



Galileo 03 Ltd.

Mynydd Ty-talwyn Energy Park - Environmental Statement Volume III

Appendix 6.3: Water Framework Directive Assessment

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RSK

RSK GENERAL NOTES

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Galileo 03 Ltd.
 Mynydd Ty-talwyn Energy Park
 ES Volume III, Appendix 6.3: Water Framework Directive Assessment
 680985-R3(04)-WFD Assessment

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1 INTRODUCTION

- 1.1.1 This Water Framework Directive (WFD) Assessment report has been prepared by RSK Land and Development Engineering Ltd (RSK) on behalf of Galileo 03 Ltd (part of Galileo Empower UK Ltd) (hereinafter referred to as 'Galileo' or the 'Applicant'). The assessment is in support of the Development of National Significance (DNS) Application for Mynydd Ty-talwyn Energy Park (the 'Proposed Development'). The 'Site' is defined as the land within the redline boundary in which the Proposed Development is located. The Proposed Development comprises the construction, operation and subsequent decommissioning, of up to six wind turbines, ground mounted solar photovoltaic (PV) modules, one project substation and ancillary infrastructure works.
- 1.1.2 Full details of the DNS application, including proposed activities during the construction, operational and decommissioning phases and proposed drawings can be found in the Environmental Statement (ES). This document forms part of a Technical Appendix to **ES Volume II, Chapter 6: Water**. This WFD Assessment focuses on effects relating to WFD water bodies and WFD Protected Areas.
- 1.1.3 The WFD aims to protect and enhance water quality through the protection of designated water bodies and Protected Areas within the EU. There is a requirement for any applicant to ensure that any project or activities which will require discharges to water bodies, and Protected Areas, do not lead to deterioration or prevent it from meeting its classification status/objectives.
- 1.1.4 The Proposed Development will be located within and in close proximity to a number of WFD water bodies and Protected Areas. A WFD Assessment is therefore required by the Statutory Authorities (Natural Resources Wales (NRW)) to assess the activities related to the Proposed Development that may cause deterioration or prevent a water body from meeting its objectives.
- 1.1.5 Following advice published by NRW within the NRW OGN 72 document 'Guidance for assessing activities and projects for compliance with the Water Framework Directive'¹, a phased approach has been taken to the assessment of effects. This report identifies the activities related to the Proposed Development that may cause deterioration or prevent a water body from meeting its objectives. If any screened activities are noted as having the potential to cause deterioration or prevent a water body from meeting its objectives, these will be subject to further assessment following consultation and agreement with NRW.

¹ NRW, 'OGN 72 document 'Guidance for assessing activities and projects for compliance with the Water Framework Directive', 2018.

2 POLICY & GUIDANCE

2.1 Legislation

- 2.1.1 The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 implemented the Water Framework Directive 2000/60/EC. The Regulations were retained in UK law after EU Exit via the EU Withdrawal Act 2018. They aim to achieve good qualitative and quantitative health for water bodies by reducing and removing pollution and by ensuring that there is enough water to support wildlife at the same time as human needs. The WFD requires a 6-yearly cycle of river basin management, with the next comprehensive update of classifications for all water bodies due in 2027.

2.2 Policy

Planning Policy Wales (PPW)

- 2.2.1 (PPW)² sets out the land use planning policies of the Welsh Government. The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales.
- 2.2.2 In relation to the WFD, this document states that: 'Planning authorities and the minerals industry should take into account the need to protect the quantity and quality of surface and groundwater supplies. Such resources might be an integral part of sites of high landscape value or nature conservation importance, including protected habitats and species'.

2.3 Guidance

OGN 72 'Guidance for assessing activities and projects for compliance with the Water Framework Directive' and Guidance Note (GN78)

- 2.3.1 WFD assessment for Wales is guided by the NRW Guidance Note (GN78) and OGN 72 document 'Guidance for assessing activities and projects for compliance with the Water Framework Directive'. The guidance document stipulates a WFD assessment can comprise of up to three phases. All phases may not require completion dependent on the outcomes of each phase. The phases are:
- Phase 1: Screening - excludes any activities that do not need to go through the scoping or impact assessment phases;
 - Phase 2: Scoping - identifies the receptors that are potentially at risk from proposed activities and need impact assessment; and
 - Phase 3: Impact assessment - considers the potential impacts of your activity, identifies ways to avoid or minimise impacts, and shows if your activity may cause deterioration or jeopardise the waterbody achieving good status.

² Welsh Assembly Government (2024) Planning Policy Wales Edition 12.

- 2.3.2 This guidance has been taken into account during the preparation of this WFD Assessment.

Nationally Significant Infrastructure Projects (NSIP): Advice on the Water Framework Directive

- 2.3.3 The Planning Inspectorate (PINS) published “*Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive*”³ on 20th September 2024. This advice summarises the requirements of the WFD Regulations in relation to NSIP applications and describes how there is no prescribed format or process for WFD assessments.
- 2.3.4 While the advice concentrates on estuarine and coastal waters in England, the guidance sets out general principles and a phased approach to assessment that the Planning Inspectorate considers can be used for other water bodies such as rivers, lakes and groundwater in England and Wales. This guidance has therefore been deemed appropriate for the basis of this assessment, in the absence of PEDW guidance, due to the national significance of the Proposed Development.
- 2.3.5 The advice lists the aims of the WFD Regulations as follows:
- *“To enhance the status and prevent further deterioration of surface water bodies, groundwater bodies and their ecosystem;*
 - *To ensure progressive reduction of groundwater pollution;*
 - *To reduce water pollution, especially by Priority Substances and Certain Other Pollutants under Annex II of the Environmental Quality Standards Directive 2008/105/EC;*
 - *To support mitigating the effects of floods and droughts;*
 - *To achieve at least good surface water status for all surface water bodies and good chemical status in groundwater bodies by 2015 (Article 4), or good ecological potential for artificial or heavily modified water bodies; and*
 - *To support sustainable water use.”*
- 2.3.6 Under the WFD Regulations, the EA/NRW is required to prepare a River Basin Management Plan (RBMP) for each river basin district (RBD). RBMPs describe:
- *“The current state of the water environment for each river basin district;*
 - *The pressures affecting the water environment;*
 - *The objectives for protecting and improving it; and*
 - *The programme of measures needed to achieve the statutory environmental objectives of the WFD”*

³ Planning Inspectorate, ‘Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive’, published September 2024 and last updated November 2024.

- 2.3.7 When deciding NSIP applications, the Secretary of State will need to consider the potential effects of any proposed development on:
- *“The environmental objectives and measures within River Basin Management Plan and any supplementary plans; and*
 - *The ability of the UK to comply with the WFD, including (if applicable) the derogation provisions of Article 4.7”*
- 2.3.8 This guidance has therefore been deemed appropriate for the basis of this assessment, in the absence of PEDW guidance, due to the national significance of the Proposed Development.

3 METHODOLOGY

- 3.1.1 The following methodology for the assessment has been guided by the NRW OGN 72 document 'Guidance for assessing activities and projects for compliance with the Water Framework Directive'. The guidance document stipulates a WFD assessment can comprise of up to three phases, as detailed in the sections below.

Phase 1: Screening

- 3.1.2 The aim of the screening phase is to ensure that only those activities that may cause deterioration or prevent a waterbody from meeting its objectives are assessed further. The screening phase excludes any low-risk activities that do not require a WFD scoping assessment to be undertaken and therefore associated impact assessment.

Phase 2: Scoping

- 3.1.3 Scoping assists with identifying elements within water bodies which may be impacted as a result of the activity, these will then progress to detailed compliance assessment. As part of scoping, the focus is on identifying components of the activity or project that have the potential to cause an impact and the quality elements potentially impacted.
- 3.1.4 A scoping assessment should be undertaken for each waterbody potentially affected by a project. Waterbodies can be scoped out at this phase if it can be robustly demonstrated that there will be no impacts.

Phase 3: Impact Assessment

- 3.1.5 This assessment considers the potential impacts of the Proposed Development, identifies ways to avoid or minimise impacts, and shows if the Proposed Development may cause deterioration or jeopardise the waterbody achieving good status. This phase of the compliance assessment may not be required depending on whether the assets can be scoped out during Phase 2 of the process.

4 PHASE 1: SCREENING

4.1 Site Location and Study Area (Zone of Interest)

- 4.1.1 The Site is located on land to the north of New Road, Bridgend, CF32 0BS and is located at National Grid Reference: SS 86327 86041.
- 4.1.2 The total Site area covers approximately 578 hectares (ha) and comprises agricultural land, farm buildings and woodland. The Site comprises a main, larger parcel of land and a smaller second parcel of land to the west of Craig yr Aber Woodland, connected to the larger parcel via an existing highway. There are various roads which pass through the Site; Ffordd-Y-Gyfraith, Cwm Risca Lane and multiple private tracks.
- 4.1.3 To the east of the Site is A4063 and further agricultural land. To the south is New Road, agricultural land, residential properties and an animal farm off Ffordd-Y-Gyfraith and Cwm Risca Lane. To the west, Craig yr Aber Woodland and Nant Craigraber (Ordinary Watercourse) are located between the western boundary of the main Site area and the smaller area, with further agricultural fields and farms beyond. To the north are agricultural fields and farms.
- 4.1.4 The Zone of Interest (Zoi) has been defined as land within the Site and land 300 m from the edge of the Site boundary and can be viewed on the Site Location Plan in **Annex A**. This Zoi aligns with recommendations from NRW within their scoping response in relation to the Water Features Survey (See **ES Volume III, Appendix 6.1: Watercourse Crossing Baseline Assessment**). A 2 km radius for the assessment has been chosen as a precautionary approach to ensure all relevant water bodies and Protected Areas are identified and assessed and this is hereby defined as the 'Study Area' within this assessment. The Study Area can be viewed in **Annex A**.

