



Parc Ynni Calon y Gwynt

ENVIRONMENTAL STATEMENT

Appendix 9A: Flood Consequence Assessment





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EXECUTIVE SUMMARY

This Flood Consequent Assessment (FCA) accompanies the Environmental Statement (ES) for the proposed Parc Ynni Calon y Gwynt (the 'Site') located 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 381ha.

This FCA has been prepared in line with Welsh planning policy (principally guidance contained within Welsh Government's (WG) Technical Advice Note (TAN15)) and associated guidance to a) assess the consequences of flooding from all sources both during the construction and operational phases of development; and b) to appraise the potential effects of the scheme on the baseline level of existing flood risk to third parties to identify any significant consequences. The Site comprises the Energy Park development (inclusive of internal access tracks, underground cables and Temporary Construction Compound (TCC)). Once constructed the significant permanent above ground infrastructure would be the (up to) eleven turbines, Battery Energy Storage System (BESS) compound, control building compound, substation. All temporary construction works associated with the Proposed Development would be removed with the ground being reinstated to a similar condition and elevation as at present.

The hydrological baseline has been determined with information from desktop sources. The Proposed Development elements and construction works are not anticipated to cross any NRW Main Rivers, though there are a number of ordinary watercourses which are crossed currently or will be crossed by the Proposed Development. All potential sources of flooding have been considered under this assessment, which has identified that surface water runoff originating from the Proposed Development poses the greatest potential flood risk.

Suitable flood risk management measures have been identified to address the potential risks identified; these include a Drainage Management Plan for the construction phase, stand-off distances from watercourses, stockpile management and initial Drainage Design for the operational phase. Risks during decommissioning are considered to be very similar to those for construction, albeit disturbance will be more limited as some below-ground infrastructure will be left in-situ. Appropriate permissions and supporting appraisals will be obtained at the time of decommissioning to comply with the then current legislation and guidance. Residual risks were identified following this FCA, as such additional mitigation measures are required.

For the FCA, an outline approach to drainage has been identified, including identification of the discharge locations (discharge to ground and if required supplemented by discharge to watercourses), discharge rates (greenfield QBAR) and Sustainable Drainage Systems (SuDS). Investigation of the viability of infiltration as a means by which surface water runoff could be discharged will be undertaken post-consent, through liaison with Powys County Council (PCC) as the Lead Local Flood Authority (LLFA) and the SuDS Approval Body (SAB) and by undertaking soakaway testing. In the case that the soakaway testing concludes that infiltration is not solely sufficient in managing runoff, and discharge to the watercourses is required, this will be subject to a Consent from Natural Resources Wales (NRW) and PCC.



Implementation of the identified flood risk management measures is considered to be appropriate mitigation to ensure the Proposed Development will be safe for its lifetime, with consideration of the vulnerability of its users, without increasing flood risk elsewhere.

The FCA concludes that the Proposed Development, together with the proposed flood risk management measures above, will not be subject to any unacceptable level of risk, nor would there be potential increased flood risk elsewhere. As such the Proposed Development is acceptable on flood risk grounds and meets the aims of TAN15.

1 INTRODUCTION

1.1 PURPOSE OF THIS REPORT

- 1.1.1. This Flood Consequence Assessment (FCA) accompanies the Environmental Statement (ES) for the proposed Parc Ynni Calon y Gwynt Energy Park('Site '). This FCA has been prepared in accordance with Technical Advice Note 15: Development and Flood Risk (TAN15)¹¹.

1.2 CONTEXT

- 1.2.1. In accordance with the TAN15, a FCA is required as the Site exceeds 1 ha and is within an area of Flood Zone 2 from surface water and small watercourses in the Natural Resources Wales (NRW) Flood Risk Assessment Wales Map.
- 1.2.2. This FCA demonstrates how flood risk to the Proposed Development and any increased flood risk to third parties due to that development, would be managed over the lifetime of the development, taking climate change into account.

1.3 SOURCES OF DATA AND INFORMATION

- 1.3.1. **Table 9A-1** summarises sources of data, site plans and maps that have been used to inform this assessment. Data was also requested from Powys County Council (PCC), as the Lead Local Flood Authority (LLFA), and Natural Resources Wales (NRW). Powys County Council (PCC), as the Sustainable Drainage Systems (SuDS) Approval Body (SAB), was consulted on 01/04/2025 to discuss the principles of the Proposed Development. Copies of relevant correspondence are provided in **Annex 9A.2** within this Appendix.

Table 9A-1 - 1.1 Sources of desktop information used in this assessment

Source	Data
Local Ordnance Survey (OS) ¹	Topography and location of springs.
BGS Geoindex Onshore ²	http://mapapps2.bgs.ac.uk/geoindex/home.html Aquifer designation information.
Powys County Borough Council (2012) ³	https://powys.moderngov.co.uk/Data/Cabinet/20120911/Agenda/xC140 Flood Risk Management Strategy v2.pdf Records of local historical flooding; Information on local surface water flood risk issues; Records of licenced local abstraction and discharges.
British Geological Survey (BGS) ⁴	https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/ Geology viewer for bedrock and superficial geology information.

¹ Land Ordnance Survey Available online at: <https://pastmap.org.uk/map> (Accessed May 2026)

² Aquifer Designation Available online at: <http://mapapps2.bgs.ac.uk/geoindex/home.html> (Accessed May 2026)

³ Local Flood Risk Management Strategy (2012) Available online at: <https://powys.moderngov.co.uk/Data/Cabinet/20120911/Agenda/xC140%20Flood%20Risk%20Management%20Strategy%20v2.pdf> (Accessed May 2026).

⁴ BGS Geoindex Onshore Viewer Available online at: <https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/> (Accessed May 2026).

Source	Data
Cranfield University ⁵	http://www.landis.org.uk/soilscales/Soil classification viewer .
Natural Resources Wales ⁶	https://flood-risk-maps.naturalresources.wales/?locale=en Ebbw Upper ICM 5 Report and Flood Model Outputs (2018); Records of licenced local abstraction and discharges.

1.4 STRUCTURE OF THIS REPORT

1.4.1. The report is structured as follows:

- **Section 2** - Site Description: development proposals and planning context;
- **Section 3** - Flood Risk Appraisal;
- **Section 4** – Surface Water Management;
- **Section 5** – Mitigation Measures;
- **Section 6** - Requirements of Technical Advice Note 15 (2026); and
- **Section 7** - Conclusions.

1.4.2. Supporting documents are presented at the end of the report in the form of appendices. These are as follows:

- **Annex 9A.1** within this Appendix contains details of the Planning Policy Wales vulnerability testing and Technical Advice Note 15 (2026);
- **Annex 9A.2** within this Appendix contains the details of the consultation from NRW; and
- **Annex 9A.3** within this Appendix contains the drainage strategy.

⁵ LandIS soilscales viewer for soil classification Available online at: <http://www.landis.org.uk/soilscales/> (Accessed May 2026)

⁶ Natural Resources Wales Flood Risk Map Viewer Available online at: <https://flood-risk-maps.naturalresources.wales/?locale=en> (Accessed May 2026);

2 SITE DESCRIPTION, DEVELOPMENT PROPOSAL AND PLANNING CONTEXT

2.1 INTRODUCTION

- 2.1.1. This section provides an overview of the location of the Proposed Development and its characteristics (**Section 2.2** of this report), a description of the Proposed Development (**Section 2.3** of this report) and establishes the planning policy context for the FCA (**Section 2.4** of this report).

2.2 STUDY AREA

- 2.2.1. The study area assessed in this FCA covers a 1.5km buffer from the Site boundary. While the construction works and proposed permanent infrastructure cross multiple watercourses there are no proposed alterations to these watercourse or in-channel works beyond the construction or upgrading of watercourse crossings, which will all be suitably sized. It is considered that any potential impacts on watercourses in terms of flood risk would be negligible beyond 1.5km downstream of red line boundary for the Proposed Development. The 1.5km buffer is taken as an initial study area, which was further refined where hydraulic connectivity was not present (for example areas upslope of the Proposed Development were scoped out).

2.3 SITE DESCRIPTION

THE SITE

- 2.3.1. The Site lies within the PCC administrative area, with the nearest point of the Site boundary approximately 0.8km from the eastern edge of Clatter (NGR: SN 99879 94793). It is located 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, via the B4568. The Site covers an area of approximately 381ha. A site visit, informed by the frozen infrastructure design layout, 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

LAND USE AND TOPOGRAPHY

- 2.3.2. Based on Ordnance Survey (OS) 1:25k Mapping Bing Maps on-line maps, and aerial photography⁷, the Site area is largely covered with grassland, with rough grassland interspersed with areas of bracken, especially in the north and western areas. There are areas of marsh in the westerly quadrant surrounding the headwaters of the watercourses draining the Site. The southern section of the Site passes by the occurrence of deciduous woodland which tend to form corridors along the streams and field boundaries. There are areas of coniferous plantation outside the Site area, to the west of Llyn Du and recent timber harvesting near the northwestern corner of the Site area. The occurrence of plantations and timber harvesting will likely have a significant hydrological influence on the local catchment both currently and in the future. The area is largely undeveloped, with the main land use that of agriculture, being sheep farming in this case. Located, just south of the Site area, is Llyn Mawr, a Site of Special Scientific Interest (SSSI), on the basis of the lake and

⁷ Bing Maps (2024). [online]. Available at: <https://www.bing.com/maps> (Last accessed May 2026)

associated bog habitats⁸. The closest significant settlements are the village of Clatter to the south-west, Carno to the west, Caersws village to the south and the largest of these, Newtown to the southeast. The A470 runs from the south and along the western side of the Site area, while the A483 road runs along the east.

- 2.3.3. The area on which the Site is located has a broad ridge (Craig y Llyn-mawr) which runs from south to north across the western quadrant. This ridge forms the hydrological divide, as the Site drains westward (into the Afon Carno WFD surface waterbody) and eastward (into the Afon Rhiw WFD surface waterbody) respectively, with both watersheds draining into the River Severn.
- 2.3.4. The elevation varies across the Site, with the highest point being 485m above ordnance datum (AOD), whilst the turbines are situated on land ranging from 345m to 458m AOD. The lowest point of the Site in the valley near the village of Pontdolgoch, at 140m AOD, where the Site joins the B4568 before then joining the A470 in the bottom of the Afon Carno valley.

HYDROLOGY AND DRAINAGE

- 2.3.5. There are three watercourses and several smaller tributaries in the vicinity of the Site. The Afon Carno is located to the south of the Site, and the Nant Cwmgerwyn is located to the west of the Site. The Nant y Llyn Mawr crosses the Site Boundary in the northern area of the Site. The Afon Carno is classified by the NRW as a main river and the Nant Cwmgerwyn is classified as an Ordinary Watercourse.
- 2.3.6. Two springs draining into the Afon Carno valley were also identified approximately 400m north from the Nant Big's confluence with the Afon Ebwy (NGR: SO012966 and NGR: SO012960).
- 2.3.7. The Nant y Llyn Mawr is located in the northeast of the Site and is connected to Llyn Mawr. The Nant y Llyn Mawr flows north and crosses the existing access track before bending northeast through a steep sided valley before joining the Afon Rhiw and through a caravan park before joining the Afon Rhiw approximately 2.5km northeast of the Site. The existing tracks are required to be widened, and the Nant y Llyn Mawr crossing will need to be strengthened.
- 2.3.8. OS 1:25k mapping shows two springs within the Site (shown in **Chapter 9: Figure 9.3**). One spring is located adjacent to the existing road that connects the Proposed Development to the B4568 (NGR: SO012966). The second spring is also located adjacent to the existing road that connects the Proposed Development to the B4568 (NGR: SO012960). Both springs flow south eastwards away from the Site and therefore will not be affected by the Proposed Development.
- 2.3.9. There are four springs in the vicinity of the Site. One is located approximately 0.95km to the east of the Site approximately 0.41km south of Llyn Tarw and flows south before joining the Nant Rhyd-ros-lan (NGR: SO021968). The second spring is located approximately 0.37km east of Llyn Du and flows south before joining an ordinary watercourse which confluences with the Afon Carno (NGR: SO012966). The third spring is located approximately 0.43km east of the Site and flows northwest before joining an ordinary watercourse which confluences with the Nant Rhyd-ros-lan (NGR: SO016958). The fourth spring is located approximately 1.04km east of the Site and flows northeast before joining an ordinary watercourse which confluences with the River Severn (NGR: SO020948).

