



Parc Ynni Calon y Gwynt

ENVIRONMENTAL STATEMENT

Appendix 9B: WFD assessment





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1 INTRODUCTION

1.1 INTRODUCTION

- 1.1.1. This Water Framework Directive assessment (WFDa) has been prepared in order to assess the risks to the water environment posed by the Parc Ynni Calon y Gwynt hereafter referred to as the 'Proposed Development'. This report forms an appendix of **Chapter 9: Hydrology**. The Proposed Development interacts with four WFD surface waterbodies and one WFD groundwater body throughout its length: thus, each activity associated with the Proposed Development, such as watercourse crossings, culverts and outfalls, will be assessed against the biological, physico-chemical and hydromorphological quality elements that comprise the WFD.
- 1.1.2. The Proposed Development is composed of the following activities:
- Erection of up to 11 three bladed horizontal axis wind turbines, with an anticipated rotor diameter of 163m and height to blade tip of 180 to 200m (approximate generating capacity of up to 80 MW);
 - BESS infrastructure and compound;
 - Crane pads (hardstandings) and laydown areas adjacent to each wind turbine;
 - Power cables linking the wind turbines laid in trenches underground, including cable markers;
 - Health and safety and other signage;
 - New and upgrading of existing access tracks, passing places and turning heads;
 - Construction of a new access road from an existing junction of the A470 with the B4568 to facilitate access onto the Site;
 - Grid connection infrastructure, including an onsite substation compound, consisting of a 33kV/132kV switching station, transformer area and control building;
 - The creation of temporary borrow pits for the extraction of stone (the potential locations within the Site are currently being reviewed); and
 - Temporary construction compound(s).

1.2 STUDY AREA

- 1.2.1. The Proposed Development is located within the county of Powys, Mid Wales, on the top of a plateau north of the village of Clatter and northeast of the village of Carno. The Site consists of the Energy Park and the access road which links the Energy Park with the A470 road. The Site covers an area of approximately 377ha, of which the Energy Park covers 353ha, and the access road covering 24ha (see **Figure 9.4**).
- 1.2.2. The Study Area extends 1.5km from the Site at all points. This Study Area is considered conservative and sufficient for the purposes of this baseline appraisal, based on hydrological knowledge of the area and professional experience that standard avoidance and management measures would prevent significant effects occurring at a greater distance. Thus, the Study Area has been set to include all land potentially subject to effects from the Proposed Development, and sufficient to demonstrate that these can be managed within. This will enable demonstration that effects at a greater distance from the Site would also be avoided.

1.3 INTRODUCTION TO THE WATER FRAMEWORK DIRECTIVE

- 1.3.1. An impact assessment of any works/modifications to waterbodies in the UK is required under the European Union's Water Framework Directive (2000/60/EC). The WFD is transposed into law in England and Wales by the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. Compliance with the WFD legislation is required for permitting of the Proposed Development.
- 1.3.2. The primary aim of the WFD is to improve/maintain the Ecological Status/Potential of all waterbodies and to prevent deterioration in status of the waterbodies and their associated WFD quality elements. Ecological Status/Potential is determined by a suite of biological, physico-chemical and hydromorphological quality elements. This WFD assessment aims to establish the baseline conditions, evaluate potential impacts of the Proposed Development and assess compliance against WFD objectives.
- 1.3.3. The overarching objective of the WFD is for surface waterbodies in Europe to attain overall 'Good Ecological Status' (GES) or 'Good Ecological Potential' (GEP). GES refers to situations where the ecological characteristics show only a slight deviation from natural/near natural conditions. In such a situation, the biological, chemical, physico-chemical and hydromorphological conditions are associated with limited or no human pressure. Artificial and heavily modified waterbodies have a target to achieve GEP, which recognises their important uses, whilst ensuring the quality elements are protected as far as possible.
- 1.3.4. The WFD sets several objectives including:
- Prevent deterioration in status for waterbodies;
 - Aim to achieve good biological and good surface water chemical status in waterbodies. For those waterbodies that did not achieve GES by 2015, alternative objectives have been set by the Environment Agency where waterbodies have been allocated a target date for compliance of either 2021 or 2027. The target date set for each waterbody takes into consideration measures that are practicably achievable for achieving GES or GEP;
 - For waterbodies that are designated as artificial or heavily modified, the objective is to achieve GEP. Those artificial/heavily modified waterbodies that did not achieve GEP by 2015 need to achieve compliance by 2021 or 2027;
 - Where it is considered either technically infeasible or disproportionately expensive to achieve GES or GEP by 2021 or 2027, alternative objectives have been set for the waterbody, such as a target to achieve Moderate status;
 - Comply with objectives and standards for protected areas, where relevant; and,
 - Reduce pollution from priority substances and cease discharges, emissions and losses of priority hazardous substances.

- 1.3.5. Where a new modification, change in activity or change to a structure on a waterbody is proposed, a WFD assessment needs to consider whether the proposed alteration would cause deterioration in the Ecological Status or Potential of any waterbody. For heavily modified/artificial waterbodies, proposed new modifications, or changes to activities or structures, may also result in WFD mitigation measures or actions, set to help a waterbody achieve GES/GEP, being ineffective. This could result in the waterbody failing to meet GES/GEP. Where a WFD assessment concludes that deterioration or failure to achieve GES/GEP may occur, an Article 4.7 assessment would be required, which makes provision for deterioration of status provided that certain stringent conditions are met.
- 1.3.6. The purpose of this WFD assessment is to evaluate the potential impacts arising during construction and operation of The Proposed Development on WFD quality elements.

2 METHODOLOGY

2.1 DATA COLLECTION

DESK STUDY

- 2.1.1. A desk-based study was carried out to inform the WFD assessment, reviewing the existing information of the Proposed Development and Study Area to develop a baseline for the catchments, watercourses and surrounding areas. The following data sources were used for the desk study:
- Contemporary OS maps;
 - Geology and soil maps;
 - Current aerial photography;
 - Environment Agency ecology data;
 - Designated areas data, and
 - WFD status and objectives from the 2024 Severn River Basin Management Plan for Cycle 3 data.

FIELD SURVEY

Geomorphology/Hydromorphology Walkover Survey

- 2.1.2. A site visit, informed by the frozen infrastructure layout / alignment, is to be undertaken in July 2026. Should the site visit walkover identify features which are of relevance to the assessment, this will be described in full within the final ES submission

2.2 WFD ASSESSMENT PROCESS

- 2.2.1. The assessment methodology used here is based on guidance provided by the Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive¹. This guidance outlines a three-stage process to WFD assessment: screening, scoping, and impact assessment.