4.2 Surface Watercourses - Baseline

- 4.2.1 This section identifies water bodies that are classified under the WFD both within the Site and within a 2 km radius of the Site. Each WFD water body within a 2 km radius of the Site has been assessed to determine whether it is hydrologically linked to the Proposed Development and therefore whether activities associated with the Proposed Development could impact on that water body. Water bodies that are not hydrologically linked to the Site have been screened out and are not assessed further. Any water bodies that could feasibly be hydrologically linked to the Site have been taken forward for assessment, with baseline details provided in the following sections. These water bodies are shown in **Annex A**.

Nant Craigyraber (Kenfig - headwaters to tidal)

- 4.2.2 Nant Craigyraber is an Ordinary Watercourse located off-site between the two parcels of the Site, along the western boundary of the main Site parcel. It is situated within an area of ancient woodland, conveying flow south for 4.2 km, beneath New Road and through Margam Opencast Coal Mine. It then joins Nant Iorweth-goch, an Ordinary Watercourse, which flows west for approximately 1.2 km, converging with Afon Cynffig 2.0 km south-west of the Site.
- 4.2.3 There are two tributary watercourses of Nant Craigyraber on-site, the most significant being the Ordinary Watercourse Nant Fadog which discharges to Nant Craigyraber's downstream extent.

Cwm Kenfig (Kenfig - headwaters to tidal)

- 4.2.4 Afon Cynffig is a designated Main River approximately 2.0 km south-west of the Site, conveying flow east for 1.8 km to discharge to the Afon Kenfig.
- 4.2.5 Afon Cynffig's upstream extent is located approximately 0.7 km west of the smaller western parcel of the Site. This watercourse conveys flows south, beneath Crown Road and then west, away from the Site. Nant Iorweth-goch is a tributary of this watercourse, located 1.2 km south-west of the Site. Afon Cynffig becomes a designated Main River as the two watercourses converge.
- 4.2.6 Nant Craigyraber is also located upstream of Nant Iorweth-goch and is hydrologically linked. There are two tributary watercourses of Nant Craigyraber on-site, the most significant being Nant Fadog which discharges to Nant Craigyraber's downstream extent. The western Site parcel also topographically falls towards both Afon Cynffig and Nant Craigyraber.

Nant y Gadlys (Llynfi - Lletty Brongu STW to conf with Ogmor)

- 4.2.7 Within the northern extent of the Study Area are tributary watercourses of Nant y Gadlys, named Nant Bryncynan and Nant y Castell (designated Ordinary Watercourses).
- 4.2.8 Nant y Gadlys is a designated Main River and conveys flow east, converging with Afon Llynfi approximately 0.65 km north-east of the Site.
- 4.2.9 Nant Cedfyw is an Ordinary Watercourse and conveys flow south, converging with Afon Llynfi approximately 1.4 km east of the Site.

Afon Llynfi (Lletty Brongu STW to conf with Ogmore and headwaters to Lletty Brongu STW)

- 4.2.10 In the north-east of the Site are multiple unnamed Ordinary Watercourses and the Ordinary Watercourse Nant Gwyn which are all tributaries of Afon Llynfi and convey flow north-west/west. Afon Llynfi is a designated Main River located approximately 0.6 km east of the Site and conveys flow south, roughly following the route of the A4063 on its eastern side.
- 4.2.11 There are three small Ordinary Watercourses on-site in the south: Nant-y-gedd, Nant Cwm-bach and an unnamed watercourse, which all convey flow south. There is an extensive watercourse network located off-site 0.2 km south of the Site and south of New Road, associated with Parc Slip Nature Reserve. This network has hydrological links to the small watercourses emerging from south of the Site which convey flow south into this network. This network eventually conveys flow east, eventually discharging to the downstream extent of Afon Llynfi.

Afon Ogmore (Ogmore - Ogwr Fach and Ogwr Fawr conf to Llynfi conf)

- 4.2.12 Afon Ogmore is a Main River located approximately 1.4 km south-east of the Site. It flows south-west and is a tributary of the downstream extent of Afon Llynfi.
- 4.2.13 There are no hydrological links to this watercourse within the Study Area.

Afon Garw (Garw - headwaters to confluence with Ogmore (Afon Garw))

- 4.2.14 Afon Gawr is a Main River located approximately 1.9 km south-east of the Site. It flows south and is a tributary of the downstream extent of Afon Ogmore.
- 4.2.15 There are no hydrological links to this watercourse within the Study Area.

4.3 Surface Watercourses - Screening

- 4.3.1 Four of the watercourses within the Study Area of the Proposed Development are classified under Cycle 3 (2021) of the Water Environment (Water Framework Directive) (WFD) (England and Wales) Regulations 2017. The 2021 classifications have been obtained from the DataMapWales⁴ mapping service. It is to note that the watercourses can fall under the same WFD waterbody name categorisation and can therefore be grouped together as part of the assessment.
- 4.3.2 The following WFD designated watercourses within the Study Area are hydrologically linked to the Proposed Development and have been screened into the assessment:
- Kenfig - headwaters to tidal (Nant Craigraber, Nant Iorweth-goch and Afon Cynffig);
 - Llynfi - Lletty Brongu STW to conf with Ogmore (Nant y Gadlys, Nant Cedfyw and downstream Afon Llynfi); and

⁴ DataMapWales. Available at:
https://datamap.gov.wales/maps/new?layergroup=geonode:nrw_wfd_cycle_3_classifications#/

- Ogmre - confluence with Llynfi to tidal limit (downstream Afon Llynfi).
- 4.3.3 The full baseline assessment of these watercourses are included in **Table 4.1**. As the Site lies within the watercourse's catchments and/or there are tributaries of these watercourses located on-site, it is possible they could be impacted by site activities.
- 4.3.4 The following WFD designated watercourses within the Study Area are to be screened out of the assessment:
- Llynfi - headwaters to Lletty Brongu STW (upstream Afon Llynfi);
 - Ogmre - Ogwr Fach and Ogwr Fawr conf to Llynfi conf (Afon Ogmre); and
 - Garw - headwaters to confluence with Ogmre (Afon Garw).
- 4.3.5 Nant y Gadlys which forms part of the 'Llynfi - Lletty Brongu STW to conf with Ogmre' WFD designation separates the Proposed Development from the 'Llynfi - headwaters to Lletty Brongu STW' catchment and, as such, any effects from the Proposed Development will be intercepted prior to reaching the catchment of the upstream Afon Llynfi.
- 4.3.6 Both the WFD water bodies of Ogmre (Ogwr Fach and Ogwr Fawr conf to Llynfi conf) and Garw (headwaters to confluence with Ogmre) are located in separate hydrological catchments to the Site, a minimum of approximately 1.4 km east of the Proposed Development. Furthermore, the Afon Llynfi WFD classification of 'Lletty Brongu STW to conf with Ogmre' hydrologically separates these two WFD water bodies from the Site. As such, they have been screened out of this assessment.

4.4 Protected Areas - Baseline

- 4.4.1 This section identifies Protected Areas that are classified under the WFD both within the Site and within 2 km radius of the Site. Each WFD Protected Area within a 2 km radius of the Site has been assessed to determine whether it is hydrologically linked to the Proposed Development and therefore whether activities associated with the Proposed Development could impact on that Protected Area. Protected Areas that are not hydrologically linked to the Site have been screened out and are not assessed further. Any Protected Areas that could feasibly be hydrologically linked to the Site have been taken forward for assessment, with baseline details provided in the following sections. These Protected Areas are shown in **Annex A**.
- 4.4.2 The following WFD Protected Areas have been identified within 2 km of the Proposed Development:
- Cwm Risca Meadows Site of Special Scientific Interest (SSSI); directly adjacent to the southern Site boundary;
 - Cefn Cribwr (Bryn Bach) SSSI; 1 km south of the Site;
 - Caeau Cefn Cribwr SSSI; 1.3 km south of the Site;
 - Waun Cimla SSSI; 1.7 km south-west of the Site; and
 - Glaswelltiroedd Cefn Cribwr / Cefn Cribwr Grasslands Special Area of Conservation (SAC) comprises Cefn Cribwr (Bryn Bach) SSSI and Waun Cimla SSSI, the closest of which is located 1 km south of the Site.