⁸ Montgomeryshire Wildlife Trust: Llyn Mawr [online] Available at: <https://www.montwt.co.uk/nature-reserves/llyn-mawr> (Last accessed May 2026)

- 2.3.10. There are no notable ponds or canals located within the Study Area. There are three lakes of varying size within the Study Area, however, none occur within the boundaries of the Site. These lakes are Llyn Mawr, Llyn Du and Llyn Tarw. Both Llyn Du and Llyn Tarw are also reservoirs. Both Llyn Mawr, within the Afon Rhiw waterbody, and Llyn Du, within the Afon Carno waterbody, are located at an elevation of 390m AOD. Llyn y Tarw located to the east of the Study Area and within the Nant Rhyd-ros Ian waterbody is at an elevation of 420m AOD.
- 2.3.11. Based on the NRW Licensed Water Abstractions database there are no points of abstraction within the Site or Study Area.

GEOLOGY, HYDROGEOLOGY AND SOILS

- 2.3.12. A review of the available geological and hydrogeological data from the British Geological Survey is summarised in **Table 9A-2** below:

Table 9A-2 - Available Geological and Hydrogeological Data (BGS)

Geology	Geological Description	Source
Bedrock Geology	The Site for the energy park is entirely underlain by the Penstrowed Grits Formation.	BGS (2026) ⁹
Superficial Geology	The BGS online geology mapping indicates that there are no superficial deposits across the majority of the Site. However, there are small areas mapped as having superficial deposits of Till, Devensian and Peat. (Further details on peat included in Chapter 10 Geology and Soils).	BGS (2026) ⁹
Aquifer vulnerability	Secondary (undifferentiated) aquifer with medium-high vulnerability.	BGS (2026) ⁹
Borehole Records	BGS online mapping indicates there are no boreholes within the Site. There is one local BGS borehole (NGR: SO09NW2) located 0.44km west of the Site.	BGS (2026) ⁹
Soil Type	The majority of the soils within the Site for the energy park, comprise slowly permeable wet very acid upland soils with a peaty surface. Soils to the west of the Site are associated with Y Glon peak and comprise very acid loamy upland soil with a wet peaty surface. Soils to the east of the Site comprise slowly permeable seasonally wet acid loamy and clayey soils.	Cranfield University Soilscales (2026) ¹⁰

- 2.3.13. As illustrated in **Table 9A-2**, British Geological Survey (BGS) mapping indicates that the entirety of the Site overlies a consistent and low permeability geology which comprise the Penstrowed Grits Formation which is described as mudstones with greywacke sandstones. Limited superficial deposits of Till, Devensian, Head-Diamicton, gravel, sand and silt and Peat can be found across the entirety of the Site and Alluvial fan deposits-Sand and gravel where the Site joins the B4568.

⁹ BGS Geoindex Onshore Viewer Available online at: <https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/> (Accessed May 2026).

¹⁰ LandIS soilscales viewer for soil classification Available online at: <http://www.landis.org.uk/soilscales/> (Accessed May 2026)

Bedrock aquifer status

- 2.3.14. The bedrock geology underlying the Site is a Secondary B and Secondary (undifferentiated) aquifer. Secondary B aquifers defined are mainly lower permeability layers that may store and yield limited amounts of groundwater through characteristics like thin cracks (called fissures) and openings or eroded layers. Secondary (undifferentiated) aquifers defined are aquifers where it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the rock type. These have only a minor value.

Bedrock aquifer vulnerability

- 2.3.15. BGS groundwater vulnerability mapping indicates that the Secondary B and Secondary (undifferentiated) Aquifer associated with the bedrock geology underlaying the majority of the Site is at medium vulnerability. The southern area of the Site where the proposed access track is located between SO 01207 96782 and SO 01403 93495, is indicated as high vulnerability.

Superficial deposits aquifer status

- 2.3.16. There is no superficial deposit data available for the northern area of the Site. However, for the southern area of the Site, the superficial deposits underlaying the Site which is a Secondary (undifferentiated) aquifer. These aquifers are defined as mainly lower permeability layers that may store and yield limited amounts of groundwater through characteristics like thin cracks (called fissures) and openings or eroded layers.

Superficial deposits aquifer vulnerability

- 2.3.17. BGS groundwater vulnerability mapping indicates that the Secondary (undifferentiated) Aquifer associated with the superficial deposits underlying the majority of the Site is at medium vulnerability. The southern area of the Site where the proposed access track is located between SO 01207 96782 and SO 01403 93495, is indicated as high vulnerability.

Source Protection Zones

- 2.3.18. NRW mapping indicates that there are no source protection zones (SPZs) within close proximity to the Proposed Development.

EXISTING DRAINAGE INFRASTRUCTURE

- 2.3.19. No private drainage plans have currently been received for the existing Site. Further information on the existing drainage would support the assessment of the local flood risk and the production of a suitable drainage strategy (outside the scope of this report).

DEVELOPMENT PROPOSALS

- 2.3.20. The proposal is to construct and operate an energy park comprising up to eleven turbines and associated infrastructure, which would be located to the north of Clatter mid Wales in the administrative area of Powys County Council (PCC). The key elements of the Proposed Development are listed below. A more detailed description is provided in **Chapter 4: Description of Proposed Development** of the ES.
- Up to 11 three bladed horizontal axis wind turbines, with an anticipated rotor diameter of 163m and height to tip blade of 180 to 200m (approximate generating capacity of up to 80 MW).
 - BESS;

- Crane pads (hardstandings) and laydown areas adjacent to each wind turbine (further information provided below);
- Power cables linking the wind turbines laid in trenches underground, including cable markers (further information provided below);
- A control building including substation, parking and a small storage compound;
- Health and safety and other signage;
- New and upgrading of existing access tracks, passing places and turning heads;
- Borrow pits (if necessary); and
- Temporary construction compound(s).

2.4 PLANNING CONTEXT

INTRODUCTION

- 2.4.1. The purpose of this section is to identify the key policy documents that define the scope of this assessment. The section is structured in a hierarchical order, from national policy down to local guidance.

NATIONAL POLICIES AND GUIDANCE

Technical Advice Note 15 (TAN15)

- 2.4.2. The Technical Advice Note 15: Development, Flooding and Coastal Erosion 2026 edition¹¹ provides guidance in relation to development and flooding and is supported by the Flood Map for Planning which incorporates flood risk extents based on predicted climate change over the next century.
- 2.4.3. In the Flood Map for Planning, Flood Zones are provided for different sources of flooding and are defined as follows:
- Rivers, Rivers and Sea combined, Surface Water and small watercourses:
 - Flood Zone 1 – areas with less than 0.1% chance of flooding in a given year, including the effects of climate change.
 - Flood Zone 2 – areas with between 0.1% and 1% chance of flooding in a given year, including the effects of climate change.
 - Flood Zone 3 – areas with greater than 1% chance of flooding in a given year, including the effects of climate change.
 - Sea:
 - Flood Zone 1 – areas with less than 0.1% chance of flooding from the sea in a given year, including the effects of climate change.
 - Flood Zone 2 – areas with between 0.1% and 0.5% chance of flooding from the sea in a given year, including the effects of climate change.
 - Flood Zone 3 – areas with greater than 0.5% chance of flooding from the sea in a given year, including the effects of climate change.

¹¹ Technical Advice Note (TAN15) Available online at: <https://www.gov.wales/sites/default/files/publications/2018-09/tan15-development-flood-risk.pdf> (Accessed May 2026)

- 2.4.4. TAN 15 Defended Zones are areas that benefit from Risk Management Authority flood defences with the following minimum Standard of Protection, of 1% (present day) for rivers and 0.5% (present day) for the sea.

The National Strategy for Flood and Coastal Erosion Risk Management (FCERM) in Wales, Welsh Government

- 2.4.5. The National Strategy for FCERM in Wales, as required under the Flood and Water Management Act 2010, set out the management approach for risks associated with flooding and coastal erosion across Wales over a 10-year period. NRW is responsible for managing the flood risks from the main rivers and sea across Wales; whilst Local Authorities LLFAs are responsible for managing risks associated with surface water, groundwater, and ordinary watercourses.

Sustainable Drainage (SuDS) Statutory Guidance, Welsh Government[4]

- 2.4.6. The SuDS Statutory Guidance establishes the requirements of Schedule 3 of the Flood and Water Management Act 2010; a framework for the approval and adoption of surface water management systems serving new developments. The SuDS Approval Bodies (SABs) are assigned under the same Act, which give local authorities the responsibility to approve drainage systems for new developments. The overall objective of the legislation is to deliver effective, multi-purpose SuDS, which would remain effective for the lifetime of the development.

LOCAL PLANS AND POLICIES

- 2.4.7. Local plans and policies and relevant guidance to this FCA are summarised in **Table 9A-3**.

Table 9A-3 - Local Plans, Policies and Guidance

Policy/ Plan / Guidance	Key Provisions
Powys Flood Risk Management Strategy, Powys County Council (PCC) ¹²	The Powys County Borough Council (PCC) Flood Risk Management Strategy (FRMS) notes that surface water, ordinary watercourses, groundwater and sewers are the primary local sources of flooding within the region. The strategy is used by PCC to co-ordinate flood risk management across the region. The LFRMS has been used to inform Section 3 of this report.
Flood Risk Management Plan, Mid Wales Place, NRW ¹³	The NRW Flood Risk Management Plan (FRMP) identifies that the primary source of flood risk within the Caersws community area, which is relevant to this FCA, is associated with extreme weather events. The FRMP also sets out how risk management authorities will work to manage flood risk.

¹² Powys County Council. (2012). Flood Risk Management Strategy. (online) Available at: <https://powys.moderngov.co.uk/Data/Cabinet/20120911/Agenda/xC140%20Flood%20Risk%20Management%20Strategy%20v2.pdf> (Accessed May 2026).

¹³ NRW Flood Risk Management Plan, Mid Wales Place. (Online) Available at: <https://naturalresources.wales/media/3hwgt4vp/frmp-cycle-2-place-section-mid.pdf> (Accessed May 2026)

Policy/ Plan / Guidance	Key Provisions
Sustainable Drainage Approval Body (SAB), Powys County Council (PCC) ¹⁴	PCC undertake the SAB technical approvals on behalf of PCC. At present, PCC have not produced any technical guidance on sustainable drainage design or standards. However, the application guidance does make reference to the key national documents listed above
Severn Preliminary Flood Risk Assessment (PFRA), Natural Resources Wales (NRW) and the Environment Agency (EA) ¹⁵	The Severn PFRA was undertaken in December 2018. The document is used to inform management of the River Severn catchment in regard to flood risk and FRMPs developed by Local Authorities within the catchment. The catchment area is inclusive of the PCC.