STAGE 1: SCREENING

- 2.2.2. Screening is required to identify activities which have the potential to result in deterioration of a waterbody or fail to comply with the objectives of that waterbody. Screening also serves to identify those proposed activities (e.g. proposed construction methods) that are required to be taken through to scoping, and those activities that are unlikely to result in the deterioration of the waterbody.

STAGE 2: SCOPING

- 2.2.3. Scoping is required to identify risks to receptors from a project's activities, based on the relevant waterbodies and their water quality elements (including information on status, objectives, and the parameters for each waterbody). Potential risks to hydromorphology, biology (habitats and fish), water quality, WFD protected areas and invasive non-native species should be assessed. The scoping stage identifies which elements need to be carried forward to Stage 3.

¹ The Planning Inspectorate (2024). Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive. (Online). Available at <https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-the-water-framework-directive>. [Accessed May 2026]

STAGE 3: IMPACT ASSESSMENT

- 2.2.4. Where assessment has been considered necessary at scoping stage, an impact assessment is carried out for each receptor identified as being at risk in terms of potential deterioration or non-compliance with its specific objectives as set out in the River Basin Management Plan as a result of the project. Where the potential for deterioration of waterbodies is identified, and it is not possible to mitigate the impacts to a level where deterioration can be avoided, the project would need to be assessed in the context of Article 4(7) of the WFD.

2.3 LIMITATIONS AND ASSUMPTIONS

- 2.3.1. WSP has prepared this report in accordance with the instructions of the Client, for their sole and specific use relating solely to the proposed works at the Parc Ynni Calon Y Gwynt development. Any person who used any information contained herein does so at their own risk and shall hold WSP harmless in any event.
- 2.3.2. The conclusions of this WFDa are based on currently available hydrological site information accessed at the time of drafting for the current design proposals.
- 2.3.3. This report is based on the interpretation and assessment of data provided by third parties. WSP cannot be held responsible for the accuracy of third-party data, and the conclusions and findings of this report may change if the data is amended or updated after the date of consultation.
- 2.3.4. The conclusions of this report are based on the data gathered for the purposes of the report and are therefore limited in their accuracy in proportion to the validity of the dataset. The data gathered has been based on an agreed scope of works. WSP cannot guarantee that the data used is the best available at the time of the report, but it is the best available data that could be gathered for the agreed scope of works.

3 WFD SCREENING AND SCOPING

3.1 STAGE 1: WFD SCREENING

- 3.1.1. The purpose of the WFD screening stage is to identify the extent to which the Calon y Gwynt Energy Park may affect WFD waterbodies that lie within the Study Area of the Proposed Development.

SCREENING OF WATERBODIES

- 3.1.2. The WFD waterbodies intersected by the Proposed Development and the Study Area can be seen in **Figure 9.4**.
- 3.1.3. The Afon Carno - conf Afon Cwm-llwyd to conf R Severn (GB109054049250) WFD waterbody, Afon Rhiw (S arm) - Ty-newydd to Dwyrhiew (GB109054049350) WFD waterbody would be directly impacted by the Proposed Development due to a range of activities that would interact with the local watercourse network. Therefore, these WFD waterbodies are screened in for further assessment.
- 3.1.4. The downstream waterbodies are the Nant Rhyd-ros lan - source to conf R Severn (GB109054049220) WFD waterbody and the Severn - conf Afon Dulas to conf R Camlad (GB109054049310) WFD waterbody. These are within the Study Area of the Proposed Development and is therefore screened in for further assessment.
- 3.1.5. The groundwater body that underlies the Study Area is the Severn Uplands - Lower Palaeozoic (GB40902G205300) WFD groundwater body. Activities relating to the construction and operation of the Proposed Development have been assessed in terms of their potential impact upon this groundwater waterbody. There are anticipated impacts at the waterbody scale, therefore assessment of impacts to groundwater is scoped in.

SCREENING OF ACTIVITIES

- 3.1.6. The Proposed Development comprises the key activities listed below and the screening process is presented in **Table 9B-1** and **Table 9B-2**.

Table 9B-1 - WFD Screening of Activities for Impacted Surface Waterbodies

Activity	Description	Afon Carno – conf Afon Cwm-Ilwyd to conf R Severn (GB109054049250)		Afon Rhiw (S arm) - Ty-newydd to Dwyrhiew (GB109054049350)		Nant Rhyd-ros lan - source to conf R Severn (GB109054049220)		Severn - conf Afon Dulas to conf R Camlad (GB109054049310)	
		Justification	Screening Outcome	Justification	Screening Outcome	Justification	Screening Outcome	Justification	Screening Outcome
11 wind turbines (Construction & Operation)	Foundations will have a 3m formation depth. 25m diameter concrete base gravity foundation.	Excavations into the ground have the potential to impact on water quality. Construction activities may impact runoff, sediment transport and increase pollution risks. Potential to effect shallow sub-surface flow pathways. New hardstanding would increase runoff.	In	As for GB109054049250.	In	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out
BESS infrastructure and compound (Construction & Operation)	There will be 32 BESS containers, arranged in a 'back-to-back' arrangement, with each unit measuring approximately 6m x 2.4m wide and 2.9m high (total footprint of approximately 1,800m²).	Construction activities may impact runoff, sediment transport and increase pollution risks. Potential for contaminants to enter the waterbody in the event of battery unit fires or the triggering of the fire suppression system.	In	As for GB109054049250.	In	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out
Crane pads and laydown areas (Construction & Operation)	Each wind turbine requires an area of hardstanding to be built adjacent to the turbine foundation. The crane hardstanding will be left in place post-construction should further use be required.	Increase of impermeable surfaces in the catchment have the potential to increase surface water runoff, mobilise sediment and introduce pollutants during the construction phase. New hardstanding would increase runoff.	In	As for GB109054049250.	In	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out
Power cables (Construction & Operation)	Power cables linking wind turbines to be laid in trenches underground, including cable markers.	Excavations into the ground have the potential to disturb and mobilise sediment/chemicals which may reach and have adverse impacts on the waterbody and water quality. Potential to effect shallow sub-surface flow pathways	In	As for GB109054049250.	In	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out
Health and safety signage (Construction)	Signage around construction.	No potential to impact on WFD waterbodies.	Out	As for GB109054049250.	Out	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out
Access tracks / passing places / turning heads	The construction of new and the upgrade of existing access tracks / passing places / turning	Both upgraded and new construction of access tracks / passing places / turning heads have the potential disturb and	In	As for GB109054049250.	In	No potential to impact. This element of the development	Out	No potential to impact. This element of the development	Out

