Statkraft UK Ltd.

The request was accompanied by a Scoping Report (SR) [2023-03-03 - Trecwn Green Energy Hub Scoping Report] and appendices. The documents can be accessed via our casework portal:

<https://planningcasework.service.gov.wales/> - search for **CAS-02171-X3W6Z0**

The SR and appendices outline the proposed scope of the Environmental Statement (ES) for the proposed development.

PEDW is authorised to issue this Scoping Direction on behalf of the Welsh Ministers.

This Direction has been prepared in accordance with the requirements of the 2017 Regulations as well as current best practice towards preparation of an ES. In accordance with the 2017 Regulations PEDW has consulted on the SR and the responses received from the consultation bodies have been duly considered in adopting this Direction.

2. Site Description

The proposal is located to the southeast of Fishguard, and the site formed part of the former Royal Navy Armament Depot (RNAD), Trecwn SA62 5YD (known as ‘The Valley’). The site is connected to the A40 which runs to the west of the Site by a private road. As mentioned, there are three main aspects to the scheme. The location of these proposed schemes is noted below:

- **Renewable Energy Development – Solar.** Located on farmland to the west of the site.
- **Renewable Energy Development – Wind.** Three turbines located to the northeast of the site, on higher ground.
- **Electrolyser Development** – will be located within The Valley, however the exact location is currently unknown. The SR notes two options where the site could be, both of which are brownfield sites within the area of the former RNAD. The two options are noted in Figure 3.1 of the SR, and Option 1 is the preferred option.

The intention is that hydrogen produced within The Valley would be used to fuel heavy transport such as buses and trains, replacing diesel. The location was selected based on the potential of its strategic employment use and making use of its exceptional road and rail connections.

3. Proposed Development

The proposal as described in the SR in section 3 comprises of the following main components:

- 15 MW rated green hydrogen facility, covering an area of up to approximately 2 hectares, and comprising electrolyser, storage and associated infrastructure including 12 m high site lighting;
- Approximately 15 MW of solar panels, covering an initial search area of approximately 47 hectares and comprising inverters and arrays. The maximum height of these will be up to 3 m, with the switch gear and transformer unit height being 4 m. Stockproof fencing (approximately 2 m high) will surround the solar farm;
- 3 wind turbines up to 149.9 m to tip, each with a power rating of up to 4.8 MW per turbine and associated crane hardstanding's adjacent to each turbine;
- External transformers located on a concrete plinth at the base of the turbine;
- New on-site access tracks with associated watercourse crossings (if required) and widening/improvement works to existing on-site access tracks;
- Power cables laid in trenches underground (or overhead where required for environmental mitigation);
- Underground pipes to transport water from the existing onsite reservoirs to the green hydrogen facility;
- Control building and private electrical network management systems; and
- Temporary site construction compounds and associated infrastructure.

It is anticipated that the electrolyser would have a connection to the local distribution network to provide security of supply to offtakers. The solar and wind elements of the scheme would be connected to the green hydrogen facility directly by underground cables.

Water would be provided to the green hydrogen facility by means of piped connections from existing reservoirs.

The proposal is anticipated to have an operational life of 30 years. Following this, unless an extension to the site is granted, the wind farms, solar panels and green hydrogen facility would then be decommissioned and removed.

The scope of the EIA should include all elements of the development as identified in the SR, both permanent and temporary, and this Scoping Direction is written on that basis.

In line with the requirements of [Regulation 17](#) and [Schedule 4](#) to the 2017 Regulations, any reasonable alternatives considered should be presented in the ES. The reasons behind the selection of the chosen option should also be provided in the ES, including where environmental effects have informed the choices made.

4. History

The western part of The Valley comprises a Strategic Employment Site and also forms part of The Haven Enterprise Zone. Following the sale of the RNAD, planning permission was granted for the use of the existing buildings and infrastructure for a range of commercial and industrial purposes. More information can be found in sections 2.3 and 2.4 of the SR.

5. Consultation

In line with [Regulation 33\(7\)](#) of the 2017 Regulations, formal consultation was undertaken with the following bodies:

- Pembrokeshire County Council (PCC);
- Pembrokeshire Coast National Park Authority (PCNPA);
- Natural Resources Wales (NRW);
- Transport Directorate of The Welsh Government;
- Agriculture Directorate of The Welsh Government (LQAS);
- Cadw;
- Health and Safety Executive (HSE);
- Dŵr Cymru / Welsh Water;
- Mid and West Wales Fire and Rescue Service;
- NATS;
- Defence Infrastructure Organisation (DIO); and
- Civil Aviation Authority.

Responses received are included in **Appendix 1**.

6. Environmental Impact Assessment Approach

The Applicants should satisfy themselves that the ES includes all the information outlined in [Schedule 4](#) of the 2017 Regulations. In addition, the Applicant should ensure that the Non-Technical Summary includes a summary of all the information included in Schedule 4. Consider a structure that allows the author of the ES and the appointed Inspector and Decision Maker to readily satisfy themselves that the ES contains all the information specified [Regulation 17](#) and Schedule 4 of the 2017 Regulations. Cross refer to the requirements in the relevant sections of the ES, and include a summary after the Contents page that lays out all the requirements from the Regulations and what sections of the ES they are fulfilled by.

As the assessments are made, consideration should be given to whether standalone topic chapters would be necessary for topics that are currently proposed to be considered as part of other chapters, particularly if it is apparent that there are significant effects and a large amount of information for a particular topic.

There may also be topic areas scoped out of the ES where the developer may wish to include application documents that sit outside of the ES and provide information that will support their consultation(s) and the decision-making process. The developer is encouraged to liaise with key consultees regarding non-ES application documents which are not a legislative requirement of the DNS regime. If agreement cannot be reached over non-ES application documentation, then the developer may wish to explore whether PEDW can help provide clarity via its statutory pre-application advice service.

The ES should focus on describing and quantifying significant environmental effects. Policy considerations / arguments relating to those impacts should be addressed in other documentation supporting the application (e.g. a Planning Statement), which cross references the ES where necessary. This does not imply that ES chapters should not be prepared in

accordance with relevant advice in policy documents (e.g. Technical Advice Notes), rather than the ES should concentrate on identifying significant effects on the environment rather than dealing with policy arguments or exhaustively listing policies.

Rochdale Envelope: Whilst not specifically raised in the SR for this project, PEDW has previously been asked whether the '[Rochdale Envelope](#)' approach is appropriate for a DNS application for wind turbine development. Whilst this approach may be appropriate for the pre-application Environmental Impact Assessment work, it should be noted that a DNS application is an application for full planning permission under the Town and Country Planning Act 1990 (as amended). It is therefore not possible to submit a DNS application with as much uncertainty over what is proposed as is acceptable for an Outline application, or for a Development Consent Order under the Planning Act 2008. At the point of application, the following matters should be clear:

- Number of turbines
- Locations of the turbines (subject to micro-siting considerations)
- Maximum tip height
- Maximum hub height

It is open to the applicant to propose that final hub height and rotor diameter could be left to be dealt with via a written submission to the Local Planning Authority, as a pre-commencement condition (should planning permission be granted) provided the condition specifies that the hub height must not exceed (x) m and the rotor diameter shall not exceed (y) m. As with other conditions, the applicant should seek to agree a suitable form of wording with the Local Planning Authority, which can be submitted for the appointed Inspector's consideration.

The Applicant should also consider that, in some cases, different methods of construction may lead to different significant effects. This is particularly relevant in wind farm projects where different type of foundations may be required. The ES should be clear that the worst-case scenario is addressed consistently in terms of development footprint including construction areas.

Once that level of certainty is reached for the application, the ES should be reviewed and if necessary updated to ensure it properly captures the impacts of the application being submitted. If the applicant has any further queries about the scope for flexibility in the DNS application process, they should contact PEDW.

Scoping Flexibility: PEDW is content with the ES being prepared on the basis of design parameters (e.g. dimensions of solar panels and associated infrastructure), but the locations of infrastructure should be fixed (subject to micro-siting) and the ES should assess the relevant worst-case scenario for each aspect chapter. PEDW is content that the scoping is based on a maximum scale of development as a worst-case scenario, and revisions can be made to the scheme prior to submission, but the Applicant is advised to contact PEDW where substantial changes are expected, or where changes would affect the worst-case scenario.

6.1 Baseline

[Schedule 4](#) of the 2017 Regulations states that the 'baseline scenario' is "A description of the relevant aspects of the **current** state of the environment" (emphasis added). The baseline of the ES should reflect actual current conditions at the time of submission, insofar as is possible.

6.2 Reasonable Alternatives

In line with the requirements of [Regulation 17](#) and [Schedule 4](#) to the 2017 Regulations, any reasonable alternatives studied by the Applicant should be presented in the ES. The reasons behind the selection of the chosen option should also be provided in the ES, including where environmental effects have informed the choices made.

It is worth bearing in mind that under the [Conservation of Habitats and Species Regulations 2017](#) ("the Habitats Regulations") unless it can be clearly shown to the Welsh Ministers that the project would have no adverse effect on the integrity of any designated sites, it would have to be shown that there is no feasible alternative solution (see advice note from [IEMA](#)). Further advice regarding the Habitats Regulations is provided in the final chapter of this Scoping Direction.

6.3 Currency of Environmental Information

For all environmental aspects, the applicant should ensure that any survey data is as up to date as possible and clearly set out in the ES the timing and nature of the data on which the assessment has been based. Any study area applied to the assessments should be clearly defined. The impacts of construction, operation and decommissioning activities should be considered as part of the assessment where these could give rise to significant environmental effects. Consideration should be given to relevant legislation, planning policies, and applicable best practice guidance documents throughout the ES.

The ES should include a chapter setting out the overarching methodology for the assessment, which clearly distinguishes effects that are 'significant' from 'non-significant' effects. Any departure from that methodology should be described in individual aspect assessment chapters. Where professional judgement has been applied this should be clearly stated.

The ES topic chapters should report on any data limitations, key assumptions and difficulties encountered in establishing the baseline environment and undertaking the assessment of environmental effects.

6.4 Cumulative Effects

The Planning Inspectorate's guidance for Nationally Significant Infrastructure Projects – [Advice Note 17: Cumulative Effects Assessment](#) sets out a staged process for assessing cumulative impacts which the Applicant should follow when preparing the list of projects for inclusion in the ES; the Applicant should ensure that relevant schemes identified are addressed in the ES using the tiered approach set out in Advice Note 17. Best practice is to include proportionate information relating to projects that are not yet consented, dependent on the level of certainty of them coming forward. The SR states that an assessment will be made of the likely significant cumulative effects in combination with other developments considering schemes which are

subject to a planning application but not yet determined, consented schemes, schemes under construction or that are operational, however this is not for each receptor type; only landscape and visual impact. The ES should include a clear rationale for what receptor types have been included. It may be necessary to include other forms of development that could have cumulative impacts with those arising from this proposal, not just wind or solar energy.

Effects deemed individually not significant from the assessment, could cumulatively be significant, so inclusion criteria based on the most likely significant effects from this type of development may prove helpful when identifying what other developments should be accounted for. The criteria may vary from topic to topic.

Best practice is to include proportionate information relating to projects that are not yet consented, dependent on the level of certainty of them coming forward.

All of the other developments considered should be documented and the reasons for inclusion or exclusion should be clearly stated. Professional judgement should be used to avoid excluding other development that is close to threshold limits but has characteristics likely to give rise to a significant effect; or could give rise to a cumulative effect by virtue of its proximity to the proposed development. Similarly, professional judgement should be applied to other development that exceeds thresholds but may not give rise to discernible effects. The process of refinement should be undertaken in consultation with the LPA and other consultees, where appropriate.

The scope of the cumulative assessment should be fully explained and justified in the ES.

6.5 Mitigation

Any mitigation relied upon for the purposes of the assessment should be explained in detail within the ES. The likely efficacy of the mitigation proposed should be explained with reference to residual effects. The ES should provide reference to how the delivery of measures proposed to prevent/ minimise adverse effects is secured (through legal requirements or other suitably robust methods) and whether relevant consultees agree on the adequacy of the measures proposed.

6.6 Population and Human Health

The Applicant should ensure that the ES addresses any significant effects on population and human health, in light of the EIA Regulations 2017. This could be addressed under the separate topic chapters or within its own specific chapter.

6.7 Transboundary Effects

[Schedule 4 Part 5](#) of the EIA Regulations requires a description of the likely significant transboundary effects to be provided in an ES. The ES should address this matter as appropriate.

6.8 Topics Scoped In but not subject to a standalone chapter

For such topics it may be helpful to users of the ES if it includes a summary table that signposts the chapters where these matters are addressed.

7. Environmental Impact Assessment Aspects

This section contains PEDW's specific comments on the scope and level of detail of information to be provided in the Applicant's ES. Environmental topics or features are not scoped out unless specifically addressed and justified by the Applicant and confirmed as being scoped out by PEDW. In accordance with Regulation 17(4)(c) the ES should be based on this Scoping Direction in so far as the Proposed Development remains materially the same as the Proposed Development described in the Applicant's Scoping Report.

PEDW has set out in this Direction where it has or has not agreed to scope out matters on the basis of the information available at this time. PEDW is content that the receipt of a Scoping Direction should not prevent the Applicant from subsequently agreeing with the relevant consultees to scope such matters out of the ES, where further evidence has been provided to justify this approach. However, in order to demonstrate that the matters have been appropriately addressed, the ES should explain the reasoning for scoping them out and justify the approach taken.

7.1 Aspects Scoped In

Subject to the comments provided at Table 1, the following aspects are scoped into the ES:

Decommissioning (Not necessarily as a standalone chapter)

Landscape and visual

Ornithology

Ecology (including Dormouse and Great Crested Newts)

Water Environment

Geology, Soils and Land Quality (including Land Contamination)

Cultural Heritage

Access, Traffic and Transport

Socio-Economics, Tourism, Recreation and Land Use

Air Quality

Aviation and Telecommunications

Shadow Flicker (Not necessarily as a standalone chapter)

Climate and Carbon Balance (Not necessarily as a standalone chapter)

Major Accidents and Disasters (Not necessarily as a standalone chapter)

Waste (Not necessarily as a standalone chapter)

Glint and Glare (Not necessarily as a standalone chapter)

8. Table 1: Planning and Environment Decisions Wales Comments

ID	Reference in Scoping Report	Issue	Comment
Description of the Development			
ID.1	3.7	General - access	The final scheme would need to ensure that the red line boundary includes all land subject to development, including any areas which may need widening. The ES would then need to address all aspects of the scheme, even if some elements were to occur outside the site boundary (if they were not subject of this application process for example). This is to ensure that the full impacts of the proposal are appropriately and adequately assessed.
ID.2	3.8	Borrow pit	It is noted in the SR that 'The Valley' is not suitable location for borrow pit development. Should this change, the ES should clearly identify the location of these borrow pits, including information regarding the expected borrowed material and depths. Restoration proposals and final land contours should be shown with appropriate cross-section plans. Relevant aspects of the ES should consider whether construction material is won on site or imported as appropriate, including the production of waste.
ID.3	4.5	Additional schemes	PEDW is aware of the following schemes that fall within a 40 km buffer of the proposed site (distance indicated in section 6.1.1 of the SR): - Dragon Energy Wind turbines – DNS reference CAS-01859-K1M7Y6 - There is also Erebus Floating Offshore Wind Farm (reference 3251528), part of which appears to fall within the 40 km buffer set. These cases can be found online on PEDW's casework portal - https://planningcasework.service.gov.wales/

ID	Reference in Scoping Report	Issue	Comment
			This list is not exhaustive, and the Applicant is advised to check with PCC and PCNPA to ascertain if other developments should be assessed as part of the cumulative impact.
ID.4		Decommissioning	PEDW does not agree that decommissioning can be scoped out because 'the baseline environment at the time of decommissioning cannot be ascertained with any certainty... the proposals for decommissioning and site restoration as well as the future regulatory context are unknown'. The ES should be based off a worst-case scenario, and as decommissioning is part of the proposal (given that its expected lifespan is 30 years) decommissioning should be explored in a proportionate manner in the ES. As a minimum, the ES should clearly indicate how decommissioning of the site will take place, and clearly indicate what will be left on site, and what will be removed. The ES should address what the end of life cycle will be for the solar panels, wind turbines and main components of the green hydrogen facility.
ID.5	4.9	Consultation	The Applicant's attention is drawn to guidance produced by PEDW regarding DNS consultations. https://www.gov.wales/developments-national-significance-dns-guidance. PEDW welcomes that pre-application consultations have already been undertaken. For clarity, the Pre-Application Consultation Report required by Article 11 of the Developments of National Significance (Procedure) (Wales) Order 2016 (as amended) should be a standalone application document, not part of the ES.
ID.6		Substation	There is little to no information contained in the SR relating to the substation. At formal submission, the ES will need to encompass the whole of the proposal,

ID	Reference in Scoping Report	Issue	Comment
			with plans indicating the scale, size, location and information relating to how each element will be placed / erected. At the point of submission of the application, the locations of the various elements must be confirmed, and the potential impacts fully assessed in the ES.
Landscape and Visual			
ID.7		Glint and Glare	The SR references Glint and Glare, but only in relation to aviation. NRW and PCC note that there could potentially be impacts on residential receptors. Glint and Glare is therefore scoped in at this stage. It may be possible to agree a rationale for scoping it out in relation to residential properties with the relevant consultees. If the applicant does this, the rationale must be included in the ES.
ID.8		PCNPA boundary	The Applicant's attention is drawn to comments made by PCC and PCNPA requesting the boundary of PCNPA to be clearly shown on all plans and maps.
ID.9	6.1.5	Additional viewpoints	Both PCC and PCNPA request additional viewpoints to be included within the Landscape and Visual Impact Assessment (LVIA). PCC also makes reference to the Coastal Path, and the impacts that the proposal may have on potential views. PEDW would encourage continued dialogue with both parties in order to ensure that any concerns are appropriately addressed, and that the correct viewpoints are utilised in the LVIA.
ID.10		Photomontages	The Applicant's attention is drawn to comments made by PCNPA regarding how the viewpoints should be displayed in the ES.
ID.11	6.1.6	Scheme impacts	PEDW welcomes the acknowledgement in the SR that the three different elements of the scheme will each have different impacts, and that these will all be considered separately and cumulatively.
ID.12		Cumulative Effects – lighting	PCC notes that there is a potential for cumulative lighting impacts with this scheme in combination with Cawdor Barracks.

ID	Reference in Scoping Report	Issue	Comment
			The ES should explore this further in a proportionate manner.
ID.13		LVIA- Sensitivity	The Applicant's attention is drawn to comments made by PCC regarding sensitivity and that a higher sensitivity should be attributed in the LVIA to road users and populated areas.
ID.14		Lighting	Should lighting be required (including aviation lighting), then this should form part of the LVIA and ES in a proportionate manner.
ID.15		Additional Character areas	The Applicant's attention is drawn to comments made by PCNPA regarding the additional landscape and seascape character areas that will need to be assessed as part of the LVIA.
ID.16		PCNPA Special qualities	PCNPA notes in their response contained at Appendix 1 that the special characteristic assessment needs to be carried out. Should the Applicant require further information, they should liaise directly with PCNPA.
Ornithology			
ID.17		Surveys	The Applicant's attention is drawn to comments made by NRW regarding Ornithology, and that additional studies will be required and undertaken in order to inform the baseline. PEDW agrees with this approach.
ID.18		PCC and PCNPA	Both PCC and PCNPA notes that breeding bird surveys, and the impact that the proposal will have on these (in terms of loss of habitat, collusion and displacement risk) must be reported in the ES.
Ecology			
ID.19		Survey scope	The Applicant's attention is drawn to comments made by PCC and PCNPA relating to all survey and assessments carried out as part of the ES should be included in full, as well as recommendations for mitigation and enhancement. Furthermore, as it is an iterative process, the results of preliminary studies may mean that additional studies are required. PEDW agrees with this.
ID.20		Butterfly conservation	PCC notes that as Grizzled skipper and Dingy skipper butterflies have been found within 500 m of the site, butterfly surveys and conservation should be

ID	Reference in Scoping Report	Issue	Comment
			included in the ES. The Applicant should liaise directly with the PCC's Ecologist to ensure that all surveys are carried out in the appropriate manner.
ID.21		Bats	The Applicant's attention is drawn to comments made by NRW detailing that they welcome proposals to undertake static bat monitoring at the wind turbine locations, and that a 50 m buffer distance should be applied between blade tip and the nearest bat habitat features. Furthermore, additional information relating to the surveys required at both the green hydrogen facility area, other site buildings and trees is included at Appendix 1. PEDW agrees that these areas need to be fully surveyed and the survey findings clearly included in the ES. The Applicant is advised to consult NRW should additional information be required.
ID.22		Otter and Water Vole	NRW notes that given the lack of survey finding information provided in the SR, it is not possible to scope out Otters and Water Voles from the ES. PEDW agrees with this.
ID.23		Dormouse	PCC, PCNPA and NRW all note that there is the potential for dormouse on site, and subsequently, surveys should be undertaken to gauge the location of these. The ES will therefore need to scope these in, and the potential impacts of the proposal on dormouse will need to be considered.
ID.24		Great Crested Newt	PEDW agrees that this element can be scoped out.
ID.25		Lighting	NRW, PCC and PCNPA advise that the impacts of lighting are considered in the ES, especially during construction and operation, and are incorporated into the design process for bats, otters and dormouse.
ID.26		Grassland fungi	PCC and PCNPA notes that the area where the proposed solar farm will be, has been known to have an assemblage of grassland fungi. These should also be included in the ecological surveys being undertaken.

ID	Reference in Scoping Report	Issue	Comment
ID.27		Lower Plant / Lichen Assemblage	PCC and PCNPA note at Appendix 1 that the site is within 5 km of the North Pembrokeshire Woodlands Special Area of Conservation; and consequently, if any woodlands are to be removed, then lower plant surveys are required.
ID.28		Protected Species	The Applicant's attention is drawn to comments made by NRW detailing that where protected species are found during surveys, information must be provided identifying the species specific impacts in the short, medium and long term together with any mitigation and compensation measures proposed to offset the impacts identified. NRW advises that the EIA considers impacts on both designated sites, and protected species. Where the potential for significant impacts on protected species is identified, a Conservation Plan should be prepared and appended to the ES.
ID.29		Nant y Bugail / Western Cleddau River SAC	NRW notes at Appendix 1 that whilst the SR refers to the Nant Y Bugail, its significance as part of the Western Cleddau River SAC and SSSI is not deemed to be adequately addressed. The potential impacts at all stages of the proposal on the Nant y Bugail / Western Cleddau River SAC should be fully assessed in a proportionate manner in the ES.
ID.30		River Gwan and West Wales Marine SAC	NRW notes at Appendix 1 that the River Gwaun and West Wales Marine SAC should also be scoped into any future ES.
ID.31		Habitat regulations assessment	Whilst not part of the ES process, PEDW welcomes the acknowledgement of a HRA being required for the site to determine if there would be a likely significant effects on the SPA, SAC or Ramsar wetland.
Water Environment			
ID.32	9.2.1	Updated TAN 15	The SR makes note of utilising the updated TAN 15, however the Welsh Government has further suspended the changes to TAN 15, as indicated on this webpage https://www.gov.wales/technical-advice-note-tan-15-development-flooding-and-coastal-erosion NRW's position is that the Flood Maps for

ID	Reference in Scoping Report	Issue	Comment
			Planning are the most up to date evidence and should be used in place of the DAMs referred to in the July 2004 version of TAN 15.
ID.33		Flood Consequences Assessment	PEDW welcomes that a Flood Consequences Assessment (FCA) will be included as part of the ES.
Geology, Soils and Land quality			
ID.34		Agricultural Land Classification (ALC) survey	The Applicant's attention is drawn to comments made by the LQAS division, detailing that an ALC survey is not recommended for the remainder of the site, as it is considered subgrade 3b at best. PEDW supports this.
ID.35		Soil Management Scheme	The LQAS division notes that a soil management scheme should be prepared by the developer for submission. Additional information is contained at Appendix 1.
ID.36		Development Impact Assessment	PEDW welcomes that a Development Impact Assessment will be undertaken as part of the ES.
ID.37	10.4	Land contamination	The Applicant's attention is drawn to comments made by NRW raising concerns that land contamination has been scoped out prematurely. NRW provides additional information regarding this assessment; which PEDW supports. Land contamination is therefore scoped into the ES as a precaution. Should survey information find that there is no significant contamination concern, then this should be clearly explained in the ES. The Applicant's attention is also drawn to comments made by PCC at Appendix 1 detailing that the three previous environmental reports referred to as evidence would need to be included within the ES, should land contamination be scoped out.
Cultural Heritage			
ID.38		Heritage impacts	The Applicant's attention is drawn to comments made by Cadw at Appendix 1 stating that the impact of the proposed development on assets contained in Annex A should be done in accordance with the document 'The Setting of Historic Assets in Wales'. The results of the stage 1 will determine if other stage assessments are required. These should be detailed accordingly within the ES.

ID	Reference in Scoping Report	Issue	Comment
			PCC further notes that the study should also take account of seasonal effects of tree and vegetation screening.
ID.39		ASIDOHL	Cadw notes at Appendix 1 that the Zone of Theoretical Visibility indicates that the turbines may have an impact on the Newport and Carningli landscape of outstanding historic interest. A thorough assessment using the ASIDOHL methodology will therefore be required as part of the ES. Furthermore, the Applicant's attention is drawn to comments made by PCNPA noting that a 3 km study area for wind turbines is not considered sufficient given the height of the turbines and scale of development. PEDW agrees with this and encourages the Applicant to liaise directly with Cadw, PCC and PCNPA in order to come to an agreed study area distance.
ID.40		Grade II listed buildings and other designated historic assets	The Applicant's attention is drawn to comments made by PCC relating to Grade II listed buildings, as well as other heritage assets. PCC notes that the SR does not properly grasp the significance of historic assets and the contribution the landscape makes to their setting and significance. Furthermore, PCC advises the Applicant to consult Cadw's guidance (https://cadw.gov.wales/advice-support/placemaking/heritage-impact-assessment). Should additional guidance be required, the Applicant is advised to consult directly with Cadw, PCC and PCNPA.
ID.41		Geophysical survey	The Applicant's attention is drawn to comments made by Cadw in relation to the need for a geophysical survey and archaeological evaluation. PEDW agrees with this, and requests that further guidance is sought from The Dyfed Archaeological Trust (https://www.dyfedarchaeology.co.uk/contact.html).
Noise			
ID.42			The Applicant's attention is drawn to comments made by PCC and PCNPA regarding noise contained at Appendix 1. PEDW has nothing further to add to these comments.

ID	Reference in Scoping Report	Issue	Comment
Access, Traffic and Transport			
ID.43		Additional information required - Abnormal Load Route Assessment (ALRA)	The Applicant's attention is drawn to comments made by the Transport Directorate of the Welsh Government, stating that additional information is required in order to understand the impact that the proposal will have on the trunk road network. Whilst PEDW welcomes that an ALRA will be carried out and submitted as a technical appendix to the ES, the Applicant needs to ensure that they liaise directly with the Transport Directorate to provide the additional information. Additionally, the Welsh Government's draft Procedure & Advice Guidance (PAG) titled 'Pulling Together' Best Practice for Transporting Abnormal Loads in Wales is included at Appendix 1.
ID.44	3.7	Access widening	PCC notes at Appendix 1 that the access road for the Green Hydrogen facility is narrow, and would require the implementation of passing bays. A detailed design plan would be required to be submitted as part of the application. Consequently, any hedgerow removal or vegetation clearance must be included within the 'Ecology' section, and these areas also surveyed as part of the ES.
ID.45		Construction Transport Management Plan (CTMP)	PCC requests that a CTMP is utilised in order for additional details to be agreed. The Applicant is requested to liaise directly with PCC.
ID.46		Glint and Glare	The Applicant's attention is drawn to comments made by PCC regarding detailed information from a Glint and Glare assessment from the solar farm to assess the potential impacts on the A40. PEDW agrees that a Glint and Glare assessment is required, and should include the impact of the proposal on the road network.