2.5 THE JUSTIFICATION TEST

- 2.5.1. TAN15 directs that preference to siting projects within Flood Zone 1 must be given, then to Flood Zone 2 where flooding from fluvial or tidal sources will be less of an issue. Projects should be directed away from Zone 3, although where this is not possible the project will be subject to the tests set out in Sections 6 and 7 of TAN15.
- 2.5.2. As the Proposed Development is classified as being 'Renewable energy generation facilities' under TAN15 is it classified as 'Less vulnerable development' which is permissible in Flood Zone 2 if it meets the acceptability criteria in Section 11 of TAN15 (see **Section 5** of this report).

¹⁴ Powys PCC. (2026). Sustainable Drainage Approval Body (SAB). (Online) Available at: <https://en.powys.gov.uk/article/5578/Sustainable-Drainage-Approval-Body-SAB> (Accessed May 2026).

¹⁵ Natural Resource Wales. (2018). Severn Preliminary Flood Risk Assessment. (Online) Available at: <https://cdn.naturalresources.wales/media/687716/pfra-severn.pdf> (Accessed May 2026).

3 FLOOD RISK APPRAISAL

3.1 INTRODUCTION

- 3.1.1. The assessment will use the source-pathway-receptor approach, whereby all three of those elements must exist for these to be a risk to be assessed. Where a potential source is identified, the risk itself will be assessed with respect to the likelihood and consequence of flooding in the subsequent sub-sections. Where necessary, appropriate flood risk management measures will be set out in **Sections 4 and 5** of this report to address the identified risks.

3.2 SCREENING OF ALL POTENTIAL SOURCES OF FLOOD RISK

- 3.2.1. **Table 9A-4** provides an initial screening of all potential flood risk across the Site. Those that are screened in as posing a potential flood risk are then considered in the following sub-sections.

Table 9A-4 - Screening of all Potential Flood Risk Sources

Source of Flooding	Potential Connection to Site	Screened In?
Fluvial	The Flood Risk Assessment Wales map - Flood Risk from Rivers (shown on Figure 9.5) shows that the Site lies entirely within an area of very low risk of fluvial flooding. The NRW flood zone mapping shows that the Site is located in Flood Zone 1 (very low risk of fluvial flooding) (Figure 9.5). The closest areas of high flood risk are associated with the Afon Carno 0.19km to the southwest of the Site and the Nant y Llyn Mawr 0.10km to the northeast of the Site. Fluvial flooding is assessed in Section 3.5 of this report.	Yes
Tidal	The Site is located some distance from the sea and is at an elevation between 485 m AOD in the north with Garreg-hir being the highest point to 135 m AOD in the south where the A470 is located. Owing to the lack of source, the risk of tidal flooding in the area is considered to be low and is not considered further in this assessment.	No
Groundwater	The Site is underlain by Penstrowed Grits Formation which consists of a cyclical sequence of sandstone and mudstone layers (Secondary B and Secondary (undifferentiated) aquifer). Groundwater flooding is assessed in Section 3.12 of this report.	Yes
Surface water	The Flood Risk Assessment Wales map – Flood risk from surface water and small watercourses (Figure 9.5) shows that the majority of the Site is within Flood Zone 1. However, there are areas located within Flood Zone 2 and 3 which are areas with medium to high risk of flooding (1% to >3.3%AEP) associated with small watercourses. The mapping shows surface water flow pathways draining north eastwards towards the Nant y Llyn Mawr which confluences with the Afon Rhiw and south westwards towards the Afon Carno. This indicates that, for the most part, it will be surface water runoff originating from the development proposals which will be the primary surface water consideration. Surface water runoff is considered further in Section 3.9 of this report. Overall, the risk of surface water run-on is very low due to the location of the Site on a topographic high. Surface water run-on is considered further in Section 3.8 of this report.	Yes

Source of Flooding	Potential Connection to Site	Screened In?
Sewer	The Site is situated away from developed areas (due to its elevation), and it is anticipated that there are few sewer drainage networks in the Site within which water levels could feasibly rise to an extent that would result in flooding of the Site. Any flows surcharging from minor sewer systems associated with nearby farm buildings would be expected to be minimal/intercepted by the local watercourses. In the wider area sewer drainage networks serve the towns/villages of Clatter, Pontdolgoch, Llyanwnog but these are at lower elevations (171m AOD, 149m AOD and 141m AOD respectively) than the Proposed Development. On this basis, owing to the lack of source, the risk of sewer flooding in the area is considered to be low and is not considered further in this assessment.	No
Artificial	The NRW Reservoir Flood Risk Map shows that the Site is not located within an area of reservoir flood risk. In the wider area, flooding from reservoir sources is predicted from the Llyn y Tarw reservoir and along the Bechan Brook and River Severn to the east of the Site. No raised bodies of water are proposed as part of the development. Owing to the lack of source, the risk of sewer flooding in the area is considered to be low and is not considered further in this assessment.	No

3.3 HISTORICAL FLOODING

- 3.3.1. Historical flood extent mapping received from NRW indicates that there are no recorded flood incidents within the Site.
- 3.3.2. NRW's online Flood Map for Planning does not show historical flooding records at or close to the Site. The closest area of historical flooding occurred below the point at which the Afon Carno River meets the Severn River, 2.7km south of the Site in the village of Caersws. It is also noted in the NRW Flood Risk Management Plan: Mid Wales Place¹⁶ that Caersws and Newtown were noted as experiencing flooding during wet weather in February 2021.

3.4 FLOOD DEFENCES

- 3.4.1. There are no formal flood defences benefitting the Site. There are mapped flood defences (noted on the Flood Map for Planning) approximately 2.2km to the southeast of the site offering protection to Caersws.

3.5 FLUVIAL FLOODING

- 3.5.1. The Flood Map for Planning contains NRW's information with respect to flooding. The Flood Map for Planning categorises fluvial flood risk as follows and includes an allowance for climate change:
- Flood Zone 1 (FZ1) (Low Risk) – Land assessed as having less than a 1 in 1,000 (plus climate change) annual probability of flooding from rivers(<0.1%).

¹⁶ NRW Flood Risk Management Plan: Mid Wales Place [online]. Available at: <https://naturalresources.wales/media/3hwgt4vp/frmp-cycle-2-place-section-mid.pdf> (Last accessed May 2026)

- Flood Zone 2 (FZ2) (Medium Risk) – Land assessed as having between a 1 in 1000 and 1 in 1,00 annual probabilities of flooding from rivers (0.1% to 1%).
- Flood Zone 3 (FZ3) (High Risk) – Land assessed as having a 1 in 100 or greater annual probability of flooding from rivers(>1%).

3.5.2. The Flood Map for Planning and The Flood Risk Assessment Wales map - Flood Risk from Rivers (**Figure 9.5**) shows that the Site lies entirely within an area of very low risk of fluvial flooding. NRW mapping shows that the Site lies entirely in fluvial Flood Zone 1. In the wider Study Area, there are areas of both Flood Zones 2 and 3, associated with the Afon Carno which is a tributary of the River Severn 0.19km to the southwest of the Site and the Nant y Llyn Mawr which is a tributary of the Afon Rhiw 0.10km to the northeast of the Site for the wind farm. The risk of flooding from fluvial sources is therefore considered low.

3.5.3. The NRW Flood Risk Management Plan: Mid Wales Place lists the downstream village of Caersws as one of the communities in the region most at risk from flooding. However, this is primarily from the overall River Severn catchment and River Severn itself into the village, rather than the waterbodies draining the Site. Given the distance and elevation between the nearest source of fluvial flood risk and the Site, the risk of fluvial flooding to the Proposed Development is considered to be low and is not assessed further in this assessment.

3.6 TIDAL FLOODING

3.6.1. The Flood Risk Assessment Wales map - Flood Risk from the Sea⁶, contains NRW's information with respect to flooding. The Flood Map for Planning categorises tidal flood risk as follows and includes an allowance for climate change:

- Flood Zone 1 (FZ1) (Low Risk) – Land assessed as having less than a 1 in 1,000 (plus climate change) annual probability of flooding from the sea (<0.1%).
- Flood Zone 2 (FZ2) (Medium Risk) – Land assessed as having between a 1 in 200 and 1 in 1,000 annual probabilities of coastal flooding (0.5% to 0.1%).
- Flood Zone 3 (FZ3) (High Risk) – Land assessed as having a 1 in 200 or greater annual probability of flooding from the sea (>0.5%).

3.6.2. The Flood Map for Planning shows that the Site is not mapped to be at risk from this source. Based on the mapped tidal extents and the site topography, the risk from this source is considered low.

3.7 SURFACE WATER FLOODING

3.7.1. Surface water flooding occurs because rainwater is unable to drain away through the normal drainage systems or infiltrate into the ground. It therefore lies on or flows over the ground instead. NRW define "High", "Medium", and "Low" surface water flood risk as:

- Flood Zone 1 (FZ1) "Low" risk means that each year, the area has a chance of flooding between 1 in 1000 (0.1%) and 1 in 100 (1%).
- Flood Zone 2 (FZ2) "Medium" risk means that each year, the area has a chance of flooding between 1 in 100 (1%) and 1 in 30 (3.3%).
- Flood Zone 3 (FZ3) "High" risk means that each year, this area has a chance of flooding of greater than 1 in 30 (3.3%).

EXISTING

- 3.7.2. The Flood Risk Assessment Wales map – Flood risk from surface water and small watercourses (**Figure 9.5**) gives an indication of the broad areas likely to be at risk of surface water flooding at present, i.e. areas where surface water would be expected to flow or pond. It defines areas at very low (less than 0.1% AEP), low (between 0.1% and 1% AEP), medium (between 1% and 3.3% AEP) and high (greater than 3.3% AEP) probability of surface water flooding.
- 3.7.3. The mapping shows that most of the Site for the energy park is at a low risk of flooding from this source. However, there are areas at medium to high of flooding from this source associated with small watercourses. Small areas of low to high flood risk are shown on localised lower-lying areas associated with the Nant y Llyn Mawr, two tributaries of the Afon Rhiw, a tributary of the Nant Cwmgerwyn, Nant yr Arian, tributaries of the Afon Carno and Llyn, Du, Llyn Mawr and Llyn Tarw.
- 3.7.4. The mapping also shows surface water flow pathways draining north eastwards towards the Nant y Llyn Mawr which confluences with the Afon Rhiw and south westwards towards the Afon Carno. The closest areas of high flood risk are associated with the Nant y Llyn Mawr in the eastern section of the Site, the Nant yr Arian in the western section of the Site and Lake Mawr, Lake Du and Lake Tarw.

