



THE WASHERY- ECOLOGICAL APPRAISAL FOR DISCHARGE OF PLANNING CONDITIONS

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INTRODUCTION

1. Introduction

1.1 Terms of Reference

AtkinsRéalis UK Limited was commissioned by Walters Group to provide ecological services to assist in discharge of planning conditions in connection with proposed earthworks for Phase 1a development works (hereafter referred to as the Proposed Scheme) at the Onllwyn Washery area (the Site), which is part of the Global Centre of Rail Excellence (GCRE) Site.

A review of previously produced and submitted documents completed by a former consultancy has been undertaken. Assessments into the validity of the information was conducted to conclude necessary updates required to discharge planning. The documents are as follows, and their contents are referenced and summarised within this report:

- Global Centre of Rail Excellence Ecological Protection Plan. Dalcour Maclaren, March 2023
- Global Centre of Rail Excellence Reptile Mitigation Strategy – Phase 1A. Dalcour Maclaren, March 2023
- Global Centre of Rail Excellence Phase 1A Wildlife Corridor Scheme. Dalcour Maclaren, March 2023
- Global Centre of Rail Excellence Barn Owl Conservation Strategy. Dalcour Maclaren, April 2023
- Global Centre of Rail Excellence Strategic Biodiversity Plan. Dalcour Maclaren, March 2023
- Global Centre of Rail Excellence Phased Biodiversity Plan – Phase 1A. Dalcour Maclaren, March 2023

These documents were submitted to the Powys and Neath Port Talbot Local Planning Authorities and were accepted with exception of several comments that required to be addressed based on the previous Scheme design, which has now changed.

The Proposed Scheme is near Ollnwyn, Neath, South Wales, as shown on Appendix A (hereafter referred to as the Site).

This report has been undertaken with reference to current good practice¹ and provides an ecological appraisal of any likely ecological constraints upon designated sites, protected species and other features of ecological interest.

This report is intended to inform the discharge of specific ecological conditions of the Proposed Scheme's two outline planning permissions; Neath Port Talbot Council Local Planning Authority (LPA) Ref: P2023/0336 and Powys LPA Ref P2021/0327. A list of these conditions is given in Section 1.4 (below).

1.2 The Site

The Site is a disused washery area previously utilised as part of the disused open-cast coal mine, based in Onllwyn, Neath, South Wales. The Site is a portion of the larger plot of land that the GCRE planning permission/development boundary encompasses.

The Site is approximately 27 hectares and comprises railway land, coal spoil heaps, stockpiles, lagoons, several buildings, and material storing facilities. The Site also supports areas of plantation woodland (broadleaved and mixed),

¹ CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal, 2nd Edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

scrub, several waterbodies and a ditch network along the northern extent of the Site. Habitats associated with Onllwyn Coal Washery Site of Importance for Nature Conservation (SINC) are also present within the Site, comprising marshy and acid grassland.

A proposed enhancement area located to the east of the Site comprises predominantly mixed plantation woodland with patches of marshy and acid grassland and three waterbodies.

Within the wider landscape, habitats to the north and to the south of the Site comprise marshy grassland, woodland and a ditch network.

1.3 The Proposed Scheme

The Proposed Scheme comprises earthworks for the redevelopment of the Onllwyn Washery area as part of the wider GCRE Scheme, a future rolling stock and rail infrastructure testing facility. The details of the Proposed Scheme, as they are currently understood at the time of writing of this report are shown in **Appendix A**.

The Masterplan for the portion of the wider site known as the Washery is provided in **Appendix A**. The Proposed Scheme has been divided into two phases of works which are referred to throughout this Ecological Appraisal, namely Phase 1A and Phase 2A, also referred to as Zone 1A and Zone 2A. Respectively for this report, only Phase 1a (Zone 1A) is assessed. The outline GCRE planning permission for the wider Washery comprises the installation of multiple sidings for rolling stock storage and decommissioning, a 'shunter's cabin' and electricity substation, inspection and maintenance sheds, carriage wash facilities, several buildings forming an Innovation Hub, a Depot, as well as further industrial/commercial developments.

GCREs intention is for development within the Washery to occur in three stages:

- Stage 1 – construction of earthworks, limited railway trackbed and sidings (land falling within the Depot Area);
- Stage 2 – construction of additional trackbed and sidings, UK Rail Research and Innovation Network (UKRRIN) building and a train repair depot building within the earthworks footprint (land falling within the Depot Area);
- Stage 3 – construction of additional buildings (offices, research buildings, engineering), site access roads and soft landscaping outside of the earthworks footprint (land falling within the Campus Area).

The development intended within the site's footprint is Stage 1 of the above and will consist of an earthworks (area of cut and fill intended to produce a level platform), and the construction of sidings on top of the earthworks.