ID	Reference in Scoping Report	Issue	Comment
ID.47		Additional survey requirements - Site and staff movements and introduction of an Automatic Traffic Counter (ATC)	PCC notes in their response that the ES should assess staff movements and visitors to the site, as well as an ATC to be installed to assist in the baseline data. PEDW agrees with this.
ID.48	13.1.3	Operational movements	The SR confirms in that operational traffic will be described in the ES. PEDW welcomes this approach and requests that the Applicant liaises directly with PCC over this matter.
ID.49		Additional information required	PCC notes at Appendix 1 a list of information that should be included within the Access, Traffic and Transport section of the ES. PEDW agrees with this.
Socio-Economics, Tourism, Recreation and Land Use			
ID.50	14.0		PEDW welcomes the inclusion of this aspect of the environment within the ES.
Air Quality			
ID.51		Air Quality Management Area (AQMA)	Whilst there are no AQMAs within 2 km of the site, vehicular movement for the construction of the proposal has the potential to pass through AQMA areas. Consequently, an impact assessment on the AQMA may be required, and this should be proportionately addressed in the ES. At this stage, there is insufficient information provided to enable PEDW to agree to scope this element out of the ES.
Aviation and Telecommunication			
ID.52			The Applicant's attention is drawn to comments made by DIO and NATS contained at Appendix 1. DIO raises concerns that the applicant will need to address and the applicant is advised to liaise closely with them during the design evolution of the scheme and preparation of the ES.
ID.53		Glint and Glare	It is noted in the SR that there is the potential for glint and glare to be an potential impact for aviation, however no further information is provided in

ID	Reference in Scoping Report	Issue	Comment
			regards to the impact that the proposal could have on residential properties. PCC requests that one is included, and PEDW supports this notion. This should be explored as part of the LVIA.
Other issues			
ID.54		Shadow Flicker	PEDW notes that in Review of Light and Shadow Effects from Wind Turbines in Scotland (climateexchange.org.uk) (L.U.C. for climateXchange, 2017) it was found that “there is a lack of evidence to support the use of ten rotor diameters as a cut off, and this is entirely down to misinterpretation of the original reference to this distance.” Whilst the approach set out in the SR is acknowledged, the ES should provide a clear rationale as to the methodology adopted, and why it is considered appropriate given the scale of turbine proposed and the requirement for more nuanced assessment suggested by the concerns raised in the above document. PCC also notes that Shadow Flicker should be included in the ES in its own right, which could be included as an appendix to the ES.
ID.55	17.4	Major Accidents and Hazards	The Applicant’s attention is drawn to the fact that some solar panels are coated in PFAS (Per- and polyfluoroalkyl substances) which can leach over time due to wear and tear. Should the panels proposed include this, appropriate measures need to be put in place to ensure that leaching of PFAS into the local environment does not occur. The ES should address the risks involved in producing, storing and transporting hydrogen, and PEDW welcomes the approach outlined in this section of the SR.
ID.56	17.5	Waste	Waste should be addressed in the ES (in other relevant chapters rather than as a standalone chapter if that approach is preferable). The draft CEMP should be included as a technical appendix to the ES.

ID	Reference in Scoping Report	Issue	Comment
			Waste is therefore scoped into the ES.
ID.57		Lighting Scheme	The Applicant's attention is drawn to comments made by PCC regarding the need for a lighting scheme to be submitted as part of the ES.

9. Other Matters

This section does not constitute part of the Scoping Direction, but addresses other issues related to the proposal.

9.1 Habitats Regulation Assessment

The applicant's attention is drawn to PCC's comments confirming the site is within the catchment of the Cleddau River SAC and the need to demonstrate nutrient neutrality. See NRW's 'Advice to planning authorities for planning applications affecting phosphorus sensitive river Special Areas of Conservation': <https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/our-role-in-planning-and-development/advice-to-planning-authorities-for-planning-applications-affecting-phosphorus-sensitive-river-special-areas-of-conservation/?lang=en>

[The Conservation of Habitats and Species Regulations 2017](#) require competent authorities, before granting consent for a plan or project, to carry out an appropriate assessment (AA) in circumstances where the plan or project is likely to have a significant effect on a European site (either alone or in combination with other plans or projects). The competent authority in respect of a DNS application is the relevant Welsh Minister who makes the final decision. It is the Applicant's responsibility to provide sufficient information to the competent authority to enable them to carry out an AA or determine whether an AA is required.

When considering whether or not significant effects are likely, applicants should ensure that their rationale is consistent with the [CJEU finding](#) that mitigation measures (referred to in the judgment as measures which are intended to avoid or reduce effects) should be assessed within the framework of an AA and that it is not permissible to take account of measures intended to avoid or reduce the harmful effects of the plan or project on a European site when determining whether an AA is required ('screening'). The screening stage must be undertaken on a precautionary basis without regard to any proposed integrated or additional avoidance or reduction measures. Where the likelihood of significant effects cannot be excluded, on the basis of objective information the competent authority must proceed to carry out an AA to establish whether the plan or project will affect the integrity of the European site, which can include at that stage consideration of the effectiveness of the proposed avoidance or reduction measures.

Where it is effective to cross refer to sections of the ES in the HRA, a clear and consistent approach should be adopted.

The Planning Inspectorate's guidance for Nationally Significant Infrastructure Projects – [Advice Note 10: Habitat Regulations Assessment relevant to Nationally Significant Infrastructure Projects](#) may prove useful when considering what information to provide to allow the Welsh Ministers to undertake AA.

9.2 SuDS Consent

Whilst a separate legislative requirement from planning permission, the Applicant's attention is drawn to the statutory SuDS regime that came into force in Wales in January 2019. The requirement to obtain SuDS consent prior to construction may require iterative design changes that influence the scheme that is to be assessed within the ES and taken through to application. As such, it is recommended that the applicant contact the local SuDS Approval Body early on.

Appendix 1: Consultee Responses

Planning and Environment Decisions Wales
Crown Buildings
Cathays Park
Cardiff
CF10 3NQ

Eich cyf / Your ref CAS-02171-X3W6Z0

Ein cyf / Our ref 23/SW-5568

12 April 2023

Dear Sir/Madam,

**TOWN AND COUNTRY PLANNING (DEVELOPMENT MANAGEMENT PROCEDURE) (WALES)
ORDER 2012:**

The Valley, Trecwn, Pembrokeshire

**Green energy hub comprising a green hydrogen electrolyser powered by wind and solar energy
(approximately 30MW installed generation capacity)**

Detail needs to be provided to prove access for transporting AILs is achievable from the point of entry to the Welsh trunk road network to the point of egress, that minimises any impact on the safety and free flow of trunk road traffic, please supply the likely traveling weights and dimensions of AILs and swept path analysis for all junctions on the Trunk Road Strategic network.

Please note, to screen the proposals, the draft abnormal load notifications would be particularly helpful to the Welsh Government as highway authority. Providing these will allow us to review/comment quickly as well as provide more meaningful feedback

Attached for reference, is the draft version of our "Pulling Together" – Best Practice for Transporting Abnormal Loads in Wales - Procedures and Advice Guidance (PAG) document.

For your information please find below our standard planning conditions (taken from the aforementioned PAG document), which would be included as part of any future planning application;

Structural assessment

No on-site development works shall be undertaken until:

- a. an assessment of the capacity and impact on all structures along those parts of the highway network which shall be utilised during the construction of the development including bridges, culverts, retaining walls, embankments, and
- b. details of any improvement works required to such structures as a result of construction of the development

have been submitted to and approved by the local planning authority following consultation with the Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate). The required improvement works identified in the assessment shall be completed prior to the commencement of any Abnormal Indivisible Load (AIL) deliveries to the development site

Condition surveys

Condition surveys of all highway features along those parts of the highway network which shall be utilised during the construction of the development shall be undertaken prior to, during and on completion of the construction phase of the development. The survey reports shall be submitted to and approved by the local planning authority following consultation with the Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate) within 28 days of the surveys.

Liability for incidental damage

Prior to the commencement of development works, a scheme to provide for the remediation of any incidental damage directly attributable to the development to the parts of the highway network which will be utilised during the construction of the development including street furniture, structures, highway verge and carriageway surfaces shall be submitted to and approved by the local planning authority following consultation with the Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate). The scheme shall be implemented as approved throughout the construction phase of the development.

Traffic Management Plan

AILs associated with the development shall be delivered strictly in accordance with a Traffic Management Plan (TMP) as shall be agreed with the relevant highway authority. In this respect, the TMP shall be submitted to and approved in writing by Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate) prior to the commencement of any works. The TMP shall include:

- a. proposals for transporting AILs from their point of entry to the Welsh trunk road network to the site that minimise any impact on the safety and free flow of trunk road traffic
- b. evidence of trial runs that mimic the movement of the worst case AILs along the access route where appropriate, at the discretion of the Highway Authority



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- c. number and size of AILs, including loaded dimensions and weights
- d. number and composition of AIL convoys, including anticipated escort arrangements
- e. methodology for managing trunk road traffic during AIL deliveries, including identification of passing places and holding areas as necessary
- f. convoy contingency plans in the event of incidents or emergencies
- g. estimated convoy journey durations and timings along the route, including release of forecast traffic queues
- h. swept path analysis modelling the movement of the worst case AILs at all potential horizontal and vertical constraints along the access route where appropriate, at the discretion of the Highway Authority
- i. proposals for the temporary or permanent modification of any affected street furniture along the access route and details of how this would be managed
- j. plans for the reinstatement of any temporary works after completion of the construction phase
- k. land ownership must be clarified on all drawings showing proposed highway modifications. The developer shall be responsible for the acquisition and reinstatement of all third party land including re-instatement of boundary features
- l. proposals to liaise with all relevant stakeholders and members of the public regarding construction traffic and AIL movements
- m. consideration of the cumulative impact of other abnormal load generating schemes proposing to use all or part of the same access route
- n. the appointment and role of a transport coordinator to administer the abnormal indivisible load delivery strategy
- o. means of control of timing of delivery of AIL movements
- p. temporary traffic diversions and traffic hold points
- q. details of banksmen and escorts for abnormal loads
- r. management and maintenance of layover areas, junctions, passing places, public rights of way and welfare facilities while AIL deliveries take place
- s. details of temporary signage.
- t. details of any alterations to any works that are carried out to enable AIL movements

ALLs associated with the maintenance and decommissioning of the development shall leave the site strictly in accordance with a TMP as shall be agreed with the relevant highway authority. In this respect, the TMP shall be submitted to and approved in writing by Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate) prior to the commencement of any removal, replacement of decommissioning works.

Highway works

No development works shall be undertaken until full details of any highway works associated with the construction of layover areas, passing places and highway improvements as agreed with each relevant highway authority including:

- r. the detailed design of any works
- c. geometric layout
- d. construction methods
- e. drainage, and
- f. street lighting

have been submitted to and approved in writing by the local planning authority following consultation with the Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate). The highway works shall be completed in accordance with the approved details prior to the commencement of any AIL deliveries to the development site.

No development works shall be undertaken until the developer demonstrates rights of access to all proposed works that are not part of the highway network to the satisfaction of the local planning authority.

Road Safety Audit

The applicant shall undertake a Road Safety Audit of the scheme (Stages 1 – 4) in accordance with the Design Manual for Roads and Bridges GG 119. The applicant shall agree the required measures with the Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate) prior to the commencement of works on site.

Section 278 Agreement

The applicant shall enter into an Agreement with the Welsh Ministers under Section 278 of the Highways Act 1980 to enable the Applicant to undertake agreed improvement works on the trunk road. This Agreement will contain details of the improvement works, construction conditions and financial arrangements under which agreed measures can be put in place, including indemnifying the Welsh Ministers against third party claims. Without such an agreement in place, any consent that may be granted cannot be implemented.



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For further information on this matter please refer to Welsh Government Procedure & Advice Guidance PAG 109/18: section 38, 184, and 278 Agreements under the Highways Act 1980.

If you have any further queries, please forward to the following Welsh Government Mailbox
Lgc_development_control-south@Gov.Wales

Yours faithfully

Richard Jones



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Welsh Government Motorway and Trunk Road Network

‘Pulling Together’ Best Practice for Transporting Abnormal Loads in Wales

Instructions for use:

This guidance document is intended for use by hauliers and developers planning to generate abnormal load movements on Trunk Roads and Motorways in Wales.

It outlines the statutory process for planning and conducting safe and effective abnormal load movements in agreement with all relevant authorities and organisations.

This document supersedes any previous advice issued by the Welsh Government regarding this process.

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1 INTRODUCTION

1.1 Document purpose

Our highways are, in the most part, built to accommodate a certain maximum vehicle size and weight. These vehicle limits are defined and upheld by UK law and most daily movements can be completed within them. However, some particular vehicle types and indivisible freight loads fall outside these limits and so are known as 'abnormal loads'. These typically include:

- Vehicle carrying an oversize or overweight load
- Mobile cranes
- Engineering plant
- Road recovery vehicles



The movement of these types of loads by road is essential for supporting the UK economy, but it is also essential that the movements are carefully planned and executed to ensure they can be safely accommodated by the highway network. Movements of abnormal loads on the Welsh trunk road network (see Figure 1) can include vehicles as large as 8m wide, 55m long and 135te, while many thousand abnormal load movements take place in Wales every year. The consequences of these types of journeys being unplanned or poorly executed can therefore be significant, and include:

- Damage to the network when abnormally wide or heavy loads travel over weak structures or along narrow roads
- Delay to all road users if movement timing or route is poorly planned
- Harm to wider public if mismanaged movement results in an accident

- Delays and cost implications to industry when vehicles unable to complete journey on time

Figure 1 Trunk Road Network Wales (Traffic Wales, 2015)¹



¹ <https://traffic.wales/sites/default/files/2018-10/151021-wales-trunk-roads-map-en.pdf>

To avoid such impacts and their potential legal consequences, those responsible for transporting abnormal loads by road in the UK are required by law to plan and execute each movement in agreement with relevant authorities to ensure the incident-free passage of every load from origin to destination.

Welsh Government is the devolved government for Wales. The Welsh Ministers are the Highway Authority for trunk roads and motorways in Wales under the Highways Act 1980. They are supported by civil servant officials who work across devolved areas that include key areas of public life, including transport and the management of trunk roads and motorways.

This document therefore comprises a Welsh Government Procedure and Advice Guidance (PAG) document which aims to summarise the legal process which must be followed in the planning and execution of all abnormal load movements on trunk roads within Wales and to clarify the roles and responsibilities of the various parties involved.

By pulling together, we make roads in Wales safer and more effective.

1.2 Document structure

The document is structured as follows:

- The legal definition of an abnormal load is discussed in Section 2
- Guidance on vehicle preparation is provided in Section 3
- Guidance on journey preparation is provided in Section 4
- Planning for abnormal loads through the development control process is outlined in Section 5
- A summary of roles and responsibilities is presented in Section 6, and
- A list of useful contacts is provided in Section 7

1.3 Intended audience

This document is primarily addressed at the party responsible for conducting an abnormal load movement on Welsh trunk roads (most commonly the haulier), but is relevant to all parties involved in its safe planning and execution, as follows:

- Consigners/agents
- Hauliers
- Attendants
- Escorting services

- Police
- DVSA
- Highway Authorities and other bridge owners
- Planning authorities
- Developers / agents or consultants
- Statutory utilities

1.4 List of abbreviations

The following abbreviations are used throughout this document:

- AIL – Abnormal Indivisible Load
- ALO – Abnormal Loads Officer
- AWR – Road Vehicles (Authorised Weight) Regulations 1998
- STGO – The Road Vehicles (Authorisation of Special Types) (General) Order 2003
- C&U – The Road Vehicles (Construction and Use) Regulations 1986
- DBFO – Design, Build, Finance, Operate companies
- DMRB – Design Manual for Roads and Bridges
- HA&BO – Highway Authorities and other Bridge Owners
- NH – National Highways (*previously Highways England*)
- DVSA – Driver and Vehicle Standards Agency
- LA – Local Authority
- NMWTRA – North and Mid Wales Trunk Road Agent
- SWTRA – South Wales Trunk Road Agent
- TAA – Technical Approval Authority
- TMP – Traffic Management Plan
- TTRO – Temporary Traffic Regulation Order
- WG – Welsh Government

2 CATEGORIES OF ABNORMAL LOAD

Abnormal loads, and the obligations of those moving them, are defined in the UK by legislation. This section provides a summary of the different legal categories of abnormal load and their implications.

2.1 Normal vehicle definition

The maximum size and weight of vehicles which can use the UK road network without journey notification having to be provided to relevant authorities is defined by the following regulations:

- The Road Vehicles (Construction and Use) Regulations 1986 – “C&U”
- Road Vehicles (Authorised Weight) Regulations 1998 – “AWR”

These permit a vehicle and its load to use UK roads without notification as long as the combination falls within the following maximum size and weight limits:

- Rigid length: up to 18.65m
- Width: up to 2.9m
- Weight: up to 44,000kg
- Axle load: up to 10,000kg (or 11,500kg for single driving axle)

If a vehicle and its load lie outside any of these limits, it is referred to as an abnormal load.

There is no legal height limit for vehicles but, wherever possible, the overall height of a vehicle and load should not exceed 4.95m so that the maximum use can be made of the motorway and trunk road network. This will ensure that loads are less than 5.03m in height, which is the minimum maintained headroom requirement on UK highways.

2.2 Categories of abnormal loads

Legal categories of abnormal load vary to cover different combinations of vehicle size and weight. This is because different types of abnormal load have implications for both:

- Vehicle choice, and
- Route choice

The implications in each case are considered in the following subsections.

2.2.1 Abnormal loads and vehicle choice

The size of an abnormal load has implications for the size of the transporting vehicle, with larger loads generally requiring larger vehicles.

In addition, heavier loads put greater demands on a vehicle's chassis, suspension, tyres, brakes and engine, so heavier abnormal loads also require a higher specification of vehicle.

These distinctions between the impacts of size and weight result in the following abnormal load vehicle legal categories:

- C&U/AWR compliant vehicles are permitted within that legislation to carry oversized abnormal indivisible loads up to a limit, but not overweight loads
- Overweight loads, and those beyond C&U size limits, can be carried by three categories of higher specification vehicles designed to standards prescribed by The Road Vehicles (Authorisation of Special Types) (General) Order 2003 ("STGO") and are subject to lower speed limits depending on load weight
- Loads heavier and/or larger than those permitted by STGO require Special Order approval by the UK Secretary of State under Section 44 of the UK Road Traffic Act 1988

The application of these categories to abnormal load sizes and weights is summarised in the following table.

Table 1 Abnormal load legal category by size/weight combination

Gross weight	Axle weight	Load Dimensions				
		W ≤2.9m L ≤18.65m	W >2.9m L >18.65m	W >4.3m L >27.4m	W >5m L >27.4m	W >6.1m L >30m
≤44,000kg	≤11,500kg	C&U	C&U	STGO Category 1	STGO Category 1	Special Order
>44,000kg	≤11,500kg	STGO Category 1	STGO Category 1	STGO Category 1	STGO Category 1	Special Order
>50,000kg	>11,500	STGO Category 2	STGO Category 2	STGO Category 2	STGO Category 2	Special Order
>80,000kg	>12,500	STGO Category 3	STGO Category 3	STGO Category 3	STGO Category 3	Special Order
>150,000kg	>16,500kg	Special Order	Special Order	Special Order	Special Order	Special Order

Key: = Abnormal load legislation

This table highlights that:

- C&U vehicles are limited to carrying abnormal loads which are oversized but not overweight
- STGO categories increase with abnormal load weight up to 150,000kg
- Special Order vehicles are for extra heavy and/or very large abnormal loads

2.2.2 Abnormal loads and route choice

As well as vehicle type implications, abnormal loads also present route choice implications, as follows:

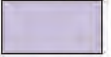
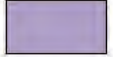
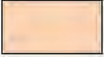
- The wider and longer a load, the greater the potential for conflict with other road users and roadside furniture / structures
- The heavier a load, the greater the potential for damage to underlying infrastructure and for delays to other road users due to slower speeds

The transporting of abnormal loads therefore presents increased road safety, infrastructure damage and traffic management risks to the network which need careful management and mitigation in liaison with relevant authorities. This is required by legislation covering abnormal load movements and the following table summarises:

- The organisations requiring pre-trip notification of the abnormal load journey details, and
- The minimum notification period in each case, where 'd' refers to working days (excluding Sundays and Bank Holidays) and 'w' refers to weeks

Table 2 Pre-journey notification requirements by abnormal load category

Gross weight	Axle weight	Load Dimensions				
		W <=2.9m L <=18.65m	W >2.9m L >18.65m	W >4.3m L >27.4m	W >5m L >27.4m	W >6.1m L >30m
<=44,000kg	<=11,500kg	N/A	Police – 2d		Police – 2d HA&BO – 2d NH – 2w	
>44,000kg	<=11,500kg	HA&BO – 2d	Police – 2d HA&BO – 2d			
>50,000kg	>11,500					
>80,000kg	>12,500	Police – 2d HA&BO – 5d		Police – 2d HA&BO – 5d NH – 2w		
>150,000kg	>16,500kg	Police – 5d HA&BO – 5d NH – 10w				

Key:  = Abnormal Load legislation  = VR1 form notice  = C&U
 = STGO C1  = STGO C2  = STGO C3  = Special Order

HA&BO = Highway Authority and other Bridge Owners NH = National Highways

This table highlights that:

- Where just load size increases, only the Police require notification, until the size reaches such that HA&BOs and National Highways require notifying also
- Conversely, where just load weight increases, HA&BOs require notification, until the weight reaches such that the Police and National Highways require notifying also
- For combinations of size and weight increases, both the Police and HA&BOs need notifying, together with National Highways for the largest/heaviest loads
- In all cases, the minimum notification period increases with load size and weight
- For loads over 5m wide, UK Secretary of State approval must be sought through submission of a VR1 form²

² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/471962/VR1_form.pdf

- For loads over 6.1m wide, UK Secretary of State approval must be sought through submission of a Special Order form³

The approval of VR1 and Special Order forms has not been devolved by the UK Government to Welsh Government and so currently remains the responsibility of National Highways. However, for Special Order movements which will result in trips on the Welsh trunk road network, and for any other abnormal load movement deemed applicable, Welsh Government may require a Traffic Management Plan (TMP) to be submitted for approval before the proposed journey date. TMP requirements are defined in Section 4.1 below.

VR1 and Special Order load movements should also be planned with due cognisance of Highway England's 'Water preferred policy guidelines'⁴ which require such journeys to be completed as far as possible by either inland or coastal waters wherever it is practical, economic and environmentally desirable to do so.

2.3 Summary

UK law defines abnormal load categories based on the degree of vehicle and route preparation required in each case to ensure a smooth and safe movement, with preparation requirements increasing with load size and weight.

Further guidance on vehicle and route preparation is provided in the following two sections.

³https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/503102/BE16_form_revised_Sept_15.pdf

⁴https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/799833/WPP_guidelines_2019_DfT_consultation_revision.pdf

3 VEHICLE PREPARATION

Ensuring that an abnormal load vehicle meets legal requirements and is fit-for-purpose is essential for ensuring safe and reliable journeys. This short section is not intended to cover all legal matters relating to abnormal load vehicle preparation but summarises key requirements that contribute to safe movements through Wales.

3.1 Vehicle choice

Where the carrying of a load causes the vehicle and load to lie outside of normal C&U/AWR size and/or weight limits, the party responsible for its transportation is legally required to divide the load into smaller components wherever possible, except where this would involve undue expense or risk of damage.

Assuming the load cannot be further subdivided and so is considered an abnormal indivisible load, the selected vehicle must comply with the legislation applicable to the dimensions and weight of the combination, as set out in Table 1 above.

3.2 Signage, markings and lighting

It is both a legal requirement and best practice to clearly sign, mark and light an abnormal load vehicle to ensure the visibility of vehicle size and extremities for other road users. For a summary of requirements and best practice, refer to the following documents:

- 'Special types enforcement guide', by Gov.UK⁵
- 'Lighting and marking for abnormal loads vehicles code of practice', by National Highways⁶

3.3 Attendants

Both C&U and STGO legislation require that an attendant travel with the vehicle where:

- The overall width of the vehicle together with the width of any lateral projection or projections of any load carried on it is 3m or less but the length of any lateral projection of a load carried on it exceeds 305mm.

⁵ <https://www.gov.uk/government/publications/lighting-and-marking-for-abnormal-loads-vehicles-code-of-practice>

⁶ <https://www.gov.uk/government/publications/special-types-enforcement-guide/special-types-enforcement-guide#abnormal-loads>

- The overall width of the vehicle together with the width of any lateral projection or projections of any load carried on it exceeds 3.5m where a rigid unit and any projection of the load exceeds 18.75m in length.
- Special types combination exceeds 25.9m, the length of any forward projection of the load exceeds 2m, the length of any rearward projection of the load exceeds 3.05m.

Where attendants are required on special types vehicles and three or more vehicles are involved travelling in convoy, attendants need only be carried in the first and last vehicles of that convoy.

The attendant's duty is to warn the driver or any other person of any danger likely to be caused by the presence of the vehicle or vehicles on the road and to ensure road signs and notices are complied with.

3.4 Documentation

If UK Secretary of State approval is required and obtained for the journey via either a VR1 or Special Order form, the approval documents must be carried in the vehicle during the approved journey as the means of demonstrating authorised exemption from C&U/AWR regulations.



4 JOURNEY PREPARATION

The key to an effective and safe abnormal load journey is good preparation in liaison with relevant authorities, as required by legislation and by this document. This section provides guidance on the journey planning and notification process.

4.1 Notification requirements

4.1.1 Authorities to be notified

As summarised in Table 2 above, the relevant authorities who require notification of abnormal load movements may include:

- Police
- Highway authorities and other bridge owners
- National Highways

In Wales, highway authorities comprise:

- Local authorities for non-trunk roads, and
- Welsh Government for trunk roads (with functions delegated to NMWTRA/SWTRA and DBFO companies)

Bridge authorities/owners most commonly comprise:

- Local authorities for non-trunk road structures
- Welsh Government for trunk road structures (with functions delegated to NMWTRA/SWTRA and DBFO companies)
- Network Rail for rail bridges
- Canal and River Trust for canal bridges

4.1.2 Notice periods

Notification to relevant authorities must be provided before any abnormal load journeys take place. The minimum notification periods for each authority are summarised by abnormal load category in Table 2 above. Depending on the type of abnormal load, this shows that:

- Each Police force area traversed by the route must be given at least 2 to 5 days' notice

- Each HA&BO area traversed by the route must be given at least 2 to 5 days' notice
- If VR1 form approval is required, National Highways must be given at least 2 weeks' notice
- If Special Order approval is required, National Highways must be given at least 10 weeks' notice

Where a Temporary Traffic Regulation Order is required, it should be noted that this can also take up to 12 weeks to process (see Section 4.3.1.3 below for more information).

The reason for requiring minimum notification periods is to allow due time for notified authorities to assess the proposed journey and for applicants to satisfactorily address any issues raised before the journey takes place. More information on the notification assessment process is provided in Section 4.3 below, but it should be noted that notified journeys can only legally take place:

- If all relevant authorities are notified with sufficient notice period and either no response is received before the journey date or any response received before the journey date is addressed by the applicant to the satisfaction of the responding authority, and
- In the case of VR1 or Special Order movements, explicit written approval is received

In addition, where a TMP has been requested by Welsh Government, Welsh Police forces can request evidence of TMP approval before providing escort support services.

It is important to note that notifications which do not satisfy the legal minimum notice periods will generally not be accepted by authorities unless a movement is required as part of a genuine emergency and the notification is accompanied by a telephone call. Equally, notifications can be submitted earlier than the minimum notice period, while pre-notifications and consultations with authorities are also encouraged where there is uncertainty about whether a journey notification would be accepted.