Activity	Description	Afon Carno – conf Afon Cwm-Ilwyd to conf R Severn (GB109054049250)		Afon Rhiw (S arm) - Ty-newydd to Dwyrhiew (GB109054049350)		Nant Rhyd-ros lan - source to conf R Severn (GB109054049220)		Severn - conf Afon Dulas to conf R Camlad (GB109054049310)	
		Justification	Screening Outcome	Justification	Screening Outcome	Justification	Screening Outcome	Justification	Screening Outcome
(Construction & Operation)	heads. 10.67km of site access tracks required for the Proposed Development, including 3.88km of existing track. Approx. 5m wide, 0.5m deep.	mobilise sediment and pollutants which may impact the waterbody. New and upgraded watercourse crossings may also be required – these could form a channel connectivity barrier for aquatic ecology and hydromorphological processes, impacting the waterbody. Excavations into the ground have the potential to impact on water quality. New hardstanding would increase runoff.				infrastructure is not proposed within this WFD waterbody.		infrastructure is not proposed within this WFD waterbody.	
New access road (Construction & Operation)	The construction of a new access road from an existing junction of the A470 with the B4568 to facilitate access onto the Site.	The construction of a new access road has the potential to disturb and mobilise sediment and pollutants which may impact the waterbody. New and upgraded watercourse crossings may also be required – these could form a channel connectivity barrier for aquatic ecology and hydromorphological processes, impacting the waterbody. New hardstanding would increase runoff.	In	As for GB109054049250.	In	As for GB109054049250.	In	As for GB109054049250.	In
Implementation of grid connection infrastructure (Construction & Operation)	This includes an onsite substation compound, consisting of a 33kV/132kV switching station, transformer area and control building.	Excavations into the ground have the potential to impact on water quality. Construction activities may impact runoff, sediment transport and increase pollution risks.	In	As for GB109054049250.	In	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out
Temporary borrow pits (Construction)	Temporary borrow pits in place for the extraction of stone at the Site (potential locations currently under review).	Excavations into the ground have the potential to impact on water quality. This additionally has the potential to alter local drainage patterns.	In	As for GB109054049250.	In	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out
Temporary construction compounds (Construction)	Temporary facility used to support construction work and day-to-day operations on the Site.	Potential for construction-phase runoff. May require temporary surface water drainage management systems. Temporary construction compounds additionally store fuel which may pose a contamination risk.	In	As for GB109054049250.	In	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out	No potential to impact. This element of the development infrastructure is not proposed within this WFD waterbody.	Out

Table 9B-2 - WFD Screening of Activities for Impacted Groundwater Body

Activity	Description	Severn Uplands - Lower Palaeozoic (GB40902G205300) WFD groundwater body	
		Justification	Screening Outcome
11 wind turbines (Construction & Operation)	3m formation depth. 25m diameter concrete base gravity foundation.	Excavations into the ground have the potential to impact on groundwater quality and disrupt subsurface flow pathways. Construction activities also have the potential to pollute the groundwater causing further water quality reductions.	In
BESS infrastructure and compound (Construction & Operation)	There will be 32 BESS containers, arranged in a 'back-to-back' arrangement, with each unit measuring approximately 6m x 2.4m wide and 2.9m high (total footprint of approximately 1,800m ²).	Excavations into the ground have the potential to impact on groundwater quality and disrupt subsurface flow pathways. Construction activities also have the potential to pollute the groundwater source causing further water quality reductions. The BESS includes a fire suppression system, were this to be triggered there is the potential for pollutants to enter the groundwater body.	In
Crane pads and laydown areas (Construction & Operation)	Each wind turbine requires an area of hardstanding to be built adjacent to the turbine foundation. The crane hardstanding will be left in place post-construction should further use be required.	Excavations into the ground have the potential to impact on groundwater quality and disrupt subsurface flow pathways.	In
Power cables (Construction & Operation)	Power cables linking wind turbines to be laid in trenches underground, including cable markers.	Excavations into the ground have the potential to impact on groundwater quality and disrupt subsurface flow pathways.	In
Health and safety signage (Construction)	Signage around construction.	No potential to impact on WFD waterbodies.	Out
Access tracks / passing places / turning heads (Construction & Operation)	The construction of new and the upgrade of existing access tracks / passing places / turning heads. 10.7km of site access tracks required for the Proposed Development, including 3.9km of existing track. Approx. 5m wide, 0.5m deep.	Both excavation that may occur as part of construction and new / upgraded waterbody crossings that are implemented may create a barrier between groundwater and surface water interactions. Construction activities also have the potential to pollute the groundwater source causing further water quality reductions.	In
New access road (Construction & Operation)	The construction of a new access road from an existing junction of the A470 with the B4568 to facilitate access onto the Site.	Both excavation that may occur as part of construction and new / upgraded waterbody crossings that are implemented may create a barrier between groundwater and surface water interactions. Construction activities also have the potential to pollute the groundwater source causing further water quality reductions.	In
Implementation of grid connection infrastructure (Construction & Operation)	This includes an onsite substation compound, consisting of a 33kV/132kV switching station, transformer area and control building.	Excavations into the ground have the potential to impact on groundwater quality and disrupt subsurface flow pathways. Construction activities also have the potential to pollute the groundwater source causing further water quality reductions.	In
Temporary borrow pits (Construction)	Temporary borrow pits in place for the extraction of stone at the Site (potential locations currently under review).	Excavation may impact local water table. There is the potential that water may need to be abstracted from borrow pits to allow for safe working – this would impact local groundwater levels.	In
Temporary construction compounds (Construction)	Temporary facility used to support construction work and day-to-day operations on the Site.	Potential for construction-phase runoff. May require temporary surface water drainage management systems. Temporary construction compounds additionally store fuel which creates contamination risk. Excavations into the ground have the potential to impact on groundwater quality and disrupt subsurface flow pathways. Construction activities also have the potential to pollute the groundwater source causing further water quality reductions.	In

3.2 STAGE 2: WFD SCOPING

- 3.2.1. The WFD scoping stage defines the level of detail required for further WFD assessment. This includes identifying risks to the WFD receptors from the Proposed Development's activities. The scoping stage assessments for the impacted WFD surface waterbodies are presented in **Table 9B-3**. The scoping stage assessments for the impacted WFD groundwater body is presented in **Table 9B-4**.

Table 9B-3 - WFD Scoping of the Proposed Development's Activities against WFD Quality Elements for the Impacted Surface Waterbodies.