The wider GCRE development comprises the construction of earthworks (cuttings and embankments) to support railway infrastructure and development of a rail testing, storage, and maintenance facility at the Nant Helen opencast coal mine currently owned and operated by Celtic Energy.

The remaining phases form part of the wider GCRE Scheme and are not relevant to this document.

This Ecological Appraisal, and assessment of ecological impacts, has been written on the assumption that the Proposed Scheme construction programme would be due to commence in mid-2024 with an overall duration of approximately 5 months, however the exact programme is still to be confirmed.

1.4 Planning Conditions for Discharge

The planning conditions to be considered within this report for discharge are presented in **Table 1-1** below (numbering and text is the same in both decision notices). Condition 33 is excluded from this document as it states that the Ecological and Environmental Management Plan is not required until six months prior to the development being brought into beneficial use, and so is therefore not required at this stage.

Table 1-1 - Summary of Planning Conditions

Planning Condition Number	Planning Condition
13 – Ecological Protection Plan	No development shall take place in each phase of development as identified in Condition 7 (including demolition, ground works, site or vegetation clearance) until an Ecological Protection Plan (EPP) has been submitted to and approved in writing by the local planning authority. The EPP shall include but is not limited to the measures set out in 7.16.5 and 7.21.3 of the ES. a) Risk assessment of potentially damaging construction activities. b) Details of Pre-commencement Surveys, including methodologies and timing. c) Identification of "biodiversity protection zones". d) Reptile trapping and relocation method statement including details of receptor sites. e) Vascular Plant Species translocation method statements (specifically common wintergreen, lesser bulrush, floating bur-reed, greater tussock sedge and spiked water milfoil, royal fern and viviparous fescue). f) Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts to retained features of ecological importance during construction (may be provided as a set of method statements). g) The location and timing of sensitive works to avoid harm to ecological features of importance. h) The times during construction when specialist ecologists need to be present on site to oversee works. i) Responsible persons and lines of communication. j) The role and responsibilities on site of an Ecological Clerk of Works (ECoW) or similarly competent person. k) Use of protective fences, exclusion barriers and warning signs.
14 – Site Wide Strategy for Wildlife Corridors	No development shall take place in any phase of development as identified in Condition 7 (including demolition, ground works, site or vegetation clearance) until details of the proposed site-wide strategy to maintain and enhance wildlife corridors supporting wildlife movement within and without of the development site has been submitted to and approved in writing by the Local Planning Authority. This will include but is not limited to the following: a) Detailed specification of culverts b) Locations of culverts

Planning Condition Number	Planning Condition
	c) A plan showing key wildlife corridors across the site, as informed by up to date ecological surveys d) Details of landscaping and fencing to encourage use e) Monitoring of use
15 – Scheme for Wildlife Corridors (maintenance and enhancement)	No development shall take place in each phase of development as identified in Condition 7 (including demolition, ground works, site or vegetation clearance) until a scheme to maintain and enhance wildlife corridors has been submitted to and approved in writing by the Local Planning Authority. The scheme shall be in line with, implement and demonstrate compliance with the approach set out in the strategy agreed under Condition 14, and shall be implemented as approved.
16 – Scheme for the Conservation of Reptiles	No development shall take place (including demolition, ground works, site or vegetation clearance) until a scheme for the conservation of reptiles has been submitted to and approved in writing by the Local Planning Authority. This will include but is not limited to the following: a) Location of any receptor sites to be used and detail of landownership/control of the sites b) Suitability of receptor sites for reptiles that will include estimated existing populations presented based on up to date survey information. c) Enhancement measures to be implemented on receptor sites d) Re-location methodologies and timing e) Monitoring proposals f) Details of any necessary agreement with landowner.
17 – Barn Owl Box Compensation Scheme	No development shall take place (including demolition, ground works, site or vegetation clearance) until a Barn Owl Compensation Scheme that includes the provision of a minimum of 2 Barn Owl boxes, 1 in NPT and 1 in Powys has been submitted to and approved in writing by the LPA. The scheme will include but is not limited to: a) Details of locations and details of landownership b) Box design/specification c) Demonstration of agreements with relevant landowners d) Details of monitoring use e) Provisions for replacement where damage or deterioration prevents intended use
18 – Strategic Biodiversity Plan	No development shall take place in any phase of development as identified in Condition 7 (including demolition, ground works, site or vegetation clearance) until such time as a Strategic Biodiversity Plan (SBP) has been submitted to and approved in writing by the Local Planning Authority. The SBP shall set out the approach to be taken to the production of phase-specific Biodiversity Plans (PBP) under Condition 19. The SBP shall include but is not limited to the following: a) Methodologies and principles for scheduling of pre-commencement ecological checks and where necessary update to ecological surveys, particularly for