4.1.3 Information required

4.1.3.1 Statutory notification requirements

The level of notification information required depends on the category of abnormal load being moved, with information requirements increasing with movement size and/or weight. A summary of requirements per movement category is provided in the following table.

Table 3 Information required by notification type

Information	C&U	STGO	VR1	Special Order
List of authorities notified	☒	☒	☒	☒
Operator details	☒	☒	☒	☒
Movement route, time and date	☒	☒	☒	☒
Description of load	☒	☒	☒	☒
Vehicle type and registration	☒	☒	☒	☒
Vehicle dimensions and laden weight	☒	☒	☒	☒
Axle weights and spacing		☒		☒
Proof of current indemnity to HW&BO		☒		
More detailed journey information			☒	
More detailed vehicle and load information				☒

4.1.3.2 Traffic Management Plan requirements

Where a TMP is required to be submitted to Welsh Government (see sections 2.2.2 and 4.1.2), the following journey details should be provided:

1. Proposals for transporting AILs from their point of entry to the Welsh trunk road network to the site that minimise any impact on the safety and free flow of trunk road traffic
2. Loaded dimension and weight of AIL
3. Anticipated escort arrangements
4. Methodology for managing trunk road traffic during journey, including identification of passing places and holding areas as necessary
5. Journey contingency plans in the event of incidents or emergencies
6. Estimated journey duration and timings along the route
7. Evidence of trial run that mimics the movement of the AIL along the access route where appropriate, at the discretion of the Highway Authority
8. Swept path analysis modelling at all potential horizontal and vertical constraints along the access route where appropriate, at the discretion of the Highway Authority
9. Proposals for the temporary or permanent modification of any affected street furniture along the access route and details of how this would be managed and reinstated

4.1.4 Notification submission

All relevant notification and indemnity forms can be found on the Gov.UK website⁷ which can be emailed, faxed or posted to relevant authorities.

However, it is recommended that an online notification portal is used to submit C&U and STGO abnormal load notifications. The standard UK system is ESDAL⁸, maintained by National Highways, which allows users to:



- Plan an appropriate route according to vehicle size and weight
- Notify all relevant Police, highway authorities and other bridge owners of the planned journey
- Get advance notice of any possible route problems
- Save vehicle details and routes for future use

Subject to the preferences of individual authorities and Police forces, other online notification portals can also be used, but the applicant should satisfy themselves that any system employed satisfies all legal requirements for making abnormal load journey notifications.

The TMP, if required, should be submitted to the Welsh Government ALO, as detailed in Table 7 below.

4.1.5 Notification dispensations

Dispensations may be issued by Police to hauliers to move abnormal loads through their area without prior notification if they satisfy the following requirements:

- Abnormal loads no wider than 3.5m
- Multiple loads of a like nature on a regular basis
- Routes limited to motorways and selected A roads only

The granting of a dispensation has the potential to significantly reduce the number of notifications hauliers will have to submit. However, the dispensation should reference specific vehicles in the fleet and so are not transferable without prior notice to the Police. Drivers should also carry a copy of the dispensation and present it to an officer on request. Dispensations must be renewed annually on application and are not automatically renewed.

⁷ <https://www.gov.uk/government/publications/abnormal-load-movements-application-and-notification-forms>

⁸ <https://www.gov.uk/esdal-abnormal-load-notification>

Any dispensation granted will not take account of any roadworks commencing during the dispensation period or ongoing at the point of issue and hauliers will still be expected to check their route.

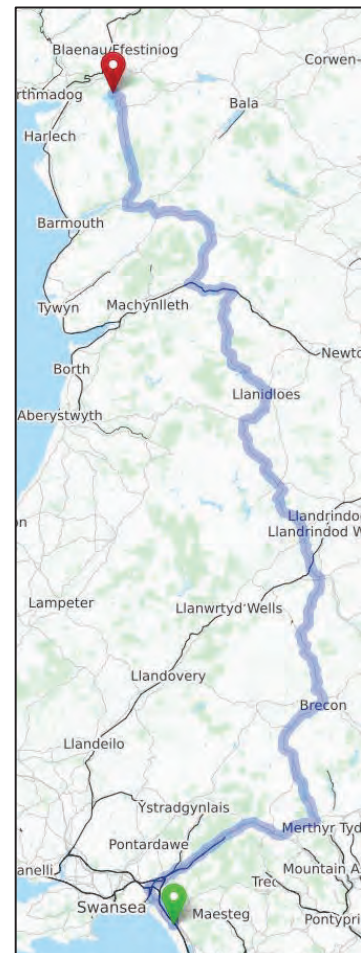
4.2 Route planning guidance

4.2.1 General principles

It is ultimately the haulier's responsibility to identify a route and execute a journey which ensures the legal, safe and least disruptive passage of an abnormal load from trip origin to trip destination. Relevant authorities will provide guidance and, where necessary, require journey amendments, but the legal responsibility and liability for the safe completion of each journey lies with the haulier.

In selecting an appropriate route for inclusion in an abnormal load journey notification, the following general principles should be followed:

- Routing preference should always be given to using the highest classification roads, with as much of the journey as possible being routed along motorways, trunk roads and A-roads. These routes are best equipped to carry large and heavy loads, and are least likely to present size and weight restrictions (the busiest abnormal load routes on the Welsh trunk road network typically include the A55, A494 dual carriageway, A483 dual carriageway and the A5 near Chirk)
- Routes should also avoid passing through population centres wherever possible to minimise conflict with both infrastructure constraints and other road users
- Routes must avoid roads presenting size and/or weight restrictions which fall within the parameters of the vehicle/load combination being transported
- One key advantage of using online journey notification systems like ESDAL is that it allows users to plot a route based on vehicle size and weight based on mapping which contains information on network size and weight restrictions.



Potential applicants should also be aware of Ordnance Survey 'Mastermap Highways Network' products which allow point-to-point route planning and contains a comprehensive and continuously updated national database of:

- Road classification and name
- Height, weight, width and length restrictions
- Turn restrictions
- Access restrictions
- Locations of bollards and traffic calming
- Narrow roads and pinch points
- Maintenance responsibility

In addition, it is recommended that applicants consider potential planned roadworks at the route planning stage using the online resources detailed in Section 4.4.1 below.

In combination with online notification portals, hauliers therefore now have access to route planning tools which maximise the chances of both successful abnormal load notifications and successful abnormal load journeys.

4.2.2 Other considerations

4.2.2.1 Travel timing

In planning an abnormal load route, the following timing related factors should also be considered:

- Journey times which exceed statutory driver working time limits will require a stopping place to be identified along the route which can accommodate abnormal load vehicles
- Journey distances which require vehicle refuelling will require a fuel station to be identified along the route which can accommodate abnormal load vehicles
- During hours of darkness, most Police forces only allow abnormal load movements to take place on motorways and on some lit dual carriageways. Journeys on all other road types which cannot be completed during daylight hours will therefore need to be routed via an abnormal load layby where layover can take place
- Some authorities will not allow abnormal load movements through their area or parts of their area during peak traffic hours. This can affect both route choice and journey timing

For planning stops and/or refuelling, National Highways publish on the Gov.uk website a list⁹ and map¹⁰ of laybys and motorway service stations which can accommodate abnormal loads.

In calculating journey times, typical congestion on the planned day of travel should be taken into account, as well as the speed limit applicable to the abnormal load vehicle type. STGO loads are speed limited by category and road type. The most common categories are limited as follows:

Table 4 STGO speed limits by category and road type

STGO category	Speed limit		
	Motorway	Dual carriageway	Other roads
Category 1 (width ≤ 4.3m)	60mph	50mph	40mph
Category 1 (width > 4.3m) & Categories 2 & 3	40mph	35mph	30mph
Special Order ¹¹	20mph	20mph	20mph

Source: Special Types Enforcement Guide

4.2.2.2 Escort considerations

Consideration should also be given during route planning as to whether either a private or Police escort is required to accompany the abnormal load movement.

There is no legal requirement for a vehicle moving under STGO or a Special Order to be accompanied by an escort vehicle, but National Highways advises that the following dimensions may be applied to decide if the movement of an abnormal load requires an escort:

Table 5 National Highways guidelines on escort requirements

Abnormal load measurement	Motorway	Other
Width	>4.6m	>4.1m
Length	-	>30.5m
Weight	130t	100t

Source: Lighting and marking COP for abnormal load self escorting vehicles, National Highways

The above measures are for guidance and may differ between individual Police forces who may wish to vary these requirements. The final decision rests with the Police (see Section 4.3.1.2 below).

See the full National Highways Code of Practice¹² for further details on escorting abnormal load movements.

⁹https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/494606/Location_of_Abnormal_Load_Laybys_-_1143.pdf

¹⁰https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/494607/Layby_and_MSA_Map_-_1143.pdf

¹¹For girder frame trailers over 150 tonnes and draw-bar trailers over 250 tonnes, the limit is 12mph

¹²https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/503105/Lighting_and_marking_COP_for_abnormal_load_self_escorting_vehicles_HE_rebranding_v1.pdf

4.3 Notification processing

4.3.1 Police notification assessment process

4.3.1.1 Public Safety Risk Assessment

In processing an abnormal load journey notification, the primary concern of the Police is to assess the potential impact of the journey on public safety. The relevant duty officer within the Police will therefore check the notification and carry out a risk assessment based on the agreed 'risk category' levels set out below:

- Low risk notifications – no necessity for further action. General advice provided to the haulier and information on control measures if necessary.
- Medium risk notifications – the Police will check the movement complies with relevant legislation and inform the haulier if the notification is rejected. A decision on the necessity of a Police escort or further traffic management measures will be considered for all notifications considered medium risk.
- High risk notifications – the Police will check the movement complies with relevant legislation and inform the haulier if the notification is rejected. A decision on the necessity of a Police escort or further traffic management measures will be considered for all notifications considered high risk.

Based on this risk assessment, the Police forces may reject or amend any time, date or route that they consider may have an impact on public safety. If a route is deemed unsuitable, the haulier will be notified and will then be responsible for identifying an alternative route or additional traffic management measures sought from local authorities, National Highways or the Police.

4.3.1.2 Escort requirements

If the risk assessment determines that the safety of road users may be compromised to an unacceptable extent, an escort may be specified regardless of the vehicle dimensions specified in Table 5 above. The haulier will therefore be responsible for provision of an escort vehicle which conforms to the type specified by National Highways.

As per ACPO guidance, Police escorts will only be provided if specifically requested by a haulier or if the risk assessment identifies the need for temporary road closures to ensure safe passage of the load through restricted sections of the route. A minimum of 8 days notice will be required for a Police escort. If necessary, charges for Police escorts will be incurred by the haulier at 'Special Policing



Services' rates. For journeys where a TMP has been requested by Welsh Government, Welsh Police forces can request evidence of TMP approval before providing escort support services.

4.3.1.3 Temporary Traffic Regulation Order

If the risk assessment identifies the need for a temporary road closure on any section of the route, the haulier will be required to apply for a Temporary Traffic Regulation Order (TTRO) under the Road Traffic Regulation Act 1984 to allow officers and other Accredited Persons¹³ to stop and direct moving traffic or to suspend on-street parking. Applications for TTROs on the non-trunk road network should be made through the relevant local authority, and through NMWTRA/SWTRA for trunk road applications.

Hauliers should be advised that TTROs can take up to 12 weeks to process.

4.3.2 HA&BO notification assessment process

In processing an abnormal load journey notifications, the primary concern of highway authorities and other bridge owners is to assess the potential impact of the journey on highway structures.

4.3.2.1 Check for height and width restrictions

On receipt of a notification or notification enquiry, the Abnormal Loads Officer (ALO) for each of the affected HA&BOs will use details of the vehicle configuration to undertake audit checks of known height and width restrictions at structures along the route, and any other known structural constraints (temporary or permanent). Alternative routes or configurations may be suggested to avoid any identified structural constraints.

The ALO may request the haulier or enquiring party provides horizontal and/or vertical swept path analysis as necessary, based on topographical survey data. If the submitted swept path analysis is considered inadequate, the ALO may request the haulier or enquiring party undertakes a trial run to mimic the movement of the abnormal load vehicle through the constraint. The trial run vehicle should demonstrate the extent of the load envelope in terms of width and height in a clearly visible manner using a collapsible template. It should be noted that this may require a Police escort.

If the ALO is not satisfied that the constraint can be negotiated by the load, the HA&BO shall inform the haulier or enquiring party, as well as other relevant authorities as appropriate, that the load cannot be moved. WG can also implement Permanent or Temporary Traffic Regulation Orders under the Road Traffic Regulation Act 1984 to limit the maximum gross vehicle weight on a structure if required.

¹³ The Police Reform Act allows DVSA and other agencies to use Policing Powers to be able to replace officers at planned events, under the provisions of the Community Safety Accreditation Scheme (CSAS), as long as they are "employed" by the Accredited Agency to do so.

4.3.2.2 Check for structural capacity

On receipt of a notification or notification enquiry, the ALO will undertake checks referring to existing structural certification along the notified route, in consultation with the HA&BO's structures team if necessary, based on the loading and vehicle configuration.

If checks identify structures which may not be able to carry the load, the haulier may suggest an alternative route which will then need to be submitted to the relevant HA&BO for approval.

Further checks will be undertaken if an alternative route cannot be found. This will be undertaken by the ALO or a structural engineer. If these checks identify structures which would not be able to carry the load, the haulier may propose alternative vehicle configurations until a suitable configuration is found.

If neither a suitable route nor suitable vehicle configuration can be found and the HA&BO rejects the proposal to move on this basis, then the haulier may commission the assessment of route structures by a suitably qualified and experienced consultant at their own expense. All load assessments require Technical Approval according to BD2, 'Technical Approval Of Highway Structures'¹⁴. WG are the Technical Approval Authority (TAA) for Trunk Roads in Wales.



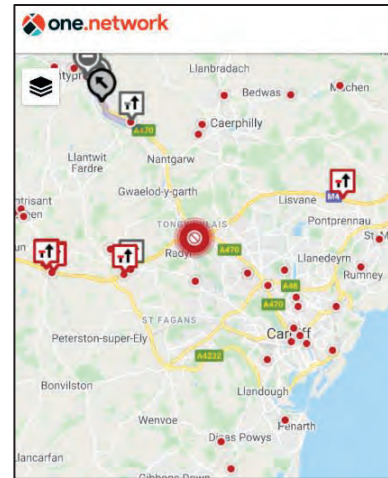
¹⁴ <https://www.croftse.co.uk/wp-content/uploads/2018/04/BD2-12-Highways-Structures-Approval.pdf>

4.4 Post-notification considerations

4.4.1 Roadworks and disruptions

The haulier should check for roadworks and disruptions along the route on the day of travel before commencing an agreed journey. Roadworks can particularly affect the passage of wide loads, and national details of live roadworks can be checked at <https://one.network/> or at <https://traffic.wales/> (also see Section 7 for Traffic Wales' contact details).

The haulier should consult in advance with the relevant ALO and the party responsible for the works if there is any doubt about whether the works affect the agreed route for the journey.



In the event where roadworks make the agreed route impassable, an agreement should be reached with the party responsible for the works to make passage possible at an agreed time, if feasible.

If not feasible, or if an unforeseen disruption makes a section of the agreed route impassable, the haulier is expected to assess where it is most appropriate and safe to park up and to contact the Police. If there are no safe areas then traffic management may be required to safely control traffic around the abnormal load vehicle. In addition to Police contact details, all hauliers are also recommended to carry contact details of the relevant local highway authorities and national traffic management firms to aid swift action in case of such an event.

4.4.2 Enforcement considerations

Once in transit, abnormal load vehicles can be subject to enforcement checks by either Police or DVSA officers. The vehicle may be escorted to a safe stopping place if any of the following conditions are met:

- Police have not received notification of movement
- Notification of movement is invalid due to inaccuracies
- Movement is not taking place in accordance with approved notification or authorised amendments
- Abnormal Indivisible Load vehicle or load is incorrectly marked or lit
- Abnormal Indivisible Load vehicle does not have the required attendant

- Abnormal Indivisible Load vehicle does not have the escort vehicle required by Police
- Driver is currently committing a 'driving hours' offence under tachograph regulations or will have committed an offence before reaching next stopping point
- Driver is currently committing an 'insufficient rest' offence under tachograph regulations
- Any C&U offences not exempted by STGO 2003 are evident

Where non-compliance is evident, the driver and operator are liable to prosecution under C&U regulations. Penalties for non-compliance can range from a fine¹⁵ to the temporary restriction or suspension of the haulier's operating licence by the Traffic Commissioner for Wales¹⁶. Officers might also prevent onward travel of the vehicle until any areas of non-compliance are adequately addressed.

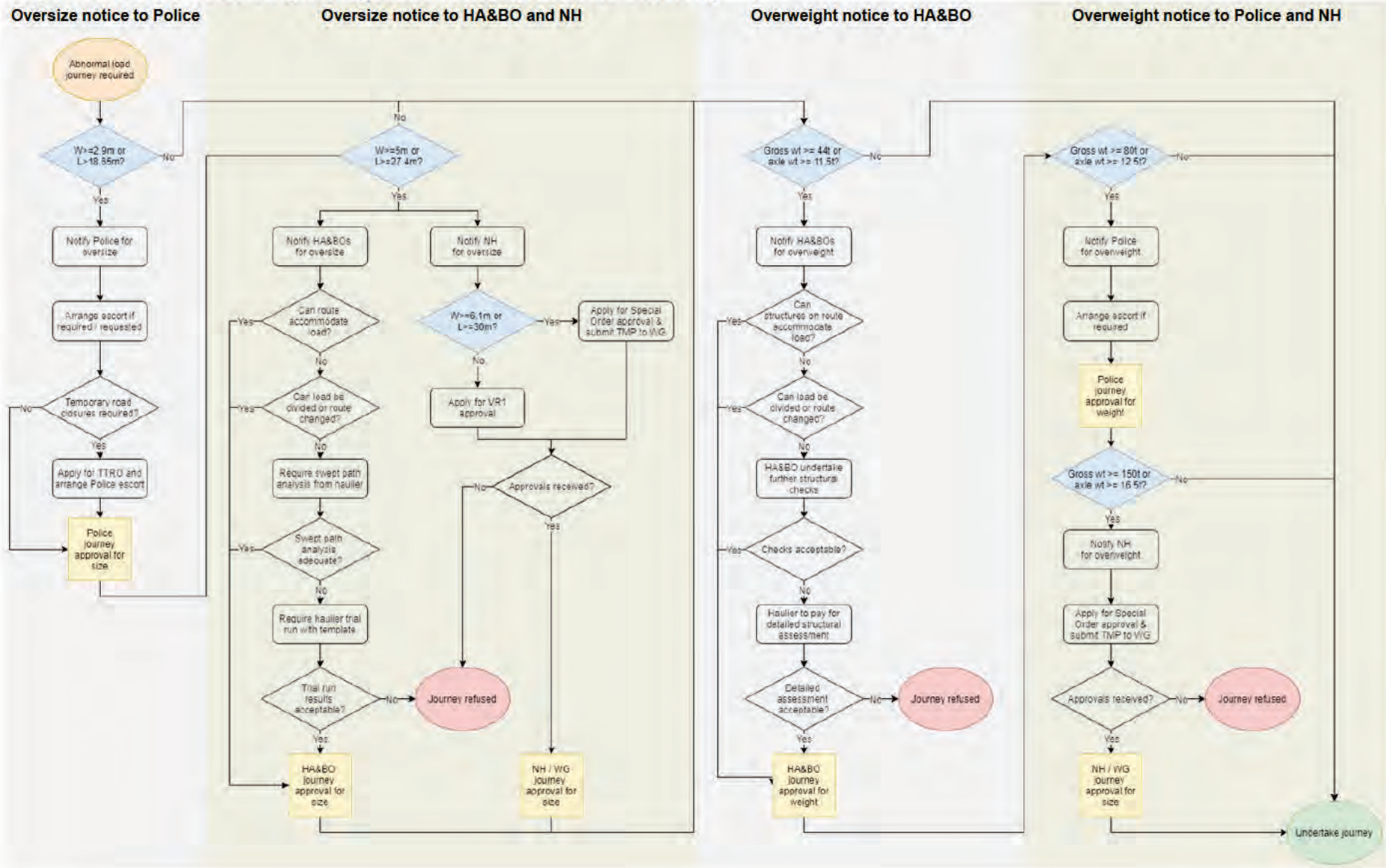
4.5 Process summary

A summary of the main steps in the legally required notification process is shown in the following figure.

¹⁵ <https://www.gov.uk/government/publications/guide-to-graduated-fixed-penalties-financial-deposits/dvsa-roadside-checks-fines-and-financial-deposits>

¹⁶ <https://www.gov.uk/traffic-commissioner/decision-and-penalties>

Figure 2 Abnormal load journey notification process summary



5 ABNORMAL LOADS AND DEVELOPMENT CONTROL

5.1 Planning applications

Planning applications for developments which are likely to generate abnormal load movements, either during construction or operation, may be required to be submitted with a Transport Assessment in accordance with Welsh Government Planning Policy Technical Advice Note 18: Transport¹⁷ Regarding abnormal load movements, the Transport Assessment should identify:

- Estimated movement volumes of abnormal loads to and from the site
- The most appropriate abnormal load routes to and from the site
- Mitigation proposals where necessary for route to safely accommodate load

Failure to demonstrate that the site can be safely accessed by the loads it will generate can be grounds for refusal of planning permission.



5.2 Planning conditions

Where planning permission is granted for a development which will generate abnormal load movements on the Welsh trunk road network, the following planning conditions will be attached.

¹⁷ <https://gov.wales/sites/default/files/publications/2018-09/tan18-transport.pdf>

5.2.1 Structural assessment

No on-site development works shall be undertaken until:

- a. an assessment of the capacity and impact on all structures along those parts of the highway network which shall be utilised during the construction of the development including bridges, culverts, retaining walls, embankments, and
- b. details of any improvement works required to such structures as a result of construction of the development

have been submitted to and approved by the local planning authority following consultation with the Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate). The required improvement works identified in the assessment shall be completed prior to the commencement of any Abnormal Indivisible Load (AIL) deliveries to the development site.

5.2.2 Condition surveys

Condition surveys of all highway features along those parts of the highway network which shall be utilised during the construction of the development shall be undertaken prior to, during and on completion of the construction phase of the development. The survey reports shall be submitted to and approved by the local planning authority following consultation with the Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate) within 28 days of the surveys.

5.2.3 Liability for incidental damage

Prior to the commencement of development works, a scheme to provide for the remediation of any incidental damage directly attributable to the development to the parts of the highway network which will be utilised during the construction of the development including street furniture, structures, highway verge and carriageway surfaces shall be submitted to and approved by the local planning authority following consultation with the Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate). The scheme shall be implemented as approved throughout the construction phase of the development.

5.2.4 Traffic Management Plan

AILs associated with the development shall be delivered strictly in accordance with a Traffic Management Plan (TMP) as shall be agreed with the relevant highway authority. In this respect, the TMP shall be submitted to and approved in writing by Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate) prior to the commencement of any works. The TMP shall include:

- a. proposals for transporting AILs from their point of entry to the Welsh trunk road network to the site that minimise any impact on the safety and free flow of trunk road traffic
- b. evidence of trial runs that mimic the movement of the worst case AILs along the access route where appropriate, at the discretion of the Highway Authority
- c. number and size of AILs, including loaded dimensions and weights
- d. number and composition of AIL convoys, including anticipated escort arrangements
- e. methodology for managing trunk road traffic during AIL deliveries, including identification of passing places and holding areas as necessary
- f. convoy contingency plans in the event of incidents or emergencies
- g. estimated convoy journey durations and timings along the route, including release of forecast traffic queues
- h. swept path analysis modelling the movement of the worst case AILs at all potential horizontal and vertical constraints along the access route where appropriate, at the discretion of the Highway Authority
- i. proposals for the temporary or permanent modification of any affected street furniture along the access route and details of how this would be managed
- j. plans for the reinstatement of any temporary works after completion of the construction phase
- k. land ownership must be clarified on all drawings showing proposed highway modifications. The developer shall be responsible for the acquisition and reinstatement of all third party land including re-instatement of boundary features
- l. proposals to liaise with all relevant stakeholders and members of the public regarding construction traffic and AIL movements
- m. consideration of the cumulative impact of other abnormal load generating schemes proposing to use all or part of the same access route

AILs associated with the maintenance and decommissioning of the development shall leave the site strictly in accordance with a TMP as shall be agreed with the relevant highway authority. In this respect, the TMP shall be submitted to and approved in writing by Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate) prior to the commencement of any removal, replacement of decommissioning works.

5.2.5 Highway works

No development works shall be undertaken until full details of any highway works associated with the construction of layover areas, passing places and highway improvements as agreed with each relevant highway authority including:

- a. the detailed design of any works
- b. geometric layout
- c. construction methods
- d. drainage, and
- e. street lighting

have been submitted to and approved in writing by the local planning authority following consultation with the Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate). The highway works shall be completed in accordance with the approved details prior to the commencement of any AIL deliveries to the development site.

No development works shall be undertaken until the developer demonstrates rights of access to all proposed works that are not part of the highway network to the satisfaction of the local planning authority.

5.2.6 Road Safety Audit

The applicant shall undertake a Road Safety Audit of the scheme (Stages 1 – 4) in accordance with the Design Manual for Roads and Bridges GG 119¹⁸. The applicant shall agree the required measures with the Welsh Government as Welsh trunk road highway authority or other relevant highway authority (as appropriate) prior to the commencement of works on site.

5.2.7 Section 278 Agreement

The applicant shall enter into an Agreement with the Welsh Ministers under Section 278 of the Highways Act 1980 to enable the Applicant to undertake agreed improvement works on the trunk road. This Agreement will contain details of the improvement works, construction conditions and financial arrangements under which agreed measures can be put in place, including indemnifying the Welsh Ministers against third party claims. Without such an

¹⁸ <http://bailey.persona-pi.com/Public-Inquiries/M4-Newport/C%20-%20Core%20Documents/6.%20Transport%20and%20Engineering/DMRB/vol5/section2/hd1915.pdf>

agreement in place, any consent that may be granted cannot be implemented.

For further information on this matter please refer to Welsh Government Procedure & Advice Guidance PAG 109/18: Section 38, 184, and 278 Agreements under the Highways Act 1980¹⁹.

5.2.8 Access onto the trunk road

Full details of the highway works associated with the proposed new access onto the trunk road shall be submitted by the applicant to WG, as the Welsh trunk road highway authority, prior to the commencement of any works on the development site. Details of proposed highway works should be as indicated on the submitted plans including the detailed design, geometric layout, construction and drainage.

The visibility splays shown on the submitted plans of the proposed new access onto the trunk shall at all times be kept free of any planting, tree or shrub growth, or any other obstruction in excess of 1.05m above the adjoining carriageway.

All highways works shall achieve full compliance with DMRB.



¹⁹ <https://gov.wales/sites/default/files/publications/2018-04/109-18-section-38-184-and-278-agreements-under-the-highways-act-1980.pdf>

6 SUMMARY OF ROLES AND RESPONSIBILITIES

The roles and responsibilities for each party set out in this document are summarised in the following table.

