Cyfoeth Naturiol Cymru
Natural Resources Wales

Environmental Screening Advice Note

Screening completed by	James Dunn
Date	16/01/2023
Version	1 - Draft
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Project Name	Ystumtuen Metal Mine		
Location	Ystumtuen, Ceredigion	**Grid reference**	SN 74088 78932
Senior User	TBC	**Senior User Post Title**	Metal Mines Programme Lead
Project Manager	Luke Thompson	**Project Manager Post Title**	Project Manager, Coal Authority
Community Risk Register Area (for FRM projects)		**Strategic Context e.g. CFMP / SMP Policy, RBMP**	Water Framework Directive / West of Wales River Basin Management Plan – GB110063041570: Rheidol – confluence with Castell to tidal limit.

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Set out the background, scope, description, and objectives of the project (information from draft project brief)

The Ystumtuen historical metal mines comprises of the following: Lees shaft, Nant Bwlchgwyn and Ystumtuen, centred around the national grid Reference SN 74088 78932 and is located 16Km from Aberystwyth. This project focuses on THE Lees shaft and Ystumtuen sites.

Project Objective: The 2021 WFD Abandoned Mines Projects for the Afon Rheidol catchment splits the Afon Rheidol river system into seven waterbodies, this project will focus on GB110063041570: Rheidol – confluence with Castell to tidal limit. The WFD classifies this waterbody as being 'Moderate' quality, with failings for cadium and zinc.

An un-named waterbody is located adjacent to the Lee's shaf which flows in a northerly direction to discharge into an abandoned mine reservoir. Works where completed a number of year ago to divert this flow. The discharge from the mine reservoir enters the Nant Bwlchgwyn which flows in an easterly direction for 350 metres before merging with the Afon Tuen.

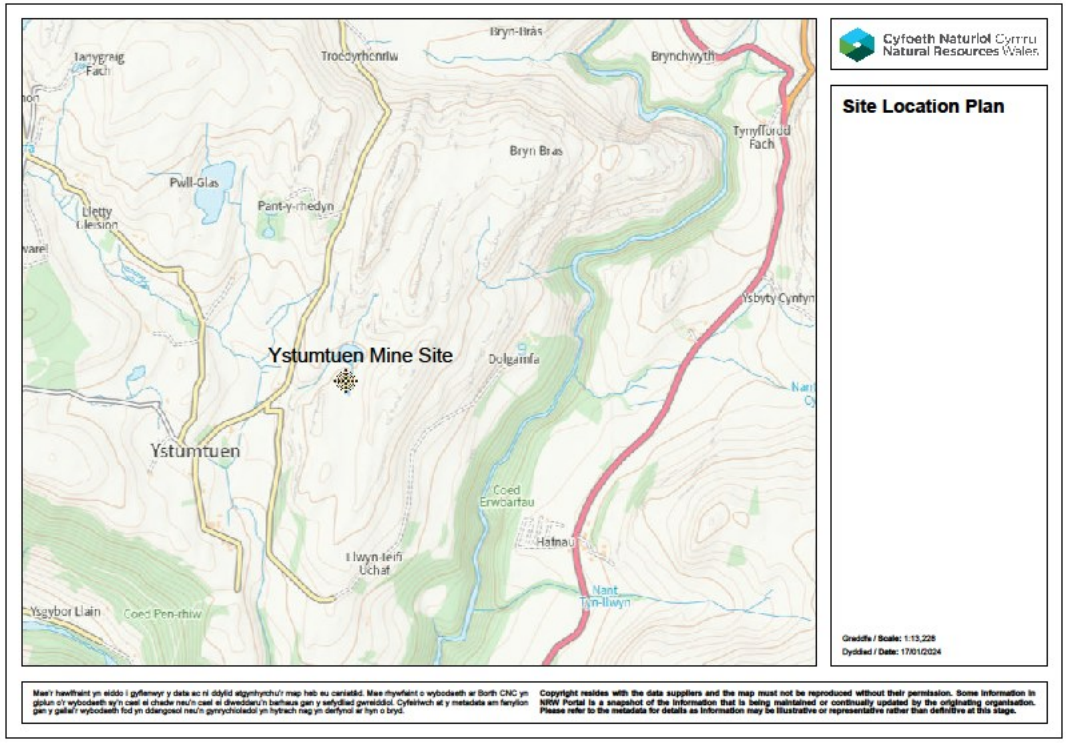
The Afon Tuen is a small tributary of the Rheidol and its headwaters and flows across the heavily mined part of the Ystumtuen plateau. Some flow losses to underground workings are documented with discharges at Cwm Rheidol Adits 6 and 9 into the Afon Rheidol, with others being subject to ongoing investigation

The purpose of this project is to obtain data on flows and contamination levels occurring from these mines in order to inform future waterbody / mine remediation projects in order to contribute to the improvement of the WFD waterbody status.