- 4.4.3 Cwm Risca Meadows is a designated SSSI and is located directly south of the southern Site boundary, between the Site and New Road. Two small watercourses (Nant y Gedd and an unnamed watercourse) emerge on-site in the south and flow south through this designated area, hydrologically linking the SSSI to the Site.
- 4.4.4 Cefn Cribwr (Bryn Bach), Caeau Cefn Cribwr and Waun Cimla are designated SSSIs and are located between approximately 1 km and 1.7 km south/south-west of the Site boundary, between Parc Slip Nature Reserve and Margam Opencast Coal Mine and the B4281. These Protected Areas are not hydrologically connected to the Site and are located in a separate catchment to the Site.
- 4.4.5 Glaswelltiroedd Cefn Cribwr/Cefn Cribwr Grasslands is a designated SAC site and comprises the SSSI designations of Cefn Cribwr (Bryn Bach) and Waun Cimla, located to the south/south-west of the Site. This Protected Area is not hydrologically connected to the Site and is located in a separate catchment to the Site

4.5 Protected Areas - Screening

- 4.5.1 The following WFD Protected Areas within the Study Area are to be screened into the assessment:
- Cwm Risca Meadows SSSI.
- 4.5.2 A QGIS catchment exercise has been undertaken to determine the hydrological catchments of Cwm Risca Meadows SSSI. The topographic data used has been taken from the available DTM LiDAR tiles, the results of which can be seen in **Annex B**. The results show that there are three distinct catchments on-site which drain into the SSSI, located in the south-eastern Site corner. This designation is proven to be hydraulically linked to the Site.
- 4.5.3 The following WFD Protected Areas within the Study Area are to be screened out of the assessment:
- Cefn Cribwr (Bryn Bach) SSSI;
 - Caeau Cefn Cribwr SSSI;
 - Waun Cimla SSSI; and
 - Glaswelltiroedd Cefn Cribwr / Cefn Cribwr Grasslands SAC.
- 4.5.4 **Annex C** has been produced to illustrate the local topography and the location of the Cefn Cribwr (Bryn Bach), Caeau Cefn Cribwr, Waun Cimla and Glaswelltiroedd Cefn Cribwr/Cefn Cribwr Grasslands SAC. It is shown that whilst the south of the Site falls south, the Protected Area designations and the Site are located in two separate catchments, both falling towards the line of the old Dyffryn, Llynfi and Porthcawl Railway which forms a low lateral ridge east to west. This railway line separates the Site's catchment from the Protected Area designations. Whilst there are watercourses located crossing the SSSI designations which join Afon Cynffig and Nant Cynffig, these watercourses join the networks downstream of the Site and are therefore not hydrologically linked to the Site.

Table 4.1: Watercourse Baseline Information (Cycle 3 - 2021) – water bodies screened in

Water body ID	Water body name	Water body type	HMWB	Overall water body status	Morphology status	Relevance to the proposal
GB110058026170	Kenfig - headwaters to tidal	River	Natural	Moderate	Not High	Proposal is hydrologically linked – at risk
GB110058026332	Llynfi - Lletty Brongu STW to conf with Ogmore	River	Natural	Moderate	Not High	Proposal is hydrologically linked – at risk
GB110058026280	Ogmore - confluence with Llynfi to tidal limit	River	Natural	Moderate	Not High	Proposal is hydrologically linked – at risk

5 ASSESSMENT OF EFFECTS OF PROPOSED ACTIVITIES

5.1 Description of Development

- 5.1.1** The Proposed Development comprises the construction and operation of six wind turbines, ground mounted solar PV modules, one project substation, ancillary infrastructure works and all other infrastructure integral to the construction, operation and maintenance of the Proposed Development. The Proposed Development is shown in **Annex D** and further details are included in **ES Volume II, Chapter 2: Proposed Development Description**.
- 5.1.2** The Proposed Development falls under a DNS under The Planning (Wales) Act 2015 and the Developments of National Significance (Wales) Regulations 2016 (as amended) and subsequent regulations. This is due to any proposal to construct or operate an onshore wind development with a capacity over 10 mega-watts (MW) falling under the DNS system requiring Welsh Ministers' consent.
- 5.1.3** The principal components of the Proposed Development are listed below:
- Up to six wind turbines, each up to 200 m in height to blade tip and associated infrastructure including access tracks, crane pad hardstandings, foundations, cabling, and laydown/storage areas and a 50 m micro-siting allowance for the turbines and ancillary infrastructure;
 - Solar PV modules and associated infrastructure including invertors, transformers, associated mounting structures, fencing, CCTV, cabling and access tracks;
 - An on-site electrical 33 kV/132 kV substation to connect the solar PV modules, and wind turbines to the electricity network, including transformers, switchgear, busbars, control equipment buildings including an office, control functions, material storage, firewalls, cabling, as well as wider monitoring and maintenance equipment;
 - Underground electrical cables linking the wind turbines, solar PV and the on-site substation, generally laid in trenches alongside access tracks where possible;
 - Site Access from the northeast (A4063) and south (New Road). Total wind track length is approximately 11.5 km, including approximately 7.9 km new tracks and approximately 3.6 km upgrades to existing tracks, with vehicle turning heads and passing places as required;
 - Watercourse crossing and associated infrastructure;
 - Landscaping and biodiversity enhancements; and
 - Drainage infrastructure.

- 5.1.4 In addition to the above, the following temporary components of the Proposed Development are proposed during the construction phase:
- An initial construction and storage compound at the northern site entrance to facilitate construction of water crossing prior to its relocation further into the Site;
 - A subsequent temporary construction and storage compound and laydown area, located further into the Site; and
 - Temporary tracks to facilitate construction access into some solar PV land parcels.
- 5.1.5 It is proposed that the lifetime of this scheme will be 50 years.
- 5.1.6 During the construction phase, one or more temporary construction compound(s) will be required as well as temporary roadways to facilitate access to all parts of the Site.
- 5.1.7 The construction of the Proposed Development is anticipated to comprise the following general Phases:
- Advance works including:
 - Site investigations;
 - Pre-construction environmental surveys (if required);
 - Preliminary mitigation works; and
 - Advanced Site access works.
 - Site mobilisation and access improvements including:
 - Construction/upgrading of Site access tracks off the New Road and A4063
 - Construction of the temporary construction compound;
 - Construction of all on-site access tracks.
 - Construction of new bridge over the unnamed watercourse;
 - Construction of temporary and permanent drainage measures and cable trenches; and
 - Laying of electricity and communications cables in trenches.
 - Construction of turbine foundations, crane hardstandings and laydown areas;
 - Construction of control building and electrical compound;
 - Construction of substation;
 - Delivery, installation, testing and commissioning of wind turbines and ancillary equipment;
 - Construction of solar PV areas; and
 - Site finalisation works, including restoration.

- 5.1.8 The Proposed Development will be decommissioned at the end of its approved operational phase. All turbines, PV modules, mounting poles, inverters, transformers, etc., would be removed from the Site. These items would be recycled or disposed of in accordance with good practice and market conditions at the time. Decommissioning is expected to take six to 12 months.

5.2 Western Wales River Basin Management Plan

- 5.2.1 The relevant River Basin Management Plan (RBMP) for the Site is the Western Wales RBMP⁵.
- 5.2.2 The plan states that the Welsh Government declared a 'Climate Emergency' in Wales in April 2019 with the intention of prompting "a wave of action at home and internationally. From our own communities, businesses and organisations to parliaments and Governments around the world". In June 2021 the Welsh Government also declared a nature emergency. The Welsh Government programme of aspirations sets the commitment to embed NRW's response to the climate and nature emergency in everything they do; plus commitments linked to water quality improvement.
- 5.2.3 Since the second cycle RBMP (2015), NRW have continued to improve their understanding of the pressures, impacts and risks that the water environment faces. They have:
- Investigated failures to achieve standards to identify the underlying reason for failure;
 - Assessed the risk of deterioration or of failing to achieve standards in this and future plans;
 - Consulted the public on their findings through the Challenges and Choices consultation and consultation on the draft third cycle plan; and
 - Considered current and emerging challenges in particular those that have been identified by stakeholders. These have been used to inform the updated programme of measures to address a broad range of challenges including phosphorous in SAC rivers, spills from storm overflows and taking a more integrated approach for catchments from source to sea.
- 5.2.4 NRW have reviewed the list of the most important issues they believe threaten the current and potential future uses of the water environment. They have grouped the pressures under a number of issue headings known as the Significant Water Management Issues (SWMIs). These are focused on those issues where more action is needed to achieve status objectives.
- Physical modifications - Man made changes to the natural habitat, for example poorly designed or redundant flood defences and weirs, and changes to the natural river channels for land drainage and navigation and shellfisheries on estuaries and in coastal waters. These modifications can cause changes to

⁵ Natural Resources Wales, 'Western Wales River Basin Management Plan 2021 – 2027 Summary', July 2022.

natural flow levels, excessive build-up of sediment, and the loss of the habitat that wildlife needs to thrive;

- Pollution from sewage and wastewater - Wastewater can contain large amounts of nutrients (such as phosphorus and nitrates), ammonia, bacteria and other damaging substances;
- Pollution from towns, cities and transport - Rainwater running over manmade surfaces and carrying pollutants into waters, toxic substances from contaminated land, atmospheric pollution causing acidification and sewage from houses misconnected to surface water drains rather than sewers;
- Pollution from rural areas - Poor agricultural practice and forestry can result in nutrients and sediments affecting the water environment (also known as diffuse rural pollution);
- Pollution from mines - Contaminated water draining from mines, most of which are now abandoned;
- Changes to the natural flow and levels of water - Taking too much water from rivers lakes and underground causes problems for wildlife and reduces the water available for people to use; and
- Invasive Non-Native Species - The presence of invasive non-native plants and animals in our watercourses poses a threat to biodiversity, increases flood risk, affects the state of our water environment and costs the economy billions per annum.