SURFACE WATER RUN-ON

- 3.7.5. The Site for the wind farm is located within an area encompassing several summits with the highest summit being Garreg-hir which slopes to the east from its summit at an elevation of 485m AOD. Most of the land beyond the Site for the wind farm sits at lower elevations. The area at higher elevation to the north within the vicinity of Garreg-hir is unlikely to pose a risk of significant overland flow to flood-sensitive development within the Site due to the permeable nature of this area (grassland), and because topography will concentrate flows towards the head of the Nant y Llyn Mawr watercourse. However, given the hilltop location for most of the Study Area there are a large number of small surface water flowpaths which intersect the Proposed Development. Surface water flow pathways are defined as the preferential route in which overland rainfall runoff travels over the ground surface during rainfall events which typically follows topographic gradients from high to low elevations. As there is limited upslope catchment, the depths of these surface water flowpaths are not expected to be significant and they will follow localised lowpoints.
- 3.7.6. Five existing access roads are proposed to be upgraded as part of the Site cross surface water flow pathways. Two existing access roads, cross a surface water flow pathway associated with the Nant y Llyn Mawr in the central area of the Site for the wind farm (NGR: SO 00733 97888). One existing access road, which is proposed to be upgraded as part of the Site crosses a surface water flow pathway associated with a tributary of the Nant y Llyn Mawr in the northern area of the Site for the wind farm (NGR: SO 00807 98995). One existing access road crosses a surface water flow pathway associated with the Nant y Llyn Mawr (NGR: SO 01092 97844). One existing access road crosses a surface water flow pathway associated with an ordinary watercourse connected to Llyn Mawr (NGR: SO 01187 97323 and NGR: SO 01315 97589). One existing access road crosses a surface water flow pathway associated with ordinary watercourses in the northwestern corner of the Site (NGR: SN 99392 98380, NGR: SN 99411 98183, NGR: SN 99529 97973 and NGR: SO 00000 98290).
- 3.7.7. Seven new access roads which are proposed to be constructed as part of the Site cross surface water flow pathways. One access road crosses a surface water flow pathway associated with an ordinary watercourse in the north of the Site (NGR: SO 00545 99161 and NGR: SO 00521 98954).

One access road crosses a surface water flow pathway associated with an ordinary watercourse in the northeast of the Site (NGR: SO 00980 98917). One access road crosses a surface water flow pathway associated with an ordinary watercourse connected to the Nant y Llyn Mawr (NGR: SO 00529 97875, NGR: SO 00581 97759, NGR: SO 00728 97821, NGR: SO 00646 97800 and NGR: SO 00634 97867). One access road crosses a surface water flow pathway associated with an ordinary watercourse connected to the Nant y Llyn Mawr (NGR: SO 00954 97888). One access road crosses a surface water flow pathway associated with an ordinary watercourse connected to Lake Mawr (NGR: SO 01164 97444). One access road crosses a surface water flow pathway associated with an ordinary watercourse connected to Lake Mawr (NGR: SO 01302 97603). One access road crosses a surface water flow pathway associated with an ordinary watercourse (NGR: SO 00784 97981) (shown **Chapter 9: Figure 9.3**).

- 3.7.8. Five crane pads are proposed to be constructed as part of the Site cross surface water flow pathways. One crane pad (T3) crosses a surface water flow pathway associated with an ordinary watercourse which connects to the Nant y Llyn Mawr (NGR: SO 00333 97769). Crane Pad T2 abuts a minor area of surface water ponding (NGR: S00091997937). Crane pad T9 covers a small surface water cover path (NGR: SO 00412 98818). And crane pad T11 covers a minor surface water flow path (NGR: SO 01025 98783). Although it should be noted that given the hilltop location it is difficult to avoid areas of surface water and the design has been refined to ensure that it avoid all watercourses and major surface water flow paths.
- 3.7.9. One control building compound (NGR: SO 00556 98019) and one BESS compound (NGR: SO 00489 97973) cross a surface water flow pathway associated with the Nant y Llyn Mawr.
- 3.7.10. These have the potential to impact on flow conveyance and have a minor change to local flood risk. Potential mitigation to assist in conveying flows (consistent with the existing flow pathway) is discussed in **Section 5** of this report.

SURFACE WATER RUNOFF

- 3.7.11. The temporary and permanent changes in ground cover associated with the Proposed Development have the potential to increase the overall extent of lower permeability surfaces. In the absence of effective surface water management measures, this could lead to a temporary increase in peak runoff rates and a consequent increase in flood risk to third party receptors downstream. To address this, surface water management measures will be implemented, as discussed in **Section 4 and 6** of this report.
- 3.7.12. For the construction phase, such changes in ground cover would be associated with the wind turbine crane pads, TCC and internal access tracks. For the operational phase such changes would be associated with the turbine foundations and crane pads, substation and internal access tracks.
- 3.7.13. The flood risk receptors associated with the potential effects of increased runoff from the Site within the Study Area are identified as follows:
 - Ordinary watercourses: Nant Cwmgerwyn, Nant yr Amros and Nant y Llyn Mawr;
 - Main rivers: Afon Carno, Afon Rhiw, Nant Rhyd-ros Ian, River Severn;
 - WFD River waterbodies: Afon Carno (GB109054049250), Afon Rhiw (GB109054049350), Nant Rhyd-ros Ian (GB109054049220), Severn (GB109054049310);
 - Residential properties, industry/business properties located in and around Carno;

- Residential properties, industry/business properties located in and around Clatter;
- Residential properties, industry/business properties located in and around Caersws; and
- Residential properties, industry/business properties located in and around Newton.

3.8 SEWER FLOODING

- 3.8.1. No sewer plans have been received for the area. Based on the intended nature of the Proposed Development it has been assumed that the risk of sewer flooding to the Site is low until such a time when the data is available. The risk of sewer flooding to the Proposed Development has therefore been assessed to be low.
- 3.8.2. Because of the generally rural location of the proposals, the risk from sewer flooding to the infrastructure is limited.

3.9 HIGHWAY FLOODING

The B4568 to the southeast of the Site runs at a lower elevation (135m AOD), so does not pose a risk to the Site. The A470 to the south of the Site also runs lower elevation (137m AOD), so does not pose a risk to the Site. Although surface water runoff from the Site has the potential to affect towards lower-lying areas, the Proposed Development will incorporate appropriate surface water management measures to control runoff rates and volumes. Therefore, the Proposed Development is not anticipated to increase flood risk to the highway.

- 3.9.1. From the above, the risk of flooding to the Site from highways has been assessed to be low.

3.10 GROUNDWATER FLOODING

- 3.10.1. Groundwater flooding occurs as a result of water issuing to the surface from the underlying aquifers. This tends to occur after long periods of sustained high rainfall, with areas most at risk being situated on permeable geology and low-lying compared to the local water table.
- 3.10.2. The Severn Preliminary Flood Risk Assessment (PFRA)¹⁷ states that the risk of groundwater flooding is low within Wales due to the geology (underlying rock type) and topography (steep sided valleys). PCC Local Flood Risk Management Strategy (2013) states there are no reports of historical groundwater flooding within the borough area.
- 3.10.3. The Site for the energy park has no significant superficial cover, superficial deposits are thin or absent; except for its northeast corner and southwest where deposits of Till, Devensian-Diamicton are shown and in the southeast corner where the Site connects to the B4568 where deposits of Alluvial fan deposits-Sand and gravel are shown. Immediately south of the Site is a linear section of Alluvium-Gravel, sand, silt and clay is shown to run along the Afon Carno. One local BGS borehole (NGR: SO09NW2) located 0.4km west of the Site shows that the underlying bedrock consists of mudstone.
- 3.10.4. Although groundwater emergence is highly unlikely, any flows are expected to be limited as the Site is on a topographic high and the underlying geology comprises bands of both higher and lower permeability bedrock layers. Where groundwater may be encountered, it is likely to be perched and in small quantities. This is due to the Site being at a topographic high and the underlying geology

¹⁷ Severn Preliminary Flood Risk Assessment (2018) [online] Available at:
<https://naturalresources.wales/media/687716/pfra-severn.pdf> (Last accessed: May 2026)

comprising bands of both higher and lower permeability bedrock layers. The same understanding applies to the area of the Site which descends into the Afon Carno valley where the slope is steady and should promote surface water runoff into the drainage channels.

3.11 ARTIFICIAL SOURCES OF FLOODING

RESERVOIRS

- 3.11.1. Flood events can occur from a sudden release of large volumes of water from reservoirs, canals and artificial structures. Reservoir flooding is however also extremely unlikely, with reservoirs managed under the Reservoirs Act 1975.
- 3.11.2. The NRW's reservoir flood risk maps⁶ indicate the reservoir flood risk in the area is confined to the Bechan Brook which is a tributary of the River Severn connecting to the Llyn y Tarw reservoir approximately 3.80km to the east of the Site and does not impact the area within immediate vicinity of the Site. Llyn Du reservoir is located 0.22km south of the Site however there is no reservoir flood risk associated with this reservoir. This is because the reservoir appears to be located within a topographical depression at 386m AOD and is not surrounded by embankments that would cause a flood risk under failure. As such, it is not indicated as being at risk of reservoir embankment failure on NRW mapping. Additionally, the topography generally slopes from north to south towards Afon Carno, therefore there will be no direct flow paths from Llyn Du in the direction of the Proposed Development. As there are no direct flow paths or overland flooding in the immediate area, the flood risk from reservoirs is assessed to be low.

CANALS

- 3.11.3. The Site is not within the proximity of any canals and therefore, the risk of canal flooding to the Proposed Development is considered to be negligible.

3.12 SUMMARY

- 3.12.1. **Table 9A-5** summarises the findings of the assessment. It should be noted that the designation of risk outlined below is prior to the inclusion of any mitigation measures, which may subsequently act to reduce the risk.

Table 9A-5 - Summary of Flood Risk to the Site Resulting from Various Sources Prior to Mitigation Measures

Source	Risk
Fluvial	Low
Tidal	Low
Surface Water	Low - High
Groundwater	Low
Sewer	Low
Highways	Low
Reservoir	Low
Canal	Negligible

4 SURFACE WATER MANAGEMENT

4.1 DRAINAGE STRATEGY OVERVIEW

- 4.1.1. The existing greenfield site comprises approximately 377 hectares of undeveloped land and extends across an area of hillside. It is anticipated that the existing site drains via infiltration and overland flow routes to a number of existing watercourses found within the proposed boundary.
- 4.1.2. The development proposals consist of 11 wind turbines and associated infrastructure, resulting in the introduction of 26.28 hectares of new impermeable surfacing.
- 4.1.3. Runoff generated by the development will need to be captured, attenuated, treated, and discharged in accordance with guidance outlined within 'Llywodraeth Cymru Welsh Government - Statutory standards for sustainable drainage systems' (supported directly by 'CIRIA C753 - The SuDS Manual')¹⁸, and a detailed drainage strategy will need to be submitted as part of a formal SuDS Approval Body (SAB) application post-consent.
- 4.1.4. Based on the guidance set out in the above document, it is anticipated that measures that could be implemented throughout the development to accumulate and convey the rainwater may include (but are not limited to):
- Filter Drains;
 - Swales;
 - Attenuation Tanks;
 - Attenuation Basins;
 - Ponds;
 - Wetlands; and
 - Tanked Permeable Surfacing.
- 4.1.5. These features would enable runoff to be collected and treated as close to source as possible, in accordance with current design guidance.
- 4.1.6. Collected rainwater could also be treated and repurposed for any potential facilities proposed within the development, however this is likely to be limited to site welfare facilities such as toilets and handwash basins, and is unlikely to contribute to a reduction in the site's overall runoff volumes.
- 4.1.7. As the Site is currently greenfield, efforts should be made to offset the impact on biodiversity by incorporating high-quality "green" SuDS (wetland features, vegetated swales, raingardens etc.) into the scheme which would provide combined treatment, biodiversity and amenity benefits, as well as the potential for slowing water, treating water as a resource, and minimising disruption to natural habitats, in line with current guidance.

¹⁸ CIRIA C753 – The SuDS Manual Available online at:
https://www.ciria.org/CIRIA/CIRIA/Item_Detail.aspx?iProductCode=C753F (Accessed May 2026)

STATUTORY STANDARDS

- 4.1.8. **Table 9A-6** summarises how the proposed outline drainage strategy will comply with Statutory Standards, with further details of this strategy to be developed as part of a formal SAB application submission at later stages of design, and in accordance with any formal planning conditions.