WFD Quality Element	Risk to Receptor (Yes/No)	Scoping Outcome Reasoning
Biological Quality Elements		
Fish	Yes	Potential to be impacted by construction activities – impacts may include fine sediment / pollutant release which may adversely impact fish both on and off site. The potential implementation of watercourse crossings (e.g. culverts) poses a barrier for the connectivity of the waterbodies and may disrupt migration and spawning processes of fish species. Pollution risk if no adequate controls during operational phase.
Invertebrates	Yes	Impacted by construction activities – impacts may include fine sediment / pollutant release which may adversely impact invertebrates. Pollution risk if no adequate controls during operational phase.
Macrophytes and phytobenthos combined	Yes	Impacted by construction activities – impacts may include fine sediment / pollutant release which may adversely impact macrophytes and phytobenthos combined. Pollution risk if no adequate controls during operational phase.
Physico-chemical Quality Elements		
Thermal Conditions	No	The Proposed Development is not anticipated to alter the Thermal Conditions of the waterbodies.
Oxygenation Conditions	No	The Proposed Development is not anticipated to alter the Oxygenation Conditions of the waterbodies.
Salinity	No	The Proposed Development is not anticipated to alter the Salinity of the waterbodies.
Acidification Status	No	The Proposed Development is not anticipated to alter the Acidification Status of the waterbodies.
Nutrient Conditions	No	The Proposed Development is not anticipated to alter the Nutrient Conditions of the waterbodies.

WFD Quality Element	Risk to Receptor (Yes/No)	Scoping Outcome Reasoning
Hydromorphological Quality Elements		
Quantity and Dynamics of Water Flow	Yes	The Proposed Development may alter the Quality and Dynamics of Water Flow of the waterbodies via changes in runoff rates and volumes from new areas of hardstanding
Connection to Groundwater Bodies	No	The Proposed Development is not anticipated to alter the waterbody's connection to groundwater bodies.
River Continuity	Yes	Impacted by construction activities – the potential implementation of watercourse crossings (e.g. culverts) poses a barrier for the connectivity of the waterbodies.
River Depth and Width Variation	No	The Proposed Development is not anticipated to alter the River Depth and Width Variation of the waterbodies, with exception of short culvert sections.
Structure and Substrate of the Riverbed	Yes	Impacted by construction activities – sediment mobilisation from construction/excavation activities may influence the Structure and Substrate of the Riverbed. Short culverted sections may also impact the Structure and Substrate of the Riverbed.
Structure of the Riparian Zone	No	The Proposed Development is not anticipated to alter the Structure of the Riparian Zone of the waterbodies, with exception of short culvert sections.
Chemical quality elements		
Specific pollutants, priority hazardous substances, priority substances and other pollutants	Yes	Potential for hazardous substances from the BESS fire suppression system to enter the waterbody in the event of a fire.

Table 9B-4 - WFD scoping of the Proposed Development's activities against WFD quality elements for the Severn Uplands - Lower Palaeozoic (GB40902G205300) waterbody

WFD Quality Element	Risk to Receptor (Yes/No)	Scoping Outcome Reasoning
Quantitative Saline Intrusion	No	The Proposed Development is not anticipated to alter the Quantitative Saline Intrusion of the groundwater body.
Quantitative Water Balance	Yes	Potential to be impacted by construction – de-watering may occur during the excavation process required for introducing underground power cables, creating foundations for turbines and proposed infrastructure, and for implementing temporary borrow pits.

WFD Quality Element	Risk to Receptor (Yes/No)	Scoping Outcome Reasoning
Quantitative GWDTEs Test	No	The Proposed Development is not anticipated to alter affect GWDTEs associated with the groundwater body.
Quantitative Dependent Surface Water Body Status	No	The Proposed Development is not anticipated to alter the Quantitative Dependent Surface Water Body Status of the groundwater body.
Chemical Drinking Water Protected Area	Yes	The Site is within the Severn Uplands - Lower Palaeozoic groundwater drinking water protected area. There is potential for chemical inputs to groundwater as a result of construction.
General Chemical Test	Yes	Potential to be impacted by construction – contaminants from construction machinery have the potential to enter the groundwater body. Potential for contaminants from the BESS fire suppression system to enter the groundwater in the event of a fire.
Chemical GWDTEs Test	No	The Proposed Development is not anticipated to alter the Chemical GWDTEs Test of the groundwater body.
Chemical Dependent Surface Waterbody Status	Yes	Potential to be impacted by construction – contaminants from construction machinery have the potential to enter the groundwater body and subsequently enter surface waters. Potential for contaminants from the BESS fire suppression system to enter the groundwater in the event of a fire.
Chemical Saline Intrusion	No	The Proposed Development is not anticipated to alter the Chemical Saline Intrusion of the groundwater body.

4 WFD IMPACT ASSESSMENT

4.1 BASELINE CONDITIONS

WFD STATUS - SURFACE WATER

- 4.1.1. The WFD status the Afon Carno - conf Afon Cwm-Ilwyd to conf R Severn (GB109054049250) WFD Waterbody, Afon Rhiw (S arm) - Ty-newydd to Dwyrhiew (GB109054049350) WFD Waterbody, Nant Rhyd-ros lan - source to conf R Severn (GB109054049220) WFD Waterbody and Severn - conf Afon Dulas to conf R Camlad (GB109054049310) WFD Waterbody are provided in **Table 9B-5**, **Table 9B-6**, **Table 9B-7** and **Table 9B-8** respectively. The data presented here is the Cycle 3 interim classifications from 2024, being the most up to date data. WFD classification data is taken from Water Watch Wales². For groundwater data, provided in **Table 9B-9**, 2021 is the latest data collection date.

Table 9B-5 - WFD Status of the Afon Carno - conf Afon Cwm-Ilwyd to conf R Severn (GB109054049250) WFD Waterbody

Waterbody ID: GB109054049250	2021	2024
Waterbody Name	Afon Carno - conf Afon Cwm-Ilwyd to conf R Severn	
Waterbody Type	River	
Hydromorphological Designation	Natural	Natural
Overall Ecological Status	Good	Good
Current Overall Status	Good	Good
Biological Quality Elements		
Overall Biological Quality Element Status	Good	Good
Fish	Good	High
Invertebrates	High	High
Macrophytes	Good	Good
Physico-chemical Quality Elements		
Ammonia (Phys-Chem)	Good	Good
Dissolved oxygen	High	High

² Water Watch Wales (2024). Water Watch Wales Map Gallery; Cycle 3 2021/2024 (Interim) Comparison (Online). [Cycle 3 Rivers and Waterbodies Interim 2024](#)