5.2.5 This main Programme of Measures to deliver the statutory objectives are to:

- Prevent deterioration in status - Water body status will not be allowed to deteriorate;
- Achieve the objectives for Protected Areas - Achieve the standards set by the relevant legislation under which they were designated. For water dependent European sites NRW will continue to work towards achieving conservation objectives. Achieving good status by 2027 will contribute towards meeting those objectives; and
- Aim to achieve good overall status/potential for surface waters and ground waters - Implement measures to achieve good overall status where they are technically feasible and not disproportionately costly.

5.3 Key Challenges for the Water Environment

5.3.1 As an initial step to identifying which proposed activities could impact RBMP objectives and the status of a water body, key challenges for the water environment have also been identified using NRW guidance “*Challenges and Choices: Consultation on the summary of significant water management issues for Wales, Western Wales River Basin District and Dee River Basin District*”⁶. These SWMIs align with those detailed within the RBMP.

⁶ Natural Resources Wales, “Challenges and Choices: Consultation on the summary of significant water management issues for Wales, Western Wales River Basin District and Dee River Basin District”, 2019.

5.3.2 The main five SWMIs across Wales are:

- **Physical Modifications:** modifications that society has made and continues to make to rivers, lakes, estuaries and our coastline; the end result being that the size and shape of natural habitats become altered. Physical modifications can include artificially straightening channels to aid navigation or flood risk management, structures designed to reduce flood risk, flow regulation structures to create reservoirs, dams and weirs, or short-term management activities like dredging or vegetation removal. They can also cause changes to the natural flow, water levels and can result in the excessive build-up of sediment and the loss of habitat that wildlife needs to survive;
- **Pollution from sewage and wastewater:** Sewage and wastewater can contain large amounts of nutrients (such as phosphorus and nitrates), ammonia, metals and other damaging substances including viruses and bacteria. These can have a detrimental effect on habitats and a significant impact on our use of water, particularly the recreational use of bathing waters and waters supporting shellfish for consumption. All groundwater forms part of a Drinking Water Protected Area (DWPA). Unregulated discharges to ground and leaking subsurface sewers can cause point source and diffuse pollution of groundwater resources. Pollutants enter the water environment through discharges from sewage treatment works and sewage overflows (either treated or untreated);
- **Pollution from towns, cities and transport:** A combination of misconnections of our dirty water (from sewage and washing) at our workplaces (in particular industrial estates) and homes and privately owned septic tanks and treatment plants together with rainwater collected from manmade surfaces such as building roofs, roads and pavements collectively contribute to a mixture of water pollution within our towns and cities. This can include dust/grit, oils, detergents, metals, road salt, bacteria from animal faeces and other particulates which becomes collected through surface water drainage systems or directly into local streams and lake from localised drains;
- **Pollution from rural areas:** Some land management practices as well as impacts from other rural uses (for example, horses/stables and golf courses) can result in nutrients (such as phosphorus and nitrate), bacteria, pesticides, soils and sediments affecting the water environment. Nutrients can cause excessive algal growth and lead to eutrophication in our surface waters. Groundwater used for drinking water can also be impacted through the long-term application of fertilizers and manures which can result in nitrate concentrations above the drinking water standard. Groundwater containing elevated levels of nutrients can lead to poor ecological status in wetlands that are groundwater fed; and
- **Pollution from mines:** Contaminated groundwater can discharge from abandoned mines and is a major problem in Wales. These mine water discharges are often contaminated with dissolved metals such as iron, lead, copper, zinc and cadmium which discharge into adjacent rivers and subsequently to estuarine and coastal waters. Rainwater run-off from spoil heaps associated with the workings can also discharge into rivers. These metal rich discharges have a significant detrimental impact on many of our rivers and the fish and ecosystems they support.

- 5.3.3 Each of these SWMIs is considered below, with a high-level comment as to whether the Proposed Development could exacerbate these SWMIs and consequently result in impacts for local water bodies. Specific impacts for each water body are discussed in detail following this initial screening exercise.
- 5.3.4 Any site activities that would not impact one of SWMIs has been screened out, as described in **Section 5.4**.

Table 5.1: Key challenges for the water environment - Risk Screening

SWMI	How impacts arise	Potential impacts from Proposed Development <u>without Mitigation</u>	Explanation	Challenge discussed further
Climate emergency	Climate change results in raised temperatures and reduced flows in watercourses, impacting habitats and species. Droughts place increased demand on water resources. Less water is available for dilution and dispersion of pollutants. Increased flooding can cause release of polluted runoff and storm overflows from combined sewerage systems.	Yes - beneficial	The Proposed Development will help combat climate change because it is a clean and renewable energy source that generates no greenhouse emissions and helps reduce reliance on fossil fuels which are major contributors to climate change. Any discharges from the Site from hardstanding's will be carefully designed as not to increase runoff from the existing Greenfield runoff rates, so not to increase flooding off-site.	Yes
Physical modifications	Diversion, culverting and straightening of watercourses can damage habitats and reduce resilience to flooding, erosion and drought.	Yes - adverse	During construction without careful design/mitigation, physical disturbance could result from laying of cables beneath watercourses and creation of crossings over watercourses. Siltation could also impact river morphology.	Yes

SWMI	How impacts arise	Potential impacts from Proposed Development <u>without Mitigation</u>	Explanation	Challenge discussed further
Pollution from agriculture and rural areas	Management of land, livestock and use of fertilisers and pesticides can result in river and groundwater pollution.	Yes - beneficial	Intensive farming practices are not proposed as part of the Proposed Development. Cessation of some arable activities could reduce inputs of agricultural chemicals and farming by-products. The existing Site use is agricultural farming practices, the majority of which will remain during the lifetime of the Proposed Development. However, during operation, the quantity of these practices will be reduced where the solar PV development is provided and where the landscape planting is proposed. In additional, landscaping will reduce the quantity of land used for agriculture.	No
Pollution from water industry wastewater	Untreated sewage can be released to watercourses, particularly from storm overflows from combined sewerage systems.	No	Development does not relate to the water industry.	No

SWMI	How impacts arise	Potential impacts from Proposed Development <u>without Mitigation</u>	Explanation	Challenge discussed further
Invasive non-native species	Introduction of non-native species through spread of animals or plants can damage water environment.	Yes - adverse	Without mitigation, construction activities could facilitate the spread of material, e.g., attached to equipment or vehicles.	Yes
Pollution from towns, cities and transport	Pollution from urbanisation and transport in urban areas can damage water quality.	No	Proposed Development not within urban environment and would not result in new residential dwellings.	No
Changes to water levels and flows	Over-abstraction of surface / groundwater can result in damage rivers, springs, aquifers, lakes and wetlands.	Yes - adverse	Construction and operational phases have an associated water demand, inappropriate abstraction could result in damage to surface water/groundwater (and as, such would be avoided through mitigation).	Yes

SWMI	How impacts arise	Potential impacts from Proposed Development <u>without Mitigation</u>	Explanation	Challenge discussed further
Chemicals in the water environment	Release of chemicals to the water environment could impact aquatic life, human health and surface/groundwater water supplies.	Yes – adverse	Without mitigation, chemicals could be released through leaks/spills of substances during construction and decommissioning works, within contaminated runoff or as a result of releases through accident or emergency during the operational phase.	Yes
Pollution from abandoned mines	Pollution from abandoned mines impacts surface water and groundwater quality and habitats.	Yes – adverse	Former coal mines are present within the Site and therefore, construction or decommissioning activities could result in adverse impacts to groundwater/surface water if they are not undertaken with appropriate mitigation.	Yes

5.3.5 **Table 5.1** identifies that without mitigation the Proposed Development could result in adverse effects through:

- Physical modifications;
- Invasive non-native species;
- Changes to water levels and flows;
- Chemicals in the water environment; and/or
- Pollution from abandoned mines.

5.3.6 Each of the SWMIs is considered further in relation to the WFD watercourses in the Scoping section in **Section 6**, taking into account the mitigation measures proposed as part of the Proposed Development and how these mitigation measures will be secured. A summary of the mitigation measures committed to as part of the Proposed Development can be found in **ES Volume II, Chapter 17: Summary of Effects** with further detail provided in **ES Volume II, Chapters 5 to 14**.

5.3.7 It should be noted that the Proposed Development has the potential to result in positive effects in relation to climate emergency by reducing reliance on fossil fuels. These are discussed further below.

5.4 Activities Screened Out

5.4.1 The following activities have been scoped out of further assessment, on the basis they are considered not to add pressure to the SWMIs as identified in the RBMP and associated advice.