Table 9A-6 - Statutory standards assessment

Standard	Summary
STANDARD S1 SURFACE WATER RUNOFF DESTINATION ¹⁹	Collection for use – Unlikely to contribute to significant reduction in volume, but could be considered for site compound uses (handwashing, boot cleaning, etc.). Into the ground (infiltration) – No BRE365 Infiltration tests currently undertaken. BGS review shows a number of bedrock formations, including Pysgotwr Grits and Glanyrafon Formations, comprising primarily of sandstone and mudstones. This indicates infiltration may be feasible, however BRE365 testing is required to confirm. To a surface water body – Development runoff to discharge into on-site watercourse/ditch networks if infiltration capacity is insufficient. To a surface water sewer - N/A To a combined sewer – N/A
STANDARD S2 - SURFACE WATER RUNOFF HYDRAULIC CONTROL ¹⁹	Surface water runoff generated by the development, if it is to be discharged into an existing watercourse network, will discharge at QBAR greenfield runoff rate, calculated as approximately 3.1 l/s/ha using FSR rainfall data. Quick Storage Estimate in Infodrainage showed that a storage volume of approximately 1,488m³ is required per hectare of drained impermeable area. It is assumed that the Site will likely have a number of attenuation basins spread across the Site due to topographical levels. The access road is likely to be drained via a series of swales, with larger attenuation/infiltration features included (if required) prior to discharge to a nearby watercourse.
STANDARD S3. WATER QUALITY ¹⁹	A SuDS Management train approach should be incorporated as part of a detailed drainage strategy, to provide conveyance and storage of surface water runoff while delivering interception and pollution risk management. It is assumed that runoff from road areas (both the access road and on-site access tracks) will be collected via a network of roadside swales, which will treat runoff close to source, before conveying flows to a strategic attenuation feature (basin / pond / wetland) for further treatment and storage. Runoff from turbine areas and site compound areas will likely be drained via a combination of permeable surfacing, gullies and filter drains, before conveying flows to a strategic attenuation feature (basin / pond / wetland) for further treatment and storage.

¹⁹ National standards for sustainable drainage systems (SuDS) Available online at: <https://www.gov.uk/government/publications/national-standards-for-sustainable-drainage-systems/national-standards-for-sustainable-drainage-systems-suds> (Accessed May 2026)

Standard	Summary
	Runoff will be collected and adequately treated within the design in accordance with principles from the Statutory Standards, and the C753 SuDS Manual Simple Index Approach.
STANDARDS S4 & S5 - AMENITY & BIODIVERSITY ¹⁹	The Site is currently greenfield, and therefore opportunities to maximise biodiversity and amenity should be taken wherever possible. Limited opportunity for amenity value due to site usage, however biodiversity should be maximised as part of the drainage strategy by ensuring any surface-level SuDS features (basins, swales, etc.) include planting to comply with both drainage design guidance and any Net Benefit for Biodiversity. Inclusion of ponds / wetlands should be considered to provide opportunities for NBB purposes and habitat preservation / creation.
STANDARD S6. DESIGN OF DRAINAGE FOR CONSTRUCTION, OPERATION AND MAINTENANCE ¹⁹	Drainage features to be designed to allow for regular maintenance regimes, and details of this would be confirmed as part of a formal planning application and SAB submission. Details of any drainage features designed to serve temporary construction areas will be confirmed at the detailed design stages of the project. However, long-term impact of features should be minimised, and scope to re-use such features as part of the site's permanent surface water drainage strategy should be considered (where appropriate).

4.2 SUDS APPROVING BODY (SAB) CONSULTATION

- 4.2.1. As of January 2019, developments in Wales over 100m² require submission to the Council's SuDS Approving Body (SAB) for review and approval. Powys County Council are the regulating authority for the SAB application²⁰<https://en.powys.gov.uk/article/5578/Sustainable-Drainage-Approval-Body-SAB>.
- 4.2.2. This process is separate to, but typically concurrent with, a formal planning process.
- 4.2.3. Due to the specialist nature of this site, it is recommended that a SAB Pre-Application is undertaken to allow the appropriate officers to review the scheme and provide comment on the development proposals prior to full SAB application submission.
- 4.2.4. As part of the pre-application process, a more detailed drainage strategy will be required, and details of the above drainage strategy can be confirmed at this stage. This can be based on a fixed masterplan and more detailed development proposals available at the time.
- 4.2.5. A SAB Full Application could then be developed, incorporating any feedback from the SAB pre-app process, any formal planning conditions, and details of any other associated design developments relating to the wider scheme (site layout, landscape proposals, flood risk mitigation measures, etc.).

²⁰ Powys County Council Sustainable Drainage Approval Body (SAB) Available online at: <https://en.powys.gov.uk/article/5578/Sustainable-Drainage-Approval-Body-SAB> (Accessed May 2026)

4.3 CLIMATE CHANGE

- 4.3.1. The proposed drainage strategy will be developed in accordance with the Welsh Government guidance on climate change allowances. It states that *“When using these allowances to consider drainage assessments, it is important that drainage systems are designed to ensure there is no increase in site run-off when assessed against the upper allowance.”*. The guidance also states that a lifetime of 75 years *“is considered a reasonable rule of thumb for all other [non-residential] developments”*.
- 4.3.2. **Plate 9A-1**, below, shows the published allowances for peak rainfall allowances

Plate 9A-1 - Peak rainfall intensity allowances

Location	Percentile	2050s (present day -2060)	2070s (2061-2125)
Wales	Central	20%	30%
	Upper	35%	40%

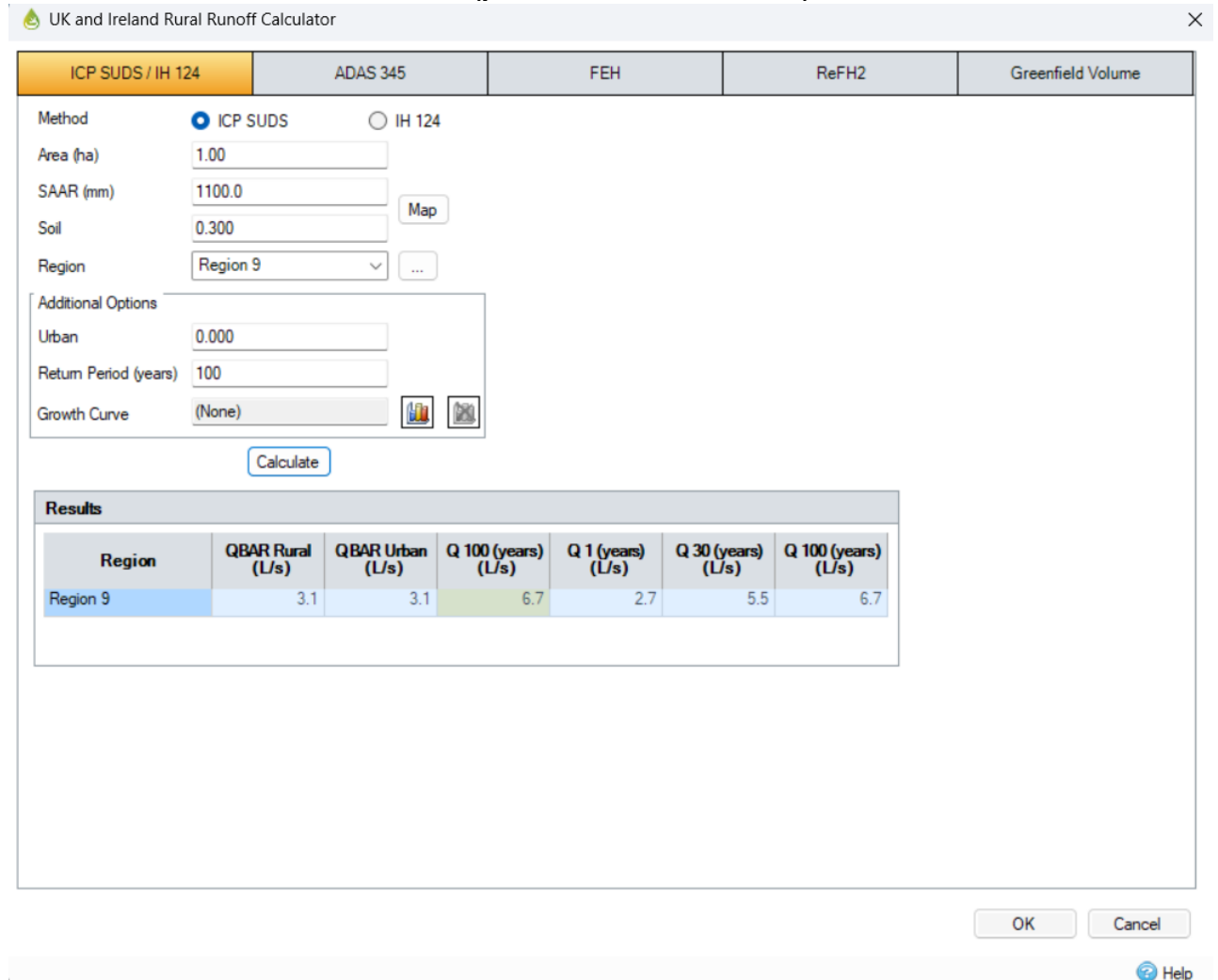
- 4.3.3. As per the above table, a rainfall allowance of 40% should be considered for this development, and therefore any attenuation proposed as part of the drainage strategy will be sized on this basis. However, details should be confirmed as part of a SAB Full App submission (and in accordance with any formal planning conditions).

4.4 PROPOSED DRAINAGE STRATEGY DETAILS

- 4.4.1. As outlined above, until infiltration rates can be confirmed via BRE365 testing, it is assumed that runoff captured as part of the development’s surface water drainage network should be discharged to a nearby watercourse. Due to the scale of the Site, there are a number of watercourses which could act as potential destinations, and the final strategy will be confirmed once a fixed masterplan and topographical survey are available.
- 4.4.2. Due to the varying topography of the Site, runoff catchments have been approximated based on available LiDAR data and should be confirmed via a more detailed assessment to be carried out as part of the detailed drainage design process to support a SAB application.
- 4.4.3. The proposed layout has been split into approximate catchments separated by “compounds” (turbines and their associated areas, plus the main site compounds) “internal access track” areas and the Site’s main access road, with the final destinations for each of these to be confirmed at detailed design to support a SAB application.
- 4.4.4. On this basis, a high-level assessment of proposed drained areas has been undertaken and confirms that the current proposed drained impermeable areas is 26.28Ha.
- 4.4.5. This comprises approximately:
- 4.08Ha of access road (including current anticipated earthworks extents);
 - 8.88Ha of internal access tracks (including current anticipated earthworks extents);
 - 13.32Ha of other impermeable (including turbines and their foundations, site compounds, and all other non-road infrastructure).