Table 6 Summary of roles and responsibilities of parties involved in abnormal load movements

Party	Role	Responsibilities
Consigners/agents	Generating/commissioning abnormal load movement	Commissioning of fully compliant haulier for planning and executing abnormal load movements. Preference should be given to hauliers with FORS accreditation (see https://www.fors-online.org.uk/cms/)
Haulier	Preparing and executing abnormal load movement	- Planning subdivision of loads wherever possible to avoid need for abnormal load movements (see Section 3.1) - Ensuring selected vehicle complies with the legislation applicable to the dimensions and weight of the combination (see Table 1) - Ensure vehicle and load is clearly signed, marked and lit according to regulations (see Section 3.2) - Ensure attendants accompany vehicle if required (see Section 3.3) - Carry VR1 or Special Order documents in vehicle where applicable (see Section 3.4) - Notify relevant authorities of abnormal load journey with sufficient notice period, including a Traffic Management Plan if required (see Section 4.1.2) - Address and, if necessary, pay for any requirements emerging from notification assessment process (see Section 4.3) - Undertake/procure structural assessment if required (see Section 4.3.2.2) - Accommodate for roadworks and disruptions on day of travel (see Section 4.4.1) - Execute journey according to approved notification (see Section 4.4.2) and, where applicable, to approved Traffic Management Plan (see Section 2.2.2)
Abnormal load attendant	Accompanying abnormal load on journey where required	- Accompany abnormal load vehicle for full journey where legislation requires - Warn the driver or any other person of any danger likely to be caused by the presence of the vehicle or vehicles on the road (see Section 3.3)
Abnormal load escort	Escorting abnormal load on journey where required	- Comply with National Highways guidance in vehicle preparation and abnormal load escort protocol (see Section 4.2.2.2) - Comply with any specific instructions provided by Police (see Section 4.3.1.2)
Police	Assessing public safety impacts of abnormal load notifications, escorting where required and enforcing regulations in transit	- Undertake public safety risk assessment for all abnormal load notifications (see Section 4.3.1.1) - Advise haulier with sufficient notice if any amendments required to notified journey or if notification refused (see Section 4.3.1.1) - Advise haulier with sufficient notice if private or Police escort required and if TTRO required (see Section 4.3.1.2 and 4.3.1.3) - Resource the Police escort, as required (see Section 4.3.1.2) - Enforce abnormal load regulations in transit for public safety (see Section 4.4.2)
DVSA	Vehicle standards, licencing and enforcement	Enforce abnormal load regulations in transit for public safety (see Section 4.4.2)
HB&BOs	Assessing infrastructure impacts of abnormal load notifications	- Assess relevant journey notifications in terms of capacity of route infrastructure to accommodate proposed abnormal load dimensions and weight (see Section 4.3.2) - Advise haulier if journey notification is rejected or approved (see Section 4.3.2 Error! Reference source not found.)
Planning authorities	Determining planning applications for abnormal load generating developments	- Ensure planning applications consider abnormal load trip generation and demonstrate suitable routeing and, where necessary, mitigation (see Section 5.1) - Apply planning conditions where necessary to ensure abnormal load routes are fully planned and approved and that all journeys are undertaken according to an approved Traffic Management Plan (see Section 5.2)
Developers	Seeking planning consent for abnormal load generating developments	- Submit Transport Assessment with planning application to identify abnormal load trip generation, suitable routeing and, where necessary, mitigation (see Section 5.1) - Discharge planning conditions, where applicable, by ensuring abnormal load routes are fully planned and approved and by committing to all journeys being undertaken according to an approved Traffic Management Plan (see Section 5.2)

7 USEFUL CONTACTS

The process outlined in the above sections requires input from and contact with a number of organisations in order to ensure all relevant authorities are notified, and that abnormal load movements occur safely and without causing disruption to the network.

The following table provides a list of key contacts and contact details for queries associated with the movement of abnormal loads in Wales.

Table 7 Useful contacts for abnormal load related queries

Organisation	Contact details
Welsh Government ALO	[REDACTED]
Dyfed-Powys Police	[REDACTED]
Gwent Police	[REDACTED]
North Wales Police	[REDACTED]
South Wales Police	[REDACTED]
NMWTRA	[REDACTED]
SWTRA	[REDACTED]
Traffic Wales	[REDACTED]
National Highways Abnormal Loads Tea	[REDACTED]
Network Rail Abnormal Loads Team	[REDACTED]
Blaenau Gwent County Borough Council	[REDACTED]
Bridgend County Borough Council	[REDACTED]
Caerphilly County Borough Council	[REDACTED]
Cardiff City & County Council	[REDACTED]
Carmarthenshire County Council	[REDACTED]
Ceredigion County Council	[REDACTED]
Conwy County Borough Council	[REDACTED]
Denbighshire County Council	[REDACTED]
Flintshire County Council	[REDACTED]
Gwynedd County Council	[REDACTED]
Isle of Anglesey County Council	[REDACTED]

Organisation	Contact details
Merthyr Tydfil County and Borough Council	
Monmouthshire Council	
Neath Port Talbot County Borough Council	
Newport City Council	
Pembrokeshire County Council	
Powys County Council	
Rhondda Cynon Taf County Borough Council	
Swansea Council	
Torfaen County and Borough Council	
Vale of Glamorgan Council	
Wrexham County Borough Council	

From: Williams, Arwel (CCRA - ERA - Landscapes, Nature and Forestry) [REDACTED]
On Behalf Of LQAS
Sent: 24 April 2023 15:14
To: PEDW – Seilwaith / Infrastructure <PEDW.Infrastructure@gov.wales>
Cc: LQAS <LQAS@gov.wales>
Subject: RE: DNS CAS-02171-X3W6Z0 - Trecwn Green Energy Hub - EIA Scoping Consultation

Good afternoon Marloes,

Please find attached our response to the scoping direction request regarding DNS CAS-02171-X3W6Z0 - Trecwn Green Energy Hub.

The department would welcome further consultation on an application as the site includes BMV agricultural land.

I would be happy to discuss further if any clarification is required.

Many thanks

Arwel

Arwel Williams
Cyngorydd Polisi Pridd a Defnydd Tir Amaethyddol / Agricultural Land Use & Soil Policy Advisor
Is-adran Tirweddau, Natur a Choedwigaeth / Landscapes, Nature and Forestry Division
Llywodraeth Cymru / Welsh Government
E-bost [REDACTED] / E-mail: [REDACTED]
Ar y We / Internet: www.llyw.cymru / www.gov.wales





Ref: DNS CAS-02171-X3W6Z0.

Marloes Holtkamp
Planning and Environment Decisions Wales
Crown Buildings
Cathays Park
Cardiff
CF10 3NQ

Via Email: PEDW.Infrastructure@gov.wales

24th April 2023.

Re: EIA Scoping Consultation - Trecwn Green Energy Hub – DNS CAS-02171-X3W6Z0.

In reference to the consultation letter of 22nd March 2023 from PEDW consulting on the above Scoping Direction request, the Department offers the following response for your consideration regarding agricultural land quality and the use of soil. This response is made in accordance with Technical Advice Note (TAN) 6¹ Annex B6 and relates to technical information only, not the merits or otherwise of the proposal.

1. Agricultural Land Classification (ALC) – Information.

The indicative site for the proposed solar PV arrays has been subject to a detailed ALC field survey (see copy of report attached, Ref: 1999/1, dated 14th July 2022).

The Department has previously validated the ALC survey report and can confirm it has been completed to an acceptable standard as per the '*Guidelines and Criteria for Grading the Quality of Agricultural Land*' (MAFF 1988)² and can be accepted as an accurate reflection of agricultural land quality for the survey area.

This confirms the indicative site for proposed solar PV arrays contains 12.0ha Subgrade 3a, 35.8ha Subgrade 3b and 1.6ha '*other land*', a total of 49.4ha surveyed.

This application would therefore be a development involving 12.0ha of Best and Most Versatile (BMV) agricultural land.

The Department does not hold any detailed ALC field survey information for remainder of the site within the proposed red-line boundary (as per Figure 1.1 of Scoping Report). According to the

¹ <https://www.gov.wales/technical-advice-note-tan-6-planning-sustainable-rural-communities>

² <https://publications.naturalengland.org.uk/publication/6257050620264448?category=5954148537204736>

Predictive ALC Map (2019)³, the site is considered Subgrade 3b at best. As per published guidance⁴, an ALC survey is not recommended for the remainder of the site and the Predictive ALC Map grade can be taken as best available information.

2. Policy Context.

The Department has examined the Scoping Report (March 2023) and consider the policies and guidance below are also applicable to this development in respect of agricultural land quality and soils: -

- Policy 9 of the National Development Framework (NDF), Future Wales – The National Plan 2040 considers Best and Most Versatile (BMV) agricultural land as a '*national natural resource*'.
- Policy 18(11) of NDF Future Wales – sets out the requirement for '*...acceptable provisions relating to the decommissioning of the development at the end of its lifetime, including the removal of infrastructure and effective restoration*'.
- Planning Policy Wales (PPW) 11 – paragraph 3.58 and 3.59 - Best and Most Versatile Agricultural Land.
- Technical Advice Note (TAN) 6.
- DCPO letter, 1st March 2022 - Best and most versatile agricultural land and solar PV arrays.

3. Soil Management Scheme.

A soil management scheme should be prepared by the developer, informed by a baseline soil resources and physical characteristics report / ALC survey report, and be considered as part of the ES process. This should be a clear scheme and programme setting out how all soils and their function will be conserved and reinstated.

The Scheme should be presented in sufficient detail for the determining authority and statutory consultees to form a judgement as to its feasibility, and should include: -

- Soil stripping programme - volumes and types of soils affected.
- Soil handling techniques and procedure.
- Size, location, construction, management and period of soil storage dumps.
- Proposed decommissioning, after use and restoration programme, including techniques and aftercare programme.

The advice expressed does not bind any other part of Welsh Government commenting on the proposal. I trust the above comments are clear and unambiguous. I would welcome further discussion if you consider this helpful.

³ <https://www.gov.wales/agricultural-land-classification-predictive-map>

⁴ <https://www.gov.wales/agricultural-land-classification-predictive-map-guidance>

Yours sincerely

Arwel Williams.

Agricultural Land Use & Soil Policy Advisor

Soil Policy & Agricultural Land Use Planning Unit - LQAS@gov.wales

Enc. Copy of ALC report, Ref: 1999/1, dated 14th July 2022.

**AGRICULTURAL QUALITY
OF LAND AT TRECWN
HAVERFORDWEST**

Report 1999/1

14th July, 2022

**AGRICULTURAL QUALITY
OF LAND AT TRECWN, HAVERFORDWEST**

L Thomas, MSc, MISoilSci

Report 1999/1
Land Research Associates Ltd
Lockington Hall,
Lockington,
Derby
DE74 2RH
www.lra.co.uk

14th July, 2022

SUMMARY

An agricultural land quality survey has been undertaken of 49.4 ha of land at Trecwn, Haverfordwest, in June 2022.

The land has shallow silty clay loams over slate, with an area of groundwater-affected land in the south-west. Agricultural land quality is limited by a combination of wetness, adverse climate, shallow soil depth, topsoil stone content and slope gradient to a mixture of subgrades 3a and 3b.

1.0 Introduction

- 1.1 This report provides information on the agricultural quality of 49.4 ha of land at Trecwn, Haverfordwest. The report is based on a survey of the land in June 2022.

SITE ENVIRONMENT

- 1.2 The survey area comprises one large block at Llanstinan Home Farm and a smaller block in the south-west. The main site is bordered to the north by north by a single track road, to the south by woodland, and to the east and west by adjoining agricultural land. The smaller block is bordered to the north by woodland, to the south and east by adjoining woodland, and to the west by the A40.
- 1.3 The main site comprises a hill summit in the west, sloping land down to the woodland. The main site varies in elevation from 120 m to 75 m, with an average elevation of approximately 100 m AOD. The block in the south-west is level at a lower average elevation of 70 m AOD.
- 1.4 At the time of survey all of the land was under grass, either silage meadow or grazed by beef cattle.

PUBLISHED INFORMATION

- 1.5 1:50,000 scale BGS information records the geology of most of the land to be Penmaen Dewi Shale Formation mudstone. The two easternmost fields are recorded to be underlain by Ogof Hen Formation muddy sandstone with superficial deposits of Head.
- 1.6 The National Soil Map (published at 1:250,000 scale) records land at the main site as within the Manod Association, typically comprising well drained fine loamy or fine silty soils over rock. Land in the south-western block is recorded to be within the Conway Association, typically deep stoneless fine silty and clayey soils variably affected by groundwater¹.
- 1.7 The Welsh Predictive Agricultural Land Classification map² shows the land to be predominantly subgrade 3a, with an area of subgrade 3b in the centre and grade 4 in the south-west.

¹Rudeforth, C. C., et al., 1984. *Soils and their use in Wales*. Soil survey of England and Wales, Bulletin No. 11, Harpenden.

² Welsh Government, 2019. Predictive Agricultural Land Classification (ALC) Map 2, available at: [Predictive Agricultural Land Classification \(ALC\) Map 2 | DataMapWales \(gov.wales\)](https://data.gov.wales/data/predictive-agricultural-land-classification-alc-map-2)

2.0 Soils

2.1 A soils and agricultural quality survey was carried out in June 2022 in accordance with MAFF (1988) Agricultural Land Classification guidelines³. It was based on observations at intersects of a 100 m grid, giving a density of one observation per hectare. During the survey, soils were examined by hand augerings to a maximum depth of 0.7 m. A log of the sampling points and a map (Map 1) showing their location is in an appendix to this report.

2.2 Soils were found to vary in depth and drainage, as described below.

SHALLOW SILTY LOAMS

2.3 These soils dominate across the main site. They typically comprise medium silty clay loam topsoil, over a thin permeable loamy subsoil that overlies slate at variable depth (20 – 71 cm). The topsoils are slightly to moderately stony. The land is assessed to be freely-draining (Soil Wetness Class I).

2.4 An example shallow profile is described from a pit excavation at observation point 20 (see Map 1).

0-20 cm	Dark brown (10YR 3/3) medium silty clay loam with 15% slate stones >20 mm; well developed fine subangular blocky structure; friable; many fine fibrous roots; 2-5% pores; smooth clear boundary to:
20 cm+	Hard slate; impenetrable to roots.

2.5 An example profile with thin subsoil is described from a pit excavation at observation point 21 (see Map 1).

0-20 cm	Dark brown (10YR 3/3) medium silty clay loam with 15% slate stones >20 mm; well developed fine subangular blocky structure; friable; many fine fibrous roots; 2-5% pores; smooth clear boundary to:
20-41 cm	Yellowish brown (10YR 6/6) medium silty clay loam with <2% fine faint reddish yellow (7.5YR 6/8) mottles; 25% slate stones >20 mm; moderately developed fine subangular blocky structure; friable; common fine fibrous roots; 2% macropores; medium packing density; wavy clear boundary to:
41 cm+	Hard slate; impenetrable to roots.

IMPERFECTLY DRAINING SILTY LOAMS

2.6 These soils occur in the south-western block on lower, groundwater-affected land. They comprise medium silty clay loam topsoil over permeable subsoil of the same texture. Despite their permeability, the subsoils are *gleyed* to shallow depth, indicating seasonal waterlogging and judged to be imperfectly-draining (Soil Wetness Class III).

³MAFF, (1988). *Agricultural Land Classification for England and Wales: Guidelines and Criteria for Grading the Quality of Agricultural Land*.

2.7 An example shallow profile is described from a pit excavation at observation point 47 (see Map 1).

0-25 cm	Very dark greyish brown (10YR 3/2) medium silty clay loam; stoneless; well developed medium to fine sub-angular blocky structure; friable; abundant fine fibrous roots; 2-5% pores; smooth clear boundary to:
25-60 cm	Grey (10YR 7/1) medium silty clay loam with 20% distinct fine and medium yellowish brown (10YR 5/8) mottles; stoneless; moderately developed coarse sub-angular blocky structure; friable; medium packing density; porous; many fine fibrous roots; smooth clear boundary to:
60 cm+	Hard slate; impenetrable to roots.

3.0 Agricultural land quality

- 3.1. To assist in assessing land quality, the Ministry of Agriculture, Fisheries and Food (MAFF) developed a method for classifying agricultural land by grade according to the extent to which physical or chemical characteristics impose long-term limitations on agricultural use for food production. The MAFF ALC system classifies land into five grades numbered 1 to 5, with grade 3 divided into two subgrades (3a and 3b). The system was devised and introduced in the 1960s and revised in 1988.
- 3.2. The agricultural climate is an important factor in assessing the agricultural quality of land and has been calculated using the Climatological Data for Agricultural Land Classification⁴. The relevant site data for an average elevation of 100 m is given below.
- Average annual rainfall: 1237 mm
 - January-June accumulated temperature >0°C 1446 day°
 - Field capacity period 249 days
(when the soils are fully replete with water) mid Sept-mid May
 - Summer moisture deficits for: wheat: 69 mm
potatoes: 52 mm
- 3.3. The survey described in the previous section was used in conjunction with the agro-climatic data above to classify the site using the revised guidelines for ALC issued in 1988 by MAFF⁵. The moist climate at this elevation limits land quality to a maximum of subgrade 3a at elevations above 110 m, and to grade 2 at lower elevations (in the south of the site).

SURVEY RESULTS

- 3.4. The agricultural quality of the land is variably determined by wetness, adverse climate, soil depth, topsoil stone content and slope gradient. Other factors have been assessed but do not affect the land grade. Land of grades 3 and 4 has been identified.

Subgrade 3a

- 3.5. In parts of the site where the soils are deeper over bedrock, land is limited to this subgrade (at best) by adverse climate. The persistent wetness and humidity of the local climate is likely to lead to crop disease, adversely affecting yield and quality.

⁴Meteorological Office, (1989). *Climatological Data for Agricultural Land Classification*.

⁵MAFF, (1988). *Agricultural Land Classification for England and Wales: Guidelines and Criteria for Grading the Quality of Agricultural Land*.

- 3.6. Wetness is also a limiting factor on the deeper soils within the site. The moderately clay content of the topsoils under the moist local climate means land will not be accessible with machinery in winter and early spring. Although access to the land is possible in late spring and autumn most years.
- 3.7. Also included are areas with moderately shallow soils over hard slate (30-45 cm on average). The restricted depth to hard bedrock makes cultivation of roots crops difficult and limited rooting depth has adverse effects on crop growth.

Subgrade 3b

- 3.8. This subgrade includes most of the land within the site where the silty loams are of shallow depth over bedrock (between 20 and 30 cm). The shallow depth of the soils over hard rock limits the depth and range of cultivation possible, restricts rooting depth and nutrient capacity of the soils. Some of the land within this subgrade is also limited by topsoil stone content. High topsoil stone content can impair precision cultivation, damage rooting crops and reduces the nutrient holding capacity of the soil.
- 3.9. Some small areas have slope gradients between 7 and 10 degrees. This is likely to make the use of some cultivation machinery difficult and increases erosion risk under cultivation.
- 3.10. This subgrade also comprises land in the south-west which is imperfectly draining (Soil Wetness Class III). The combination of moderately high topsoil clay content and impeded drainage under the wet local climate severely restricts land access. Land use is mainly restricted to grass, of which yields could be moderate to high but limitations in access can make utilisation of the crop difficult.

Other land (non-agricultural)

- 3.11. This comprises tracks and a timber yard.

Grade areas

3.12. The land grade is shown on Map 2 and the area occupied is shown below.

Table 1: Areas occupied by the different land grades

<i>Grade/subgrade</i>	<i>Area (ha)</i>	<i>% of the land</i>
Subgrade 3a	12.0	24
Subgrade 3b	35.8	72
Other land	1.6	4
Total	49.4	100

APPENDIX
DETAILS OF OBSERVATIONS
MAPS

Land at Trecwn: Soils and ALC survey – Details of observations at each sampling point

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
1	0-25	MZCL	<5	25+	Slate					1	I	3b	De
2	0-25	MZCL	<5	25-71	MZCL shaley	x	71+	Stopped on slate		3	I	3a	C/W
3	0-26	MZCL	<5	20+	Slate					3	I	3b	De
4	0-24	MZCL	<5	24-30	MZCL	x	30+	Slate		1	I	3b/3a	De
5	0-30	MZCL	5-10	30-61	MZCL	x	61+	Slate		2	I	3a	C/W
6	0-25	MZCL	5-10	25-38	MZCL	x	38+	Slate		2	I	3a	De/C/W
7	0-20	MZCL	5-10	20+	Slate					0	I	3b	De
8	0-25	MZCL	5-10	25-36	MZCL	x	36+	Slate		1	I	3a	De/C/W
9	0-25	MZCL	<5	25-55+	M/HZCL	x	55+	Slate		1	I	3a	C/W
10	0-28	MZCL	5-10	28-41	MZCL	xx	41-50 50+	MCL shaley Slate	xx(x)	1	I	3a/3b	W
11	0-25	MZCL	5-10	25+	Slate					1	I	3b	De
12	0-26	MZCL	5-10	26-41	MZCL	x	41+	Slate		2	I	3a	C/De/W
13	0-20	MZCL	5-10	20-40	MZCL	x	40+	Slate		3	I	3a	C/De/W
14	0-20	MZCL	5-10	20+	Slate					0	I	3b	De
15	0-20	MZCL	15-20	20+	Slate					3	I	3b	De/St
16	0-25	MZCL	<5	25-42	MCZL	xx	42+	Slate		3	I	3a	C/De/W
17	0-26	MZCL	<5	26-03+	MZCL shaley	x	30+	Slate		2	I	3b	De
18	0-20	MZCL	10-15	20+	Slate					1	I	3b	De
19	0-20	MZCL	10-15	20+	Slate					3	I	3b	De
20	0-20	MZCL	10-15	20+	Slate					4	I	3b	De
21	0-20	MZCL	10-15	20-43	MZCL	x	43+	Slate		3	I	3a	St/W
22	0-20	MZCL	15-20	20+	Slate					6	I	3b	De/St
23	0-20	MZCL	15-20	20+	Slate					4	I	3b	De/St
24	0-25	MZCL	5-10	25-51	MZCL	xx	51+	Slate		3	I	3a	C/W
25	0-20	MZCL	15-20	20+	Slate					0	I	3b	De/St
26	Track												
27	Track												
28	0-28	MZCL	10-15	28-46	MZCL	x	40+	Slate		8	I	3b	SI
29	0-20	MZCL	5-10	20+	Slate					8	I	3b	SI
30	0-20	MZCL	5-10	20-34	MZCL	x	34+	Slate		8	I	3b	SI
31	0-25	MZCL	5-10	25-40	MZCL	o	40-51 51+	MZCL Slate	x	5	I	3a	W

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
32	0-22	MZCL	5-10	22-40	MZCL	x	40+	Slate		6	I	3a	De/W
33	0-20	MZCL	5-10	20-35+	MZCL	x	35+	Slate		5	I	3a	C/W
34	0-20	MZCL	5-10	20+	Slate					5	I	3b	De
35	0-25	MZCL	5-10	25+	Slate					6	I	3b	De
36	0-20	MZCL	5-10	20+	Slate					9	I	3b	De/SI
37	0-21	MZCL	15-20	21+	Slate					7	I	3b	De
38	0-20	MZCL	5-10	20+	Slate					6	I	3b	De
39	0-28	MZCL	5-10	28-50	MZCL	x	50-60 60+	MZCL Slate	x	8	I	3b	SI
40	0-20	MZCL	5-10	20-42	MZCL	x	42+	Slate		6	I	3a	De/W
41	0-28	MZCL	5-10	28-56	MZCL	xx	56+	Slate		7	I	3a	W
42	0-15	MZCL	5-10	15+	Slate					10	I	4	De
43	0-25	MZCL	5-10	25-54	MZCL sl st	xxx	54+	Slate		5	III	3b	W
44	0-20	MZCL	15-20	20+	Slate					8	I	3b	De/SI
45	0-22	MZCL	5-10	22-40	MZCL	xxx	40+	Slate		2	III	3b	W
46	0-20	MZCL	5-10	20-40	MZCL	xxx	40+	Slate		3	III	3b	W
47	0-21	MZCL	5-10	21-43	MZCL	xxx	43+	Slate		1	III	3b	W
48	Hedgerow												
49	0-20	MZCL	5-10	20-42	MZCL	xxx	42+	Slate		1	III	3b	W

Soil log key

Gley indicators¹

o	unmottled
x	1-2% ochreous mottles and brownish matrix (or a few to common root mottles (topsoils)) ³
xx	>2% ochreous mottles and brownish matrix and/or dull structure faces (slightly gleyed horizon)
xxx	>2% ochreous mottles and greyish or pale matrix (gleyed horizon) or reddish matrix and >2% greyish, brownish or ochreous mottles and pale ped faces
xxxx	mottles or f-m concentrations (gleyed horizon) dominantly blueish matrix, often with some ochreous mottles (gleyed horizon)

Slowly permeable layers⁴

a depth underlined (e.g. 50) indicates the top of a slowly permeable layer

A wavy underline (e.g. 50) indicates the top of a layer borderline to slowly permeable

Texture²

C	- clay
ZC	- silty clay
SC	- sandy clay
CL	- clay loam (H-heavy, M-medium)
ZCL	- silty clay loam (H-heavy, M-medium)
SZL	- sandy silt loam (F-fine, M-medium, C-coarse)
LS	- loamy sand (F-fine, M-medium, C-coarse)
SL	- sandy loam (F-fine, M-medium, C-coarse)
S	- sand (F-fine, M-medium, C-coarse)
SCL	- sandy clay loam
P	- peat (H-humified, SF-semi-fibrous, F-fibrous)
LP	- loamy peat; PL - peaty loam

Wetness Class⁵

I (freely drained) to VI (very poorly drained)

Limitations:

W	- wetness/workability
D	- droughtiness
De	- depth
F	- flooding
St	- stoniness
Sl	- slope
T	- topography/microrelief
C	- Climate

Suffixes & prefixes:

o - organic

(vsl, sl, m, v, x)st – (very slightly, slightly, moderately, very, extremely) stony⁶

(vsl, sl, m, v, x)
(very slightly, slightly, moderately, very, extremely) calcareous⁷

Other abbreviations

fmn - ferri-manganiferous concentrations
dist - disturbed soil layer;
R – bedrock (CH – chalk, SST – sandstone)
LST – limestone, MST – Mudstone)
r-reddish, gn – greenish

¹Gley indicators in accordance with Hodgson, J.M., 1997. Soil Survey Field Handbook (third edition). Soil survey technical monograph No. 5

²Texture in accordance with particle size classes in Hodgson (1997)

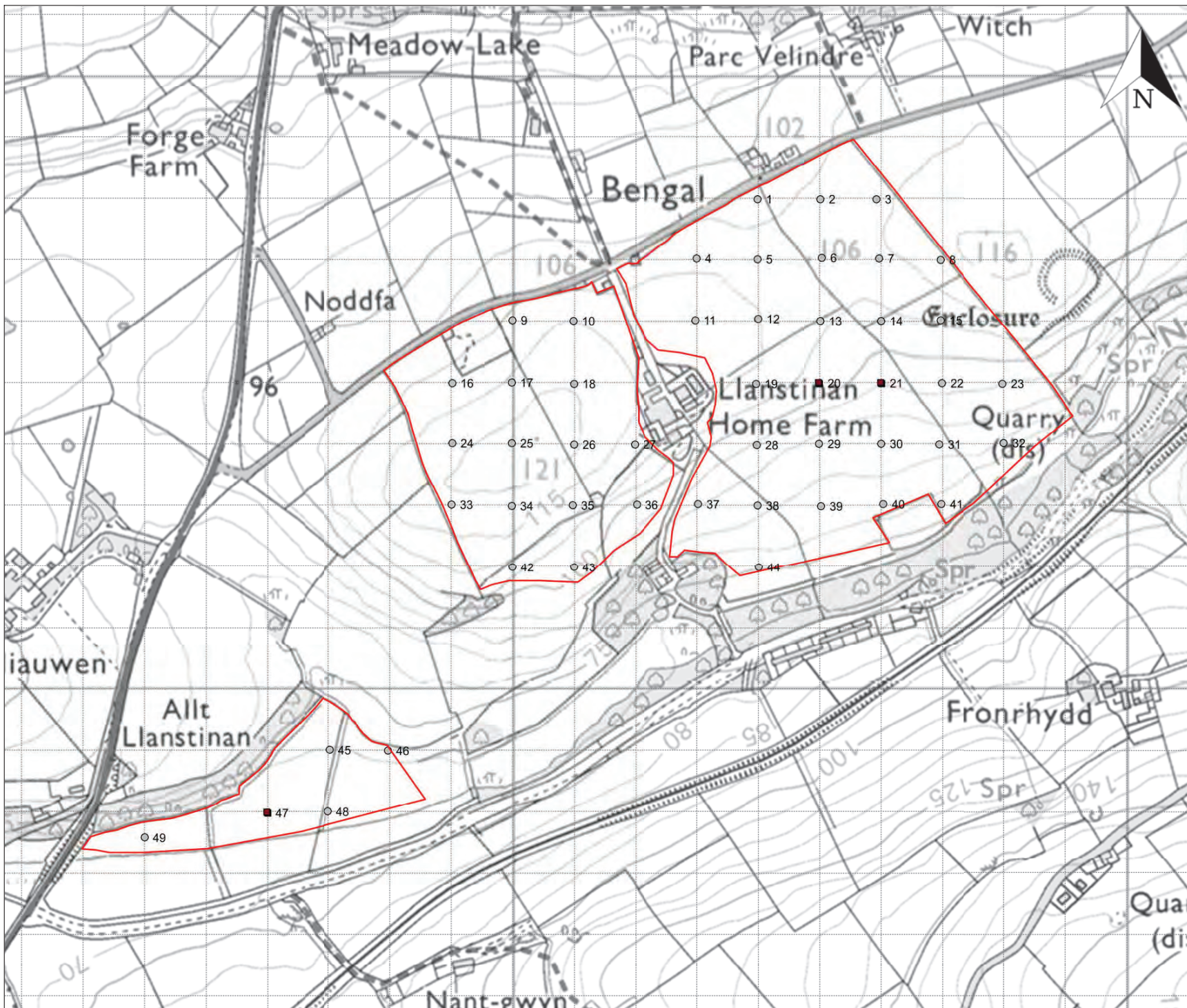
³ Occasionally recorded in the texture box

⁴Permeability is estimated for auger borings and must be confirmed by full pit observations in accordance with the definitions in: Revised Guidelines for grading the quality of Agricultural Land (Maff 1988)

⁵Soil Wetness Classes are defined in Hodgson (1997)

⁶stoniness classes as defined in Hodgson (1997)

⁷calcareous classes as defined in Hodgson (1997)



KEY

- Auger observation
- Soil/land grade description pit
- Survey area

Site:

**Land at Trecwyn,
Haverfordwest**

Map title:

**Map 1
Survey observations**

**Land
Research
ASSOCIATES**

Land Research Associates
Lockington Hall
Lockington
Derby DE74 2RH
01509.670570

Scale: 1:6,000

Date: 14/07/2022



KEY

-  Subgrade 3a
-  Subgrade 3b
-  Survey area

Site:

**Land at Trecwyn,
Haverfordwest**

Map title:

**Map 2
Agricultural Land Classification**

**Land
Research
ASSOCIATES**
Land Research Associates
Lockington Hall
Lockington
Derby DE74 2RH
01509 670570

Scale: 1:6,000

Date: 14/07/2022

From: Shirley Rance [REDACTED] **On Behalf Of** NSIP Applications
Sent: 23 March 2023 12:14
To: PEDW – Seilwaith / Infrastructure <PEDW.Infrastructure@gov.wales>
Cc: HazSubConsent CEMHD5 <HazSubCon.CEMHD5@hse.gov.uk>; NSIP Applications <NSIP.Applications@hse.gov.uk>
Subject: RE: HPE CM: DNS CAS-02171-X3W6Z0 - Trecwn Green Energy Hub - EIA Scoping Consultation - HSE Response

Dear Marloes Holtkamp,

Thank you for your email dated 22 March 2023 consulting HSE on the Proposed Trecwn Green Energy Hub - Development of National Significance (DNS).