Construction and Decommissioning phases

5.4.2 All activities have been scoped in due to the associated use and transport of materials, excavation works, use and storage of fuels and oils associated construction equipment, and water usage during the proposed works. Habitat creation works have been scoped in due to their proximity to existing watercourses and their potential for enhancement/benefit to RBMP objectives.

Operational phase

5.4.3 Activities scoped out comprise:

- On-site underground cabling – this activity will be below ground with no impacts to topography or water dynamics and will not alter water quantity and quality within the WFD water bodies and the SSSI;
- Fencing and security measures – The fencing will allow surface water flows to pass through freely and should not impact the hydromorphology across the Site or water quantity and quality within the WFD water bodies and the SSSI. The security measures comprise CCTV posts which will be kept to minimal; and
- All other structures during the operational phase have been scoped in, so that further assessment can be made of any impact on natural river dynamics.

6 PHASE 2: SCOPING

6.1 Introduction

6.1.1 Scoping was completed for the Proposed Development's activities against the receptors and criteria provided in the NRW OGN072 guidance note (NRW 2018) for three water bodies and one Protected Area, that were identified as being potentially impacted by the Proposed Development. These are:

- Kenfig (headwaters to tidal);
- Llynfi (Lletty Brongu STW to conf with Ogmre);
- Ogmre (confluence with Llynfi to tidal limit); and
- Cwm Risca Meadows SSSI.

6.1.2 Activities that have been scoped in for further assessment are considered further below. Activities with a potential adverse effect are considered in **paragraph 6.2.1**, and activities making a positive contribution to RBMP objectives are discussed in **paragraph 6.2.2**.

6.2 Scoping Assessment of Activities Screened In

Risk of deterioration

6.2.1 Activities not scoped out associated with the construction, operational and decommissioning phases of the Proposed Development have been assessed to determine whether they could cause a risk of deterioration of status of the identified water bodies. The assessment takes into account the mitigation measures that have been incorporated into the Proposed Development for the protection of the water environment.

6.2.2 The assessment considers potential pathways between activities and receptors. Where there is no pathway for an activity to impact a receptor, there will be no impact on that receptor. A 300 m Zol has been used to assess the effects on WFD water bodies and WFD Protected Areas, although each activity has been assessed on an individual basis.

6.2.3 "Deterioration of status" refers to at least one of the quality elements falling by one class. This is even if the change does not result in a fall in classification of the water body as a whole. This applies unless the water body is already in the lowest status class, in which case any deterioration is deterioration in status under the WFD.

6.2.4 The assessment findings are presented in **Table 6.1**.

Table 6.1: Scoping Assessment of impact of activities

SWMIs/Criteria	Activity	Deterioration of status			Discussion taking into account mitigation committed to by applicant	How mitigation secured	Further assessment required?
		Kenfig	Llynfi	Ogmore			
Biodiversity crisis (Hydromorphology, Biology)	Works close to watercourse channel resulting in degradation or loss of habitats or species (e.g. New proposed watercourse crossings for the access tracks over Nant Cwm-bach and the unnamed Ordinary Watercourse in the south)	No	No	No	Nant-Cwm Bach and the unnamed Ordinary Watercourse in the south are tributaries of Afon Llynfi, however, this watercourse is outside the Zol and the activity should therefore have no direct impacts. No direct impact to Kenfig or Ogmore as outside Zol. There are no direct impacts to Cwm Risca Meadows SSSI as a result of the proposed crossing points, as whilst although this designation is hydrologically linked to a small area of the Site located in the southwest,	Secured via a planning condition and Watercourse Crossing Baseline Assessment as Land Drainage Consent from Bridgend County Borough Council.	No - Scoped Out

SWMIs/Criteria	Activity	Deterioration of status			Discussion taking into account mitigation committed to by applicant	How mitigation secured	Further assessment required?
		Kenfig	Llynfi	Ogmore			
					the crossing points are not located within these catchments and are not hydrologically linked. The Proposed Development includes a 50 m buffer from the on-site Ordinary Watercourses. No works are required within the watercourse channel or affecting the bed or banks of the watercourse. There will be no physical impact on the Ordinary Watercourse as a result of this activity.		
Physical modifications	Laying of cables beneath watercourses	No	No	No	No direct impact to Kenfig, Llynfi or Ogmore as outside Zol.	Condition of consent to undertake works (Land	No - Scoped Out

SWMIs/Criteria	Activity	Deterioration of status			Discussion taking into account mitigation committed to by applicant	How mitigation secured	Further assessment required?
		Kenfig	Llynfi	Ogmore			
(Hydromorphology, Biology)					Cables will be laid to the depth specified by the Lead Local Flood Authority (LLFA) to ensure no future impact on watercourse maintenance/function. There will be no physical impact on Ordinary Watercourses as a result of this activity.	Drainage consent).	
Physical modifications (Hydromorphology, Biology)	Creation of watercourse crossings for access	No	No	No	No direct impact to Kenfig, not hydrologically linked to watercourses proposed to be crossed. Two new crossings are proposed over two Ordinary Watercourses upstream Llynfi and Ogmore. Any works will be undertaken under Bridgend County	Condition of consent to undertake works (Bridgend County Borough Council Land Drainage	No - Scoped Out

SWMIs/Criteria	Activity	Deterioration of status			Discussion taking into account mitigation committed to by applicant	How mitigation secured	Further assessment required?
		Kenfig	Llynfi	Ogmore			
					Borough Council Land Drainage Consent and will ensure existing flows are maintained beneath the structure. The structure will be designed to allow for an increase in flows caused by climate change and/or a blockage, plus a freeboard allowance. The suitable design of these structures should not increase sediment downstream with proposed crossing details included in ES Volume III, Appendix 6.1: Water Crossing Baseline Assessment. Cwm Risca Meadows SSSI is hydrologically linked to a small area of the Site located in the southwest. The proposed crossing over the unnamed Ordinary	Consent) and specified via CEMP.	

SWMIs/Criteria	Activity	Deterioration of status			Discussion taking into account mitigation committed to by applicant	How mitigation secured	Further assessment required?
		Kenfig	Llynfi	Ogmore			
					Watercourse is upstream of the SSSI designation. A suitable watercourse crossing will be constructed, avoiding culverting where possible. No works are required within the watercourse channel or affecting the bed or banks of the watercourse. There will be no physical impact on the Ordinary Watercourses during the operation of this activity, however, during construction, all three watercourses could be impacted due to migration of silt from construction/ decommissioning works via on-site watercourses to downstream WFD watercourses.		

SWMIs/Criteria	Activity	Deterioration of status			Discussion taking into account mitigation committed to by applicant	How mitigation secured	Further assessment required?
		Kenfig	Llynfi	Ogmore			
					Mitigation measures to minimise silt input will be committed to via the Construction Environmental Management Plan (CEMP). An Outline CEMP has been prepared and submitted alongside this application (ES Volume III, Appendix 2.1: Outline Construction Environmental Management Plan).		
Physical modifications (Biology)	Infrastructure development	No	No	No	The nearest proposed infrastructure to the WFD watercourses is solar PV and its associated fencing to the Kenfig (Nant Craigyraber) at approximately 190 m west from the watercourse. The proposed structures will not impact on natural fluvial	N/A	No – Scoped Out

SWMIs/Criteria	Activity	Deterioration of status			Discussion taking into account mitigation committed to by applicant	How mitigation secured	Further assessment required?
		Kenfig	Llynfi	Ogmore			
					processes (taking account of the potential for lateral geomorphological changes over the lifetime of the Proposed Development) and are not considered to restrict future river restoration projects. A minimum 50 m development-free easement (buffer) has been allowed either side of the on-site Ordinary Watercourses. As the WFD watercourses are natural, there is potential for minor lateral geomorphological changes over the 50-year lifetime of the Proposed Development therefore the minimum 20 m		

SWMIs/Criteria	Activity	Deterioration of status			Discussion taking into account mitigation committed to by applicant	How mitigation secured	Further assessment required?
		Kenfig	Llynfi	Ogmore			
					easement is considered appropriate to avoid impacts on natural fluvial processes.		
Physical modifications (Hydromorphology, Chemicals)	Disturbance of soils during construction/decommissioning resulting in release of silt to watercourses	No	No	No	All three watercourses could be impacted due to migration of silt from construction/decommissioning works via on-site watercourses to downstream WFD watercourses. Mitigation measures to minimise silt input will be committed to via the CEMP and Decommissioning Environmental Management Plan (DEMP). An Outline CEMP has been prepared and submitted alongside this application (ES Volume III ,	Specified via CEMP/DEMP	No – Scoped Out

SWMIs/Criteria	Activity	Deterioration of status			Discussion taking into account mitigation committed to by applicant	How mitigation secured	Further assessment required?
		Kenfig	Llynfi	Ogmore			
					Appendix 2.1: Outline Construction Environmental Management Plan). A temporary drainage strategy will be implemented during construction works to control runoff rates and sediment mobilisation. There will be no impact on the hydromorphology of Ordinary Watercourses as a result of this activity.		
Invasive non-native species (Biology)	Movement of equipment and vehicles around the Site during construction and decommissioning	No	No	No	Invasive non-native species have been mapped across the Site, as detailed in ES Volume IV, Figure 11.5: Important Ecological Features Invasive Non-	CEMP	No – Scoped Out