To address the identified risks, it is proposed that the following works are undertaken as part of this Project, with the primary objective of identifying and quantifying water loss into Lee's shaft which increases water through the Cwm Rheidol workings and leading to excess output at Cwm Rheidol Adit 6:

- Design, and construction of either a permanent flow gauging structure or velocity meter within culvert running under the road. Including all necessary pre-works surveys, approvals and permits.

- A water quality monitoring programme to include flow structures, mine water and surface waters;
- Assess (including surveys), design, plan and install temporary scour protection at spoil heaps along the unnamed watercourse to prevent ongoing erosion, with the aim being to reduce the amount of contaminated material entering the Afon Tuen, until a long-term solution is identified and implemented.
- Optioneering designs for the water that flows into Lee's shaft.



Environmental Screening

Environmental Desk Based Assessment	Follow up Action Required	Who will carry out the follow up action?
Population & Human Health The site is located to the west of the village of Ystumtuen and is accessed via a trackway from the local access road into the village. The majority of the surrounding land use comprises a mix of mine spoil and rough grazing lands. Human health risks exist across these mine sites due to indirect exposure to contaminated waters and sediments and direct risk from geohazards, such mine shaft as collapse. The study area is crossed by a Public Rights of Way (PRoW) (Footpath 70/18/43) which intersects the mine site.	**Population & Human Health (Recreation)** The Project Manager (PM) should consider any works-phase impacts on visitors using the area recreationally. Appropriate working hours to be agreed (for contractor or in-house Operations team) with the Ceredigion County Council (CCC) in advance to mitigate any issues relating to construction disturbances. Minimise the footprint and confirm any construction compound requirements. The closest properties to the access roads to site should be informed of the plans. Engage any relevant landowner(s) early, to ensure considerate traffic planning and minimise disruptions. Consult with CCC PRoW officer regarding the work's impact on any PRoWs which run close to and across the sites, if temporary diversions are necessary.	*PM*

Biodiversity, Fisheries & Invasive Non-Native Species *International, National Sites Network and other National Designations* **National Site Networks** • The Coedydd a Cheunant Rheidol (Rheidol Woods & Gorge) SAC is approximately 1.25km east of the site. **Geological Conservation Review Sites (GCRs)** • The Coedydd a Cheunant Rheidol (Rheidol Woods & Gorge) RIGS site is approximately 1.5km north-east of the site. **SSSI** The site is situated adjacent to the Bryn Bras SSSI (see Site Plan in Annex 1). The Coedydd a Cheunant Rheidol (Rheidol Woods & Gorge) SSSI is located approximatey 1.25km south east of the site. The Ystumtuen metal mine site is hydrologically connected to this SSSI via the Afon Tuen which discharges into the Afon Rheidol approximately 1.45km south east of the mine site.	**Biodiversity, Fisheries & Invasive Non-Native Species** It is recommended that a Preliminary Ecological Appraisal be undertaken by appropriately qualified ecologists to determine whether the protected and priority species recorded by the LRC are still within the vicinity and to confirm whether there are no Invasive Non-Native Species present. These will inform more detailed Phase II Habitat or Protected Species surveys that might be required (dependent upon findings). Calaminarian grasslands- Engage lower plant/lichen specialist to undertake additional surveys as required. The surveys undertaken should also consider provisions of the Birds Directive 2009. Ongoing consultation will be needed with the local Environment Team (CeredigionEnvironmentTeam@cyfoethnaturiolcymru.gov.uk) about the survey work. Given that the site is located in close proximity to an SSSI, a SSSI Assent may be required. Consultation necessary with the local Environment Team. The proposed scope of works should include INNS/Biosecurity, including a Biodiversity Risk Assessment (EIA regs) and any necessary provisions relating to Invasive Alien Species Order 2019 (seek advice of Enforcement and Permitting; permittingservice@cyfoethnaturiolcymru.gov.uk).	*PM* *PM* *PM* *PM* *PM* *PM*