Please find HSE's advice below.

HSE's Land Use Planning Advice (CEM HD5 Contribution)

Will the proposed development fall within any of HSE's consultation distances?

With reference to the proposed development redlined site boundary, shown in Figure 1.1 – Site Location [Reference: TRECWN GREEN ENERGY HUB, Scoping Report, Statkraft UK Limited, SLR Ref: 404.10585.00001, Version No: FINAL, March 2023], the proposed project/development does not currently fall within the consultation distances of any Major Hazard Installation(s) or Major Accident Hazard Pipeline(s).

Please note if prior to the granting of a development consent order for this proposed development, Hazardous Substances Consent is granted for a Major Hazard Installation or there is notification of a Major Accident Hazard Pipeline within or in the vicinity of the development, HSE reserves the right to revise its advice.

Would Hazardous Substances Consent be needed?

The presence of hazardous substances on, over or under land at or above set threshold quantities (Controlled Quantities) may require Hazardous Substances Consent (HSC) under the Planning (Hazardous Substances) Act 1990 as amended. The substances, alone or when aggregated with others, for which HSC is required, and the associated Controlled Quantities, are set out in The Planning (Hazardous Substances) (Wales) Regulations 2015.

Hazardous Substances Consent would be required if the site is intending to store or use any of the Named Hazardous Substances or Categories of Substances and Preparations at or above the controlled quantities set out in schedule 1 of these Regulations.

Further information on HSC should be sought from the relevant Hazardous Substances Authority.

Explosives sites

There are no licensed explosive sites in the vicinity so HSE has no comment to make in this regard.

Kind Regards
Shirley

NSIP Consultation Team
Health and Safety Executive



Gwasanaeth Tân ac Achub
Canolbarth a Gorllewin Cymru

Mid and West Wales
Fire and Rescue Service

Prif Swyddog Tân | Chief Fire Officer

Roger Thomas BA(Hons), MSc

tancgc.gov.uk
mawwfire.gov.uk

PEDW
Crown Buildings
Cathays Park
Cardiff
CF10 3NQ

Gofynner am/
Please ask for:
Rhif Est/Extn.
No.

Watch Manager Adrian Hall

E-bost/E-mail:

bregs@mawwfire.gov.uk

Fy Nghyf/My
Ref:

AJH/KDT/00343803

Dyddiad/Date:

22 March 2023

Dear Sir / Madam,

**THE TOWN AND COUNTRY PLANNING (DEVELOPMENT MANAGEMENT PROCEDURE)
(WALES) ORDER 2012**

THE DEVELOPMENTS OF NATIONAL SIGNIFICANCE (PROCEDURE) (WALES) ORDER 2016

**DEVELOPMENT PROCEDURE (CONSULTEES) (WALES) (MISCELLANEOUS AMANDMENTS)
ORDER 2021 – FIRE AND RESCUE AUTHORITIES**

RE: Trecwn Green Energy Hub, The Valley, Trecwn, Pembrokeshire SA62 5XX

APPLICATION NUMBER: DNS CAS-02171-X3W6Z0

I acknowledge receipt of the notification to the Mid and West Wales Fire and Rescue Authority in relation to the above application.

The site plan/s of the above proposal has been examined and the Fire and Rescue Authority would wish the following comments to be brought to the attention of the planning committee/applicant. It is important that these matters are dealt with early on in any proposed development:

- The Fire Authority has no comment to make on access for fire appliances or water supplies.
- the Fire Authority has no objection to the proposed development and refers the Local Planning Authority to any current standing advice by the Fire Authority about the consultation.

The developer should consider the need to provide adequate water supplies and vehicle access for firefighting purposes on the site and general guidance on this matter is given in the attached Appendix and the following links: <https://www.water.org.uk/guidance/national-guidance-document-on-the-provision-of-water-for-firefighting-3rd-edition-jan-2007/>

<https://www.ukfrs.com/index.php/promos/16847>

Y Pencadlys, Heol Llwyn Pisgwydd, Caerfyrddin, Sir Gâr, SA31 1SP
Headquarters, Lime Grove Avenue, Carmarthen, Carmarthenshire, SA31 1SP

post@tancgc.gov.uk
mail@mawwfire.gov.uk

0370 60 60 699

Furthermore, the applicant should be advised to contact the Local Authority Building Control Department, which is the responsible authority, when determining issues concerning means of warning and escape, internal fire spread (linings and structure), external fire spread, access and facilities for the Fire and Rescue Service, in accordance with the 2007 version of Approved Document B (Wales).

The plan/s has been retained for record purposes.

Yours faithfully



Watch Manager A Hall
Authorised Fire Safety Inspecting Officer
On behalf of the Mid and West Wales Fire and Rescue Authority

Enc

MID AND WEST WALES FIRE AND RESCUE SERVICE

Advice on Water Supplies

1. WATER SUPPLIES FOR FIREFIGHTING

The existing output of the statutory water supply network may need to be upgraded in certain parts of the local plan area to care for firefighting needs of new developments. It is recommended that this provision be a condition of planning consent.

Reference to the National Guidance Document on the Provision of Water for Fire Fighting 2007.

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 condition of any planning consent.

Consultation must take place with the Fire and Rescue Authority during the earliest planning stages of any development to ensure access for fire pumping appliances is satisfactory.

1.1. HOUSING

Minimum main size 100 millimetres. Housing developments of units of detached or semi-detached houses of not more than two floors should have a water supply capable of delivering a minimum of eight litres per second through any hydrant on the development.

The Fire and Rescue Authority should be consulted at the outline planning stage of any proposed projects to ascertain the exact requirements.

1.2. TRANSPORTATION

Lorry/Coach Parks - Multi-Storey Car Parks-Service Stations

Minimum main size 100 millimetres. All of these amenities should have a water supply capable of delivering a minimum of 25 litres per second through any hydrant on the development or within a vehicular distance of 90 metres from the complex.

1.3. INDUSTRY

In order that an adequate supply of water is available for use by the Fire and Rescue Authority in case of fire, it is recommended that the water supply infrastructure to any commercial industrial estate is as follows:

Light Industrial/Commercial

Up to one hectare, 20 litres per second - Minimum Main Size 100 millimetres

Up to two hectares, 35 litres per second - Minimum Main Size 150 millimetres

High Risk Industrial

Up to three hectares 50 litres per second - Minimum Main Size 150 millimetres

Over three hectares, 75 litres per second - Minimum Main Size 150 millimetres

In rural areas it may not be possible to provide sufficient mains water. To overcome this, static or river supplies would be considered on site if they are capable of supplying the above flow rates for at least one hour.

The Fire and Rescue Authority should be consulted at the outline planning stage of any proposed projects to ascertain the exact requirements, as high-risk premises may require a greater flow.

1.4. SHOPPING, OFFICES, RECREATION AND TOURISM

Commercial developments of this type should have a water supply capable of delivering a minimum of 20 to 75 litres per second to the development site. The Fire and Rescue Authority should be consulted at the outline planning stage of any proposed projects to ascertain the exact requirements.

1.5. EDUCATION, HEALTH AND COMMUNITY FACILITIES

Village Halls

Should have a water supply capable of delivering a minimum of 15 litres per second through any hydrant on the development or within a vehicular distance of 100 metres from the complex.

Primary Schools and Single Storey Health Centres

Should have a water supply capable of delivering a minimum of 20 litres per second through any hydrant on the development or within a vehicular distance of 70 metres from the complex.

Secondary Schools, Colleges, Large Health and Community Facilities

Should have a water supply capable of delivering a minimum of 35 litres per second through any hydrant on the development or within a vehicular distance of 70 metres from the complex.

1.6. DISTANCES BETWEEN FIRE HYDRANTS

The distance between fire hydrants should not exceed the following:

Residential areas	-	200 metres
Industrial Estates	-	150 metres
Town Centre Areas	-	90 metres
Commercial (Offices & Shops)	-	100 metres
Residential Hostels	-	Adjacent to access
Hotels	-	Adjacent to access
Institutional (Hospitals & Old Persons Home)	-	Adjacent to access
Old Persons Home	-	Adjacent to access
Educational (Schools & Colleges)	-	Adjacent to access

1.7. CONCLUSION

Developers should hold joint discussions with the relevant Water Authority or the Environmental Agency and the Fire and Rescue Authority to ensure that adequate water supplies are available in case of fire.

The Fire and Rescue Authority reserve the right to ask for static water supplies for firefighting on site, as a condition of planning consent, if the supply infrastructure is inadequate for any given risk.

From: NATS Safeguarding <NATSSafeguarding@nats.co.uk>
Sent: 28 March 2023 10:46
To: PEDW – Seilwaith / Infrastructure <PEDW.Infrastructure@gov.wales>
Subject: RE: DNS CAS-02171-X3W6Z0 - Trecwn Green Energy Hub - EIA Scoping Consultation [SG35067]

Our Ref: SG35067

Dear Sir/Madam

The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.

However, please be aware that this response applies specifically to the above consultation and only reflects the position of NATS (that is responsible for the management of en route air traffic) based on the information supplied at the time of this application. This letter does not provide any indication of the position of any other party, whether they be an airport, airspace user or otherwise. It remains your responsibility to ensure that all the appropriate consultees are properly consulted.

If any changes are proposed to the information supplied to NATS in regard to this application which become the basis of a revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.

Yours faithfully

NATS

NATS Safeguarding

E: natssafeguarding@nats.co.uk

4000 Parkway, Whiteley,
Fareham, Hants PO15 7FL
www.nats.co.uk



PEDW
Crown Buildings
Cathays Park
Cardiff
CF10 3NQ

Date: 03/04/2023
Our Ref: PPA0007722

Dear Sir/Madam,

Site Address: The Valley, Trecwn, Pembrokeshire.

Development: DNS: EIA Scoping Consultation Trecwn Green Energy Hub Green energy hub comprising a green hydrogen electrolyser powered by wind and solar energy (approximately 30MW installed generation capacity)

I refer to your consultation documents received in accordance of regulation 33(7) of the 2017 Regulations, which precedes your application for a Development of National Significance for the construction of a Green energy hub comprising a green hydrogen electrolyser powered by wind and solar energy (approximately 30MW installed generation capacity).

We welcome the opportunity to comment on the proposal and would offer the following standing advice which should be taken into account within any future application:

SEWERAGE / SEWAGE TREATMENT

It appears the application does not propose to connect to the public sewer, and therefore Dwr Cymru Welsh Water has no further comments.

However, should circumstances change and a connection to the public sewerage system/public sewage treatment works is preferred we must be re-consulted on this application.

The applicant is also advised that some public sewers and lateral drains may not be recorded on our maps of public sewers because they were originally privately owned and were transferred into public ownership by nature of the Water Industry (Schemes for Adoption of Private Sewers) Regulations 2011. The presence of such assets may affect the proposal. In order to assist us in dealing with the proposal the applicant may contact Dwr Cymru Welsh Water on 0800 085 3968 to establish the location and status of the apparatus. Under the Water Industry Act 1991 Dwr Cymru Welsh Water has rights of access to its apparatus at all times.

I trust the above information is helpful and will assist you in forming water and drainage strategies that should accompany any future planning application. I also attach copies of our water and sewer extract plans for the area, and a copy of our Planning Guidance Note which provides further information on our approach to the planning process, making connections to our systems and ensuring any existing public assets or infrastructure located within new development sites are protected.

Please note that our response is based on the information provided in your enquiry and should the information change we reserve the right to make a new representation. Should you have any queries or wish to discuss any aspect of our response please do not hesitate to contact our dedicated team of planning officers, either on 0800 917 2652 or via email at developer.services@dwrcymru.com

Please quote our reference number in all communications and correspondence.

Yours faithfully,



Owain George
Planning Liaison Manager
Developer Services

Please Note that demands upon the water and sewerage systems change continually; consequently the information given above should be regarded as reliable for a maximum period of 12 months from the date of this letter.



Welsh Water is owned by Glas Cymru – a not-for-profit company.
Mae Dŵr Cymru yn eiddo i Glas Cymru – cwmni nid-er-elw.

We welcome correspondence in
Welsh and English

Dŵr Cymru Cyf, a limited company registered in
Wales no 2366777. Registered office: Pentwyn Road,
Nelson, Treharris, Mid Glamorgan CF46 6LY

Rydym yn croesawu gohebiaeth yn y
Gymraeg neu yn Saesneg

Dŵr Cymru Cyf, cwmni cyfyngedig wedi i gofrestru yng
Nghymru rhif 2366777. Swyddfa gofrestredig: Heol Pentwyn
Nelson, Treharris, Morgannwg Ganol CF46 6LY.

Planning and new development

What you should do, and how we can help





Whether you're a homeowner with plans to extend your home, a builder working on a new house or a developer working on a new housing site, you need to involve us in the planning process. Even if you are just thinking about building, getting us involved early can help your project run smoothly and address any water and drainage matters as early as possible in the development process.

How can we help?

As water and waste services are at the forefront of public health and protection of the environment, we play a key part in the town and country planning process.

If you're planning on building new houses, our team of dedicated planning officers can give you advice and guidance at all stages of the process, including pre-application, planning application and discharge of condition.

When it comes to your new development, by getting us involved in the planning stages, we can:

- Assess whether the current local water and sewerage networks have capacity to service your new site (and if they can't, then identify whether the network can be reinforced to support your new site)
- Mitigate any potential negative impact that the new development could have on the performance of our infrastructure, the service we provide to customers, and the wider environment
- Identify where new development and growth is planned so that we can target investment in our existing infrastructure within these areas
- Provide advice on making new water and waste connections to our networks once your development is complete and ready to be occupied
- Identify any existing water or waste pipes in or near to the site, so we can advise on their location and let you know your options for protecting and/or diverting our assets for the lifetime of the development





Step 1: Use our pre-planning service

What is our pre-planning service?

We encourage all developers to engage with us as early as possible to ensure any water and drainage matters that might arise during the planning process are identified and addressed early on. In order to facilitate this, you can engage with us via our dedicated pre-planning service, which will provide:

- An assessment of the impact of your proposed development and whether our local water and waste networks can support it
- Confirmation of whether off-site water mains and/or sewers will need to be provided, and
- Water main and sewer plans indicating the location of our assets crossing the site or located in close proximity. *Please note that these are for general guidance only and all assets need to be accurately located on site before any excavation works begin.*

How can I access it?

You can submit a 'pre-planning advice' application online via our website. To make sure that we can provide you with the most comprehensive advice, you should include the following information:

- Site location plan
- Details of the proposed development
- Proposed points of communication to our local network of sewers and/or water mains (if known)
- Relevant planning history relating to the site e.g. any previous permissions granted or status within the council's development plan

You can see how much this service will cost on our website, and we'll aim to get back to you with a written **response within 21 days** of your application. The advice provided will be valid for 12 months and help inform our response when consulted on your planning application by the local planning authority (LPA).

For larger developments in Wales:

- You have to undertake pre-application consultation as set out in Schedule 4 of the Town & Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016 for any developments that:
 - Include 10 dwellings or larger
 - Have 1000sqm or larger non-residential floor space or
 - Have a site area that's 1 hectare or larger
- This means you need to consult with us and we will **respond within 28 days**.
- While there's no charge for this service, as it's a statutory requirement, we do recommend that you apply for our pre-planning service in advance of this consultation, as it will help to identify any potential issues that need to be addressed in advance of your planning application.





Step 2: Once you have our pre-planning advice



Locate our assets

Before you build, it's important to identify if any of our pipes, water mains or sewers are underneath the ground in or adjacent to your development site. Under section 159 of the Water Industry Act 1991, we have the rights of access to inspect, maintain, adjust, repair or alter any asset or apparatus at all times.

If your land does contain assets

If your land does indeed contain some of our assets, then this will have an impact on the layout and general arrangement of the new development site. We strongly recommend that you contact us to discuss accurately locating our assets to ensure that they are protected during and after construction. Please contact our Plan and Protect team via planandprotect@dwrcymru.com or 08009172652 to discuss further.

If you want to divert or remove the assets contained in your land

If you decide the asset located within or adjacent to your site can't be incorporated within the layout of the new development, or our rights of access to the asset may be hindered by your proposal, you can ask us to alter, divert or remove it in accordance with section 185 of the Water Industry Act 1991. You can find the application forms on our website.

How will you manage surface water?

As with all new development sites, you'll need to think about how to deal with surface water runoff from any new buildings and hard standings. Legislation in both England and Wales now actively encourages the use of sustainable urban drainage systems (SUDS). This approach manages surface water runoff by imitating natural drainage systems and retaining water on or near the site.

There are such a variety of SUDS techniques including green roofs, rainwater harvesting and permeable pavements that any development should be able to include a SUDS scheme. There would need to be good justification not to incorporate a SUDS scheme on your site.

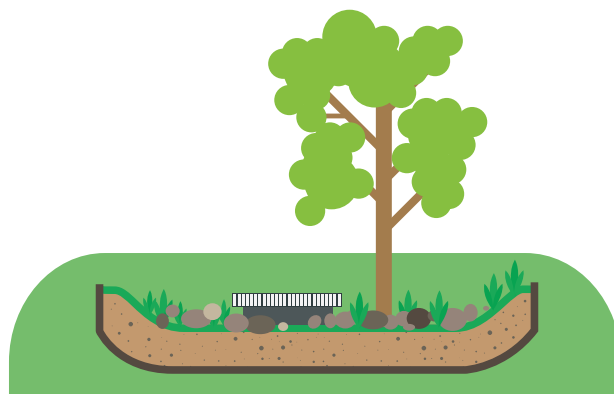
SUDS in Wales

All new development of more than one building or a construction area of 100m² or more will require consent from the sustainable drainage system (SUDS) approval body (also known as a SAB) for any new SUDS features, as required by Schedule 3 of the Flood and Water Management Act 2010. SABs are delivered by local authorities across Wales.

In accordance with this and the Welsh Government 'Statutory standards for sustainable drainage systems', you need to explore and fully exhaust all surface water drainage options, using discharge to a combined sewer only as a last resort.

SUDS in England

Even if your new development is based in England, it's important to keep Part H of the 'Building Regulations 2000' in mind. On this basis, all new developments in England will also be expected to consider surface water management techniques and demonstrate all technical options have been explored and exhausted, in liaison with the land drainage authority and/or the Environment Agency. You need to consider the management of highway or land drainage runoff as these flows won't be allowed to discharge directly or indirectly into the public sewerage system.



Step 3: The planning application process

Once you've used our pre-planning service and identified any potential issues before building, it's time to incorporate our advice into your proposals to your local planning authority (LPA).

As part of the planning application consultation process we will provide similar advice to that provided in our pre-application **response within 21 days**. It's important to note that while we share our expert opinion during this process, the ultimate decision to grant planning permission is the LPA's.

What are the options if we can't currently support your development?

Network hydraulic modelling/WwTW feasibility studies

As our aim is to support economic development and growth, we do not want to resist new development where possible. However, we must take the capacity of our existing assets, the service we are providing to existing customers and the environment into account. In areas where there are capacity constraints either on our networks or at the wastewater treatment works (WwTW), we may well already have proposals in place to deliver reinforcement works and to create capacity for new developments.

That being said, you may want to develop your site in advance of us undertaking these works. If this is the case, to ensure there's no detriment to our existing customers, you may be required to implement solutions identified by an assessment of either the network or WwTW. It's important to note that you won't be expected to resolve any existing operational issues.

Where further assessments are recommended, you will need to allow sufficient time in your development programme for these studies to be carried out and any reinforcement works to be delivered, as in some circumstances we won't permit a communication to our networks until these works are completed. The delivery of the works will need to align with occupation rather than construction.

Where possible, we will control the delivery of any solutions as part of the planning process. Dependent on the progress of the assessment, we may be in a position to recommend appropriate planning conditions so that the outcomes of the assessment can be delivered as part of any planning permission.

This approach allows us to support the progression of the site through the planning process, however in the absence of a completed assessment and known solutions we may need to work with you and the LPA until the assessment is completed and the outcomes are known.

Step 4: Connecting to our network

If you've had the green light from us and planning permission has been granted for your development, then it's time to start thinking about the different ways you'll need to connect to our network.

On our website you can find detailed guidance around applying for new water connections, new water mains, new public sewers and new sewer connections.

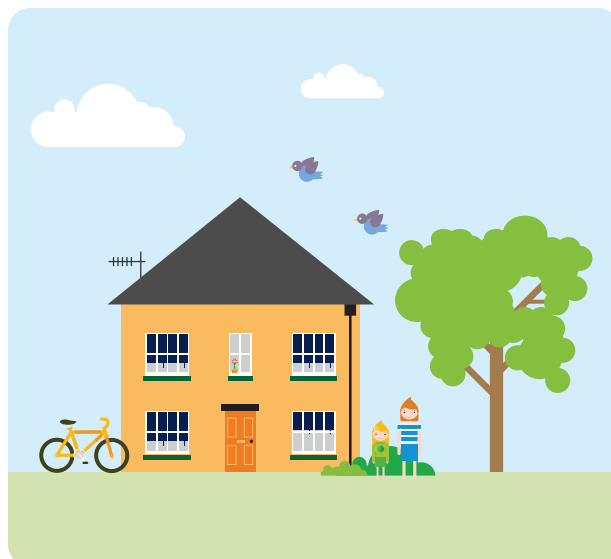
Contact us

If you've still got any questions or queries, then feel free to contact us:

Email: developer.services@dwrcymru.com

Visit: www.dwrcymru.com

Tel: 0800 917 2652





Contact Us:

If you've got any questions or queries,
then feel free to contact us:

Call

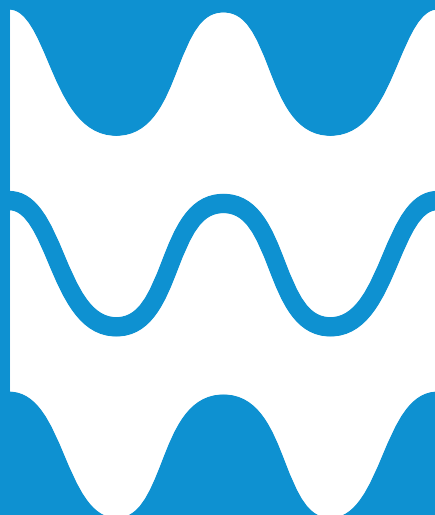
0800 917 2652

Email

developer.services@dwrcymru.com

Visit

www.dwrcymru.com



@dwrcymru



/dwrcymruwelshwater



**Cyfoeth
Naturiol
Cymru
Natural
Resources
Wales**

Ein cyf/Our ref: CAS-213806-Y1L3
Eich cyf/Your ref: DNS CAS-02171-
X3W6Z0

Maes Newydd,
Llandarcy,
Neath Port Talbot,
SA10 6JQ

Marloes Holtkamp,
Planning Officer,
Crown Buildings,
Cathays Buildings,
Cathays Park,
Cardiff,
CF10 3NQ

ebost/email:
swplanning@cyfoethnaturiolcymru.gov.uk

25/04/2023

Annwyl Marloes / Dear Marloes,

TOWN AND COUNTRY PLANNING ACT 1990 THE DEVELOPMENTS OF NATIONAL SIGNIFICANCE (PROCEDURE) (WALES) ORDER 2016

TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT (WALES) REGULATIONS 2017

BWRIAD / PROPOSAL: GREEN ENERGY HUB COMPRISING A GREEN HYDROGEN ELECTROLYSER POWERED BY WIND AND SOLAR ENERGY (APPROXIMATELY 30MW INSTALLED GENERATION CAPACITY)

LLEOLIAD / LOCATION: TRECWN, HAVERFORDWEST, SA62 5YD

Thank you for consulting Cyfoeth Naturiol Cymru / Natural Resources Wales about the above, which we received on 22nd March 2023.

We are commenting because we consider that the proposals are likely to give rise to significant effects.

We advise that the likely significant effects are assessed by the applicant, and we consider that they should be 'scoped in' to any future Environmental Statement (ES).

Ecology

We have reviewed the following report and drawings:

- TRECWN GREEN ENERGY HUB, Scoping Report, Ref No: 404.10585.00001, dated March 2023, Statkraft UK Limited
- Figure 1.1, Site Location, Trecwn Green Energy Hub, dated January 2023
- Figure 2.3, Environmental Designations, Trecwn Green Energy Hub, dated January 2023

- Figure 3.1, Proposed Development Locations, Trecwn Green Energy Hub, dated January 2023
- Figure 6.1, Landscape Designations, Trecwn Green Energy Hub, dated January 2023

Description of the Project

Within the ES, the proposed scheme should be described in detail in its entirety. This description should cover construction, operation and decommissioning phases as appropriate and include detailed, scaled maps and drawings as appropriate.