Planning Condition Number	Planning Condition
	protected species, taking account of CIEEM Advice note on the Lifespan of Ecological Report and Surveys.
	b) Methodology to update and confirm the quantitative assessment of habitat loss and creation (updating ES 7.19.48, table 7.8 and Appendices 7T and 7V).
	c) A biodiversity enhancement scheme that will set out the approach to the design and implementation of enhancement measures including, but not limited to, the measures set out in 7.23.1-7.23.7 inclusive of the Environmental Statement.
	d) Detail the mechanism, including principles to be applied, for the review of the adequacy of mitigation, compensation and enhancement measures in light of pre-commencement ecological checks and / or surveys. This will include the inclusion of new, revised and additional measures where necessary to ensure the scheme delivers an overall net benefit.
19 – Phased Biodiversity Plan	No development shall take place in each individual phase of development as identified in Condition 7 (including demolition, ground works, site or vegetation clearance) until such time as a Phase Biodiversity Plan (PBP) has been submitted to and approved in writing by the Local Planning Authority. The PBP shall be in line with, implement and demonstrate compliance with the approach set out in the SBP agreed under Condition 18. The Plan shall be implemented as approved.
28 – Site Wide Landscape Strategy	As part of the submission of the first reserved matters application (for any phase of development as agreed under Condition 7) a site wide landscape Strategy and associated scheme of Landscape Mitigation Planting (to include a timetable for implementation; shall be submitted to the Local Planning Authority for its approval in writing. Such landscape strategy shall cover a period of no less than 20 years and shall include a mechanism for review and extension in the event planting has not mitigated the impacts on the National Park to the extent identified in the Environmental Statement. This strategy will include indications of all existing trees, hedgerows and other ecologically significant features on the land, and details of any to be retained, removed or enhanced, taking into account potential growth, together with measures for their protection in the course of development. No development shall commence until such landscape strategy has been approved in writing, and thereafter the scheme shall be implemented in accordance with the approved details.

1.5 Gap Analysis

AtkinsRéalis completed a gap analysis exercise in March 2024 as detailed within the AtkinsRéalis Ecological Appraisal report², which has been presented within **Appendix C**.

The Ecological Appraisal Report provides a review of the existing ecological data and associated reports produced for the Scheme to date by Dalcour Maclaren and their commissioned contractors. The report also provides an updated review of the ecological constraints present within the Site, based on an updated desk study and ecological walkover which were completed by AtkinsRéalis in February 2024.

² AtkinsRéalis (2024) GCRE Washeries Ecological Appraisal Report. Issued April 2024.

The Ecological Appraisal identified two Sites of Special Scientific Interest (SSSI) and nine Sites of Importance for Nature Conservation (SINC) within 1 km of the Site. Onllwyn Coal Washery SINC overlaps the northeastern area of the Site and the Gorsllwyn Meadows SINC and Khartoum Tip SINC are immediately adjacent to the southeast and south west of the Site.

The Ecological Appraisal summarised that habitats present within the Site, particularly those within the periphery of the Site remained consistent with those described within the Ecological Protection Plan (EPP)³ submitted with the planning application, with the exception of an increase in the amount of ground disturbance which had occurred during demolition works. The habitats present were considered to be suitable to support badger, bats, breeding birds, reptiles, amphibians, priority plants and invasive non-native species.

Following from the recommendations presented within the Ecological Appraisal, further surveys have been undertaken at the Site in order to support the discharge of planning conditions. These further surveys comprised of;

- Great crested newt habitat suitability assessment and eDNA survey of four waterbodies
- Ecological walkover survey of the proposed Ecological Enhancement Areas

Full survey methodologies have been presented within **Appendix D.1** and full survey results have been presented within **Appendix D.2**.

³ Global Centre of Rail Excellence Ecological Protection Plan. Dalcour Maclaren, March 2023

DISCHARGE OF PLANNING CONDITIONS

2. Discharge of Planning Conditions

2.1 Condition 13 - Ecological Protection Plan

Dalcour Maclaren provided an Ecological Protection Plan (EPP)⁴ for the Proposed Scheme in March 2023. This document presents the baseline ecological receptors present within the site in accordance with Chapter 7 of the Environmental Statement⁵ and presents the findings of updated surveys that were completed during 2022. Since the submission of this document, the construction boundary of the Proposed Scheme has been amended; the most recent version has been presented within **Appendix A**. Updated ecological walkover surveys have been completed by AtkinsRéalis to assess the potential ecological impacts of the Scheme, and to verify the validity of the impact assessment, mitigation, compensation and enhancement measures, following the change in construction boundary. Surveys undertaken in February 2024 are presented within the Ecological Appraisal Report (See **Appendix C**) and in surveys undertaken in May 2024 (are presented in **Appendix D**).