There are no NNRs, LNRs or Local Wildlife Sites within 2km of the site. No Ramsar sites within 10 km of the site. **Protected Species known to be of interest:** Species records on site and in close proximity: - *European Water Vole* - *Brown Hare*		
Land (eg land take) The project area is a historic mining area and therefore contains a number of heavily contaminated spoil heaps and contaminated areas associated with the historic mines. Soil should therefore be considered and treated as potentially contaminated with heavy metals and contamination testing should be undertaken if any excavation and material movement is required as part of the work. Any potential Scour Protection works would require land-take at existing spoil heaps at the mine site.	Consult NRW Geoscience Team regarding identifying any requirement for contaminated land assessment. Trystan James Geoscience Team Lead (geoscience@cyfoethynaturiolcymru.gov.uk). If a construction compound is necessary, then it should be minimal (in terms of footprint) any land used must be restored to its previous land-use and soil quality.	*PM*
Soils (eg organic matter, erosion, compaction, sealing) Metal-rich mine waste (spoil heaps) are present at the sites and are actively being	**Soils (eg organic matter, erosion, compaction, sealing)** Every effort should be made to protect surface and groundwaters from contamination during the proposed works	*PM*

eroded at the site along the coursew of the unnamed watercourse	(fuel leaks, sediments etc.) – follow GPP5 and use correct materials storage procedures. Mitigation should be implemented to prevent the further/additional mobilisation of contaminated fine soil/sediments will be required during works.	*PM*
Water (eg hydromorphological changes, quantity and quality) The site is located within the WFD *Rheidol and Clarach catchment.* The WFD River Waterbody: *GB110063041570: Rheidol – confluence with Castell to tidal limit.* is approximately 0.75km east of the Ystumuen site. The WFD classifies this waterbody as being 'Moderate' quality, with failings for cadium and zinc. The Afon Tuen which discharges into the Afon Rheidol approximately 1.0km south east of the mine site. As works will be 'in-river' method statements for any construction work must be discussed and agreed with the relevant Environment Officer.	**Water (inc WFD)** A preliminary Water Framework Directive (WFD) Assessment is required for the proposed works. Consult with the Local Environment Team who can advise on the scope of this WFD screening assessment. The area WFD coordinator (trevor.west@cyfoethnaturiolcymru.gov.uk) should be made aware of the project works. The Afon Tuen ordinary water courses fall within the proposed scope of works. Works within the watercourses will require an Ordinary Watercourse Consent from Ceredigion County Council. NRW Geomorphology South should be consulted about the proposed works, specifically with regard to potential knock-on impacts to riverine form and processes brought on by the scour protection activities. In addition, Geomorphology should be consulted on the proposed development to identify any opportunities to improve/restore these fluvial environments and/or work with natural processes. Water quality management is of particular importance during these works. As mentioned, works should adhere to GPP5 guidance and have an appropriate Method Statement in place, including mitigation, which should be agreed with the Local Environment Team and WFD consultees.	*PM* *PM* *PM* *PM*

	Any erosion protection works should not increase flood risk, even temporarily, and should be planned and timed to minimised risk of flooding affecting the works. Any materials and plant should be stored outside of the floodplain, in addition to any compound (if required). There are no designated main rivers within the site boundary. The nearest main river is the Afon Rheidol , approximately 1km east of the site. FRAP is not likely required.	*PM*
Air There are no Air Quality Monitoring Stations situation near the proposed project site. Any fine sediment from proposed groundworks are likely to contain heavy metals.	**Air** Dust suppression would be required if construction is undertaken during a dry period as the mobilised dust may contain significant quantities of heavy metals. Any residential or commercial properties in proximity to site need to be considered (Ystumtuen Village).	*PM* *PM*
Climate (eg greenhouse gas emissions, impacts relevant to adaptation) The Carbon neutrality of these works should be considered via design and offset measures. Net carbon sequestration could be sought through appropriate landscaping/planting where appropiate.	**Climatic Factors** Project designers should consider potential opportunities for better local climate change adaption (e.g. minimise GHG emissions, using low-carbon material, offset tree/shrub planting for shade and green engineering options rather than materials with high carbon footprints) as well as taking opportunities to restore the natural environment so as to increase carbon sequestration and sustainable resource management.	*PM*
Landscape The site is not situated within an Area of Outstanding Natural Beauty, a National Park or an Historic Landscape.	**Landscape** Landscape impacts to be considered as the project progresses. Environmental Assessment Team (EAT)	*PM*