Waterbody ID: GB109054049250	2021	2024
pH	High	High
Phosphate	Good	Good
Temperature	High	High
Specific pollutants	High	High
Chemical		
Overall Chemical Status	High	High
Priority substances	Not Assessed	Not Assessed
Priority hazardous substances	Not Assessed	Not Assessed
Hydromorphological Quality Elements		
Hydromorphology Supporting Elements Status	Not High	Not High
Hydrological regime	High	High

Table 9B-6 - WFD Status of the Afon Rhiw (S arm) - Ty-newydd to Dwyrhiew (GB109054049350) WFD Waterbody

Waterbody ID: GB109054049350	2021	2024
Waterbody Name	Afon Rhiw (S arm) - Ty-newydd to Dwyrhiew	
Waterbody Type	River	
Hydromorphological Designation	Natural	Natural
Overall Ecological Status	Good	Good
Current Overall Status	Good	Good
Biological Quality Elements		
Overall Biological Quality Element Status Objective	Good	Good
Fish	High	Good
Invertebrates	Good	Good
Macrophytes	Good	Good

Waterbody ID: GB109054049350	2021	2024
Physico-chemical Quality Elements		
Ammonia (Phys-Chem)	High	High
Dissolved oxygen	High	High
pH	High	High
Phosphate	Good	Good
Temperature	High	High
Specific pollutants	High	High
Chemical		
Overall Chemical Status	High	High
Priority substances	High	High
Priority hazardous substances	High	High
Hydromorphological Quality Elements		
Hydromorphology Supporting Elements Status	Not High	Not High
Hydrological regime	High	High

Table 9B-7 - WFD Status of the Nant Rhyd-ros lan - source to conf R Severn (GB109054049220) WFD Waterbody

Waterbody ID: GB109054049220	2021	2024
Waterbody Name	Nant Rhyd-ros lan - source to conf R Severn	
Waterbody Type	River	
Hydromorphological Designation	Natural	Natural
Overall Ecological Status	Good	Moderate
Current Overall Status	Good	Moderate
Biological Quality Elements		
Overall Biological Quality Element Status Objective	Good	Good

Waterbody ID: GB109054049220	2021	2024
Fish	High	High
Invertebrates	High	High
Macrophytes	Good	Good
Physico-chemical Quality Elements		
Ammonia (Phys-Chem)	Not Assessed	High
Dissolved oxygen	Not Assessed	Moderate
pH	Not Assessed	High
Phosphate	Not Assessed	Good
Temperature	Not Assessed	High
Specific pollutants	High	High
Chemical		
Overall Chemical Status	High	High
Priority substances	High	High
Priority hazardous substances	High	High
Hydromorphological Quality Elements		
Hydromorphology Supporting Elements Status	Not High	Not High
Hydrological regime	High	High

Table 9B-8 - WFD Status of the Severn - conf Afon Dulas to conf R Camlad (GB109054049310)
WFD Waterbody

Waterbody ID: GB109054049310	2021	2024
Waterbody Name	Severn - conf Afon Dulas to conf R Camlad	
Waterbody Type	River	
Hydromorphological Designation	Heavily Modified	Heavily Modified
Overall Ecological Potential	Moderate	Moderate
Current Overall Potential	Moderate	Moderate

Waterbody ID: GB109054049310	2021	2024
Mitigation Measures Assessment	Moderate	Moderate
Biological Quality Elements		
Overall Biological Quality Element Potential	Good	Good
Invertebrates	High	High
Macrophytes	Good	Good
Physico-chemical Quality Elements		
Ammonia (Phys-Chem)	High	High
Dissolved oxygen	High	High
pH	High	High
Phosphate	Moderate	Good
Temperature	High	Good
Specific pollutants	High	High
Chemical		
Overall Chemical Potential	High	High
Priority substances	High	High
Priority hazardous substances	High	High
Hydromorphological Quality Elements		
Hydromorphology Supporting Elements Status	Not Assessed	Not Assessed
Hydrological regime	Not Assessed	Not Assessed

WFD STATUS - GROUNDWATER

- 4.1.2. The Cycle 3 (2021 WFD classifications for the Severn Uplands - Lower Palaeozoic (GB40902G205300) WFD ground waterbody is provided in **Table 9B-9**. For groundwater bodies, 2021 is the most up to date data.

Table 9B-9 - 2021 WFD Status for Severn Uplands - Lower Palaeozoic (GB40902G205300) Groundwater Body

Waterbody Classification	Cycle 3 2021
Overall Waterbody	Poor
Quantitative	Good
Quantitative Status element	Good
Quantitative Saline Intrusion	Good
Quantitative Water Balance	Good
Quantitative GWDTEs test	Good
Quantitative Dependent Surface Waterbody Status	Good
Chemical	Poor
Chemical Status element	Poor
Chemical Drinking Water Protected Area	Good
General Chemical Test	Good
Chemical GWDTEs test	Good
Chemical Dependent Surface Waterbody Status	Poor
Chemical Saline Intrusion	Good

- 4.1.3. The Afon Carno - conf Afon Cwm-Ilwyd to conf R Severn (GB109054049250) and the Afon Rhiw (S arm) - Ty-newydd to Dwyrhiew (GB109054049350) WFD waterbodies were classified as having both good ecological and good overall status in 2021 and 2024. The overall good classification of the Afon Carno - conf Afon Cwm-Ilwyd is comprised of a good classification for Biological Quality Elements, a good classification for Physico-Chemical quality elements, and a high classification for Chemical status. The overall good classification of the Afon Rhiw (S arm) - Ty-newydd to Dwyrhiew is comprised of a good classification for Biological Quality Elements, a high classification for Physico-Chemical quality elements, and a high classification for Chemical status.
- 4.1.4. WFD Status of the Nant Rhyd-ros Ian - source to conf R Severn (GB109054049220) waterbody was classified as having both good ecological and good overall status in 2021, however in 2024 the ecological and overall status of this waterbody was changed to moderate. This was driven by a moderate classification assigned for the Dissolved Oxygen Physico-Chemical quality element in 2024.

- 4.1.5. The Severn - conf Afon Dulas to conf R Camlad (GB109054049310) WFD waterbody was classified as being moderate for both ecological and overall status in 2021 and 2024. In 2021, this classification was driven by a moderate classification for Phosphate and a moderate classification for Mitigations Measures Assessment. While phosphate was reclassified to good for 2024, the ecological and overall status remained as moderate due to the moderate classification assigned for Mitigation Measures Assessment, as this is a heavily modified waterbody.
- 4.1.6. The Severn Uplands - Lower Palaeozoic (GB40902G205300) Groundwater Body is classified as being of a poor status. This is due to the poor Chemical classification it revied in 2021 – specifically with the groundwater body having received a rating of ‘poor’ for Chemical Status Element and Chemical Dependent Surface Waterbody Status. The Reason for Not Achieving Good is attributed to abandoned mines in the area, as this has impacted chemical dependent surface waterbody status through both point and diffuse sources. The mines are listed as non-coal mines.