SWMIs/Criteria	Activity	Deterioration of status			Discussion taking into account mitigation committed to by applicant	How mitigation secured	Further assessment required?
		Kenfig	Llynfi	Ogmore			
	could result in spread of non-native species, particularly during works close to watercourses (e.g., crossing creation)				Native Species. The primary management technique will be establishment of a herbicide spraying regime of Glyphosate. Given this is approved for use near water there would no impact on Ordinary or WFD Watercourses.		
Changes to water levels and flows (Hydromorphology)	Abstraction of surface water during construction and operational phases	No	No	No	Domestic water supply for welfare uses (construction and operation) and non-domestic requirements during construction and operation (e.g. wheel washing, dust suppression, process water for cooling, fire water supply and panel cleaning) will be met by using raw water via a bowser. As	CEMP	No - Scoped Out

SWMIs/Criteria	Activity	Deterioration of status			Discussion taking into account mitigation committed to by applicant	How mitigation secured	Further assessment required?
		Kenfig	Llynfi	Ogmore			
					such, abstraction from WFD watercourses will be null.		
Chemicals in the water environment (Chemicals)	Storage and use of fuels, oils and chemicals during construction and decommissioning works	No	No	No	All three watercourses could be impacted due to migration of pollutants from construction works via on-site watercourses to downstream WFD watercourses. Appropriate best practices measures will be stipulated within the CEMP/DEMP to ensure construction compounds are located away from watercourses, as far as practicable, and spills / leaks are minimised with a plan in place for dealing with accidental releases.	CEMP / DEMD	No – Scoped Out

SWMIs/Criteria	Activity	Deterioration of status			Discussion taking into account mitigation committed to by applicant	How mitigation secured	Further assessment required?
		Kenfig	Llynfi	Ogmore			
Chemicals in the water environment (Chemicals)	Accidental release of chemicals or release of contaminated surface water runoff during operational phase	No	No	No	Kenfig could be impacted due to migration of pollutants via on-site watercourses to the downstream WFD watercourse. An outfall is proposed to a nearby watercourse, likely an unnamed tributary of Nant Craig-yr-aber. However, the drainage system will include appropriate phases of treatment to ensure discharged runoff does not impact the quality of the receiving watercourse. As the outfall will be directly to an Ordinary Watercourse, the agreement for the connection should be with the LLFA	OEMP/SMP/BSMP and Drainage Strategy	No – Scoped Out

SWMIs/Criteria	Activity	Deterioration of status			Discussion taking into account mitigation committed to by applicant	How mitigation secured	Further assessment required?
		Kenfig	Llynfi	Ogmore			
					(Bridgend County Borough Council).		
Chemicals in the water environment (Chemicals)	Accidental release of chemicals from former coal mines during construction or decommissioning activities	No	No	No	There are no mining entries located near to the proposed turbine locations where more extensive earthworks are required. The solar PV parcels are located within c.57 m at their closest point; this construction involves shallow piling for the frames. Given the depths of the mines on the Site, this shallow construction technique is unlikely to release any chemicals associated with the historic mining.	Planning Condition	No – Scoped Out.

SWMIs/Criteria	Activity	Deterioration of status			Discussion taking into account mitigation committed to by applicant	How mitigation secured	Further assessment required?
		Kenfig	Llynfi	Ogmore			
					In additional, further ground investigation would be undertaken during the detailed design phase and any remedial works would be undertaken in consultation with the Mining Remediation Authority (formally Coal Authority).		

- 6.2.5 Overall, the assessment within **Table 6.1** shows that none of the activities assessed have the potential to cause a deterioration in status of WFD water bodies.
- 6.2.6 No activities are proposed within WFD water bodies that could have any impact on their banks/beds and appropriate easements are proposed either side of the tributary Ordinary Watercourses located within the Site. Land Drainage Consent from Bridgend County Borough Council will be obtained for watercourse crossings as identified in **ES Volume III, Appendix 6.1: Water Crossing Baseline Assessment**. Any potential water quality impacts during construction and decommissioning will be managed through measures specified within the CEMP and DEMP, and any residual impacts would be of limited magnitude and temporary in nature. Water quality impacts during operation are considered unlikely. Impacts on habitats and species will be managed through best practice measures provided in **ES Volume III, Appendix 2.1: Outline Construction Environmental Management Plan**.
- 6.2.7 No further assessment is considered necessary in relation to the effects on WFD water bodies.

Positive Contributions to RBMP Objectives

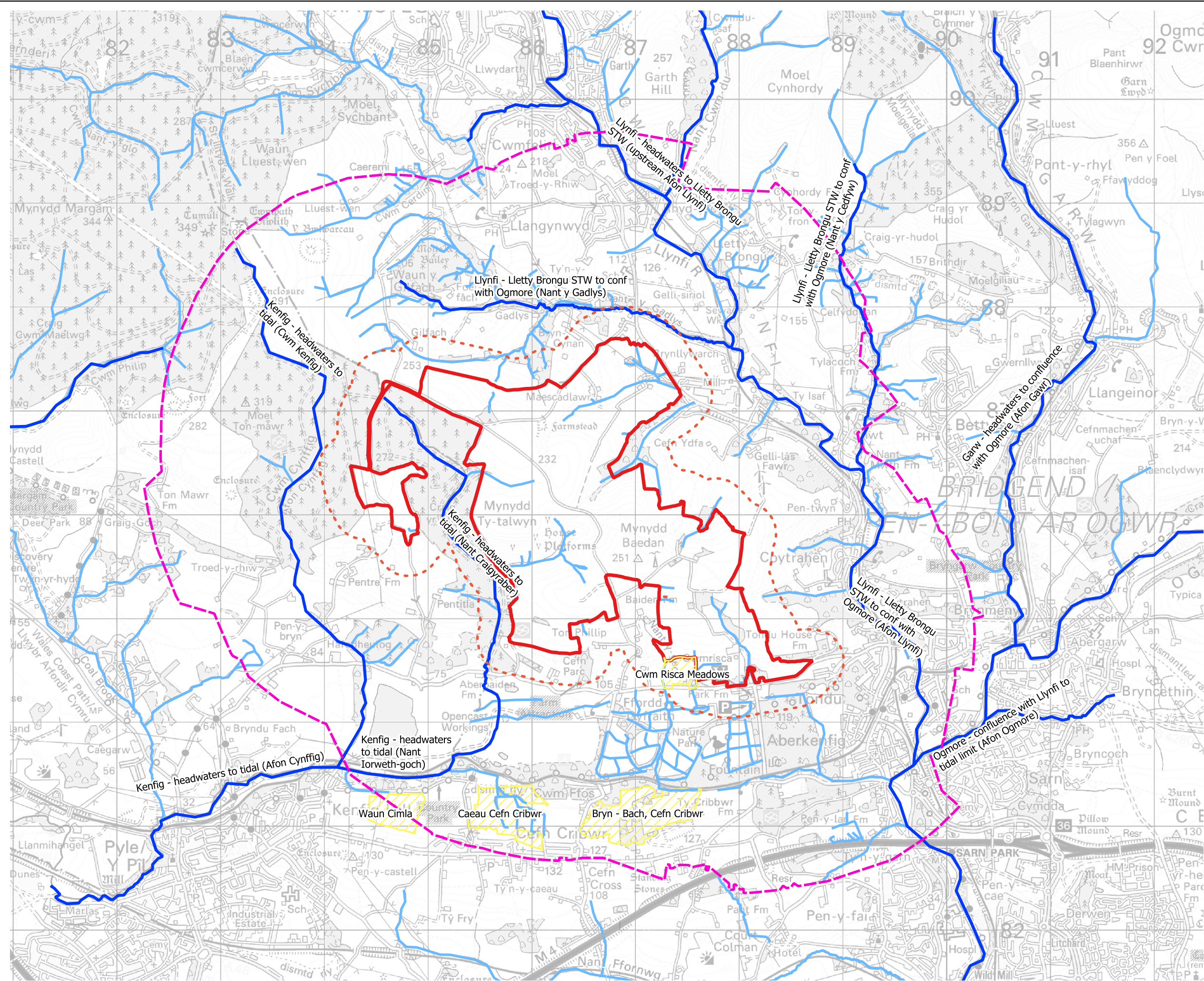
- 6.2.8 In addition to ensuring no deterioration of status of water bodies, the Proposed Development will have a positive effect on the SWMIs as identified within the RBMP. The cessation of some agricultural activities would have an overall benefit to the status of WFD water bodies, and a positive improvement in biodiversity will be achieved through the proposed landscaping design and details provided in **ES Volume III, Appendix 11.4: Net Benefit for Biodiversity Report**. Additionally, the Proposed Development as a whole will help combat climate change by helping reduce reliance on fossil fuels which are major contributors to climate change. These enhancements are intrinsic within the Proposed Development and therefore do not require an external mechanism to secure their implementation.