- 4.4.6. In order to determine the attenuation requirements for each of these areas, an assessment has been carried out using InfoDrainage to determine Greenfield Runoff Rates for a 1.0Ha area. A storage estimate has been carried out based on discharging runoff at Qbar greenfield runoff rate, as this is typically the agreed discharge requested as part of the formal SAB process.
- 4.4.7. Results of this assessment are shown below in **Plate 9A-2** and **Plate 9A-3**:

Plate 9A-2 - Greenfield runoff rates (per hectare drained area)

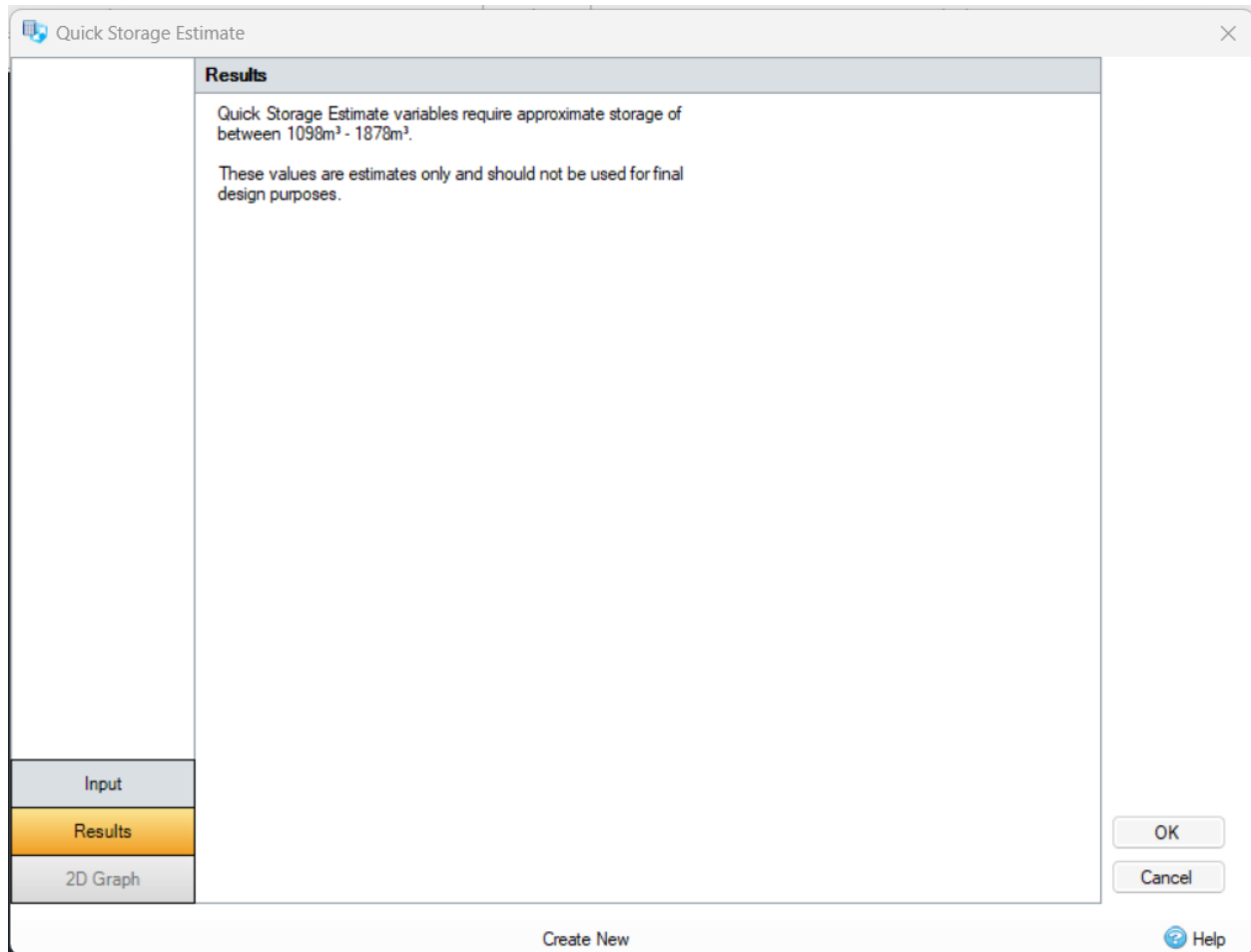


The screenshot shows the 'UK and Ireland Rural Runoff Calculator' window. The 'ICP SUDS / IH 124' tab is selected. The 'Method' is set to 'ICP SUDS'. The 'Area (ha)' is 1.00, 'SAAR (mm)' is 1100.0, 'Soil' is 0.300, and 'Region' is 'Region 9'. Under 'Additional Options', 'Urban' is 0.000, 'Return Period (years)' is 100, and 'Growth Curve' is '(None)'. A 'Calculate' button is present. Below the input fields, a 'Results' table is displayed.

Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 100 (years) (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 9	3.1	3.1	6.7	2.7	5.5	6.7

At the bottom right of the window are 'OK' and 'Cancel' buttons, and a 'Help' icon.

Plate 9A-3 - InfoDrainage Quick Storage Estimate (per hectare drained area)



- 4.4.8. This attenuation / runoff rate figure has then been scaled for each drainage catchment, with a further assessment and formal drainage model to be developed at detailed design.
- 4.4.9. Based on these calculations, it is assessed that a total attenuation volume of approximately 39,104m³ will be required. However, a number of factors may affect the total attenuation requirement, including:
- Soil infiltration capacity
 - If infiltration is determined via testing to be feasible, attenuation requirements are like to be reduced
 - Catchment topography
 - A detailed topographical survey will allow a more detailed assessment of drained catchment areas, and extreme topography (particularly steep slopes) can result in increased attenuation requirements (due to water travelling quickly to end-of-line features)
 - Treatment requirements
 - Areas at high risk of pollution may require additional stages of treatment, which may increase time runoff is held before discharging to ground / off-site

- 4.4.10. It should be noted that the development proposals include battery storage on site, as part of the main site compound. At present, these are proposed to be housed in contained structures with internal fire suppression, with provisions for external fire hydrants for cooling the external structure walls and preventing the spread of fire.
- 4.4.11. Subject to detailed design development of a battery fire suppression system, it has been assumed that a separate drainage system for this area will be required, in order to contain any high-risk pollutants which may be present in the batteries or any fire suppression materials. This separated system is likely to comprise a sealed below-ground storage tank which would be emptied and transported off-site by a tanker, to avoid polluting either groundwater or the main surface water drainage network. Attenuation volumes for this battery storage area have been included in the above total figure.

5 MITIGATION MEASURES

- 5.1.1. This section of the report outlines the mitigation measures, noting that some are for consideration to further reduce flood risk and consequences whilst others should be undertaken to ensure compliance.
- Finished floor levels, or flood sensitive assets within for the control building and BESS compound should be raised to at least 300mm above the maximum depths such that they remain dry in the design event (1% AEP) and such that the maximum predicted depths in the extreme (0.1% AEP) event to ensure that they will remain dry in the event of a flood. While the BESS and control building are not shown to be within a mapped area of surface water flood risk, it is recommended that flood sensitive assets are raised 300mm above local ground levels to manage for any residual risk. The deepest mapped area of surface water on NRW mapping which is shown to affect any infrastructure is 0.1m for the 0.1% AEP surface water flood event for the flowpath in the location of the T3. While there are other surface water flowpaths shown as affecting a number of the crane pads, these are not considered to be vulnerable to flooding.
 - Whilst an outline drainage strategy (See **Section 4** and **Annex 9A.3** within this Appendix) 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 receptors.
 - The BESS fire suppression system will be self-contained so that in the event of it being triggered all fire suppression liquids will be contained on-site to prevent runoff to offsite receptors.
 - 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.
 - During construction, a flood evacuation plan will be in place with safe egress to the south via the A470. The Site manager (or appropriate person) will sign up to receive NRW flood warnings and evacuate all personnel upon receipt of one.
 - The infrastructure is typically unstaffed in operation and any risks to people or the water environment can be appropriately managed. If a flood warning is received, no personnel will attend site to undertake operation or maintenance activities.
 - Waterproof seals, and cable entry protections can reduce the risk of water ingress into electrical equipment. Electrical equipment can also be stored in elevated enclosures that are waterproofed.

6 REQUIREMENTS OF TECHNICAL ADVICE NOTE 15 (2026)

6.1 OVERVIEW

- 6.1.1. This report assesses the suitability of the Proposed Development against the requirements of the 2026 edition of Technical Advice Note 15 (TAN15). More detail on the revised TAN15 is included in **Annex 9A.1** within this Appendix. This section outlines the risks identified in the report and explains the steps required for the development to comply with current legislation.
- 6.1.2. According to the Flood Map for Planning the site is situated within fluvial Flood Zone 1 and within pluvial Flood Zone 2 and 3.
- 6.1.3. The Proposed Development, being an energy end use (not associated with power plants), is classified as 'Less Vulnerable' under TAN 15. According to Section 10 of TAN15, Less Vulnerable developments are conditionally acceptable in or on greenfield sites in Zone 3 whereas all developments are generally permissible in fluvial Flood Zone 1 and 2. The Site is entirely in fluvial Flood Zone 1 which is therefore deemed acceptable.

6.2 FLUVIAL FLOODING

- 6.2.1. The Site lies outside of the mapped fluvial flood zones for the 1%, 1% +30% CC AEP events and predominantly outside the mapped 0.1% AEP events.

6.3 TIDAL FLOODING

- 6.3.1. The Site is not shown to be impacted by the tidal flood extents.

6.4 SURFACE WATER AND SMALL WATERCOURSES FLOOD RISK

- 6.4.1. As identified in **Section 3.8** of this report, the Proposed Development is outlined to be at risk from surface water and small watercourses.
- 6.4.2. Details on any drainage network have not been provided, though any new / updated drainage network should be designed in line with the latest guidance and regulations to prevent any surface water flood risk on site or elsewhere.

6.5 ACCESS, EGRESS AND EVACUATION

- 6.5.1. The substation (once operational) will primarily be an unmanned substation. Due to the location of the development, safe access and egress will be available to the west and east of the substation

6.6 FLOOD COMPENSATION

- 6.6.1. The Site lies outside of the fluvial and tidal (1% AEP and 0.5% AEP) flood extents. There is unlikely to be a loss of floodplain following the Proposed Development and the displacement of flood water is also unlikely; it is not expected to pose a detriment to the current situation, nor require compensation.

6.7 AWARENESS OF FLOOD RISK

- 6.7.1. The Site is located less than 2km from areas for which NRW issue flood alerts and flood warnings (Afon Carno and Afon Hafren/River Severn). The exact period of advance warning notwithstanding, notice should be available prior to an extreme event, and a Flood Action Plan can be developed to manage safe refuge / evacuation and reoccupation. Awareness of flood risk can be addressed within the Flood Action Plan and can include emergency notices posted next to fire notices to be accessible to all site users, inducting new employees and practice drills. Those responsible for the site and all site users should be encouraged to sign up to NRW's flood line service (0345 988 1188).

6.8 GROUNDWATER

- 6.8.1. Based on the location, design and the existing nature of the Site the risk of groundwater flooding has been preliminary assessed as medium. The development platform will be raised above the existing ground levels to accommodate for the overland flow in the area, as such groundwater is unlikely to impact on the development.

6.9 Reservoir, Sewer, Highways and Artificial Sources Flood Risk

- 6.9.1. As noted in **Section 3** of this report, the risk of flooding from these sources is considered low - negligible.

6.10 TAN 15 ACCEPTABILITY & DEVELOPMENT ADVICE

- 6.10.1. The development is to be located within fluvial Flood Zone 1. This section of the report has been included for completeness based on the pluvial Flood Zone 2 and 3 in the centre of the development and outlines and discusses the Acceptability of Consequences and Development Advice as set out in TAN15.
- 6.10.2. Section 11 of TAN15 outlines the acceptability of consequences particularly within sections 11.4 and 11.5:
- 6.10.3. Under Section 11.4 of TAN15 the following points are noted:
- No increase in flooding elsewhere;
 - Occupiers aware of flood risk;
 - Escape/evacuation routes present;
 - Flood emergency plans and procedures agreed and in place;
 - Flood resistant and resilient design; and
 - Acceptable consequences for type of use.
- 6.10.4. This report provides sufficient information on access and flood warnings for these acceptability criteria to be understood.
- 6.10.5. Section 11.5 of TAN15 notes that if required, mitigation measures should be incorporated into the design to make it as safe as possible and that there is:
- Minimal risk to life;
 - Minimal disruption to people living and working in the area;
 - Minimal potential damage to property;

- Minimal impact of the Proposed Development on flood risk generally; and
- Minimal disruption to natural heritage.