The change to the construction boundary has reduced the anticipated impacts to the two SINC's identified within the EPP;

The construction boundary no longer covers Gorsllwyn Meadows SINC, which is located immediately to the north of the boundary, and therefore no loss of habitats from this site will occur. Previously approximately 0.6 Ha of this SINC was located within the Site boundary; The proportion of the construction boundary which covers Onllwyn Coal Washery SINC has been reduced from 1.1 Ha to 0.1 Ha, reducing the extent of habitat loss from that site by 1Ha, as shown within **Appendix A**. The Scheme avoids impacting the rest of the SINC minimising the impact of the designated site through design. Measures have been presented within the EPP to erect protective fencing around retained habitats, this will be implemented along the northern boundary of the Site to protect habitats associated with the SINC during construction works, in addition no soils or materials will be stored in areas protected by fencing and no fuels, contaminants or machinery will be stored within 10 m of protective fencing overnight. These measures presented within the EPP remain applicable to reduce potential for indirect impacts to these habitats and to ensure they are excluded from construction activities and to ensure no significant impacts to designated sites as a result of the proposed works.

A summary of Net Benefits for Biodiversity Assessment has been presented within **Appendix E** taking into account the reduction of impacts to two SINC's by a total of 1.6 Ha which has followed a step-wise approach of avoidance in the first instance. Where it has not been possible to avoid a designated site due to construction requirements (an area of 0.1 Ha of Onllwyn Coal Washery SINC will be lost), measures have been proposed to enhance an area of approximately 0.2 Ha located to the east of the Site within the Enhancement Area which is functionally linked to the SINC through management of existing plantation woodland to encourage encroachment of grassland habitats consistent with those associated with the SINC to ensure overall the Proposed Scheme has not resulted in a significant impact on the SINC.

Updated great crested newt eDNA surveys undertaken by AtkinsRéalis in 2024 have confirmed that this species remains likely absent from the Site as presented within **Appendix D** and therefore no additional measures are required within the EPP for this species.

Reptile trapping and translocation exercises presented within the EPP were completed by Dalcour Maclaren between October 2022 and June 2023 in accordance with the Reptile Mitigation Strategy⁶. Due to the time elapsed since the reptile trapping and translocation was completed, it is assumed that reptile recolonisation may have occurred;

⁴ Global Centre of Rail Excellence Ecological Protection Plan. Dalcour Maclaren, March 2023

⁵ ARUP (2021a) GCRE Environmental Statement. Welsh Government

⁶ Global Centre of Rail Excellence Reptile Mitigation Strategy – Phase 1A. Dalcour Maclaren, March 2023

therefore, reptile presence or likely absence surveys, and mitigation measures outlined in Section 7.2 of the EPP, will be carried out before commencement of any impacting operations at the Site. The existing Reptile Trapping and Relocation Method Statement, as presented in the EPP, is considered to still be valid (See **Section 2.3** below).

Priority plant species⁷ were identified during surveys conducted in 2023 and presented within the EPP. These were recorded in habitats surrounding waterbodies located within the western area of the Site. This existing survey information is detailed, and the updated 2024 ecological walkover of the Site recorded that the habitats have changed little in the interim time period and so still have capacity to support these plants. No further surveys for priority plants in these areas are required and the general translocation approaches detailed within the EPP are still valid and will be followed during any works conducted within these areas. The method statement provided within the EPP will therefore prevent adverse impacts on species listed on Section 7 of the Environment (Wales) Act 2016.

Mitigation measures to avoid or reduce impacts to retained features of ecological importance have been detailed within the Ecological Appraisal². Sensitive timings of works as presented in Section 7.2 of the EPP remain valid for the proposals.

In consideration of the above which has assessed the requirements of the EPP as per Planning Condition 13 and the current understanding of the Site in line with updated surveys undertaken by AtkinsRéalis it is considered that this document meets the requirements of the planning condition and this is further supported by the additional ecological surveys and assessments which have been detailed within the Ecological Appraisal and within **Appendix D** and **Appendix E** to determine the risk of potentially damaging construction activities.

The biodiversity protection zones identified within the EPP have been proposed to be amended in line with the shift in the red line boundary to ensure retained habitats are excluded from construction activities. A reptile trapping and relocation method statement and vascular plant species translocation method statement have been provided within the EPP and as discussed above in line with the current understanding of the site remain suitable for purpose. A number of measures have been provided within the EPP as discussed above to avoid or reduce impacts to retained ecological features including protective fencing, sensitive timings of works, ecological clerk of works requirements and responsibilities of persons on site.

In accordance with the above, and the supplementary information provided within this document to inform the EPP, it is considered that sufficient evidence has been provided for the discharge of Condition 13 for Phase 1a.