The Site is not within a conservation area.	Landscape Architect to provide advice on the proposed design for the scour protection works. Contact the Local Authority with respect to the presence of any Tree Preservation Orders.	
Cultural Heritage Site is not within a World Heritage Site No Listed buildings in proximity. No Scheduled Monuments in proximity.	**Cultural Heritage** Dyfed Archaeological Trust (DAT) have been consulted – *Response Pending*	
Material Assets The site is privately owned. Access for surveys and any proposed works will need to be agreed with landowner. Partial NRW Forestry ownership. Minimal utilities are expected in the wider study area. Correct waste management procedures should be undertaken, especially in relation to contaminated mine spoil. The PM should be familiar with any necessary waste licencing requirements and contractor checks must be done	**Material Assets** Obtain Landowner consent for Flow Structures & Scour Protection Works. Progress a utilities search of the project area. Consult with local NRW (Environment Team) and Waste licencing team. The Waste licencing team can advise on the Definition of Waste (Code of Practice and Exemptions).	*PM* *PM* *PM*
Likely Consenting Route *For further advice on*	Based on the information available at this stage it is considered that the proposed installation of flow gauging structures ands scour protection is not likely to require planning consent.	Confirm planning/PD route with LPA.	*PM*

consenting routes, refer to Section 3 of OGN86	Work is thought to fall under permitted development (PD) rights. If works are permitted development and constitute improvement works rather than maintenance. The works will need to be advertised in accordacnew ith the EIA (Land Drainage Improvement Works) Regulations. Contact EAT for advert template and further guidance. For assistance in determining the consenting route, please seek advice from the Environmental Assessment Team		
Other Approvals required	• WFD Compliance • CRoW (SSSI) assent • Ordinary Watercourse Consent • Protected Spices Licencing	*PM*	
Environmental Opportunities	In delivering our projects we should consider what wider benefits we can deliver, for example: • Are there any opportunities for planting trees or shrubs? • Are there any opportunities for using green engineering or green infrastructure? • Can the project build in measures to slow the flow of water, consequently having flood risk and water quality benefits?	*PM*	*Ensure any benefits delivered are reported to the benefactor and to the communications team for publicising.*