We would expect the description to include:

- The purpose and physical characteristics of the proposals;
- Location, development size and configuration of the development including flexibility of the site layout;
- Land use requirements and other physical features of the project;
- Procedures for good working practices;
- Identification of appropriate pollution contingency and emergency measures for watercourses on and adjacent to site;
- Timing of all works and contingency plans should slippage in the programme occur;
- Details of construction works including methodology, location and extent of construction sites, construction access/working corridors and stock piling sites;
- Maintenance requirements of structures;
- Maintenance of any habitats within the site;
- Artificial lighting requirements, including likely intensity and location of light spill on green infrastructure.

Any maps, drawings and illustrations that are produced to describe the project should be designed in such a way that they can be overlaid with drawings and illustrations produced for other sections of the ES, such as biodiversity.

Any habitat surveys should accord with the NCC Phase 1 survey guidelines (NCC (1990) Handbook for Phase 1 habitat survey. NCC, Peterborough). We advise that Phase 1 surveys are undertaken and completed during the summer to ensure the best chance of identifying the habitats present.

Protected Species

We note that from the Scoping Report that ecological surveys commenced in 2021. No survey results are submitted as part of the Scoping Report submitted. We advise that the site is subject to assessment to determine the likelihood of protected species being present and affected by the proposals, including the associated infrastructure works (e.g. cable routes, connections) and access roads (including creation and widening works). Targeted species surveys should be undertaken for all species scoped in which:

- are undertaken by qualified, experienced and where necessary, licensed ecologist(s) and,

- ii. comply with current best practice guidelines. In the event that the surveys deviate from published guidance, or there are good reasons for deviation, full justification for this should be included within the EIA.

Bats

The ES should assess the likely impacts of all elements of the proposals, including potential access and electricity cable routes, on bats and include suitable mitigation measures.

We welcome the proposals to undertake static bat monitoring at the wind turbine locations, with survey proposed during spring, summer and autumn of the bat active season, with a static detector positioned at each proposed turbine location. We advise surveys follow the joint agency guidance (*Bats and onshore wind turbines - survey, assessment and mitigation*) and that the online ECOBAT tool is used to present an analysis of the potential impact of the scheme on bats. The report should present which bats are at moderate and high risk of collision with the wind turbines, and the impacts on these per season and per turbine location, so that comparisons of bat use in different seasons, and at the different turbine locations can be made.

We note the indicative location of the turbines shown on Figure 3.1 “Proposed Development Locations”. At this stage it is not clear how the turbines would be sited in relation to linear features that may be used by bats. The joint agency guidance advises that a 50m buffer distance between turbine blade tip and nearest bat habitat features should be universally applied.

We welcome the proposals to undertake bat activity transect surveys at the green hydrogen facility area. We note that site lighting is proposed for the development, with Chapter 3 including a description of 12m high site lighting for the hydrogen facility (Table 3.1). Activity surveys should help to understand bat use and could aid in informing impacts of lighting on bats (see lighting subheading below).

We note survey will be undertaken for buildings. We advise all buildings that may be impacted by the development should be assessed for their potential to support roosting bats. The report states buildings found to have moderate and high potential will be subject to further surveys however, following best practice BCT guidelines, we advise further bat surveys are undertaken for all buildings with potential to support roosting bats.

We advise an assessment of all trees that may be impacted by the development is undertaken for their potential to support bat roosts, followed by further bat surveys, if required.

Otter and Water Vole

We note from the Scoping Report that the Applicant intends to survey for otter and water vole on watercourses within 200m of the green hydrogen facility area of the site. There are multiple records of otter and water vole in the wider vicinity of the site, and we advise impacts on these species should be considered for all aspects of the development site, including potential access and electricity cable routes. The ES should assess the likely impacts of the proposals on otter and water vole and include suitable mitigation measures if necessary, which could be provided in a species conservation plan.

It is difficult to concur at this stage that these species can be scoped out from the ES for certain areas of the development (e.g. wind and solar areas) based on the information provided. If the ES can demonstrate that these species are unlikely to be impacted in certain areas, they could be scoped out and full justification should be included the EIA.

Dormouse

The Scoping Report does not refer to dormouse. Whilst results of a habitat survey for the site have not yet been provided, the mapping indicates there is woodland and hedgerows on site that may have potential to support dormice, and there are records of dormouse in the county.

We advise the EIA should consider potential impacts of the proposals on dormice if the proposals will affect habitats that may be used by the species (for example hedgerows and woodland).

Great Crested Newt

We note that great crested newt is not referenced in the Scoping Report. Great Crested Newt is not known to be present in the vicinity of this development and so we would have no objection to this species being scoped-out of the EIA.

Lighting

We advise that impacts of lighting during construction and operational stages is considered as part of the EIA process for all areas of the development, with sensitive lighting proposals incorporated into the design process for bats, otter and dormouse where necessary. If impacts of lighting are scoped-out for areas of the development, justification should be included the EIA.

Please note that any changes to designs and plans between this consultation and future applications may affect the outcome of our advice.

Ornithology

It is noted that Section 7.3 of the Scoping Report refers to the appropriateness of a second year of ornithological baseline data collection. We agree that a second year of data collection would be necessary and welcome the approach taken.

We are unable to comment on ornithological matters scoped out (Section 7.4) until the second-year baseline survey data has been received and the full details of the surveys are reviewed.

Impact Assessment

Further surveys are proposed for European Protected Species for this proposal. Should protected species be found during the surveys, information must be provided identifying the species specific impacts in the short, medium and long term together with any mitigation and compensation measures proposed to offset the impacts identified.

Where proposals concern protected species which are also notified features of designated sites (e.g. SAC, SSSI), we advise that the EIA considers the impacts on those species from both perspectives.

We advise that the EIA sets out how the long-term site security of any mitigation or compensation will be assured, including management and monitoring information and long term financial and management responsibility. Where the potential for significant impacts on protected species is identified, we advocate that a Conservation Plan is prepared for the relevant species and included as an Annex to the EA.

EPS Licence

Where a European Protected Species is identified and the development proposal will contravene the legal protection they are afforded, a licence should be sought from NRW. Should a licence be identified as appropriate, the EIA should set out how the works will satisfy the three requirements as set out in the Conservation of Habitats and Species Regulations 2017. One of these requires that the development authorised will 'not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range'. These requirements are also translated into planning policy through Planning Policy Wales (PPW) December 2018, section 6.4.22 and 6.4.23 and Technical Advice Note (TAN) 5, Nature Conservation and Planning (September 2009). The local planning authority will take them into account when considering the EIA where a European Protected Species is present.

Local Biodiversity Interests

We recommend that the developer consults the local authority Ecologists on the scope of the work to ensure that regional and local biodiversity issues are adequately considered, particularly those habitats and species listed in the relevant Local Biodiversity Action Plan and that are considered important for the conservation of biological diversity in Wales.

NRW would expect the developer to contact other relevant people/organisations for biological information/records relevant to the site and its surrounds. These include the relevant Local Records Centre and any local ecological interest groups (Eg. bat groups, mammal groups).

Securing Biodiversity Enhancement

We also advise that, in accordance with the Environment (Wales) Act 2016 and Planning Policy Wales, the application demonstrates how it can deliver biodiversity enhancements and thus contribute to promoting ecological resilience. This is reaffirmed in the Welsh Government letter of 23/10/19 to all Chief Planning Officers.

Protected Sites

We note the site is within proximity to protected sites, including the Western Cleddau River Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI). The Nant Y Bugail flows through the site and is a tributary of this protected site. Therefore, any plans

or projects, alone or in combination with others, will be subject to an Appropriate Assessment under the Habitats Regulations.

It is acknowledged that the Scoping Report refers to the Nant Y Bugail, however its significance as part of the Western Cleddau River SAC and SSSI does not appear to have been adequately addressed. We therefore advise that the potential impacts onto the Nant Y Bugail/Western Cleddau River SAC at all stages of the proposal are scoped into the ES.

We advise that although the Scoping Report mentions the River Aer, the River Gwaun and the West Wales Marine SAC should also be scoped into any future ES. The West Wales Marine SAC should also be considered under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended).

Please note that the applicant will be required to carry out a Water Framework Directive (WFD) Assessment, as the scheme comprises a new activity with potential to impact the watercourses. This Assessment would need to consider all WFD water bodies, including surface waters and ground waters, for which there are potential interactions with the project, both during construction and operational phases.

We note the Scoping Report refers to the production of a Construction Environment Management Plan (CEMP), which is welcomed. We would request that a site-specific CEMP is produced and this should include the potential impacts from surface water run-off during construction.

Foul Drainage

We note the Trecwm Valley has a biological treatment plant which serves the existing site. Any permits associated with the plant will need to be reviewed at an early stage with our Environmental Permitting Team to ensure any increase in foul flows from the proposed development are considered. Applicants are encouraged to ensure they have all the required permissions, consents, permits and any other approvals in place prior to commencement of works on the site.

Notwithstanding, our records also show that the site is located within the catchment of the River Cleddau Special Area of Conservation (SAC). On the 21st January 2021, we published an evidence package outlining phosphorus levels for all river SACs across Wales. In line with our [Planning Advice](#) (July 2022), under the Habitats Regulations, Planning Authorities must consider the phosphorus impact of proposed developments on water quality within SAC river catchments. We therefore advise you to consider whether the proposals, as submitted, would increase the volume of foul discharge from the site in planning terms.

Any increased sewage flows from the proposed development will introduce additional phosphate into the catchment. Therefore, any proposal, unless it screens out from the need for an Appropriate Assessment, would be subject to a Habitats Regulations Assessment (HRA). The HRA would have to show how additional phosphate will be removed in order to remain phosphate neutral.

We advise that foul drainage and the potential for increase in sewage flows is scoped into the ES.

Ground Conditions

We consider that the risks associated with the water environment have been included to an appropriate level within the scoping report. However, it is a concern that land contamination has been scoped out at this stage. Our advice is that land contamination is scoped into the ES.

Based on some of the historic use alluded to as a naval base and previous use by the Ministry of Defence (MOD), NRW consider there to be a risk associated with land contamination associated with the site that would require addressing through the planning process. Please note that where identifying potential sources of contamination are concerned, commercially available material such as third-party data may be highly redacted and inaccurate when it comes to MOD land use. This sort of information therefore cannot be solely relied upon for an accurate understanding of the sites historic use. In order to establish and inform an accurate baseline we strongly recommend the applicant seeks specialist records and approaches the landowner for historic site records.

Flood Risk

Our Flood Risk Map confirms the site to be partially within Zone C2 of the Development Advice Map (DAM) contained in Technical Advice Note 15 (TAN15): Development and Flood Risk (20040). The Flood Map for Planning (FMfP) identifies the application site to be at risk of flooding and falls partially into Flood Zone 2 and 3 for Rivers.

The Scoping Report proposes the development of a Flood Risk Model for the Nant Y Bugail. This approach appears to be reasonable and will inform any detailed FCA.

Landscape and Visual Amenity

We have reviewed Section 6 of the Scoping Report 'Landscape and Visual' and consider the landscape character and visual impact and mitigation method outlined is thorough and in line with LVIA practice. It is agreed that the effects will be different for wind turbines, solar farm and the green hydrogen facility. The main impacts on the Pembrokeshire Coast National Park (PCNP) will be from the proposed turbines.

We welcome the assessment of all elements, including transformers, access track and substation, particularly as the track adjoins the PCNP. Given the scale of the proposal and the potential geographic extent of the impacts, there is a risk that localised impacts may not be adequately addressed or mitigated for, including CCTV and security fencing.

It is good to see that the detailed LVIA will be undertaken following a design optimisation process. It is important to stress that good design begins with sound decisions on location as it can be difficult and sometimes impossible to adequately mitigate adverse impacts that arise out of location. The size and height of turbines, and the orientation and spread of the array and the inclusion or exclusion of lighting are also potential mitigation options for the project.

The ZTV analysis for the cluster of three 149.5m high turbines shows the potential for visibility across a significant area of the PCNP, this is theoretical but based on topography and is more accurate where there is limited tree or building cover which are features of the PCNP.

The Report states a study area of 20km will be used which is the minimum study area in NRW GN46 for the height of turbine proposed and would exclude settlements such as St Davids which is shown within the ZTV. Given that negative impacts are very likely and potentially significant within the PCNP, the study area should be extended to the NRW GN46 maximum of 24km and include St Davids. If plans can show the ZTV in relation to the PCNP boundary that would be helpful.

Search and study areas for solar and the green hydrogen facility are in line with NRW GN46.

Viewpoints

Only 10 viewpoints have been used although the Report states these will be extended and acknowledges the need for additional viewpoints to the south and west towards St Davids and Haverforwest, the northern coast (including Dinas Head) and along the coast to the northwest, and closer to the site.

The Report states that agreed viewpoint photos will use computer generated wirelines and photomontages. The photomontages should be prepared in accordance with Visual Representation of Wind Farms (NatureScot, 2017) and Visual Representation of Development Proposals (TGN 06/19) (Landscape Institute, 2019). The proposal for consultation with PCC, PCNPA and NRW to agree the LVIA approach and viewpoints is welcomed.

The Report confirms a Residential Visual Amenity survey will be undertaken as part of the LVIA.

Glint and Glare is mentioned in the Report but only in relation to air traffic. We would advise that this can also be an impact for residents and should therefore be considered. We agree that Shadow Flicker should be scoped in, referred to in Chapter 17 of the Scoping Report under 'Other Issues'. A summary of any Glint and Glare and Shadow Flicker assessments should be incorporated into the LVIA residential visual amenity survey.

The Report states that as the turbines would not exceed 150m, visible aviation lights would not be required and therefore no night-time assessment will be undertaken for the turbines. If, for any reason, aviation lights are required, this would be an important change for the LVIA to incorporate.

The Scoping Report states that a 'Schedule of Mitigation' will be provided. We would advise that a plan to show indicative soft landscape mitigation should also be provided, ensuring that the geographic location and extent is clear.

Other Matters

Our comments above only relate specifically to matters included on our checklist, *Development Planning Advisory Service: Consultation Topics* (September 2018), which is published on our [website](https://www.naturalresourceswales.gov.uk). We have not considered potential effects on other matters and do not rule out the potential for the proposed development to affect other interests.

We advise the applicant that, in addition to planning permission, it is their responsibility to ensure they secure all other permits/consents/licences relevant to their development. Please refer to our [website](#) for further details.

Advice for the Developer

Land Contamination Informative

Please refer to Refer to '[Land Contamination: a guide for developers](#) (WLGA, 2017) for the type of information that we require in order to assess risks to controlled waters from the site. The Local Authority can advise on risk to other receptors, such as human health.

Please refer to our [groundwater protection](#) advice on www.gov.uk.

If you have any queries on the above, please do not hesitate to contact us.

Yn gywir / Yours faithfully

Eleanor Sullivan

Cynghorydd - Cynllunio Datblygu / Advisor - Development Planning
Cyfoeth Naturiol Cymru / Natural Resources Wales

Marloes Holtkamp
Planning Officer
PEDW

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Eich cyfeirnod
Your reference

DNS CAS-02171-X3W6Z0

Ein cyfeirnod
Our reference

Dyddiad
Date

2 May 2023

Llinell uniongyrchol
Direct line

Ebost
Email:

Cadwplanning@gov.wales

Dear Marloes

**Trecwn Green Energy Hub - EIA Scoping
The Valley, Trecwn, Pembrokeshire, SA62 5XX**

Thank you for your letter of 22 March 2023 regarding the above and apologies for the late response.

Cadw, as the Welsh Government's historic environment service, has assessed the characteristics of this proposed development and its location within the historic environment. In particular, the likely impact on designated or registered historic assets of national importance. In assessing if the likely impact of the development is significant Cadw has considered the extent to which the proposals affect those nationally important historic assets that form the historic environment, including scheduled ancient monuments, listed buildings, registered historic parks, gardens and landscapes.

These views are provided without prejudice to the Welsh Government's consideration of the matter, should it come before it formally for determination.

This advice is given in response to scoping opinion as to the contents of an Environmental Impact Assessment (EIA) that will be submitted in support of an application for the Trecwn Green Energy Hub.

Advice

The scoping request is accompanied by a scoping report produced by SLR, with Chapter 11 considering Cultural Heritage. In general, we are in agreement with the information contained in this chapter. However, we recommend that the impact of the proposed development on the setting of the designated heritage assets in Annex A (which are located inside 3km of the proposed development and in the developer's

ZTV) should be carried out in accordance with the Welsh Government guidance given in the document "The Setting of Historic Assets in Wales". We would expect a stage 1 assessment to be carried out for all the designated heritage assets in Annex A, which will determine the need, if necessary, for stages 2 to 4 to be carried out for specific heritage assets. The results of the stage 1 assessment should be provided with the EIA, possibly as an appendix.

The ZTV indicates that the turbines may be visible from the registered Newport and Carningli landscape of outstanding historic interest. Whilst the impact of a development on a historic landscape can be assessed using the ASIDOHL methodology, in this case it would be more appropriate for the impact of the proposed development on this historic landscape to be assessed using the methodology given in "The Setting of Historic Assets in Wales".

An archaeological desk-based assessment may not provide sufficient information for the significance of the archaeological resource to be determined, especially in regard to currently undesignated archaeological features. There may therefore be a need for geophysical survey and archaeological evaluation to be completed to determine the extent and significance of the archaeological resource in the application area before the EIA can be finalised. The archaeological advisors to Pembrokeshire CC are The Dyfed Archaeological Trust, and they should be consulted in regard to the requirements for geophysical survey and archaeological evaluation.

Yours sincerely

Jenna Arnold

Diogelu a Pholisi/ Protection and Policy

Annex A

Within a 5km developer ZTV

PE082 Round Barrow on Jordanson Hill
PE138 Castell Pant-y-Phillip
PE139 Caer Penbicas
PE145 Inscribed Stone at Llangwarran Farm
PE231 Bucket Camp
PE259 Ffynnon- Druidion Standing Stone
PE293 Mynydd Cilciffeth Round Barrows
PE417 Iron Age/ Romano-British Settlement & Field Systems on Fagwr-Fran Moor
PE025 Colston Burial Chamber
PE044 Trefflys Burial Chamber
PE045 Rhos y Clegyrn Circle & Standing Stone
PE081 Castell Hendre-Wen
PE082 Round Barrow on Jordanson Hill
PE126 Parc-y-Meirw Standing Stones
PE138 Castell Pant-y-Phillip
PE139 Caer Penbicas
PE140 Waun-Castell Camp
PE141 Castell Cwm-Wyntyll
PE145 Inscribed Stone at Llangwarran Farm
PE152 Inscribed Stone in Churchyard
PE200 Ty-Meini Standing Stone
PE228 Two Pillar-Crosses in Churchyard, Llanllawer
PE229 Holy Well
PE230 Pillar Cross in Churchyard
PE232 Castell Mael
PE237 Wern Camp
PE238 Castell Mound
PE239 Castell y Fwch
PE253 Sealyham Rocks Camp
PE255 Sealyham Quarries Camp
PE259 Ffynnon- Druidion Standing Stone
PE293 Mynydd Cilciffeth Round Barrows
PE296 St Lawrence Camp
PE297 Ty-Newydd-Grug Standing Stone
PE312 Glyn Gath Round Barrow
PE340 Fagwr-Fran Standing Stone
PE341 Marsh Round Barrow
PE349 Cronllwyn Earthwork
PE355 Lower Broad Moor Standing Stone
PE360 Huts on Mynydd Melyn
PE361 Bedd Morris Standing Stone
PE417 Iron Age/ Romano-British Settlement & Field Systems on Fagwr-Fran M or
PE485 Inscribed Stone 130m E of Penwaun
PE505 Trellwyn Fawr, Standing Stone 60m WSW of
PE506 Trellwyn Fach, Standing Stone 100m NW of

PE512 Standing Stone 450m SSE of Lower Broadmoor Farm
 PE513 Carreg Quoitan Standing Stone
 PE514 Parc Maen Llwyd Standing Stone
 PE516 Mynydd Castlebythe Round Barrows
 PE517 Mynydd Castlebythe Ring Barrow
 PE550 Defended Enclosure 300m SE of Pentre
 PE568 Carn Sefyll Deserted Settlement (proposed scheduling)

Registered Parks and Gardens:

PGW(Dy)22(PEM) Plas Glyn-y-Mel
 PGW(Dy)64(PEM) Manorowen

Registered Historic Landscape:

HLW (D) 15 Newport and Carningli

Listed Buildings:

12961	Priskilly Forest	II
12962	Former Coach-House & Stable at Priskilly Forest	II
13029	Manorowen	II
13049	Llanstinian Bridge (partly in Trecwn)	II
13055	Silo Tower at Llangwarren Farm	II
15194	Capel Sion	II
15198	Llangwarren Bridge (partly in Letterston Community)	II
15876	Barham Memorial School	II
15877	Old School House at Barham Memorial School	II
22761	Saron Baptist Chapel	II
24977	Pont Llangwarren (partly in Scleddau Community)	II
26717	Ciliauwen	II
26718	Range NW side of farmyard at Ciliauwen	II
26719	Outbuilding SE side of farmyard at Ciliauwen	II
26720	Ciliauwen Lodge	II
26721	Gatepiers, walls and gates at Ciliauwen Lodge	II
12011	Church of Saint Dogfael	II*
12012	Stone Hall	II
12261	,7,Hamilton Street,Fishguard,Fishguard,DYFED,SA65 9HL ,11,Hamilton Street including area	II
12262	railings,Fishguard,Fishguard,DYFED,SA65 9HL	II
12265	Sycamore Lodge	II
12266	Premises occupied by The Dragon House	II
12269	,5,High Street,Fishguard,Fishguard,DYFED,SA65 9AN	II
12270	,11,High Street,Fishguard,Fishguard,DYFED,SA65 9AN	II
12271	Cartref Hotel	II
12272	,21,High Street,Fishguard,Fishguard,DYFED,SA65 9AW	II
12273	Hermon Baptist Church including forecourt walls and steps	II*
12274	Mileplate in forecourt wall of Hermon Chapel	II
12275	Cottage occupied by St John's Fishguard Nursing Division	II
12276	Bank House	II
12278	Mount Pleasant	II
12279	,43,High Street,Fishguard,Fishguard,DYFED,SA65 9AW	II
12280	Nevern House ,61,High Street, including forecourt	II
12281	railing,Fishguard,Fishguard,DYFED,SA65 9AW	II
12283	,12,High Street,Fishguard,Fishguard,DYFED,SA65 9AR	II
12284	,14,High Street,Fishguard,Fishguard,DYFED,SA65 9AR	II
12287	Llys Mair	II
12288	,1,Hill Terrace,Fishguard,Fishguard,DYFED,SA65 9LU	II

12289	,2,Hill Terrace,Fishguard,Fishguard,DYFED,SA65 9LU	II
12290	,4,Hill Terrace,Fishguard,,DYFED,SA65 9LU	II
12291	,1,Hottipass Street,Fishguard,Fishguard,DYFED,SA65 9LJ	II
12292	Bodlondeb	II
12294	Kensington House	II
	,17,Kensington Street,Fishguard,Fishguard,DYFED,SA65	
12295	9LH	II
	,12,Kensington Street,Fishguard,Fishguard,DYFED,SA65	
12296	9LB	II
12297	,16/18,Kensington St,Fishguard,,DYFED,SA65 9LB	II
12299	Parish Church of St Mary	II
12300	Inscribed stone in St Mary's Churchyard	II
12301	Railings to churchyard of Church of St Mary	II
12302	,1,Main Street,Fishguard,Fishguard,DYFED,SA65 9HG	II
12303	,3,Main Street,Fishguard,Fishguard,DYFED,SA65 9HG	II
12304	,5,Main Street,Fishguard,Fishguard,DYFED,SA65 9HG	II
12306	Sally Port	II
12307	Manor House Hotel	II
12308	Elim Lodge	II
12309	Ty Rhos	II
12310	Sail Cottage	II
12311	,16,Main Street,Fishguard,Fishguard,DYFED,SA65 9HJ	II
12312	,22,Main Street,Fishguard,Fishguard,DYFED,SA65 9HJ	II
12313	The Globe Inn	II
12314	Black Fox Bar	II
12316	The Town Hall	II
12317	The Farmer's Arms	II
	Nos 15 and 16,,Market	
12318	Square,Fishguard,Fishguard,DYFED,SA65 9HA	II
	Nos 17 and 18,,Market	
12319	Square,Fishguard,Fishguard,DYFED,SA65 9HA	II
	,20,Market Square, including Boots the	
12320	Chemists.,Fishguard,Fishguard,DYFED,SA65 9HA	II
12321	The Royal Oak	II
12332	Former store building	II
12333	Tabernacle Independent Chapel	II
12334	Walter Brearley House	II
12335	,2,Park Street,Fishguard,Fishguard,DYFED,SA65 9HN	II
12336	,4,Park Street,Fishguard,Fishguard,DYFED,SA65 9HN	II
12337	Greenwood House	II
12338	Park House	II
	,1,The Slade, including front garden walls &	
12354	gates,Fishguard,Fishguard,DYFED,SA65 9PE	II
12356	The Monthly Tutor's Cottage	II
12360	Hill House	II
12361	Tower House	II
12362	Talarfor	II
12363	Court House, front railings and gatepiers to right	II
12364	Ardwyn and railings to front	II
12365	Capel Pentour, including forecourt railings and gates	II
12366	Prospect House	II
12369	,5,West Street,Fishguard,Fishguard,DYFED,SA65 9AE	II
12370	The Old Post Office	II
12373	Victoria Wine	II
12374	,39,West Street,Fishguard,,DYFED,SA 65 9AD	II
12379	Seaways Bookshop	II
12380	,14,West Street,Fishguard,Fishguard,DYFED,SA65 9AE	II

12956	Pencnwc	II
12957	Former Mill in Outbuildings to N.of Pencnwc	II
12958	Penfeidr	II
12961	Priskilly Forest	II
12962	Former Coach-House & Stable at Priskilly Forest	II
	Outbuilding at N.End of E.Farmyard range at Llangloffan	
12977	Farm Llangloffan	II
12978	Llangloffan Baptist Chapel	II
12979	Pont Llangloffan (partly in Mathry Community)	II
13029	Manorowen	II
13049	Llanstinian Bridge (partly in Trecwn)	II
13055	Silo Tower at Llangwarren Farm	II
	Court / Cwrt including screen wall and outside kitchen to	
13067	service court	II*
13068	Coach-house at Court / Cwrt	II
13069	Farmyard building to E of main range at Court / Cwrt	II
	,32,Main Street, including area	
13072	railings.,Fishguard,Fishguard,DYFED,SA65 9HJ	II
13073	Vincent House	II
14944	Llwynhendy	II
14945	Hafod Llwyd	II
14951	Former Farmhouse at Castell Farmyard	II
15194	Capel Sion	II
15195	Jordanston Hall	II
15197	St Cawrda Church	II
15198	Llangwarren Bridge (partly in Letterston Community)	II
15199	Walled Garden at Manorowen	II
15200	Gazebo in walled garden at Manorowen	II
15201	Home Farm Buildings, Manorwen north range.	II
15202	Home Farm Buildings, Manorwen East range	II
15203	Home Farm Buildings Manorwen South Range	II
15204	Home Farm Buildings	II
15206	Tre-Llewelyn	II
15876	Barham Memorial School	II
15877	Old School House at Barham Memorial School	II
20521	Long Hook Fawr Farmhouse	II
24397	Boundary stone at Garn Turne	II
24977	Pont Llangwarren (partly in Scleddau Community)	II
25609	Church of Saint Lawrence	II
25610	Saint Lawrence House	II
25611	Ty Rhos	II
25867	Ty Newydd	II
25868	White Hart	II
26026	,52,High Street,Fishguard,Fishguard,,SA65 9AR	II
26028	,3,Hottipass Street,Fishguard,Fishguard,,SA65 9LJ	II
26030	Emscote	II
	,2,The Slade, including front garden walls &	
26038	gates,Fishguard,Fishguard,,SA65 9PE	II
26040	Bryn Haulwen	II
26041	Moonstone	II
26042	,8,Hill Terrace,Fishguard,Fishguard,,SA65 9LU	II
26043	,30a,Main Street,Fishguard,Fishguard,,SA65 9HJ	II
26044	The Fishguard Arms	II
26045	,26,Main Street,Fishguard,Fishguard,,SA65 9HJ	II
26046	,18,Main Street,Fishguard,Fishguard,,SA65 9HJ	II
26047	,20,Main Street,Fishguard,Fishguard,,SA65 9HJ	II
26048	,16,High Street,Fishguard,Fishguard,,SA65 9AR	II

26049	Llys-Teg	II
26050	,47,High Street,Fishguard,Fishguard,,SA65 9AW	II
26051	Old Pump House	II
26053	,21a,High Street,Fishguard,Fishguard,,SA65 9AW	II
26054	,11a,High Street,Fishguard,Fishguard,,SA65 9AN	II
26055	,13,High Street,Fishguard,Fishguard,,SA65 9AN	II
26056	,7,High Street,Fishguard,Fishguard,,SA65 9AN	II
26057	,9,High Street,Fishguard,Fishguard,,SA65 9AN	II
26059	,9,Hamilton Street,Fishguard,Fishguard,,SA65 9HL	II
	,13,Hamilton Street including area	
26060	railings,Fishguard,Fishguard,,SA65 9HL	II
26064	,3,Hamilton Street,Fishguard,Fishguard,,SA65 9HL	II
26065	,5,Hamilton Street,Fishguard,Fishguard,,SA65 9HL	II
26069	,5,Hill Terrace,Fishguard,Fishguard,,SA65 9LU	II
26072	,16,West Street,Fishguard,Fishguard,,SA65 9AE	II
26073	Ty Twt	II
26074	,37,West Street,Fishguard,Fishguard,,SA65 9AD	II
26075	,41,West Street,Fishguard,Fishguard,,SA65 9AD	II
26076	Halifax Building Society	II
26078	Bennett's Navy Tavern	II
	,7,Main Street including area	
26081	railings,Fishguard,Fishguard,,SA65 9HG	II
26717	Ciliauwen	II
26718	Range NW side of farmyard at Ciliauwen	II
26719	Outbuilding SE side of farmyard at Ciliauwen	II
26720	Ciliauwen Lodge	II
26721	Gatepiers, walls and gates at Ciliauwen Lodge	II
26803	Holy Well	II
26804	Boundary Stone	II
26805	Pont Llanychaer	II
26806	Y Garn	II
26807	Mill building in farmyard at Court / Cwrt	II
26808	Cowhouse and stable range at Court / Cwrt	II
26810	The Old Vicarage	II
26814	Tredafydd Uchaf	II
26816	Llethr	II
26840	Saint Dogwells Farm	II
87809	Church of St David	II

Our Ref: NP/23/0157/SCO

04 May 2023

Ms Marloes Holtkamp
Planning Officer
Planning and Environment Decisions
Wales
Welsh Government

By email only
PEDW.Infrastructure@gov.wales

Dear Mr Holtkamp

Town and Country Planning Act 1990
The Developments of National Significance (Procedure) (Wales) Order 2016
Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017

Potential DNS Application: Trecwn Green Energy Hub

PROPOSAL: Green energy hub comprising a green hydrogen electrolyser powered by wind and solar energy (approximately 30MW installed generation capacity)

LOCATION: The Valley, Trecwn, Pembrokeshire, SA62 5XX

Thank you for providing a requisite notice to us under regulation 33(7) of the 2017 regulations. We received a copy of your proposed application on 22nd March 2023.