4.2 CATCHMENT CHARACTERISTICS

Land use and cover

- 4.2.1. The Site is predominantly upland grassland, with areas of rough grassland and bracken, particularly in the northern and western extents. Marshy ground is present in the western part of the Site, associated with the headwaters of local watercourses. Deciduous woodland occurs locally along watercourses and field boundaries, while coniferous plantation and areas of recent forestry harvesting are located outside the Site to the west of Llyn Du and in the north-west. These forestry activities are likely to influence catchment hydrology. The Site is largely undeveloped and is principally used for sheep grazing.
- 4.2.2. Llyn Mawr SSSI lies immediately south of the Site and is designated for its lake and associated bog habitats. The surrounding area is rural, with the nearest settlements being Clatter, Carno, Caersws and Newtown. The A470 runs along the western boundary of the Site, with the A483 to the east. The Llyn Mawr SSSI lies approximately 730m upstream and approximately 15m upslope of the Proposed Development; as such, the hydrology of the SSSI would not be impacted.

Catchment Geology and Soils

- 4.2.3. The Site is underlain by sandstone and mudstone of the Penstrowed Grits Formation. Superficial deposits of till and Devensian deposits occur across much of the Site, with the exception of elevated ridges. Areas of peat are present on west-facing slopes (see **Chapter 10 Geology and Soils** for further details on peat). The access road crosses superficial deposits in its lower reaches only.
- 4.2.4. Within the wider Study Area, till and Devensian deposits occur on lower slopes adjacent to the Afon Carno, with alluvium, alluvial fan and glaciofluvial deposits present within the river corridor. Head deposits are locally present on steeper western slopes. Downslope geological successions include mudstone and sandstone formations associated with the Afon Carno and Afon Rhiw valleys, with changes to Caerau and Rhayader Mudstones further downstream within the Severn catchment.
- 4.2.5. Soilscales data indicate that the Site is dominated by slowly permeable, wet, very acid upland soils with peaty surfaces. More freely draining acid loamy soils occur locally along the access road, transitioning to slightly acid loamy soils at lower elevations. Seasonally wet acid loamy and clayey soils dominate along the Afon Carno and Nant y Llyn Mawr valleys.

Catchment Hydrology

- 4.2.6. The Site is located on a broad ridge (Craig y Llyn-mawr) which forms a hydrological divide, with drainage to the west flowing to the Afon Carno WFD surface waterbody and drainage to the east flowing to the Afon Rhiw WFD surface waterbody. Both ultimately drain to the River Severn. Elevations across the Energy Park area range from approximately 327 to 485 mAOD, with turbine locations between 345 and 458 mAOD. The access road descends from the upper plateau at approximately 402 mAOD to the Afon Carno valley bottom at around 140 mAOD, where it connects to the B4568 and A470.
- 4.2.7. The Site lies within the Severn River Basin District and intersects the catchments of four WFD surface waterbodies: Afon Carno, Afon Rhiw (South Arm), Nant Rhyd-ros Ian and the Severn. The Site is located on the watershed divide between the Afon Carno (south-west) and Afon Rhiw (north-east), with approximately 63% of the Site draining to the Afon Rhiw and 35% to the Afon Carno.
- 4.2.8. The access road additionally intersects the Nant Rhyd-ros Ian and Severn waterbodies. The Afon Carno, Afon Rhiw and Nant Rhyd-ros Ian achieved an overall WFD classification of Good in 2021 (Cycle 3), while the Severn is classified as Moderate. Several minor watercourses drain the Site, including the Nant yr Amros and Nant Cwmgerwyn (to the Afon Carno) and Nant y Llyn Mawr (to the Afon Rhiw).
- 4.2.9. Two springs are recorded along the access road, with a total of 14 wells and six springs mapped within the wider Study Area. Three lakes occur within the Study Area (Llyn Mawr, Llyn Du and Llyn y Tarw), though none are located within the Site boundary.
- 4.2.10. No licensed surface water or groundwater abstractions are recorded within the Site or Study Area. Private Water Supplies will be considered at the next assessment stage.
- 4.2.11. The Site overlies the Severn Uplands – Lower Palaeozoic WFD groundwater body, which was classified as Good quantitative status and Poor chemical status in 2021 (Cycle 3). The underlying Penstrowed Grits Formation is primarily classified as a Secondary Undifferentiated aquifer, with Secondary B aquifer designations along the access road and Primary aquifer designations locally within the Afon Carno valley. The Site and Study Area are not located within a Source Protection Zone; the nearest SPZ lies approximately 4 km to the southeast. The Site and Study Area lie within the Severn Uplands – Lower Palaeozoic groundwater drinking water protected area. It should be noted that all groundwater bodies in Wales are designated as Drinking Water Protected Areas. The purpose of this is to aim to protect sources from over abstraction and to prevent any deterioration in water quality. In this instance there is no indication that there is any specific public drinking water source within the study area.

4.3 EMBEDDED MITIGATIONS

- 4.3.1. The Proposed Development would include for the following embedded measures.
- 4.3.2. The Construction Environmental management Plan (CEMP) would be the master document for consolidating all environmental requirements and undertakings that relate to the Site during the construction phase of the development. This would include all environmental mitigation measures related to construction, including embedded and additional mitigation, where required. As such it aims to ensure that construction activities for the Proposed Development are carried out in

accordance with legislation and best practice for minimising the effects of construction on the environment and local communities.