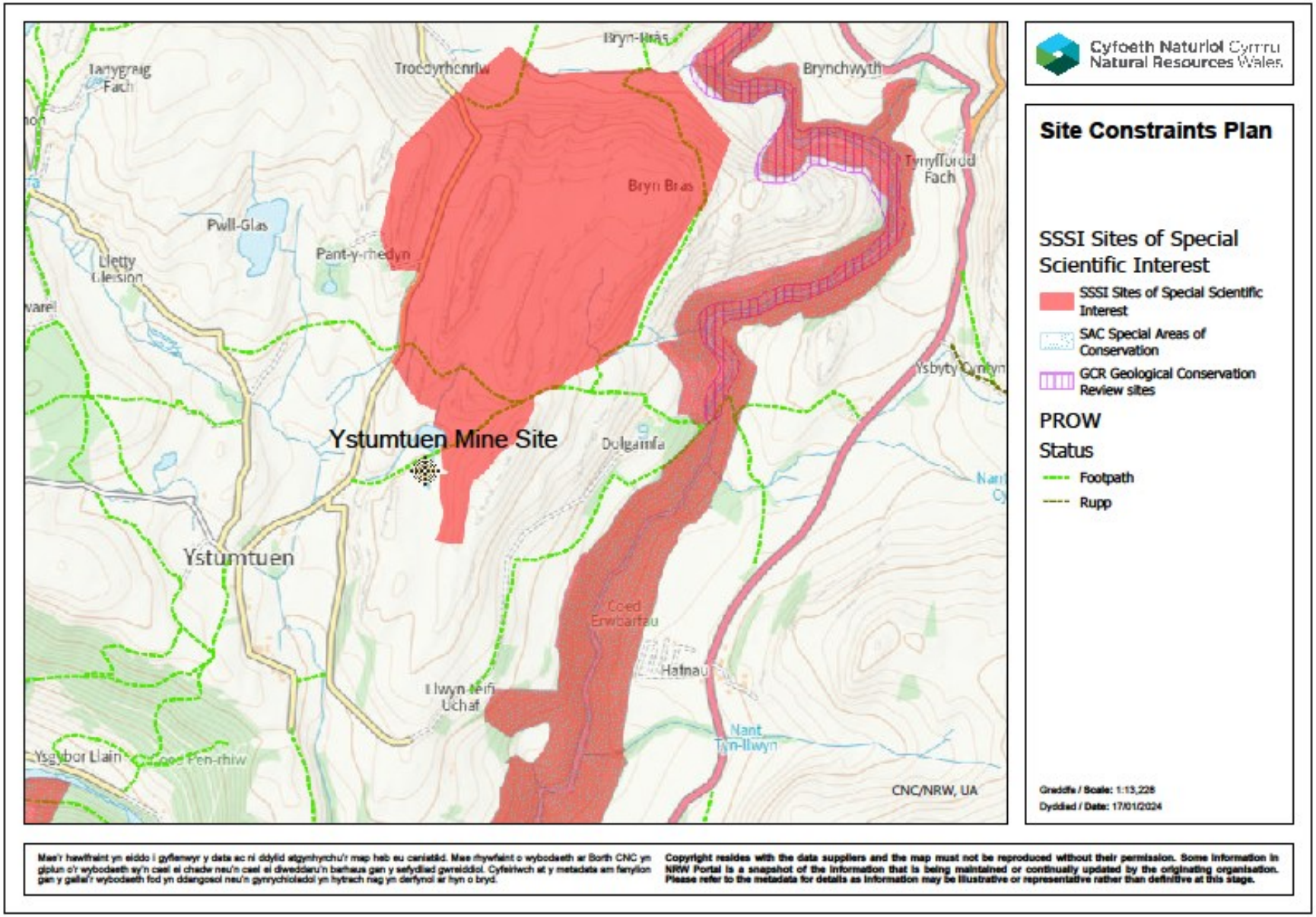
	• Where associated with water courses can the project help deliver WFD regulations benefits, for example bank naturalisation, treatment of Invasive Non Native Species, hydromorphological improvements?		

A collection of maps highlighting some of the scheme constraints has been included within Annex 1.

Screening Conclusion

- Following internal consultation, it has been determined that this project is not likely to lead to significant environmental effects and is of Medium Environmental Risk provided that good working practices and any additional mitigation identified is implemented. Unless the project scope changes, this project does not require Environmental Assessment Team (EAT) involvement.
- This note has been prepared to assist the project manager (PM) in taking forward actions and in documenting this for project approval purposes. The PM can seek assistance from Environment Assessment Officers (for Integrated Engineering Team projects) for specific tasks identified in Table 2, which must be agreed as part of the project planning stage. If at any point the scope of the works changes from that described above, the project manager must contact the EAO or EAT to confirm whether a revised determination is required.
- The project manager is responsible for ensuring the follow up actions are undertaken to ensure the environmental risk is managed.