In accordance with The Developments of National Significance (Wales) Regulations 2016 (as amended), please accept this correspondence as the Pembrokeshire Coast National Park Authority (PCNPA) response which focusses on the scope and methodology for any DNS application and the purposes of the Regulations.

Project Description

The Scoping Report (SR), dated March 2023, confirms that the proposed development would consist of the following components:

- 15 MW rated green hydrogen facility, covering an area of up to approximately 2 hectares (ha), and comprising electrolyser, storage and associated infrastructure;



**Awdurdod
Parc Cenedlaethol
Arfordir Penfro**

Parc Llanion, Doc Penfro
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Rydym yn croesawu cael
gohebiaeth yn Gymraeg, a
byddwn yn ateb gohebiaeth yn
Gymraeg. Na fydd gohebu yn
Gymraeg yn arwain at oedi.

We welcome receiving
correspondence in Welsh, and will
respond to any correspondence in
Welsh. Corresponding in Welsh
will not lead to delay.

- Approximately 15MW of solar panels, covering an initial search area of approximately 47 ha and comprising inverters and arrays;
- 3 wind turbines up to 149.9m to tip, each with a power rating of up to 4.8MW per turbine and associated crane hardstandings adjacent to each turbine;
- external transformers located on a concrete plinth at the base of the turbine;
- new on-site access tracks with associated watercourse crossings (if required) and widening/improvement works to existing on-site access tracks;
- power cables laid in trenches underground (or overhead where required for environmental mitigation);
- underground pipes to transport water from the existing onsite reservoirs to the green hydrogen facility;
- control building and private electrical network management systems; and
- temporary site construction compounds and associated infrastructure.

It is noted that the proposed green hydrogen facility location is not finalised at present and two possible locations have been identified within the associated documentation.

Landscape

The PCNP comments set out below relate to the landscape and visual impacts on landscape character, special qualities and visual amenity and are based on the documentation submitted.

Response to the Landscape and Visual Impact Assessment

The site lies on the southeast of Fishguard within the planning jurisdiction of Pembrokeshire County Council. The National Park boundary surrounds the site and lies approximately 1.5km to the northeast, and 3km to the southeast which are the nearest points to the site. The boundary is 7.5km to the northwest and 11.3km to the southwest.

The extent of the study area for assessment of the landscape and visual effects

The Zone of Theoretical Visibility maps show ZTVs for up to 40km in Figure 6.3a and 20km in Figure 6.3b. The scoping report suggests that a detailed study area of 20km would include all the landscape and visual receptors where significant effects are considered likely. It also states that this is shown on Figure 6.1. However, Figure 6.1 shows the Landscape Designations within a maximum 40km buffer.

The Zone of Theoretical Visibility (Figures 6.3a and 6.3b) shows that the proposed turbines are likely to be visible from a number of locations within the National Park both within the 40km wider area and the 20km detailed study area. However, Figure 6.3b shows that all proposed viewpoints are located within 10km of the proposed turbines. It is considered that additional viewpoints within the 20km detailed study area, and a number of particularly sensitive locations within the 40km study area, are needed to properly assess the landscape and visual impacts of the proposed turbine development. With wind turbines of this scale and elevation there may also be a need to present clear additional ZTVs on more detailed map bases (1:50,000 or 1:25,000) to underpin assessment of the cumulative effects in areas close to the proposed development within 5-10km. An additional ZTV with ground cover should also be provided.

The Pembrokeshire Coast National Park boundary should be clearly identified on the ZTVs.

Designations and Constraints

The Landscape Designation map shows the relevant designations in the overall study area. Detailed maps using a 1:50,000 or 1:25,000 map base should be provided for the detailed study areas, all of which should show the Pembrokeshire Coast National Park.

Viewpoints

The Scoping Report suggests a total of 10 viewpoints, all of which are within 10km of the proposed wind turbines. As discussed above, the ZTV clearly shows a number of locations within the National Park from which the wind turbines are likely to be visible. We therefore have concerns that the viewpoints included in the Scoping Report will not accurately assess the potential landscape and visual impacts of the proposed turbines. The table below suggests a number of additional viewpoints in the National Park. Viewpoints (VP) 1-10 are those suggested in the Scoping Report. Additional viewpoints are numbered 11-20. Locations within the National Park are marked *

View Point	Name	Eastings	Northings	Landscape Character Areas (LCA)
1*	Garn Fawr, Mynydd Dinas	200828	236853	LCA 22: Mynydd Carningli
2*	Cerrig Lladron	206549	232056	LCA 27: Mynydd Preseli
3	Fagwyr – fran standing stone	200719	231615	
4*	Mynydd Castlebythe	202860	229640	LCA 27: Mynydd Preseli
5	Letterston	194423	229857	
6	Llangloffan Cross	190512	232921	
7	Pen Pwyllmelyn Fishguard	195539	235771	
8*	Garn Fawr, Trefasser	189589	238860	LCA 21: Pen Caer / Strumble Head
9*	Garnwnda Burial Chamber	193244	239049	LCA 21: Pen Caer / Strumble Head
10*	A487 Tynewydd	197284	237418	LCA 24: Dinas Head
11*	Rocket Cart House	187844	201317	LCA 7: Angle Peninsula

12*	Hook	196805	211605	LCA 28: Daugleddau
13*	Druidston	186192	216368	LCA 12: St Brides Bay
14*	South of Lochvane	182142	223309	LCA 12: St Brides Bay
15*	The Green Caerfarchell	179499	226986	LCA 15: Dowrog and Tretio Commons
16*	Footpath NE Carn Llidi	173903	228386	LCA 16: Carn Llidi
17*	Dinas Head Coast Path	20557	241152	LCA 24: Dinas Head
18*	North of Gelli Fawr	206163	234714	LCA 26: Cwm Gwaun
19*	Summit Foel Cwmcerwyn	209396	231143	LCA 27: Mynydd Preseli
20*	Castell Coch	187649	234555	LCA 20: Trefin

Viewpoints should be shown on a detailed map base of 1:25,000. It is suggested that the viewpoints are visited in succession from northeast to northwest in the following order: 7, 10, 17, 1, 18, 2, 19, 4, 3, 5, 12, 11, 13, 14, 15, 16, 6, 20, 8 and 9. At each viewpoint, account should be taken of the types and sensitivity of the likely receptors of the potential visual effects.

Viewpoint Baseline photographs and photomontages of proposed development

These should be provided as an A3 single frame in line with the guidance in the Landscape Institute's Technical Guidance Note 06/19: Visual Representation of development proposals.

Landscape Character Areas / Seascape Character Areas

The scoping report states that the PCNPA Landscape Character Areas and Seascape Character Areas overlap along the coastline. It is proposed that LCAs will be used as definitive character area for the assessment of effects on land, with the SCAs used for the offshore element. The scoping report has identified relevant PCNPA LCAs as follows:

- LCA 21: Pen Caer / Strumble Head
- LCA 20: Trefin
- LCA 22: Mynydd Carningli
- LCA 26: Cwm Gwaun
- LCA 27: Mynydd Preseli

In addition, the Landscape and Visual Impact Assessment should consider the potential for landscape and visual effects from:

- LCA 7: Angle

- LCA 12: St. Brides Bay
- LCA 15: Dowrog and Tretio Commons
- LCA 16: Carn Llidi
- LCA 24: Dinas Head

Please note that Figure 6.7 incorrectly identifies LCA 18 as Saundersfoot Settled Coast. This should be St. Davids Headland. There is a typo in Saundersfoot (LCA 1).

Given the proposed height and elevation of the three turbines, it is considered that there are likely to be visual impacts in a number of the Pembrokeshire Coast National Park Seascape Character Areas. Seascape Visual Impact Assessments should be carried out in the following Seascape Character Areas:

- SCA 6: Fishguard Bay East
- SCA 7: Fishguard and Goodwick
- SCA 8: North Open Sea
- SCA 14: Western Sand and Gravel Bar
- SCA 24: St Brides Bay
- SCA 25: Skomer Island and Marloes Peninsula
- SCA 28: West Open Sea

Landscape and Visual Impact Assessment Methodology / Seascape Visual Impact Methodology

The LVIA should follow the guidelines set out in the Guidelines for Landscape and Visual Impact Assessment, Third edition (GLVIA3).

Landscape Effects

The methodology should clearly set out how Landscape effects are to be assessed, including the approach to using landscape information and defining units for assessment, how landscape value and landscape susceptibility is to be assessed, levels and definitions for landscape sensitivity, how magnitude of effect is to be assessed, levels and definitions for magnitude of effect and how sensitivity and magnitude of effect are combined to arrive at significance.

Visual Effects

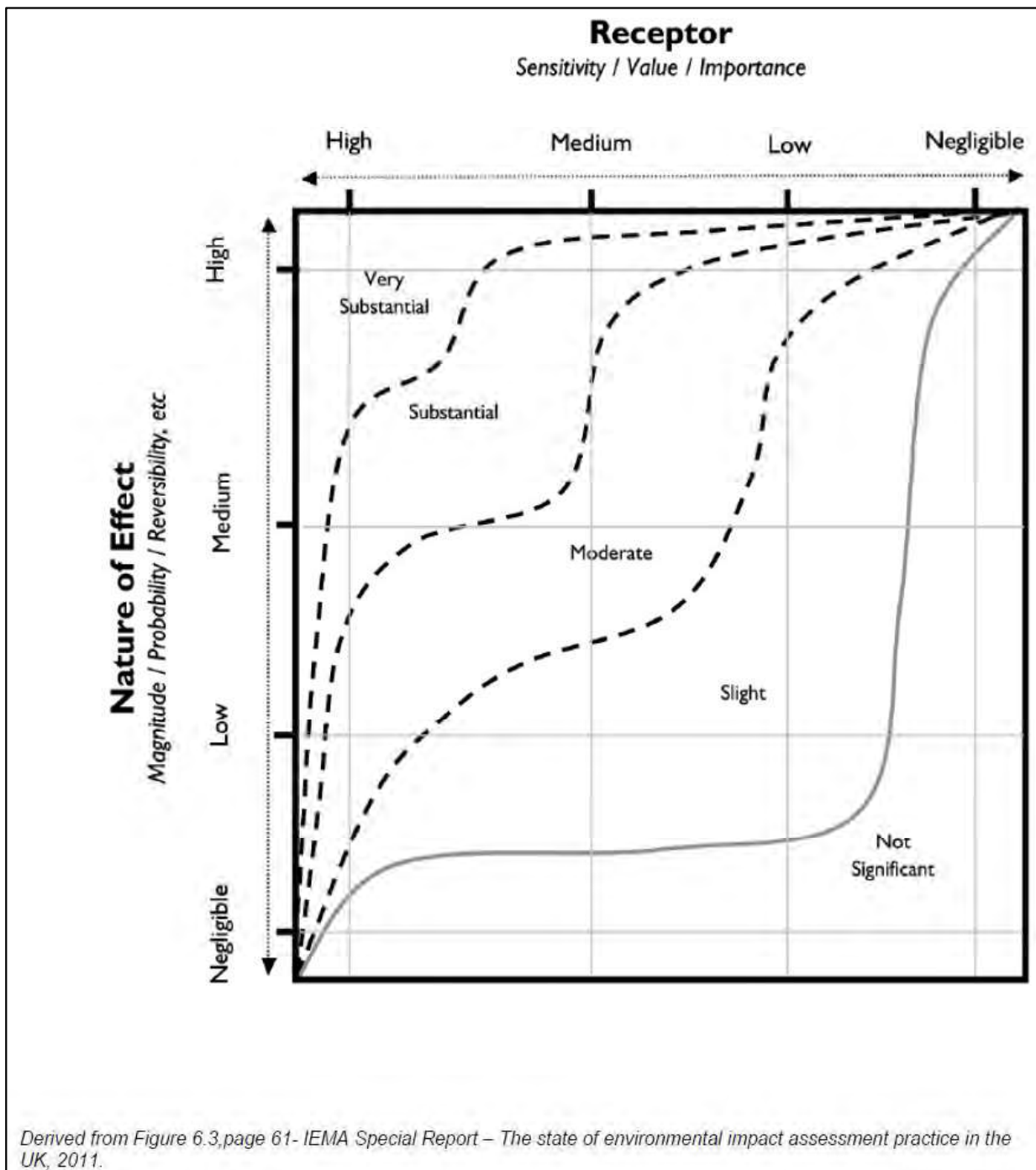
The methodology should clearly set out the selection of viewpoints (please see earlier section for suggested additional viewpoints), visualisations, including the approach, type, number and location, how visual susceptibility is to be assessed, assessment of viewpoint value, levels and definitions for receptor sensitivity, how magnitude of effect will be assessed, levels and definitions for magnitude of effect, how sensitivity and magnitude of effect are combined to arrive at significance and the thresholds and definitions of significance.

Cumulative Effects

The methodology for the assessment of cumulative effects should clearly set out the study area, the baseline used, which turbines are to be included as part of the assessment, the approach to combined effects for landscape and visual and the approach to additional effects for landscape and visual. Currently Figure 6.9 does not show all operational turbines within the proposed study area.

The Pembrokeshire Coast National Park Authority would advise that 5 levels of effect are used for each category in order to duly reflect the complexity and range of effects. Significance will be reviewed by the Authority using Figure 6.3 (page 61) of IEMA Special

Report – The state of environmental impact assessment practice in the UK, 2011 as shown on the next page:



Effects on Pembrokeshire Coast National Park Special Qualities

The special qualities of the National Park are those characteristics and features of the National Park which individually or in combination contribute to making this National Park unique. In this National Park they are identified as being:

- Coastal Splendour
- Diverse geology
- Diversity of landscape
- Distinctive settlement character
- Rich historic environment
- Richness of habitats and biodiversity

- Accessibility
- Space to breathe
- Remoteness, tranquillity, and wildness
- The diversity of experienced and combination of individual qualities.

For each special quality, an assessment should be carried out as below:

Special Quality:	
Likely changes caused by proposed development	
Are effects beneficial, neutral, or adverse and reasoned justification	
Duration of effect	
Are changes important? Do they conserve, enhance, or harm the special quality?	

The above assessment should be brought together with the Landscape and Visual effects on the National Park to establish the potential level of harm to the main National Park purpose.

Ecology

Whilst The ecology & Ornithology chapters of the submitted EIA Scoping report are welcomed the following comments are made:

ES Scoping Advice

- The ES must include the results of all required surveys and an assessment of the effect of the development on the species/habitats/sites and recommendations for mitigation and enhancement.
- Ecological Impact Assessment (EclA) is an iterative process, scoping is an ongoing process - the initially proposed scope of the EclA may be modified following further ecological survey/research and during impact assessment.
- Surveys, assessments, and the ES are also required to be carried out in line with the British Standards for Biodiversity: Code of Practice for Planning and Development (BS42020:2013) and other relevant species and survey best practice guidelines. All surveys will be required to be carried out by a suitably qualified ecologist within the appropriate season and to appropriate survey standards and methodology.
- The EclA must:
 - cover the construction, operation maintenance, closure and decommissioning stages of any project.
 - determine the importance of ecological features affected, through survey and/or research.
 - assess impacts potentially affecting important features.
 - characterise the impacts by describing their extent, magnitude, duration, reversibility, timing, and frequency.

- identify cumulative impacts; and identify significant effects of impacts in the absence of any mitigation.
- consider alternative location(s) or layouts for the proposed development.
- identify mitigation measures and explain their likely success.
- identify opportunities for enhancement.
- design and agree a monitoring strategy and monitoring of mitigation performance.
- provide sufficient information for mitigation measures to be implemented effectively.
- produce a clear summary of the residual impacts and the significance of their effects following incorporation of avoidance and mitigation measures.
- consider the implications of significant effects on the features of interest in accordance with planning policies and legislation.

Environmental (Impact) Statement) must clearly set out all the ecological information necessary for a robust decision to be made. Key aspects include a description of the following:

- ecological baseline and trends if the project were not to go ahead.
- criteria used to evaluate ecological features.
- criteria used to assess the significance of impacts of the project.
- justification of methods used.
- the identification of likely impacts (positive and negative) on ecological features together with an explanation of the significance of their effects.
- mitigation, compensation, and enhancement measures.
- legal and policy consequences.
- a note of any key data that were unavailable or missing and
- a presentation of any analytical techniques used and the analysis itself.

THE ES MUST INCLUDE:

Desk Study

Any ES must document that a thorough ecological desk study has been undertaken to fully inform the application, this should include data from the Local Records Centre.

Ecological Impact – Habitats and Species

The ES must provide sufficient information to identify any nature conservation features (habitats/species) that are likely to be affected by the proposals and identify potential options for mitigation and enhancement. The impacts on any species protected under legislation (see below) must be considered and any species or habitat listed under the Carmarthenshire LBAP, UK BAP, or identified on the Section 7 list of the Environment Act (Wales) 2016 must also be considered. Surveys must be carried out by a qualified ecological surveyor. The ES must identify the potential of the habitats on site to be used by protected species.

The ES must include a **Phase I habitat survey**, to identify the quality and extent of the habitats present. Detailed habitat assessment should only be carried out between the months of April to September only. The habitat survey should also identify the presence of any invasive species. Habitats identified on site including the Woodland and any semi natural grasslands must in this instance also be subject to **NVC phase II surveys**.

Reptiles

Common species of reptiles may be present within suitable habitats. These are protected by legislation. The site should be assessed for its potential to support reptiles within the ES. Surveys for reptiles should be undertaken if suitable habitat is to be removed. These assessments should inform a code of construction practice for the proposed works with regard to reptiles.

Badgers

Badgers and their setts are protected under The Protection of Badgers Act 1992. Activity within 30 metres of a sett may require a licence. A site may contain badger setts, it is recommended that any site and where possible surrounding land within 30m be surveyed for badgers and the results presented in the ES.

Birds

The application must make an assessment of the bird populations currently using the application area in the form of a breeding bird survey and the impact of the development on these, in terms of loss of habitat, displacement and collision risk, results of this assessment must be reported in the ES. The recommendations for breeding birds, flight and raptor surveys are all welcomed.

Dormice

An assessment of the hedgerows/scrub/woodland for their potential to support dormouse must be undertaken and reported in the ES. Dormice are protected under European and UK legislation. If habitats are found suitable, the protection and enhancement of the hedges/scrub for this species must be included as part of any scheme and if their habitat is to be affected then a full survey will be required. Dormice are protected under European and UK legislation. Their presence is a material consideration when a local planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat.

Bats

All British bats are protected under European and UK legislation. Their presence is a material consideration when a local planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat. An assessment of any trees for their potential for bat use should be carried out and a full bat survey of any trees assessed to have bat potential should be conducted if these will be impacted upon and reported in the ES. Impacts of removal of vegetation on foraging and commuting must also be considered. Impacts from turbine collision must also be assessed and surveys must be undertaken in accordance with the Nature Scot 'Bats and Onshore Wind Turbines'

Butterflies

There are records of Grizzled skipper and Dingy skipper butterflies within 500m of the centre of the site. It is therefore recommended that contact is made with butterfly conservation and an appropriate level of survey effort agreed and undertaken. The results of the surveys should inform any biodiversity enhancement scheme.

Lower Plant / Lichen Assemblage

Within 5km of the North Pembrokeshire Woodlands Special Area of Conservation, which is designated in part for the lower plant/lichen assemblage. If any woodland is to be removed, then lower plant surveys will be necessary.

Otters

There are several watercourses on the site and within close proximity of the site and otter records within 1.5km. If any watercourses are to be changed or disturbed during construction or operation a full survey for otter must be undertaken. Otters are a European Protected Species, and their presence is a material consideration.

Pine Marten

There is habitat within the red line boundary that is suitable for Pine Marten. There have been records over a number of years of pine marten being spotted within the woods and Trecwn, and although these sightings have not been confirmed, it is possible that they are present. Due to the level of disturbance the proposed works is likely to result in pine martin surveys must therefore be undertaken. Pine marten are protected in the UK under the Wildlife and Countryside Act, 1981 as well as being a Section 7 species of principle importance under the Environment (Wales) Act 2016.

Grassland Fungi

The grasslands surrounding the woodland and within the red line boundary identified as possible areas for solar and wind are known to have an assemblage of grassland fungi. A survey must therefore be undertaken in order to establish whether or not the assemblage present would qualify as being of Section 7 principle importance.

Biodiversity Enhancement

A scheme must also be submitted in the form of a Landscape and Ecological Management Plan. The scheme must be informed by the results of the survey work for all of the above species and secure appropriate enhancements (above any mitigation which may be required). The scheme must be proportionate to the scale of the development.

Nutrient Neutrality

The application site is within the catchment of the Cleddau River SAC and any application must therefore demonstrate nutrient neutrality. The latest NRW advice states: *There may be cases where planning applications for new commercial or industrial developments, such as conference facilities, large retail sites or major tourist attractions could result in the release of additional phosphorus into the river system. In such cases, further assessment is likely to be required to determine if the proposal will have an adverse effect on the integrity of the river SAC.* Any application must therefore clearly identify the source and quantity of foul flows and if necessary, an appropriate mitigation scheme proposed.

ZONES OF INFLUENCE

- Activities associated with the construction, operation (best and worst-case operating conditions), decommissioning and restoration phases must be separately identified in any ES.
- All ecological features occurring within the area to be worked that will be affected by changes in land cover caused by topsoil stripping and excavation must be addressed in the ES.
- Blasting, noise, dust and changes in human activity will also affect species in adjacent habitats, these impacts must be addressed in the ES.
- If the proposed activities involve major, long-term dewatering operations, there could be consequences for water-dependent habitats and species, It is not possible to determine the zone of influence of dewatering without undertaking hydrological/hydrogeological modelling. The zone of influence should include all

water-dependent features and habitats, and any such impacts must be considered in the ES.

- If the site requires new infrastructure (e.g. roads, power supply or wastewater disposal) there could be significant consequences for ecological features beyond the boundaries of the site in addition to those affected by dewatering.
- The zone of influence should be regularly reviewed and amended as the project evolves. If inadequate information is available to properly define the zone of influence, this should be acknowledged, and a precautionary approach adopted.
- Determining the significance of effects is explained in Chapter 5 of the ***CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, and Coastal, 2nd edition***. Chartered Institute of Ecology and Environmental Management, Winchester. Any ES preparation and assessment must adopt these guidelines.

Heritage Assets

Where the development as proposed is over 100 metres high and within 5km of a SAM, Cadw consultation is needed. It would therefore be consistent to retain a 5km range at least in terms of the setting of heritage assets and in a wider landscape context, the setting is considered far wider.

In terms of listed buildings, it is expected that a 5 KM range should be adopted.

In terms of Conservation Areas, an assessment of Newport, Parrog, Trefin and Porthgain areas is required.

In terms of registered Parks and Gardens, a 5 Km range should also be adopted.

Archaeology

As the development is outside the National Park area, the consideration from an archaeological perspective is the setting with the biggest impact coming from the three turbines due to their height. A 3km detailed study area on archaeology is not considered sufficient in this instance given the height of the turbines and scale of development area.

The scoping figure maps show that visibility of some of the features is possible from many parts of the National Park (not just in the Preseli and Strumble Head area). This includes visibility at designated and undesignated assets and also several registered historic landscapes beyond the study area. It is considered that Cadw may require the study area to be larger due to the height and scale of development, Cadw should confirm this point in their respective response.

The Authority has carried out a test within a GIS program which shows that the turbines would be visible from Foel Eryr (see below – three features at the top of the image), which is over 6km away (if measuring in a straight line). The topography of Pembrokeshire means that developments at this height might be more pronounced and visible, particular at higher elevations like Garn Fawr, Preseli Ridge, Carn Ingli, Carn Llidi etc. So a wider study area might could be important to capture these sensitive locations.



Defence Infrastructure Organisation

Kaye Noble
Assistant Safeguarding Manager
Ministry of Defence
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Your Reference: CAS-02171-X3W620

Telephone [MOD]: [REDACTED]

Our Reference: DIO 10058410

E-mail: [REDACTED]

Marloes Holtkamp
Planning and Environment Decisions Wales
Crown Buildings
Cathays Park
Cardiff
CF10 3NQ

By email only

05 May 2023

Dear Marloes

Application reference: CAS- 02171 – X3W620
Site Name: Trecwn Green Energy Park
Proposal: Green energy hub comprising a green hydrogen electrolyser powered by wind and solar energy (approximately 30MW installed generation capacity)
Site address: The Valley, Trecwn, Pembrokeshire, SA62 5XX

Thank you for consulting the Ministry of Defence (MOD) in relation to the Scoping through your communication dated 22nd March 2023.