2.2 Conditions 14 and 15 - Strategy for Wildlife Corridors

Dalcour Maclaren provided a Wildlife Corridor Scheme⁸ in May 2023. That document details a wildlife corridor to be retained along the northern extent of the Site, which includes woodland, scrub, open mosaic grassland and a ditch network which are suitable for use by commuting and foraging bats, badger and commuting otter.

Since the production of the Wildlife Corridor Scheme document, a second wildlife corridor has been identified, comprising an area of woodland along the southern extent of the Site boundary as presented in **Appendix A**. This area comprises woodland and open mosaic grassland which is suitable for use by commuting and foraging bats and badger and ensures retention of connective habitats to areas of suitable habitat within the wider landscape. No surveys have been completed within this area due to a lack of negative impacts to those habitats; however, it has been assumed using baseline data from the Site, that a similar assemblage of species are likely to be present in accordance with the similar habitats present.

⁷ Species listed on Section 7 of the Environment (Wales) Act 2016

⁸ Global Centre of Rail Excellence Phase 1A Wildlife Corridor Scheme. Dalcour Maclaren, March 2023

Since the submission of the Wildlife Corridor Scheme document, the construction boundary of the Proposed Scheme has been amended; the most recent version to has been presented within **Appendix A**. The new proposals still retain the habitats as presented in the Wildlife Corridor Scheme document and have increased the availability of open mosaic grassland through a reduction of encroachment within the two SINC's present at the northern boundary of the Scheme.

In addition to the proposals presented within the Wildlife Corridor Scheme, landscaping proposals developed by AtkinsRéalis include the creation of an additional drainage swale and pond within the Site as detailed within the Landscape Strategy^{9,10} and landscape plans (shown in [Appendix G](#)) (to be submitted alongside this report and other disciplinary reports as part of this sign off of conditions package). The locations of these features have also been presented within **Appendix A**. In addition to the Valid Wildlife corridor Scheme previously supplied by the Dalcour Maclaren, these features which are necessary for the operational design of the Scheme will offer further suitable features for biodiversity on Site by increasing the provision of wetland habitat as a result of the Scheme.

Condition 14 states that details of proposed site-wide strategy to maintain and enhance wildlife corridors, supporting wildlife movement within and outside of the development site will be presented, for Phase 1A, ditches as detailed within the Landscape Strategy^{9,10} will be seeded with a species rich wetland seed mix and the bases planted with marginal plant species and /or translocated reeds and sedges from on site. This will retain water flow across the site and thus maintaining the riparian corridor across the northern extent of the Site. The Dalcour Maclaren Wildlife Corridor Scheme has also identified woodland, scrub and open grassland habitats across the northern extent of the Site suitable for use by commuting and foraging bats and badger which have been shown on a plan within the report, along with landscaping and fencing proposals, including planting of trees and re-seeding and long-term management of grassland to mitigate impacts to the Onllwyn Coal Washery SINC in line with requirements of Condition 14 and also Condition 15 to maintain and enhance the wildlife corridors. No culverts are present within the Site and none are proposed as part of the Scheme. Further survey work by AtkinsRéalis as detailed above has identified a second wildlife corridor which is shown in **Appendix A** as well as an additional drainage swale and pond within the Site.

In accordance with the above, and the supplementary information provided within this document to inform the Wildlife Corridor Scheme, it is considered that sufficient evidence has been provided for the discharge of Condition 14 and 15 for Phase 1a.

2.3 Condition 16 - Scheme for the Conservation of Reptiles

Dalcour Maclaren have provided a Reptile Mitigation Strategy⁶ which details reptile receptor sites (including details of landownership/control and any necessary agreements with landowners), suitability of receptor sites (based on estimated existing populations), enhancement measures of receptor sites, re-location methodologies and timings, and monitoring proposals. The also details the findings of reptile surveys completed by North-South Ecology on behalf of Dalcour Maclaren between May and June 2022.

Since the submission of that document, the construction boundary of the Proposed Scheme has been amended; the most recent version to has been presented within **Appendix A**. The new proposals have increased the retention of suitable habitat for reptiles to the north of the Site, through a reduction of encroachment within the two SINC's present at the northern boundary of the Scheme.

Updated ecological walkover surveys undertaken by AtkinsRéalis in February 2024, as detailed within the Ecological Appraisal (**Appendix C** and **Appendix D**), have concluded that habitat conditions within the Site remain consistent with those present prior to the completion of the Reptile Mitigation Strategy, therefore the methods of mitigation within the Strategy remain valid.