7 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

- 7.1.1 In line with NRW guidance and PINS guidance relevant to the Proposed Development (due to the Proposed Development's national significance in the absence of PEDW advice), this assessment has identified WFD water bodies and WFD Protected Areas that could be hydrologically linked to the Site. For each relevant water body, the baseline characteristics have been identified.
- 7.1.2 Activities associated with all phases of the Proposed Development have been considered, with any activities considered to have the potential add pressure to the SWMIs taken forward for more detailed assessment. This included both activities with a potential adverse effect and those that may be beneficial to RBMP objectives.
- 7.1.3 Activities were assessed to determine whether they could result in a deterioration of status i.e. at least one of the quality elements falling by one class. This assessment took into account the Zol of activities, pathways between activities and receptors, mitigation that has been committed to by the Applicant and the characteristics of the watercourses under consideration.
- 7.1.4 Overall, the WFD Phase 2 Scoping assessment concluded that none of the activities associated with the Proposed Development have the potential to cause a deterioration in status of WFD water bodies or deterioration of WFD Protected Areas. The Proposed Development is not considered to jeopardise the attainment of 'good' overall status of WFD water bodies. No further assessment is required in relation to the WFD and the Proposed Development is considered compliant with the WFD Regulations 2017.
- 7.1.5 Notably, the Proposed Development will have a positive effect on some of the SWMIs as identified within the RBMP. A positive improvement in biodiversity will be achieved through the proposed landscaping scheme which will form a planning condition of any planning permission. Additionally, the Proposed Development will help combat climate change by helping reduce reliance on fossil fuels.
- 7.1.6 As the Proposed Development is not considered to cause the deterioration of the status of a body of water, a derogation under Article 4.7 is not required.
- 7.1.7 The outcomes of this assessment should be shared and agreed with NRW as part of the consenting process.

ANNEX A

SITE DESIGNATIONS, WATER BODIES, ZOI AND STUDY AREA MAP



Legend

- Site Boundary
- Existing Mapped Ordinary Watercourses
- WFD Water Body
- 300 m Zone of Influence
- 2 km Study Area
- SSSI

03	24/11/2025	Update to Draft	EW	CW	CW
02	08/10/2025	Update to Draft	EW	CW	CW
01	26/03/2025	Update to Draft	EW	CW	CW
00	26/03/2025	First Draft	EW	CW	CW
Rev	Date	Description	Drm	Chk	App

Mynydd Ty-talwyn Energy Park



TITLE: Annex A
Protected Areas, WFD Water
Bodies, Zone of Influence and
Study Area Map

ID:680985-00-G-HYD

0 1 2 km

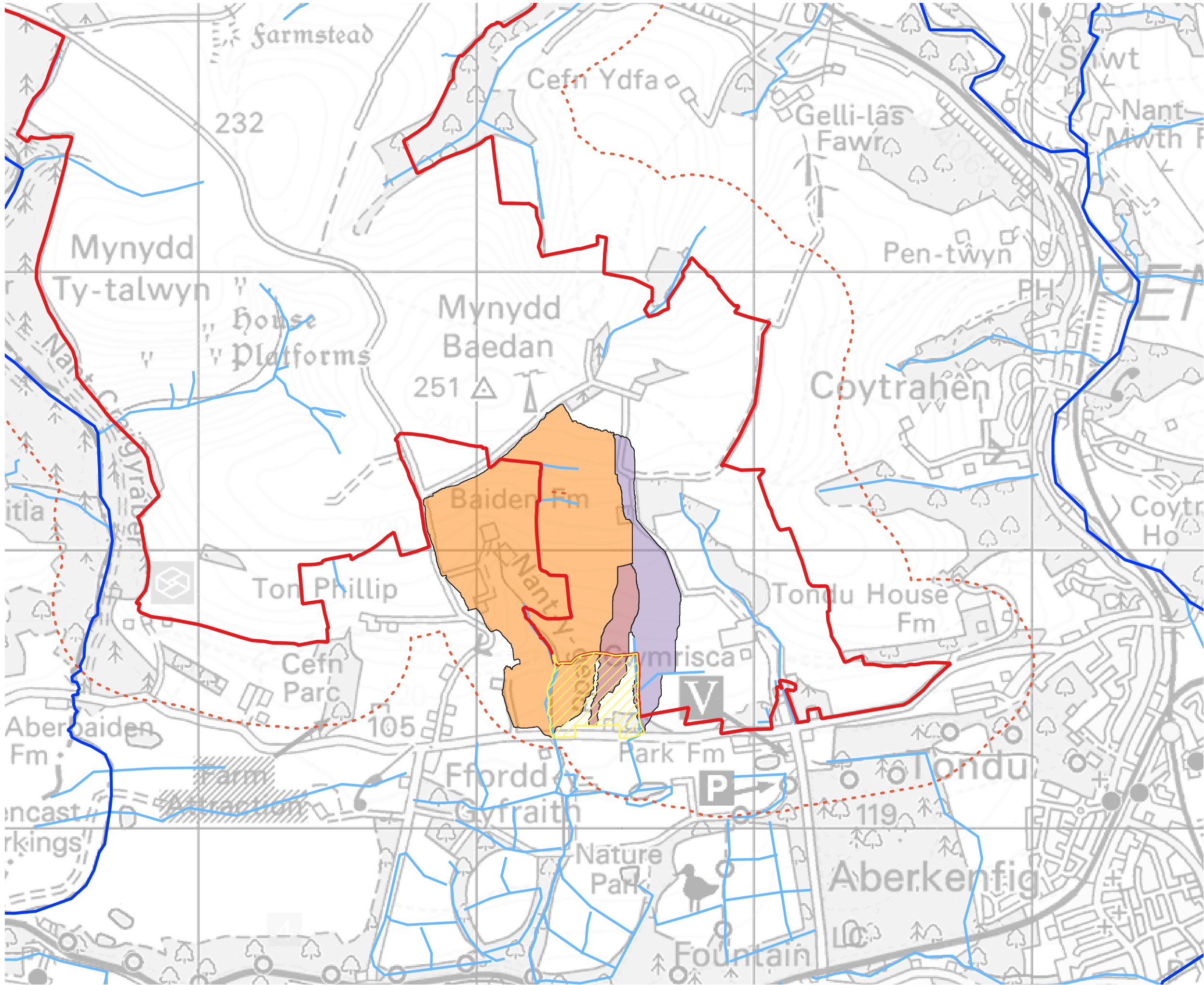
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ANNEX B

CWM RISCA MEADOWS SSSI HYDROLOGICAL CATCHMENTS MAP



Legend

- Site Boundary
- 300 m Zone of Influence
- Existing Mapped Ordinary Watercourses
- WFD Water Body
- Cwm Risca Meadows SSSI
- Central Catchment
- Western Catchment
- Eastern Catchment

CRS: EPSG 27700
Projection: Transverse Mercator
Units: m

03	24/11/2025	Update to Draft	EW	CW	CW
02	08/10/2025	Update to Draft	EW	CW	CW
01	14/04/2025	Update to Draft	EW	CW	CW
00	26/03/2025	First Draft	EW	CW	CW
Rev	Date	Description	Drm	Chk	App