- 6.10.6. This report sets out the risks as currently understood and makes a clear number of recommendations in **Section 5** of this report to further mitigate this residual risk.
- 6.10.7. This report provides sufficient information for these acceptability criteria to be addressed.

7 CONCLUSIONS

7.1 SUMMARY OF FLOOD RISK

- 7.1.1. According to the NRW mapping and model outputs, the Site lies outside the fluvial / coastal 0.1% AEP, 1% AEP and 1% AEP + 30% climate change event extents.
- 7.1.2. The risk of surface water flooding has been assessed as generally low, however there are a number of narrow corridors of high risk associated with ditches and minor watercourses which cross parts of the Proposed Development.
- 7.1.3. The risk of groundwater flooding has currently been assessed as low (based on available data).
- 7.1.4. The risk of flooding to the Site from reservoirs, canals, sewers and highways is considered to be between negligible to low.
- 7.1.5. Through the implementation of the proposed development and mitigation measures shown in **Section 5** of this report, there will be a negligible flood risk to the receptors listed in **Section 3.7.13** of this report within the surrounding area.

7.2 COMPLIANCE WITH TAN15

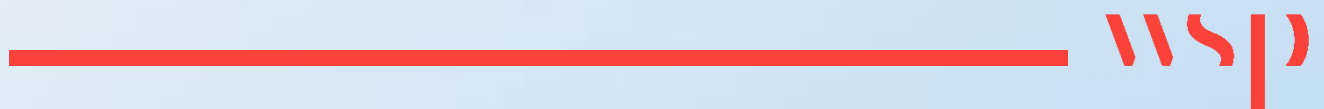
- 7.2.1. The following section summarises the key requirements of TAN15 and how the Proposed Development complies with them for its intended use, vulnerability class and design life:
 - **Flood resistant / resilient design:** As noted, finished floor levels and internal levels of water sensitive electrical equipment should be raised for the Proposed Development such that they remain dry in the design event (0.1% AEP, 2% AEP and 1% AEP climate change). FFLs should be set above the pluvial flood levels.
 - **Loss of floodplain:** As the Site and the proposals lie outside of the mapped fluvial 0.1% AEP, 1% AEP and 1% AEP + climate change flood extents, there will be no additional loss of floodplain as a result of the Site location;
 - **No increase in flood risk elsewhere:** Given that there will be no loss of floodplain, that any new or upgraded watercourse crossings will have suitable sized culverts so as to not alter flow conveyance and through the implementation of new surface water drainage systems in compliance with the relevant SAB requirements, there is unlikely to be an increase in flood risk elsewhere;
 - **Acceptable consequences for type of use:** The development category for the Site is 'Less Vulnerable' as it is classed as energy infrastructure (not associated with Power Plants). In accordance with TAN 15, this would be suitable in fluvial Flood Zone 1. **Table 9A-5** highlights that all assessed sources of flooding have a 'high' risk of pluvial flooding, 'medium' risk of groundwater flooding and a 'low' or 'negligible' risk of fluvial flooding. This in conjunction with safe access and egress results in the consequences therefore acceptable for the nature of use;
 - **Flood emergency plans in place:** As noted, a site-specific Flood Action Plan should be developed. This should include clear responsibilities and chain of command including procedures for confirming actions and coping with absences. It should give due consideration to evacuation and safe reoccupation. It is suggested that warning notices should describe the flood risk and any access constraints. The client should sign up to local flood alerts (if they haven't already);
 - **Escape / evacuation route present:** There is continuous safe and dry access and egress to the north, west and south of the site with lower ground floor levels to be set at 93.6m AOD above the pluvial flood levels; and

- **Justifiable / acceptable development:** the risk of flooding consequences to the development is considered to be acceptable based on the provided information so long as the development is raised above the finished floor levels.

7.2.2. Overall, the Proposed Development would be considered to be compliant with the requirements of TAN15 (2026) over the proposed design life.

Annex 9A.1

**PLANNING POLICY WALES
VULNERABILITY TESTING AND
TECHNICAL ADVICE NOTE 15 (2026)**



The following legislation is relevant to the assessment of Flood Risk.

The general approach of the Planning Policy Wales (PPW), now supported by the Technical Advice Note 15 (TAN15) 2026, is to follow a precautionary framework approach when determining the suitability of land for development in flood risk areas, with the intention of steering development away from areas of high risk of flooding to the lowest flood risk areas.

In Flood Zone 2 - Planning applications in Zone 2 require careful consideration and must be consistent with the acceptability considerations set out in Section 11 (TAN 15). They must also be accompanied by a FCA which clearly describes the flood risk, and the risks must be acceptable. Applications for new highly vulnerable development on greenfield land are only appropriate where the site has been allocated in adopted Development Plans.

In Flood Zone 3 - Planning applications in Zone 3 require the strongest justification. No new highly vulnerable development on greenfield land should be permitted in zone 3 regardless of the conclusion of any Flood Consequences Assessments and NRW will not consider these conclusions. Welsh Ministers must be notified of any such proposal a planning authority intends to approve.

Where development has to be considered in high-risk areas (Flood Zone 3) only those developments which can be justified on the basis on the tests outlined in Section 6 and Section 7 of the TAN15 guidance are to be located within such areas.

Table A-1 TAN15 guidance confirms the ‘Flood risk vulnerability classification’ of a site, depending on the proposed usage. This classification is subsequently applied to Flood Map for Planning containing three fluvial flood zones (1, 2 and 3 with additional information on Defended Zones) to determine whether:

The Proposed Development is suitable for the zone in which it is located; and

The appropriate planning tests have been demonstrated in relation to the Proposed Development.

In line with TAN15 (2026), the development category for the works is Less Vulnerable Development, which includes energy infrastructure (not associated with Power Plants). In line with Section 10 of TAN15, highly vulnerable development is acceptable in Flood Zones 2 subject to the application of the acceptability of consequences. Proposals which are essential to the Development Plan Strategy to regenerate an existing settlement or achieve key economic or environmental objectives and located in Flood Zone 3 may be considered appropriate if the potential consequences from flooding have been considered and found to be acceptable.

No new highly vulnerable development on greenfield land should be permitted in Zone 3.

Table A 1 – Extract of TAN15 Figure 4 Development Vulnerability Categories (Source: TAN15 2026 accessed May 2026)

Vulnerability category	Types
Highly vulnerable development	All residential premises (including hotels, Gypsy and Traveller sites, caravan parks and camping sites). Schools and childcare establishments, colleges and universities. Hospitals and GP surgeries. Especially vulnerable industrial development (e.g. power generating and distribution elements of power stations, transformers, chemical plants, incinerators), and waste disposal sites. Emergency services, including: ambulance stations, fire stations, police stations, command centres, emergency depots. Buildings used to provide emergency shelter in time of flood.
Less vulnerable development	General industrial, employment, commercial and retail development. Transport and utilities infrastructure. Car parks. Mineral extraction sites and associated processing facilities (excluding waste disposal sites). Public buildings including libraries, community centres and leisure centres (excluding those identified as in Highly Vulnerable category and emergency shelters).
	Places of worship. Cemeteries. Equipped play areas. Renewable energy generation facilities (excluding hydro generation).
Water compatible development	Boatyards, marinas and essential works required at mooring basins. Development associated with canals. Flood defences and management infrastructure. Open spaces (excluding equipped play areas). Hydro renewable energy generation.

ACCEPTABILITY CRITERIA

To satisfy the acceptability criteria of the assessment of flood consequences, the following conditions should be satisfied:

- No increase in flooding elsewhere
- Occupiers aware of flood risk
- Escape/evacuation routes present
- Flood emergency plans and procedures agreed and in place
- Flood resistant and resilient design



- Acceptable consequences for type of use
- Minimal risk to life;
- Minimal disruption to people living and working in the area;
- Minimal potential damage to property;
- Minimal impact of the Proposed Development on flood risk generally;
- Minimal disruption to the sustainable management of natural resources;

Annex 9A.2

CONSULTATION RESPONSE



From: Land Drainage
Sent: [REDACTED]
To: [REDACTED]
Subject: RE: Our ref: 25/0354/PRL EIA Scoping Request Consultation - DNS CAS-02905-P2F6M6 - Calon y Gwynt Energy Park

Hi [REDACTED]

Any proposed alterations, interference or erection of any structure that affects an ordinary watercourse will require prior consent from Powys CC (as Lead Local Flood Authority), in accordance with Section 23 of the Land Drainage Act 1991 (as amended by the Flood & Water Management Act 2010). Further information can be sought at: <https://en.powys.gov.uk/article/4661/Ordinary-Watercourses-Appealing-for-consent-for-works>.

The site may be affected by flooding. The Flood Maps for Planning should be referenced and can be found on NRW's website: [Natural Resources Wales / Flood map for planning](#). This should be investigated and considered within the development layout. Development should not be permitted within an area at risk from flooding unless it can be demonstrated that the consequences of any flooding would be acceptable for the development proposed and that it would not give rise to any unacceptable flooding impacts elsewhere.

The proposed development will likely require SAB approval. For further information on the requirements of SAB and where relevant application forms/guidance can be accessed, please visit the following website <https://en.powys.gov.uk/article/5578/Sustainable-Drainage-Approval-Body-SAB>. Alternatively, please contact the SAB Team on 01597 827465 or via email sab@powys.gov.uk.

Many thanks,

Peiriannydd Perygl Llifogydd a Draenio Cynaliadwy / Flood Risk and Sustainable Drainage Engineer

Cyngor Sir Powys / Powys County Council

E-bost / Email: [REDACTED]

Ffôn / Tel: 01597 827465

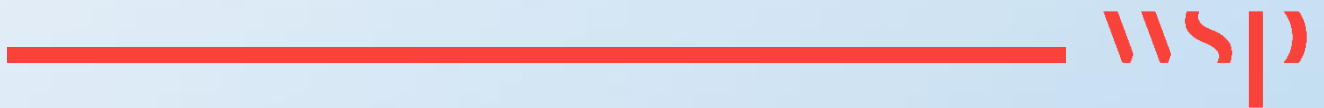
Croeso i chi gysylltu â ni yn Gymraeg. Byddwn yn ymateb yn Gymraeg, heb oedi.
You are welcome to contact us in Welsh. We will respond in Welsh, without delay.