⁹ Document Reference: GCRE001-AWJV-XX-XX-DO-YL-0004_LandscapeStrategy

¹⁰ Document Reference: GCRE001-AWJV-XX-XX-SP-YL-00002_Landscape Specification

Reptile trapping and translocation exercises presented in the EPP have been completed by Sylvan Ecology on behalf of Dalcour Maclaren between October 2022 and June 2023 in accordance with the Reptile Mitigation Strategy. Due to the time elapsed since the reptile trapping and translocation was completed, it is assumed that reptile recolonisation may have occurred; therefore, reptile presence or likely absence surveys, and mitigation measures outlined in Section 7.2 of the EPP, will be carried out before commencement of any impacting operations at the Site. The existing Reptile Trapping and Relocation Method Statement, as presented in the EPP, is considered to still be valid (See **Section 2.3** above) as it meets the following requirements of the conditions text;

- The location of receptor site to be used for the Proposed Scheme has been provided which is under land ownership of GCRE Ltd;
- Population surveys have been completed to determine the suitability of the receptor site for reptiles. Updated habitat surveys completed by AtkinsRéalis have confirmed no significant change to habitats present within the receptor site and therefore carrying capacity remains valid;
- Enhancement measures to be implemented on receptor sites have been provided;
- Re-location methodologies and timing have been provided;
- Monitoring proposals have been provided and updated surveys for reptiles have been proposed to update the baseline in line with the above discussed disrepair of reptile fencing;
- Details of any necessary agreement with landowner have been provided as the land is owned by GCRE Ltd who are the overarching client for the Proposed Scheme.

In accordance with the above, and the confirmation of the completion of the reptile translocation in June 2023 it is considered that sufficient evidence has been provided for the discharge of Condition 16 in relation to Phase 1a.

2.4 Condition 17 - Barn Owl Box Compensation Scheme

Dalcour Maclaren have provided a barn owl conservation strategy¹¹ for the wider GCRE site. However, the barn owl box locations presented within this strategy were queried by the Local Planning Authority due to their off-site positioning and their suitability as compensation for Site specific impacts¹².

The placement of these boxes is informed by mitigation advice provided by the Barn Owl Trust, Charity No. 1201419¹³, which states that:

Barn owl should not be encouraged to nest within 3 km of any major road.

Although this scheme is for the construction of a rail testing facility rather than for a road, the running of high-speed trains presents a high level of risk with regards to potential train strike of barn owl, if they were to be encouraged to nest at the Site through the installation of barn owl box, so this guidance is being followed in this instance. As such, it is considered that the placement of a barn owl box at the off-site locations of OSNGR SN 87976 04171 within Neath Port Talbot and OSNGR SN 91150 10009 within Powys are suitable compensation for the for the impacts of the GCRE wider scheme as detailed within the Environmental Statement⁵ which concluded that the development may

¹¹ Global Centre of Rail Excellence Barn Owl Conservation Strategy. Dalcour Maclaren, April 2023

¹² **LPA comments- 19/06/2023** (washery)-The barn owl box for NPT is over by Selar, quite a distance from the GCRE site so the barn owls affected by the GCRE works will not benefit from the installation of this barn owl box/ the population in the area of the GCRE works. Justification is needed as to why this is appropriate and acceptable.

¹³ Barn Owls and Major Roads, The Barn Owl Trust, 2007

result in the loss of one breeding pair of barn owls as a result of train collision and is in-line with standing guidance, relevant to Wales.

The installed barn owl boxes will conform to Barn Owl Trust specifications¹⁴, providing a permanently accessible roosting and nesting place for barn owls, at least 3 metres above ground level, with the access point positioned to face towards open countryside.

No confirmed barn owl roosts have been identified at the Washery Site during surveys undertaken by AtkinsRéalis in 2023² or Dalcour Maclaren⁵ in historical surveys; however habitats present adjacent to the north of the construction boundary, such as the open mosaic grassland, do provide foraging opportunities for this species. As detailed under sections 2.1 and 2.2 above, the impacts to these habitats have been reduced through amendment of the Proposed Scheme boundary, thus greatly reducing loss of suitable foraging habitat for this species during- and post-construction to 0.1Ha, if barn owl were to naturally persist in proximity of the Site.

Condition 17 states that at least two barn owl box locations are to be provided, one in Neath Port Talbot and one in Powys, it also states that landownership (and demonstration of agreement, box design/ specification, monitoring of use and provisions for replacement) should be detailed. All of the above have been provided by Dalcour Maclaren within the Barn Owl Conservation Strategy.

In accordance with the above and the consideration of the reduced impacts to suitable habitat for this species within the Washery Site specifically, it is considered that sufficient evidence has been provided for the discharge of Condition 17 for Phase 1a.