- 4.3.3. A final CEMP would be produced prior to the commencement of works and made available to the appointed civil engineers and construction company. It would be secured by a suitably worded planning condition and its objectives will be to:
- Provide a mechanism for delivering many of the construction related environmental mitigation measures described in the ES;
 - Provide a framework for monitoring and compliance auditing and inspection to ensure the environmental measures included in the Proposed Development are being implemented;
 - Ensure environmental best practices are adopted throughout the construction stage;
 - Provide a framework for dealing with accidents, environmental incidents and unexpected issues as they occur; and
 - Ensure a prompt response should environmental incidents occur during the works.
- 4.3.4. The CEMP would remain a live document throughout the pre-construction and construction processes and some provisions may extend into the operational phase. The CEMP would consolidate all appropriate embedded measures, and additional mitigation and enhancement strategies where required, and would clearly outline what should be implemented, where, and by whom. An Outline CEMP is provided alongside this ES. The approval of the final CEMP would be subject to a suitably worded planning condition on any permission granted.
- 4.3.5. The CEMP should detail that no works (in, over or under) would be undertaken within 20 m of a watercourse bank without technical environmental advice regarding the requirement for a permit (FRAP). Works would only proceed once appropriate mitigation (within technical environmental advice and/or FRAP) has been installed and all conditions have been met.
- 4.3.6. The CEMP should also detail that storage and handling of hazardous substances (including fuels) should not occur within 10 m of any inland freshwater, or within 50 m from a well, spring or borehole
- 4.3.7. Implementation of an appropriate Water Management Plan (WMP) for the construction phase of the Proposed Development, utilising SuDS principles, including collection, conveyance and attenuation/infiltration storage where suitable. Suitable temporary silt fencing, bunding and water quality measures (i.e., silt capture to maintain storage volume) would be included in the design of the Proposed Development. Sufficient capacity would be provided onsite to hold runoff prior to discharge runoff to ground and/or any water discharge into watercourses is limited to greenfield rates. A water quality monitoring programme would be agreed with NRW and implemented prior, during and following construction.
- 4.3.8. For all trenched crossings over pumping or fluming would be implemented to maintain the flow regime downstream of the crossing.
- 4.3.9. A Pollution Prevention Plan (PPP) would be prepared to minimise the risk to surface and groundwater quality during construction, operation, and decommissioning.
- 4.3.10. In the unlikely event of a pollution incident, a Pollution Incident Response Plan (PIRP) would have been prepared to minimise and mitigate the magnitude of change on potential receptors.

- 4.3.11. Whilst an initial drainage strategy has been prepared, a detailed drainage strategy for the permanent infrastructure is to be provided as part of the wider works. This may involve site design and landscaping features to redirect surface water flows away from key electrical infrastructure. This would also include the implementation of site drainage in the form of SuDS to facilitate the removal of surface water ensuring there is no increase in flood risk to offsite receptor and that the water quality of runoff is suitably treated before discharge.
- 4.3.12. Any proposed new culverts should be designed to be a suitable size. Any existing culverts should be upsized to suitable sizes to consider future climate change.
- 4.3.13. The BESS fire suppression system would be self-contained so that in the event of it being triggered all fire suppression liquids would be contained on-site to prevent runoff to offsite receptors. This would prevent pollutants from reaching surface water or groundwater.
- 4.3.14. Any proposed new culverts should be designed to be a suitable size. Any existing culverts should be upsized to suitable sizes to consider future climate change. Where new sections of track cross areas identified as being surface water flowpaths, suitably sized culverts should also be installed.

4.4 IMPACT ASSESSMENT

- 4.4.1. Potential pressures and impacts of the Proposed Development during construction and operation have been identified along with embedded mitigation measures and are presented in **Table 9B-10** for surface waterbodies and **Table 9B-11** for groundwater. The proposed mitigation thus forms the basis of this assessment.

Table 9B-10 - Pressures, Potential Impacts and Associated Mitigation for Works to the Scoped in WFD River Watercourses and Downstream Waterbodies (Source: UK Environmental Standards and Conditions (Phase 1), UK Technical Advisory Group, 2008³)

Pressure	Sub-pressures	Potential Impacts	Mitigation Measures
Biological Quality Elements	Fish Invertebrates Macrophytes and phytobenthos combined	As a result of construction activities, impacts may include fine sediment / pollutant release which may adversely impact aquatic ecology. Increased runoff from new hardstanding could lead to sediment and pollutants being washed into waterbodies. The potential implementation of watercourse crossings (e.g. culverts) poses a barrier for the connectivity of the waterbody and may disrupt migration and spawning processes of fish species. There is potential for pollutants to be released during construction or from the BESS fire suppression system which may adversely impact aquatic ecology.	The implementation of a suitable Construction Environmental Management Plan (CEMP) and Pollution Prevention Plan (PPP) would ensure that appropriate mitigation is in place to prevent impacts upon this WFD quality element. The CEMP would contain appropriate measures which would ensure that sediment runoff into the watercourse is prevented and the PPP would manage the risk of chemicals and fuels being spilled and entering the watercourse. Sediment management and water quality monitoring should be included in the CEMP and be implemented during any construction works with the potential to affect the watercourse, and plan for appropriate remediation measures to ameliorate any adverse effects should they occur. Culverts will be avoided or kept as short as possible and designed to avoid abrupt changes in bed level/disrupting natural bed processes wherever possible. During construction and operation suitable SuDS will be in place to manage runoff and provide water quality

³ UK Technical Advisory Group (2008) UK Environmental Standards and Conditions (Phase 1). Available at: UK Technical Advisory Group (UKTAG) [Available May 2026].

Pressure	Sub-pressures	Potential Impacts	Mitigation Measures
			treatment to mitigate negative impacts on aquatic ecology. The BESS fire suppression system will be self-contained to prevent the release of contaminants into the water environment.
Physico-chemical Quality Elements – Scoped out	N/A	N/A	N/A
Hydromorphological Quality Elements	River Continuity Structure and Substrate of the riverbed Quantity and Dynamics of Water Flow	The potential implementation of watercourse crossings (e.g. culverts) poses a barrier for the connectivity of the waterbody. Sediment mobilisation from construction/excavation activities may influence the Structure and Substrate of the riverbed.	The implementation of a suitable Construction Environmental Management Plan (CEMP) and Pollution Prevention Plan (PPP) would ensure that appropriate mitigation is in place to prevent impacts upon this WFD quality element. The CEMP would contain appropriate measures which will ensure that sediment runoff into the watercourse is prevented and the PPP will manage the risk of chemicals and fuels being spilled and entering the watercourse. Sediment management and water quality monitoring should be included in the CEMP and be implemented during any construction works with the potential to affect the watercourse, and plan for appropriate remediation measures to ameliorate any adverse effects should they occur. Culverts were avoided or kept as short as possible and designed to avoid abrupt changes in bed level/disrupting natural bed processes wherever possible. SuDS will be in place during construction and operation to ensure that existing greenfield runoff volumes of discharge to waterbodies are maintained. The SuDS will also manage water quality so that there is no impact to the structure and substrate of the riverbed.