Annex 1: Constraints plans



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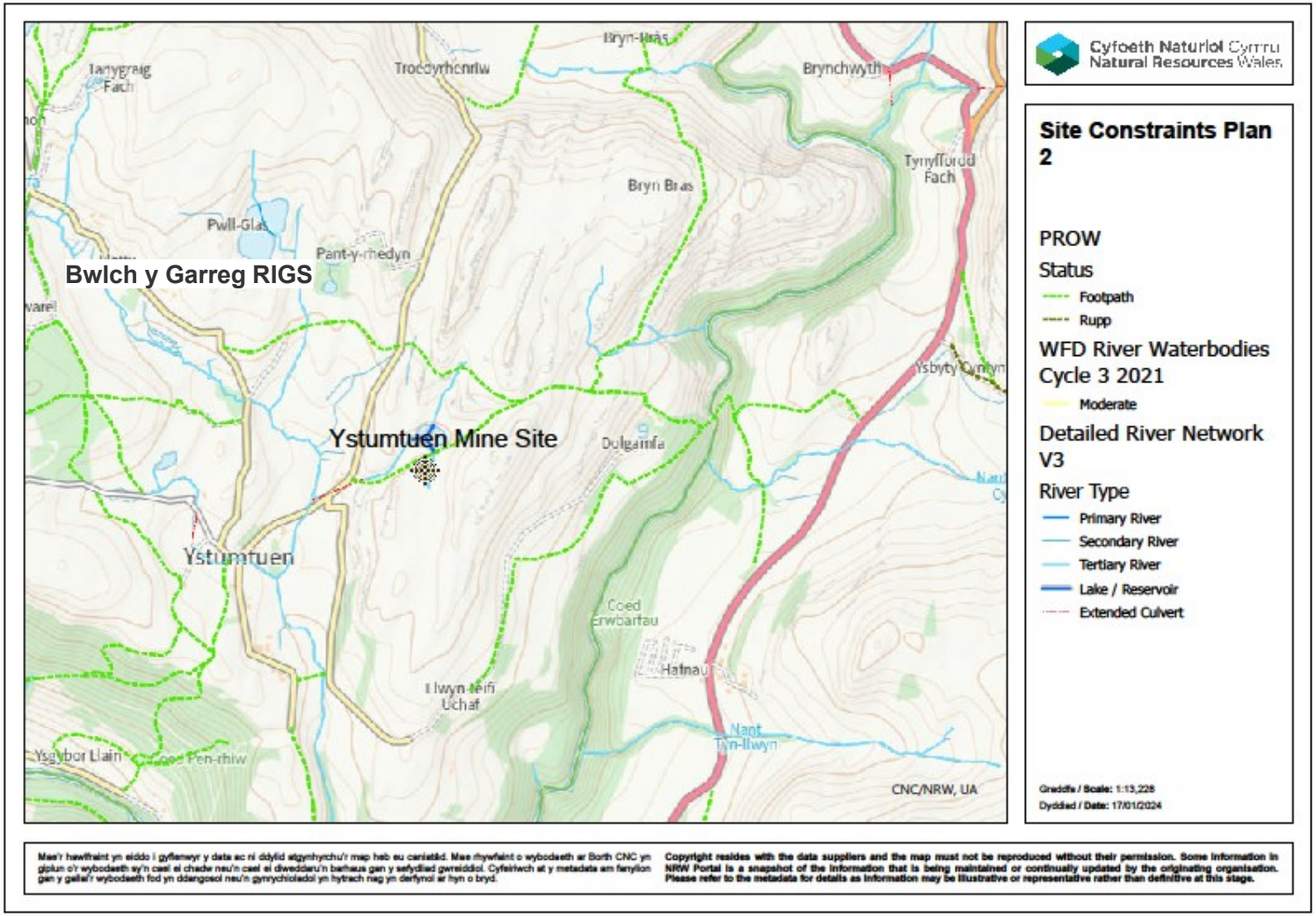
Bwlch y Garreg RIGS
Ystumtuen Mine Site
Ystumtuen
Bryn Bras
Pwll-Glas
Pant-y-rhedyn
Dolgaimla
Coed Erwbarfau
Hafnau
Ilwyn Neifi Uchaf
Nant Tyn-llwyn
Ysgybor Llain
Coed Pen-rhiw
Brynchwyth
Tynyffordd Fach
CNC/NRW, UA
Cyfoeth Naturiol Cymru
Natural Resources Wales
Site Constraints Plan 2
PROW
Status
Footpath
Rupp
WFD River Waterbodies Cycle 3 2021
Moderate
Detailed River Network V3
River Type
Primary River
Secondary River
Tertiary River
Lake / Reservoir
Extended Culvert
Graddfa / Scale: 1:13,228
Dyddiad / Date: 17/01/2024
Mae'r hawlfraint yn eiddo i gyflenwyr y data ac ni ddylid atgynhyrchu'r map heb eu caniatâd. Mae rhywfaint o wybodaeth ar Borth CNC yn giplun o'r wybodaeth sy'n cael ei chadw neu'n cael ei diweddaru'n barhaus gan y sefydliad gwreiddiol. Cyfeirwch at y metadata am fanylion gan y gallai'r wybodaeth fod yn ddangosol neu'n gymharol yn hytrach nag yn derfynol ar hyn o bryd.
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