2.5 Condition 18 - Strategic Biodiversity Plan

Dalcour Maclaren have provided a Strategic Biodiversity Plan (SBP)¹⁵ which details the ecological baseline across the full GCRE Scheme, including the Phase 1A and Phase 2A works as informed by the Environmental Statement⁵. This document provides a detailed breakdown of anticipated habitat loss and creation and biodiversity enhancement measures. This document is supplemented by Phase Specific Plans in line with Condition 19 (See **Section 2.6** below).

The baseline data used to inform the SBP has exceeded validity in line with CIEEM guidance¹⁶. In addition, since the submission of this document, the construction boundary of the Proposed Scheme for this phase of works has been amended; the most recent version to has been presented within **Appendix A**. AtkinsRéalis have therefore undertaken an updated ecological walkover survey of the Site in February 2024 as presented within the Ecological Appraisal Report (See **Appendix C**), with additional survey of the Scheme's enhancement area completed in May 2024 (as presented within **Appendix D**).

This survey information has been used to inform an updated baseline of habitats present within the Site, this has been used to produce an updated quantitative assessment of habitat loss and creation for the Proposed Scheme in accordance with the updated Red Line Boundary and landscaping proposals^{9,10}. The methodology used for this assessment and final calculations have been presented within **Appendix E**.

In accordance with Planning Policy Wales (**Appendix G**) a step-wise approach has been taken as detailed in **Appendix E** to reduce and avoid impacts to habitats in the first instance, particularly those associated with The Gorsllwyn Meadows and The Onllwyn Coal Washery SINC. Thus, reducing the significance of impacts of the Proposed Scheme to designated sites.

¹⁴ Barn Owls and Rural Planning Applications - a Guide, The Barn Owl Trust, 2015

¹⁵ Global Centre of Rail Excellence Strategic Biodiversity Plan. Dalcour Maclaren, March 2023

¹⁶ Advice Note On The Lifespan of Ecological Reports & Surveys, CIEEM, 2019

Where mitigation, compensation, and enhancement measures are delivered as part of the Scheme, on-going monitoring of success, and reactive and regular maintenance, will be carried out. The details of these processes will be presented within the Environmental and Ecological Management Plan (Condition 33) which is not required until six months prior to the development being brought into beneficial use.

In consideration of the above, the measures proposed within the SBP remain valid in regard to the Phase 1A works. However, we have presented within this document (**Appendix E**) an additional assessment of habitat loss and creation in line with changes to the Proposed Scheme red line boundary and updated ecological surveys. In line with this, additional biodiversity enhancement measures have been presented within landscaping proposals^{10,10} to supplement those already provided within the SBP to provide additional mitigation, particularly in regard to reducing the significance of impacts to the SINC and ensuring proposals have captured on-site enhancement and management to replace the loss and also increase the area of grassland habitats similar in composition to those associated with the SINC. Two additional proposals for a drainage swale and waterbody have ensued the Proposed Scheme will achieve an overall net benefit for biodiversity in order to meet the requirements for this planning condition.

In accordance with the above it is considered that sufficient evidence has been provided for the discharge of Condition 18 in respect of Phase 1a.

2.6 Condition 19 - Phased Biodiversity Plan

Dalcour Maclaren provided a Phase Biodiversity Plan (PBP)¹⁷ in March 2023. This document details the ecological baseline at the time of writing, avoidance, mitigation, and compensatory measures, enhancement measures, and habitat calculations in accordance with Phase 1A and 2a for the Proposed Scheme.

The baseline date used to inform the PBP has exceeded its lifespan in line with CIEEM guidance. In addition, since the submission of this document, the construction boundary of the Proposed Scheme has been amended; the most recent version to have been presented within **Appendix A**. AtkinsRéalis have therefore undertaken an updated ecological walkover survey of the Site, which was completed in February 2024 as presented within the Ecological Appraisal Report (See **Appendix C**) and in May 2024 (as presented within **Appendix D**).

This survey information has been used to inform an updated baseline of habitats and ecological constraints present within the Site, to re-validate the assessment of ecological impacts as a result of the Proposed Scheme and the measures of avoidance, mitigation, and of compensation and enhancement that was made in the PBP.

In accordance with Planning Policy Wales (**3.Appendix G**) a step-wise approach has been taken as detailed **Appendix E** to reduce and avoid impacts to habitats in the first instance, particularly those associated with The Gorsllwyn Meadows and The Onllwyn Coal Washery SINC.

The change to the construction boundary has reduced the anticipated impacts to the two Sites of Importance for Nature Conservation (SINCs) identified within the PBP;

- The construction boundary no longer covers Gorsllwyn Meadows SINC, which is located immediately to the north of the boundary, and therefore no loss of habitats from this site will occur. Previously approximately 0.6 Ha of this SINC was located within the Site boundary;
- The proportion of the construction boundary which covers Onllwyn Coal Washery SINC has been reduced from 1.1 Ha to 0.1 Ha, thus reducing the extent of habitat loss from that site by 1Ha, as presented within **Appendix A**.