Pressure	Sub-pressures	Potential Impacts	Mitigation Measures
Chemical quality elements	Specific pollutants, priority hazardous substances, priority substances and other pollutants	The potential for accidental spillage of fuels during construction may affect the chemical status of waterbodies. The BESS fire suppression system has the potential to release pollutants into waterbodies in the event that it is triggered.	The implementation of a suitable Construction Environmental Management Plan (CEMP) and Pollution Prevention Plan (PPP) would ensure that appropriate mitigation is in place to prevent impacts upon this WFD quality element. The CEMP would contain appropriate measures to cover good practice during construction to minimise spillage risk. The PPP will manage the risk of chemicals and fuels being spilled and entering the waterbodies. The BESS fire suppression system will be self-contained to prevent the release of contaminants into the water environment.

Table 9B-11 - Pressures, Potential Impacts and Associated Mitigation for works to the Scoped in Groundwater Bodies (Source: UK Environmental Standards and Conditions (Phase 1), UK Technical Advisory Group, 2008³)

Pressure	Potential Impacts	Mitigation Measures
Quantitative Water Balance	De-watering may occur during the excavation and construction processes; this would impact quantitative water balance.	The implementation of a suitable Construction Environmental Management Plan (CEMP) will ensure that appropriate mitigation is in place to prevent impacts upon this WFD quality element.
Chemical Drinking Water Protected Area	The site is within the Severn Uplands - Lower Palaeozoic groundwater drinking water protected area. There is potential for chemical inputs to groundwater as a result of construction.	All operatives would be made aware of the need to protect the watercourse from contamination, including EA and CIRIA guidance and legal obligations. The creation of a Pollution Prevention Plan (PPP) would ensure that appropriate mitigation is in place to prevent significant impacts, through ensuring the fuels and chemicals are suitably stored and handled to mitigate the risk of them entering groundwater. Sediment management and water quality monitoring should be included in the CEMP and be implemented during any construction works with the potential to affect the watercourse, and plan for appropriate remediation measures to ameliorate any adverse effects should they occur.

Pressure	Potential Impacts	Mitigation Measures
General Chemical Test	Potential to be impacted by construction – contaminants from construction machinery have the potential to enter the groundwater body. The potential for accidental spillage of fuels during construction may affect the chemical status of waterbodies. The BESS fire suppression system has the potential to release pollutants into waterbodies in the event that it is triggered.	All operatives would be made aware of the need to protect the watercourse from contamination, including EA and CIRIA guidance and legal obligations. The creation of a Pollution Prevention Plan (PPP) would ensure that appropriate mitigation is in place to prevent significant impacts, through ensuring the fuels and chemicals are suitably stored and handled to mitigate the risk of them entering groundwater. Sediment management and water quality monitoring should be included in the CEMP and be implemented during any construction works with the potential to affect the watercourse, and plan for appropriate remediation measures to ameliorate any adverse effects should they occur. The BESS fire suppression system will be self-contained to prevent the release of contaminants into the water environment.

ASSESSMENT OF THE PROPOSED DEVELOPMENT AGAINST WFD OBJECTIVES

4.4.2. The compliance of the Proposed Development would be determined based upon an assessment against the following objectives relating to the biological, physico-chemical and hydromorphological quality elements:

- Does the Proposed Development cause deterioration in the Ecological Potential or Status of a body of surface or ground water?
- Does the Proposed Development compromise the ability of the waterbody to achieve Good Ecological Status or Potential?
- Does the Proposed Development cause a permanent exclusion or compromise achievement of the WFD objectives (e.g. mitigation measures) in other waterbodies within the same RBD?
- Does the Proposed Development contribute to the delivery of the WFD objectives (e.g. mitigation measures)?

4.4.3. The WFD compliance assessment for the Proposed Development is summarised relating to impacted surface waterbodies in **Table 9B-12**. The WFD compliance assessment for the Proposed Development is summarised relating to the impacted groundwater body in **Table 9B-13**.

Table 9B-12 - Compliance Assessment of the Proposed Development against WFD Status for Impacted WFD Surface Waterbodies

Waterbody IDs	GB109054049250; GB109054049350; GB109054049220; GB109054049310
Waterbody name	Afon Carno – conf Afon Cwm-Ilwyd to conf R Severn; Afon Rhiw (S arm) - Ty-newydd to Dwyrhiew; Nant Rhyd-ros lan - source to conf R Severn; Severn - conf Afon Dulas to conf R Camlad
Deterioration in the status/potential of the waterbody	Biological: Through the implementation of suitable mitigation measures, there would be no deterioration to the status or potential of biological quality elements. Physico-chemical: Through the implementation of suitable mitigation measures, there would be no deterioration to the status or potential of physico-chemical quality elements. Hydromorphological: Through the implementation of suitable mitigation measures, there would be no deterioration to the status or potential of hydromorphological quality elements. Chemical: Through the implementation of suitable mitigation measures, there would be no deterioration to the status or potential of chemical quality elements.

Ability of the waterbody to achieve Good Ecological Potential/Status	The Proposed Development would not impact future attainment of 'good' ecological status for the discussed surface waterbodies.
Impact on the WFD objectives of other waterbodies within the same River Basin District	The Proposed Development would not impact upon WFD objectives of the discussed surface waterbodies.
Ability to contribute to the delivery of the WFD objectives	The Proposed Development has been demonstrated to not negatively affect WFD status, however there is no anticipated effects which would positively contribute to the delivery of WFD objectives.

Table 9B-13 - Compliance Assessment of the Proposed Development against WFD Status for the Impacted WFD Groundwater Body

Waterbody ID	GB40902G205300
Waterbody name	Severn Uplands - Lower Palaeozoic
Deterioration in the status/potential of the waterbody	Through the implementation of suitable mitigation measures, there would be no deterioration to the status of the groundwater body.
Ability of the waterbody to achieve Good Ecological Potential/Status	The Proposed Development would not impact future attainment of 'good' ecological status for the discussed groundwater body.
Impact on the WFD objectives of other waterbodies within the same River Basin District	The Proposed Development would not impact upon WFD objectives of the discussed groundwater body.
Ability to contribute to the delivery of the WFD objectives	The Proposed Development has been demonstrated to not negatively affect WFD status, however there is no anticipated effects which would positively contribute to the delivery of WFD objectives.

5 CONCLUSION

- 5.1.1. This WFD Assessment has been prepared to assess the impacts and to identify appropriate mitigation measures for the proposed works associated with the Proposed Development.
- 5.1.2. This assessment concludes that the Proposed Development would not impact on the WFD status or objectives of any associated surface water or groundwater bodies near the Proposed Development.
- 5.1.3. The assessment also concludes no adverse impacts on Protected Areas in hydrological connection with the Proposed Development.
- 5.1.4. The Proposed Development would not prevent the achievement of the wider WFD objectives and is not predicted to have a significant impact on any other surface or groundwater body, or mitigation measures developed to achieve good status.



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