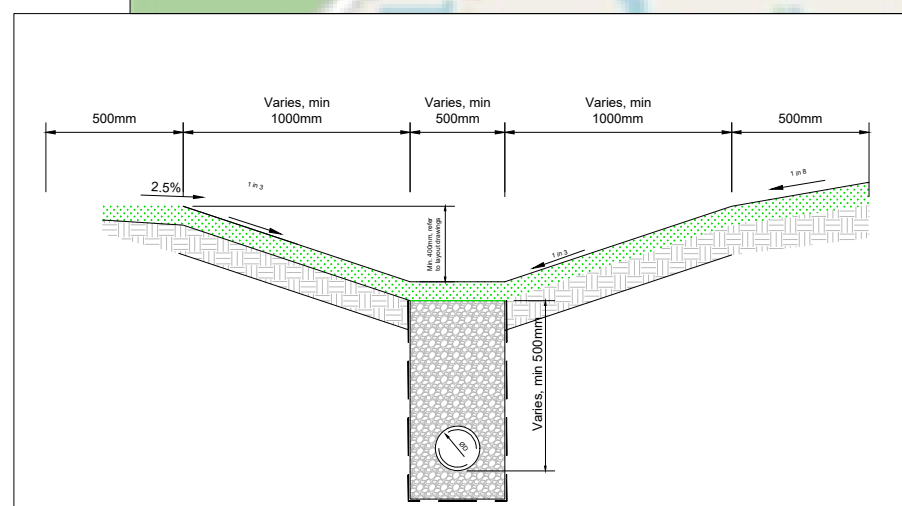
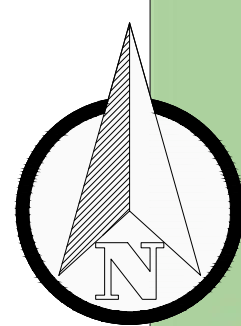
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Annex 9A.3

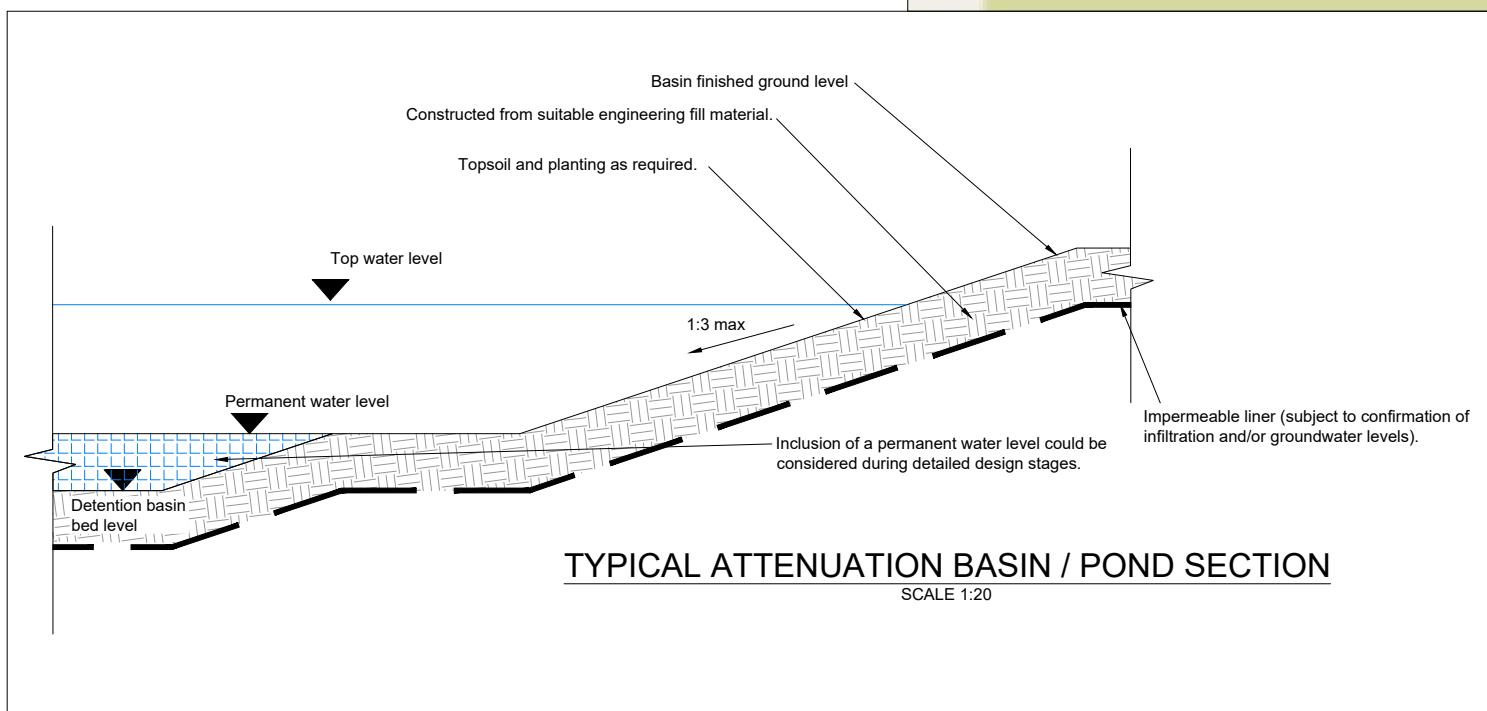
DRAINAGE STRATEGY DRAWINGS



File name: 62282400-WSP-XX-XX-DR-0500 INDICATIVE DRAINAGE STRATEGY.DWG, printed on 16 June 2026 16:19:34, by Tadhg Bryn



TYPICAL SWALE SECTION
NTS



1.505ha impermeable area
Estimated storage requirements 2240m³

1.968ha impermeable area
Estimated storage requirements 2928m³

1.511ha impermeable area
Estimated storage requirements 2248m³

1.591ha impermeable area
Estimated storage requirements 2368m³

1.637ha impermeable area
Estimated storage requirements 2436m³

2.064ha impermeable area
Estimated storage requirements 3071m³

1.756ha impermeable area
Estimated storage requirements 2613m³

2.364ha impermeable area
Estimated storage requirements 3517m³

2.321ha impermeable area
Estimated storage requirements 3453m³

1.589ha impermeable area
Estimated storage requirements 2364m³

1.747ha impermeable area
Estimated storage requirements 2599m³

1.851ha impermeable area
Estimated storage requirements 2755m³

0.711ha impermeable area
Estimated storage requirements 1058m³

SEE
62282400-WSP-XX-XX-DR-0500
FOR CONTINUATION

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- NOTES:**
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 3. DETAILS OF PROPOSED DRAINAGE STRATEGY TO BE CONFIRMED AT DETAILED DESIGN STAGES (INCLUDING ANY ATTENUATION VOLUMES, IMPERMEABLE AREAS, TREATMENT FEATURES, ETC.), AND WILL BE SUBJECT TO SAB APPROVAL
 4. DIMENSIONS, VOLUMES, & DEPTHS OF PROPOSED SUDS FEATURES ARE TO BE CONFIRMED AS PART OF DETAILED DESIGN, AND WILL BE SUBJECT TO CONFIRMED PROPOSED AND EXISTING LEVELS, AND COORDINATION WITH OTHER DISCIPLINE DESIGNS.

INDICATIVE ATTENUATION REQUIREMENTS BY USAGE:

SITE COMPOUNDS / TURBINE AREAS:
19,820m² (13.32Ha DRAINED AREA)

INTERNAL ACCESS TRACK AREAS:
13,213m² (8.88Ha DRAINED AREA)

ACCESS ROAD AREAS:
6,071m² (4.08Ha DRAINED AREA)

- Anticipated location of attenuation feature. Subject to Topographical survey.
- Self contained drainage system required for fire control and prevention of contamination of groundwater. Refer to the Drainage Strategy section within the ES Chapter.
- Drainage system to serve construction compound usage.
- Wind farm compound
- Internal access tracks
- Site access track
- Indicative swale location
- Redline boundary
- Indicative flow routes

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FOR INFORMATION				S2	

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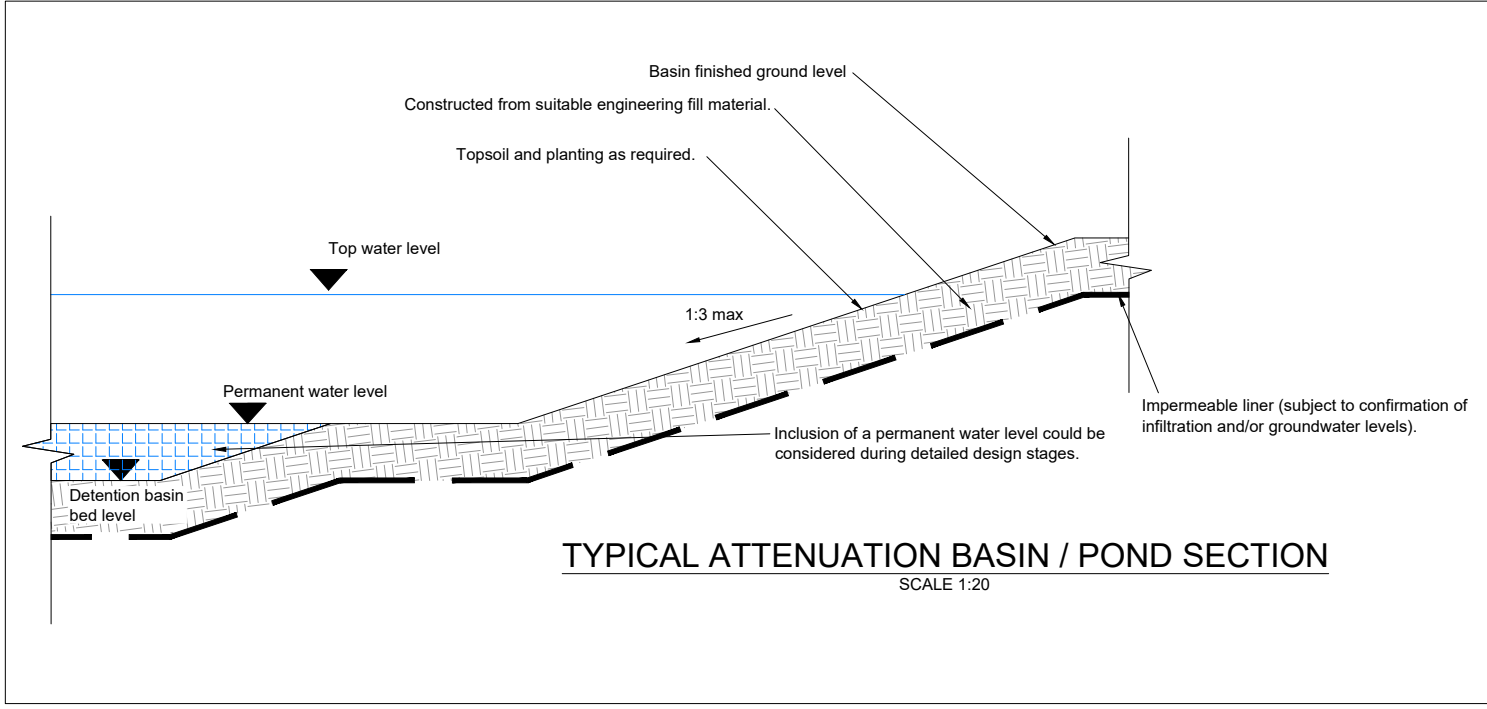
PARC YNNI
CALON Y GWYNT

TITLE:

INDICATIVE DRAINAGE STRATEGY LAYOUT
SHEET 1

SCALE @ A1: 1:10000	CHECKED: BT	APPROVED: RB
PROJECT NO: UK0039458.6640	DESIGNED: HR	DATE: JUNE 2026
DRAWING NO: 62282400-WSP-XX-XX-DR-0500	REV: P01	

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INDICATIVE ATTENUATION REQUIREMENTS BY USAGE:

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 Anticipated location of attenuation feature. Subject to Topographical survey.

 Self contained drainage system required for fire control and prevention of contamination of groundwater. Refer to the Drainage Strategy section within the ES Chapter.

 Drainage system to serve construction compound usage.

 Wind farm compound

 Internal access tracks

 Site access track

 Indicative swale location

 Redline boundary

 Indicative flow routes

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TITLE:			
INDICATIVE DRAINAGE STRATEGY LAYOUT SHEET 2			
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HR		JUNE 2026	
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