Mynydd Ty-talwyn Energy Park



TITLE:
Annex B
Cwm Risca Meadows SSSI
Hydrological Catchments

ID:680985-00-H-HYD

0 200 400 m

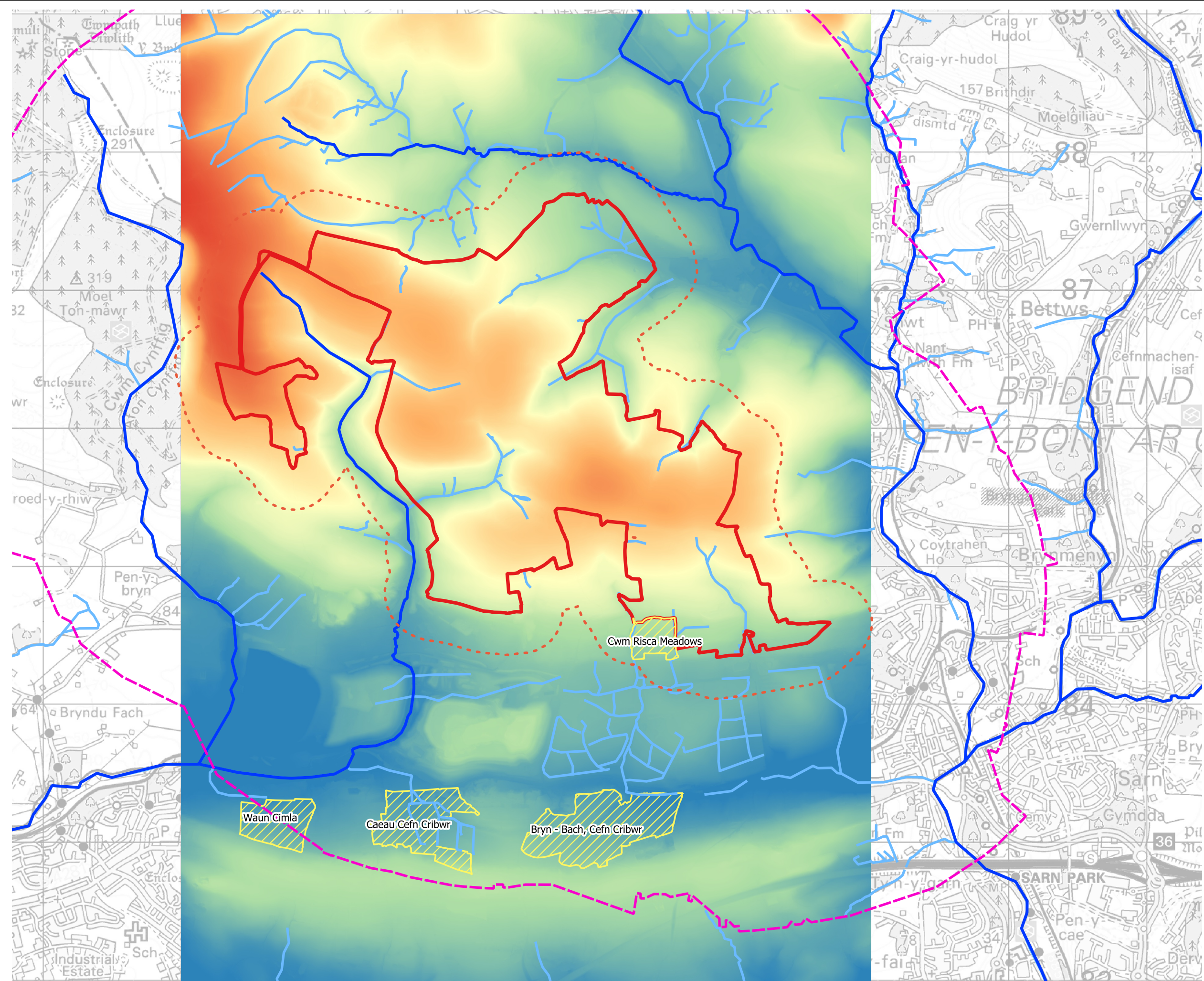
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ANNEX C

CEFN CRIBWR (BRYN BACH), CAEAU CEFN CRIBWR AND WAUN CIMLA SSSI AND GLASWELLTIROEDD CEFN CRIBWR / CEFN CRIBWR GRASSLANDS SAC HYDROLOGICAL CATCHMENTS



Legend

- Site Boundary
- 300 m ZoI
- 2 km Study Area
- Existing Mapped Ordinary Watercourses
- WFD Water Body
- SSSI Protected Areas

DTM LiDAR Elevation (mAOD)

- 60.00>
- 80.00
- 100.00
- 120.00
- 140.00
- 160.00
- 180.00
- 200.00
- 220.00
- 240.00
- 260.00
- 280.00
- >300.00

CRS: EPSG 27700
Projection: Transverse Mercator
Units: m

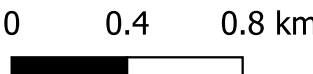
03	24/11/2025	Update to Draft	EW	CW	CW
02	08/10/2025	Update to Draft	EW	CW	CW
01	14/04/2025	Update to Draft	EW	CW	CW
00	26/03/2025	First Draft	EW	CW	CW
Rev	Date	Description	Drn	Chk	App

Mynydd Ty-talwyn Energy Park



TITLE: Annex C
Cefn Cribwr (Bryn bach), Caeau Cefn Cribwr
and Waun Cimla SSSI and Glaswelltiroedd
Cefn Cribwr / Cefn Cribwr Grasslands SAC
Hydrological Catchments

ID:680985-00-I-HYD



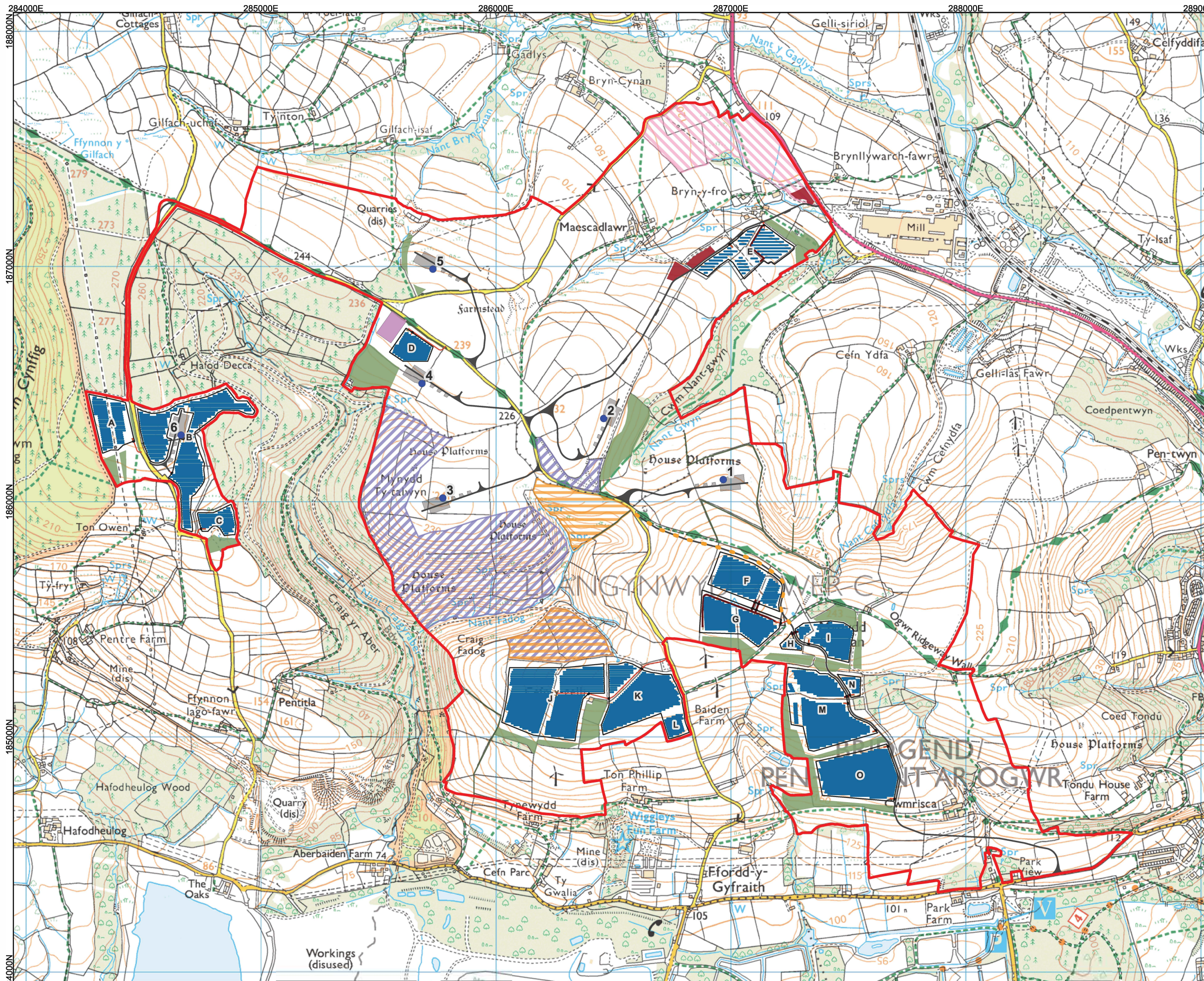
Scale: 1:30,000 @A3



REV 03

ANNEX D

PROPOSED DEVELOPMENT PLAN

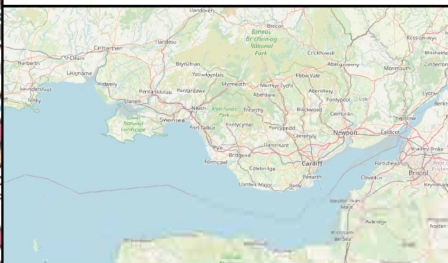


Legend

- Site Boundary
- Turbine Locations (1 - 6)
- Temporary Construction Compounds
- Track Layout and Northern Access
- Passing Places
- Temporary Track
- Solar Track
- Solar Panels (A-O) Fencing
- Solar Panels
- Hardstandings
- Substation Platform
- Proposed Permissive Route
- Ecology Mitigation (Birds)
- Ecology Mitigation (Fungi)
- Ecology Mitigation (Marsh Frit)
- Hedgerow Planting
- Woodland Planting

Due to the scale of the layout, the solar Inverters / Transformers are not shown in Figure 2.1 - Proposed Development Layout, however are depicted on insets A to H.

CRS: EPSG:27700
Projection: Transverse Mercator
Ellipsoid: EPSG:7001
Units: meters



03	27/03/2026	Amendments to Layout	MD	SP	JB
02	10/09/2025	Amendments to Layout	MD	SP	JB
01	15/04/2025	Amendments to Key	MD	JB	JB
00	12/03/2025	First Draft	MD	JB	JB
Rev	Date	Description	Dm	Chk	App

Mynydd Ty-talwyn Energy Park



GALILEO EMPOWER

TITLE:
**Annex D
Proposed Development Layout**

ID:Fig2.1 Proposed Development Layout Rev03 - (Completeness Check)