The Defence Infrastructure Organisation (DIO) Safeguarding Team represents the MOD as a consultee in UK planning and energy consenting systems to ensure that development does not compromise or degrade the operation of defence sites such as aerodromes, explosives storage sites, air weapon ranges, and technical sites or training resources such as the Military Low Flying System.

I am writing to advise you that the MOD has concerns with the proposal.

The proposal concerns a development of 3 turbines with maximum blade tip heights of 160.40 metres above ground level. The proposed development has been assessed using the location data (Grid References) below provided in the Scoping Report dated March 2023.

Turbine no.	Easting	Northing
1	198542	233634
2	198788	233288
3	198952	232930

The principal safeguarding concerns of the MOD with respect to this development of wind turbines relates to their potential to create a physical obstruction to air traffic movements.

Physical Obstruction

In this case the development falls within Low Flying Area XX (LFA XX), an area within which fixed wing aircraft may operate as low as 250 feet or 76.2 metres above ground level to conduct low level flight training. The addition of turbines in this location has the potential to introduce a physical obstruction to low flying aircraft operating in the area.

Or

In this case the development falls within Tactical Training Area XX (TTA XX), an area within which fixed wing aircraft may operate as low as 100 feet or 30.5 metres above ground level to conduct low level flight training. The addition of turbines in this location has the potential to introduce a physical obstruction to low flying aircraft operating in the area.

If the developer is able to overcome the issues stated above, to address the impact up on low flying given the location and scale of the development, the MOD would require that conditions are added to any consent issued requiring that the development is fitted with aviation safety lighting and that sufficient data is submitted to ensure that structures can be accurately charted to allow deconfliction.

As a minimum the MOD would require that the perimeter turbines are fitted with 25cd visible or infra-red (IR) lighting.

Summary

The concerns of the MOD with respect to this development of wind turbines relates to their potential to create a physical obstruction to air traffic movements.

The MOD must emphasise that the advice provided within this letter is in response to the data and information detailed in the developer's document titled "Scoping Report" dated March 2023. Any variation of the parameters (which include the location, dimensions, form, and finishing materials) detailed may significantly alter how the development relates to MOD safeguarding requirements and cause adverse impacts to safeguarded defence assets or capabilities. In the event that any amendment, whether considered material or not by the determining authority, is submitted for approval, the MOD should be consulted and provided with adequate time to carry out assessments and provide a formal response.

I hope this adequately explains our position on the matter. If you require further information or would like to discuss this matter further, please do not hesitate to contact me.

Further information about the effects of wind turbines on MOD interests can be obtained from the following websites:

MOD: <https://www.gov.uk/government/publications/wind-farms-ministry-of-defence-safeguarding>

Yours sincerely



Kaye Noble
Assistant Safeguarding Manager
DIO Safeguarding

Date • Dyddiad 05/05/2023
Your ref • Eich cyfeirnod DNS CAS-02171-X3W6Z0
My ref • Fy nghyfeirnod CO/0506/22
Telephone • Ffôn [REDACTED]
Email • E-bost [REDACTED]
www.pembrokeshire.gov.uk / www.sir-benfro.gov.uk



Pembrokeshire County Council Cyngor Sir Penfro

WILL BRAMBLE CBE
Chief Executive / Prif Weithredwr

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PEDW.Infrastructure@gov.wales

By email only

Please ask for
Os gwelwch yn dda gofynnwch am

Mike Simmons

Dear Sir / Madam

Proposal: Green energy hub comprising a green hydrogen electrolyser powered by wind and solar energy (approximately 30MW installed generation capacity)

Location: The Valley, Trecwn, Pembrokeshire

Planning and Environment Decisions Wales (PEDW) consulted Pembrokeshire County Council local planning authority (the LPA) on 22nd March 2023 requesting the LPA's advice on the scope of the proposed EIA in respect of the above proposed development. An extension of time for responding until 5th May 2023 was agreed by PEDW on 20th April 2023. The LPA have considered the "Trecwn Green Energy Hub Scoping Report" (SLR Ref: 404.10585.00001 - Version No: Final March 2023) and offer the following comment.

It is noted that the adjacent planning authority, Pembrokeshire Coast National Park Authority, were also consulted and responded under separate cover on 4th May 2023.

Chapter 2 – Site and Surroundings

No comment

Chapter 3 - Description of the Development

It is noted that "following generation and purification, the hydrogen would be compressed and stored in its gaseous form within purpose-built vessels (storage tanks)". The dimensions of these tanks are provided but not their number (albeit 8 appear to be indicated diagrammatically).

We welcome correspondence in Welsh and English, and will respond within a maximum of 15 working days. We will respond in the language in which the correspondence is received (unless you ask us to do otherwise). / Rydym yn croesawu gohebiaeth yn Gymraeg a Saesneg a byddwn yn ymateb cyn pen 15 diwrnod gwaith fan bellaf. Byddwn yn ymateb yn yr un iaith â'r ohebiaeth a dderbyniwyd (oni bai eich bod yn gofyn i ni wneud yn wahanol).

For a copy in large print, easy-read, Braille, audio, or an alternative language, please contact Pembrokeshire County Council on the number above. / Os am gopi mewn print mawr, fformat hawdd ei ddarllen, Braille, sain neu mewn iaith arall, cysylltwch â Chyngor Sir Penfro ar y rhif uchod.

Chapter 4 – EIA Methodology

No comment other than that provided elsewhere in this correspondence.

Chapter 5 – Planning Policy Context

No comment in respect of this Scoping Direction request.

Chapter 6 – Landscape and Visual

Refer to Appendix 1. This should be read in conjunction with the correspondence from the Pembrokeshire Coast National Park Authority dated 4th May 2023.

Chapters 7 (Ornithology) & 8 (Ecology)

Refer to Appendix 2. This should be read in conjunction with the correspondence from the Pembrokeshire Coast National Park Authority dated 4th May 2023.

It is noted that Natural Resources Wales have been consulted who will also comment accordingly.

Chapter 9 - Water Environment

In respect of flood risk, it is noted that Natural Resources Wales have been consulted who will also comment accordingly and that new “Flood Map for Planning” and the soon to be introduced revised TAN15 will both be considered within the EIA.

Chapter 10 - Geology, Soils and Land Quality

In respect of best and most versatile agricultural land, the LPA defer to the Agriculture Directorate at Welsh Government who have also been consulted.

It is noted that land quality issues is a matter that is proposed to be scoped out. Whilst the wind turbines and solar park are outside of the main former RNAD site, and as such it would be appropriate to scope these out, the two options for the green hydrogen facility are both within the confines of the former RNAD site so consideration of the risks would be expected. Three previous environmental reports are referred to as evidence that informed the reason to scope out land contamination issues. These reports would need to be included within the EIA.

Chapter 11 - Cultural Heritage

All designated historic assets within the Purple Zone of Theoretical Visibility Bare Earth Scenario as shown in Figures 11.1a (Solar array ZTV) and 11.1b (Wind Turbine ZTV) should be subject to further assessment. The assessment should utilise wire frame verified views in accordance with the latest guidance by the Landscape Institute. The views should be taken from within the setting of the designated heritage assets. The verified views should take into account the seasonal effects of tree screening and other factors that may reduce tree screening (for example, ash die-back).

The Scoping Report’s assertion that Grade II listed buildings are of ‘local importance’ and their significance being unaffected by their setting are not supported. This assertion is contrary to the definition of setting within Cadw’s Conservation Principles

(2011); the Scoping Report does not make reference to this document. The assessment of significance of the historic assets is inadequate and makes only limited reference to heritage values. Grade II listed buildings are of national importance albeit of less importance than Grade II* and Grade I listed buildings. Buildings of local importance are non-designated historic assets.

The late 1930s era munitions depot at Trecwn is absent from the list of identified non-designated historic assets. The facility's contribution to the defence of the realm in World War II and beyond is of considerable historic value and significance. All pre 1948 structures within the facility should be treated as non-designated historic assets. In summary, the scoping report does not properly grasp the significance of the designated historic assets and the contribution the landscape makes to their setting and significance. Therefore the potential harm caused to the historic assets cannot be appropriately assessed under the currently proposed scope of the EIA.

This advice should be read in conjunction with the correspondence from the Pembrokeshire Coast National Park Authority dated 4th May 2023. It is noted that CADW have been consulted who will comment accordingly.

Chapters 12 (Noise) & Chapter 15 (Air Quality)

The LPA accept the proposed scope of the EIA in relation to its assessments to be submitted for air quality and noise emissions but would recommend that the following assessments are also included within the EIA:

- A lighting scheme for the installation of associated luminaries compliant with the Institute of Lighting Engineers Guidance Notes for the Reduction of Obtrusive Light. To prevent an adverse impact upon the local amenity and protect the night sky from light pollution associated with overspill from poorly installed luminaries.
- An assessment of the potential implications associated with shadow flicker upon the locality from the proposed wind turbines. To protect public health and the local amenity from the adverse impact associated with shadow flicker generated by operational wind turbines.

Chapter 13 - Access, Traffic and Transport

Paragraph 2.1 states that "the location for the proposed development was selected based on the potential of The Valley for strategic employment use, and making use of its exceptional road and rail connections. The expectation is that the hydrogen produced within the Valley would be used to fuel heavy transport such as buses and trains". There does not appear to be a proposed assessment of the environmental effects of transport by rail.

At paragraph 3.7, it is noted that certain parts of the internal road network may need to be widened to accommodate construction and / or operational traffic. Such works would need to be considered as part of the EIA.

Refer to Appendix 3.

Chapter 14 - Socio-Economics, Tourism, Recreation and Land Use

No comment

Chapter 16 - Aviation and Telecommunications

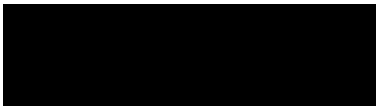
The LPA defer to the Defence Infrastructure Organisation and Civil Aviation Authority. It is proposed to consult Haverfordwest Aerodrome, NATS En Route and the MoD on the aviation effects of the development. The Joint Radio Company, Atkins and Arqiva will be consulted on effects on scanning telemetry and television re-broadcast links.

Chapter 17 - Other Issues

Chapter 17 states that “it is proposed to include a chapter of ‘other issues’ that are not considered likely to give rise to significant effects and therefore do not require full assessment”. However a full assessment in relation to potential for shadow flicker is necessary as stated in paragraph 17.1 and referred to earlier in this correspondence.

I trust that this consultation response is beneficial but please contact me if you have any queries.

Yours sincerely

A solid black rectangular box used to redact the signature of Mike Simmons.

Mike Simmons
Development Manager (Major Projects and Planning Obligations)
Development Management

Appendix 1

(PCC correspondence dated 5th May 2023; DNS ref.CAS-02171-X3W6Z0)

Chapter 6 – Landscape and Visual

- If the current figures are examples of the final issue of the ES, slight improvements will be needed, most-notably so that the boundary of the PCNP is strongly picked out as effects on this designated landscape will be of substantive importance.
- The topic of some of the figures is not clear, E.G. Fig 11 Heritage assets
- Fig 6.3 ZTV needs to show the PCNP boundary, but also the quality of the base map needs enhancing (including being in colour if possible), and a further more detailed map approximating to the 10km area is needed that shows all the viewpoints accurately. This would make 3 ZTV maps in total.
- Regarding cumulative effects, proposed Dragon LNG wind farm (DNS application expected imminently) needs to be INCLUDED and Rhoscrowther wind farm needs to be EXCLUDED
- Additional viewpoints are needed to include (if not already considered):
 - Scenic areas - West of site into PCNP Garn Fawr area where the landscape is of high quality and open in character
 - North into the PCNP, especially Dinas Head
 - East into PCNP Preseli Hills
 - Southwest Plumstone and Treffgarne Rocks – local areas of open land, scenic spot outside of PCNP
 - Southeast at Castellbythe; scenic route and lookout.
 - Settlements Northwest to Goodwick
 - West to Mathry
- Consideration should be given to the Coast Path that stretches close to Fishguard and Goodwick where it is affected and is in close proximity.
- It is noted that lighting of the hydrogen facility is likely with 18m columns. There is the potential for cumulative effects of this in combination with Cawdor Barracks.
- It is likely that other cumulative effects might be experienced with a potential development at Cawdor Barracks that is currently subject to EIA Scoping (refer documents under reference 22/1136/SO at Planning Applications on PCC website).
- In LVIA there is a tendency for road users to be ascribed a relatively low sensitivity. However many road users within the ZTV will be associated with leisure and tourism and should be considered of higher sensitivity.
- In LVIA there is a tendency for well-populated areas to be ascribed relatively low sensitivity and for the focus to be trained on only those dwellings where the visual impact is likely to be over-bearing. This is a weakness in the process that fails to acknowledge the possible visual impact experienced by large numbers of people going about their daily lives for whom the quality of their outlook from their homes, gardens and street is important. There is a possibility for this around the fringes of Fishguard, a lot of Goodwick and possibly parts of Mathry.
- There is no suggestion of a glint and glare analysis for the solar farm. This should be considered and possibly scoped-out if not needed.

- Aviation lighting on the turbines has been mentioned, noted that probably NOT needed being below the 150m threshold. If included, then this should be subject to appropriate assessment within the EIA.
- On a minor point, the labelling of the mountain east of the site is Garn Fawr (in Fig 6.2 and possibly elsewhere within the text). It would be more useful if the other name for this hill / mountain is used, that being Mynydd Dinas as this identifies it more strongly with the local 'Dinas' area and there is a more well-known Garn Fawr just south of Strumble Head to the west.

Appendix 2

(PCC correspondence dated 5th May 2023; DNS ref.CAS-02171-X3W6Z0)

Chapters 7 (Ornithology) and 8 (Ecology)

- The ES must include the results of all required surveys and an assessment of the effect of the development on the species/habitats/sites and recommendations for mitigation and enhancement.
- Ecological Impact Assessment (EclA) is an iterative process, scoping is an ongoing process - the initially proposed scope of the EclA may be modified following further ecological survey/research and during impact assessment.
- Surveys, assessments and the EIA are also required to be carried out in line with the British Standards for Biodiversity: Code of Practice for Planning and Development (BS42020:2013) and other relevant species and survey best practice guidelines. All surveys will be required to be carried out by a suitably qualified ecologist within the appropriate season and to appropriate survey standards and methodology.
- The EclA must:
 - cover the construction, operation maintenance, closure and decommissioning stages of any project.
 - determine the importance of ecological features affected, through survey and/or research.
 - assess impacts potentially affecting important features.
 - characterise the impacts by describing their extent, magnitude, duration, reversibility, timing and frequency.
 - identify cumulative impacts; and identify significant effects of impacts in the absence of any mitigation.
 - consider alternative location(s) or layouts for the proposed development.
 - identify mitigation measures and explain their likely success.
 - identify opportunities for enhancement.
 - design and agree a monitoring strategy and monitoring of mitigation performance.
 - provide sufficient information for mitigation measures to be implemented effectively.
 - produce a clear summary of the residual impacts and the significance of their effects following incorporation of avoidance and mitigation measures.
 - consider the implications of significant effects on the features of interest in accordance with planning policies and legislation.

EIA must clearly set out all the ecological information necessary for a robust decision to be made. Key aspects include a description of the following:

- ecological baseline and trends if the project were not to go ahead.
- criteria used to evaluate ecological features.
- criteria used to assess the significance of impacts of the project.
- justification of methods used.
- the identification of likely impacts (positive and negative) on ecological features together with an explanation of the significance of their effects.
- mitigation, compensation and enhancement measures.
- legal and policy consequences.
- a note of any key data that were unavailable or missing and
- a presentation of any analytical techniques used and the analysis itself.

THE ES MUST INCLUDE:

Desk Study.

Any ES must document that a thorough ecological desk study has been undertaken to fully inform the application, this should include data from the Local Records Centre.

Ecological Impact – Habitats and Species

- The ES must provide sufficient information to identify any nature conservation features (habitats/species) that are likely to be affected by the proposals and identify potential options for mitigation and enhancement. The impacts on any species protected under legislation (see below) must be considered and any species or habitat listed under the Carmarthenshire LBAP, UK BAP, or identified on the Section 7 list of the Environment Act (Wales) 2016 must also be considered. Surveys must be carried out by a qualified ecological surveyor. The ES must identify the potential of the habitats on site to be used by protected species.

- The ES must include a **Phase I habitat survey**, to identify the quality and extent of the habitats present. Detailed habitat assessment should only be carried out between the months of April to September only. The habitat survey should also identify the presence of any invasive species. Habitats identified on site including the Woodland and any semi natural grasslands must in this instance also be subject to **NVC phase II surveys**.

- **Reptiles.** Common species of reptiles may be present within suitable habitats. These are protected by legislation. The site should be assessed for its potential to support reptiles within the ES. Surveys for reptiles should be undertaken if suitable habitat is to be removed. These assessments should inform a code of construction practice for the proposed works with regard to reptiles.

- **Badgers** and their setts are protected under The Protection of Badgers Act 1992. Activity within 30 metres of a sett may require a licence. A site may contain badger setts, it is recommended that any site and where possible surrounding land within 30m be surveyed for badgers and the results presented in the ES.

- **Birds** – the application must make an assessment of the bird populations currently using the application area in the form of a breeding bird survey and the impact of the development on these, in terms of loss of habitat, displacement and collision risk, results of this assessment must be reported in the ES. The recommendations for breeding birds, flight and raptor surveys are all welcomed.

- An assessment of the hedgerows/scrub/woodland for their potential to support **dormouse** must be undertaken and reported in the ES. Dormice are protected under European and UK legislation. If habitats are found suitable, the protection and enhancement of the hedges/scrub for this species must be included as part of any scheme and if their habitat is to be affected then a full survey will be required. Dormice are protected under European and UK legislation. Their presence is a material consideration when a local planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat.

- All British **bats** are protected under European and UK legislation. Their presence is a material consideration when a local planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat. An assessment of any trees for their potential for bat use should be carried out and a full bat survey of any trees assessed to have bat potential should be conducted if these will be impacted upon and reported in the ES. Impacts of removal of vegetation on foraging and commuting must also be considered. Impacts from turbine collision must also be assessed and surveys must be undertaken in accordance with the Nature Scot 'Bats and Onshore Wind Turbines'

- There are records of Grizzled skipper and Dingy skipper **butterflies** within 500m of the centre of the site. It is therefore recommended that contact is made with butterfly conservation and an appropriate level of survey effort agreed and undertaken. The results of the surveys should inform any biodiversity enhancement scheme.

- Within 5km of the North Pembrokeshire Woodlands Special Area of Conservation, which is designated in part for the **lower plant/lichen assemblage**. If any woodland is to be removed then lower plant surveys will be necessary.

- There are several watercourse on the site and within close proximity of the site and **otter** records within 1.5km. If any watercourses are to be changed or disturbed during construction or operation a full survey for otter must be undertaken. Otter are a European Protected Species and their presence is a material consideration.

- There is habitat within the red line boundary that is suitable for **Pine marten**. There have been records over a number of years of pine marten being spotted within the woods and Trecwn, and although these sightings have not been confirmed, it is possible that they are present. Due to the level of disturbance pine martin surveys must be undertaken. Pine marten are protected in the UK under the Wildlife and Countryside Act, 1981 as well as being a Section 7 species of principle importance under the Environment (Wales) Act 2016.

- The grasslands surrounding the woodland and within the red line boundary identified as possible areas for solar and wind are known to have an assemblage of **grassland fungi**. A survey must therefore be undertaken in order to establish whether or not the assemblage present would qualify as being of Section 7 principle importance.

- A **biodiversity enhancement** scheme must also be submitted in the form of a Landscape and Ecological Management Plan. The scheme must be informed by the results of the survey work for all of the above species and secure appropriate enhancements (above any mitigation which may be required). The scheme must be proportionate to the scale of the development.

ZONES OF INFLUENCE.

- Activities associated with the construction, operation (best and worst-case operating conditions), decommissioning and restoration phases must be separately identified in any ES.
- All ecological features occurring within the area to be worked that will be affected by changes in land cover caused by topsoil stripping and excavation must be addressed in the ES.
- Blasting, noise, dust and changes in human activity will also affect species in adjacent habitats, these impacts must be addressed in the ES.
- If the proposed activities involves major, long-term dewatering operations, there could be consequences for water-dependent habitats and species, It is not possible to determine the zone of influence of dewatering without undertaking hydrological/hydrogeological modelling. The zone of influence should include all water-dependent features and habitats, and any such impacts must be considered in the ES.
- If the site requires new infrastructure (e.g. roads, power supply or waste water disposal) there could be significant consequences for ecological features beyond the boundaries of the site in addition to those affected by dewatering.
- The zone of influence should be regularly reviewed and amended as the project evolves. If inadequate information is available to properly define the zone of influence, this should be acknowledged and a precautionary approach adopted.
- Determining the significance of effects is explained in Chapter 5 of the ***CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition***. Chartered Institute of Ecology and Environmental Management, Winchester. Any ES preparation and assessment must adopt these guidelines.

The application site is within the catchment of the Cleddau River SAC and any application must therefore demonstrate nutrient neutrality. The latest NRW advice states: There may be cases where planning applications for new commercial or industrial developments, such as conference facilities, large retail sites or major tourist attractions could result in the release of additional phosphorus into the river system. In such cases, further assessment is likely to be required to determine if the proposal will have an adverse effect on the integrity of the river SAC. The EIA must therefore clearly identify the source and quantity of foul flows and if necessary an appropriate mitigation scheme.

Appendix 3

(PCC correspondence dated 5th May 2023; DNS ref.CAS-02171-X3W6Z0)

Chapter 13 - Access, Traffic and Transport

The access arrangements for the Green Hydrogen Facility, during construction and operation, would be via the existing roads which connect with the A40 via Admiralty Way. An alternative access for emergency vehicles is located to the north of the site, connecting with the B4313 along Cwm Gwaun. The existing route into the site along Ffos-Las a rural road, with no footways or street lighting, and unmarked. It forms a priority junction with the A40 and good visibility in both directions. The road is narrow in nature and would require the implementation of passing bays and to be widened in order to facilitate the increased movements of HGVs to from the site, during construction and operation. As such, the applicant will need to consider submitting a detailed design plan indicating the areas to be widened and passing bays within any future application and potential environmental effects tombe considered as part of the EIA.

Consideration will need to be given to the installation of the wind turbines on site and how they will be transported to the site. The Scoping Report indicates that the proposed routing is being considered from Swansea Docks:

- Baldwins Crescent, under the A483;
- slip road onto the A483;
- A483 to junction with M4;
- M4 to junction with A48;
- A48 to A40; and
- A40 to Site entrance.

The preference is to use the private road to gain access, however a logging track internally will be extended and upgraded to accommodate the abnormal loads. Consultation with the Trunk Road Agency will be required to accommodate these movements. The LPA will require further details to be agreed within a Construction Transport Management Plan. It is the LPA's preference for all abnormal deliveries which require police escorts to take place overnight, when traffic upon the network is minimal.

The solar farm access is proposed to be taken from an existing agricultural gate from Ffos-Las. The Scoping Report also shows an access can be taken from C3043 to the north of the site. This road is a narrow, single width for the most part and bound by hedgerows on both sides. Passing bays may need to be in place for the movement of HGVs, between the gates and the A40 junction.

Detailed information will be required including a 'Glint and Glare' report to ensure that there is no visible impact upon the A40 or surrounding area from the solar farm once in place.

Recommendation: A Construction Transport Management Plan will be required to include details regarding any passing bays/widening required, abnormal load deliveries (including police escorts), swept path arrangements, number of deliveries, number of expected staff, deliveries, timings and schedules. A 'Glint and Glare' report will be required to support the solar farm implementation. Routing information will also need to be agreed with the Trunk Road Agency.

It is proposed that the ES chapter on Access, Traffic and Transport will provide an abridged construction works programme, with details of vehicle types and sizes to be used during the construction phase and estimated number of trips by HGVs, LGVs and light vehicles. While this is acceptable, details of staff movements and visitors to the site should also be provided.

Baseline surveys including an ATC (Automatic Traffic Counter) placed upon the A40 will be utilised across 24 hours and seven days. This should be in place during the accepted standard survey period, with an additional sensitivity test undertaken in the peak summer-months. Traffic within Pembrokeshire increases significantly due to the high level of tourists in the area; the arrival of many from the Ferry in Fishguard will utilise the A40 to access the south of the County. As such, it is recommended that the impacts of the summer traffic are also incorporated into any baseline data as the construction period may fall throughout this period.

Recommendation: An ATC is requested along the A40 during the peak summer months in order to provide information for a sensitivity test of increased traffic and the construction period.

It is proposed that traffic generation will be calculated for both the operational and construction phase of the project. The Scoping Report states that 'an estimated number of trips anticipated to be generated by HGVs, LGVs and light vehicles' will be included. This is acceptable, however the assessment reporting should clearly state those vehicles for staff members, visitors, deliveries and servicing. A comparison will be made between the existing traffic upon the highway and the proposed development related traffic.

An assessment will be made utilising the IEMA (Institute of Environmental Management and Assessment) guidance 1993 to establish the impact of the proposed development upon noise, vibration, driver severance and delay, community severance and delay, vulnerable road users, road safety, hazardous and dangerous loads and dust/dirt. Appropriate mitigation measures will be required to address any issues that each of these factors raises.

Cumulative impacts arising from other developments in the area will be assessed for the construction phase of the proposed development. Where possible traffic

assessment and travel plans for other developments in the area will be reviewed to consider the impact on the highway network, and the proposed development construction period.

Recommendation: Further discussion with the Applicant and the County Highways Authority regarding cumulative impacts is requested at an appropriate time.

The Scoping Report proposes that operational traffic associated with the wind turbines and solar farms is scoped out of the Environmental Statement. The LPA does not agree with this considering the operational lifespan of the site is proposed to be 30 years. While a full traffic assessment is not required for the operational phase, a section on future trip generation, timings, maintenance schedules and operation would be required to be included.

Recommendation: A section on the operational phase of the wind turbines and solar farms to be included within the Environmental Statement to provide a level of detail regarding trip generation, maintenance schedules, timings and operation is requested.

During the construction and operational phases of the development, there has been little information provided within the Scoping Report regarding Sustainable travel arrangements or Travel Plan information for the proposed development.

There is a disused rail line and it is suggested that this is to be reused. There is a benefit to utilising the rail network in the area for the movement of hydrogen which may cut down on the number of HGV trips required to the site. This option should be considered within the EIA.

The T5 bus operates between Cardigan – Fishguard and Haverfordwest and passes directly across the proposed access along the A40. The applicant may wish to consider discussion with Traws Cymru as to the likelihood of obtaining a stopping point at this location for staff to arrive via the bus. A further minibus option could be considered to take staff from Fishguard/Goodwick station or Haverfordwest Rail station to the site in order to minimise on private vehicle travel.

A detailed travel plan will be required and should form part of the forthcoming discussions for staff on site in both the operational and construction phases of the project.

There was one recorded slight accident along Ffos-Las in 2017. The junction of the A40/Ffos-Las has had the following accidents within the past five years: Slight Accidents – 4; Serious Accidents – 3; Fatal Accidents – 1. The Fatal Accident was the result of driver error and occurred at night in wet weather.

Recommendation: The Applicant is advised to check Stats19 data for any up-to-date accidents which may have occurred between the time of Scoping Note and any subsequent submission.

While the ES will contain information around construction workflow, the following information should be included:

- a) Parking for vehicles, site personnel, operatives and visitors
- b) Expected levels of staff and any shift work, by phase
- c) Expected trip generation for the construction period
- d) Loading and unloading of plant and materials
- e) Storage of plant and materials
- f) Vehicle routing and turning, including swept paths
- g) Measures to prevent the deposit of materials on the highway
- h) Before and after construction conditions surveys of the highway and a commitment to fund the repair of any damage caused
- i) On-site turning for construction vehicles

Conclusion

In principle, the LPA has no objections regarding the methodology set out in the Scoping Report. The Applicant is advised to incorporate the comments made above into the forthcoming EIA process and engage in further conversations with the LPA and County Highway Authority.