¹⁷ Global Centre of Rail Excellence Phased Biodiversity Plan – Phase 1A. Dalcour Maclaren, March 2023

Measures have been presented within the EPP (**Section 2.1**) to ensure no significant indirect impacts occur as a result of indirect impacts to SINC's during adjacent construction works.

A summary of Net Benefits for Biodiversity Assessment has been presented within **Appendix E** taking into account the reduction of impacts to two SINC's by a total of 1.6 Ha which has followed a step-wise approach of avoidance in the first instance which has reduced the significance of impacts on these sites.

To supplement enhancement measures presented in the PBP, an enhancement area has been identified at the eastern extent of the Site. This area is functionally linked to the Onllwyn Coal Washer SINC and landscaping and management of this Site will open up an area of the woodland to encourage grassland encroachment of the SINC. Habitat creation has also been proposed through a drainage swale to be constructed through the centre of the Site, connecting to a new pond which will replace an existing group of ponds which have been created within the coal spoil Locations have been presented within **Appendix A**. Details of these enhancement measures have been presented within the Landscape Strategy proposals^{9,10} and plans have been included within **Appendix F** for reference.

Enhancement measures proposed for the Proposed Scheme will ensure an overall net-benefit for biodiversity through the Site, considering the DECCA framework for ecological resilience they have ensured diversity, extent, condition and connectivity as detailed within **Appendix E**.

In consideration of the above the PBP is considered to remain valid, this has been supported through updated ecological surveys which have been used to inform supplementary measures to the PBP in proportion to the anticipated impacts of the Proposed Scheme.

In accordance with the above it is considered that sufficient evidence has been provided for the discharge of Condition 19 for Phase 1a.

2.7 Condition 28 - Site Wide Landscape Strategy

The baseline data used to inform the Landscaping Strategy^{9,10} has exceeded its validity in line with CIEEM guidance¹⁸. In addition, since the submission of those landscape proposals, the construction boundary of the Proposed Scheme for this phase of works has been amended; the most recent version to has been presented within **Appendix A**. AtkinsRéalis have therefore undertaken an updated ecological walkover survey of the Site in February 2024 as presented within the Ecological Appraisal Report (See **Appendix C**) with additional survey of the Scheme's enhancement area completed in May 2024 (as presented within **Appendix D**).

This survey information has been used to inform an updated baseline of habitats present within the Site, this has been used to inform an updated quantitative assessment of habitat loss and creation for the Proposed Scheme in accordance with the updated Construction Boundary and Landscaping Strategy^{9,10}. The methodology used for this assessment and final calculations have been presented within **Appendix E**.

The Landscape Strategy (produced and to be submitted alongside this report^{9,10} and associated landscape plans shown in Appendix F) have been produced to discharge condition 28 and covers appropriate management of the Site to ensure the longevity of planting proposals and to ensure areas cleared to allow natural succession of grassland habitats do not become inundated with woodland and scrub. The landscape strategy will extend, connect, and complement existing habitats within and outside of the Site and presents the landscape specifications required for establishment, maintenance and monitoring of habitats, and also considers the on-going development of the Site that was previously assessed in the Environmental Statement.

In addition to compensation proposed by Dalcour Maclaren¹⁷ for the Proposed Scheme, measures within in Landscape Strategy include the creation of a new drainage swale and waterbody with suitable ecological features designed to

¹⁸ Advice Note On The Lifespan of Ecological Reports & Surveys, CIEEM, 2019

encourage biodiversity within the Site. The Landscape Strategy aims to avoid habitat removal and SINC destruction and includes introducing new habitat features into the barren Washery Site area and extends and connects habitats within and outside of the Site. It demonstrates landscape specifications designed for establishment maintenance and monitoring required and shows further on-going development of the Site.

LPA comments previously given on the Dalcour Maclaren reports¹⁹ highlights the plans to increase the woodland as not being in line with features of nearby SINC. Considering this it is considered prudent for the compensation to be sympathetic to the nearby SINC, which part of it will be removed as part of the scheme. and its marshy grassland features for which it has its designation, instead of the previously recommended tree planting. The landscape plans and strategies reflect this within the enhancement areas.

Landscaping proposals have been supported through updated ecological surveys which have been undertaken to ensure they are valid for purpose and in proportion to the anticipated impacts of the Proposed Scheme.

In accordance with the above it is considered that sufficient evidence has been provided for the discharge of Condition 28 for phase 1a.

¹⁹ **LPA comments for EPP & PBP (19/06/2023)**- *Why is there such an increase in mixed woodland? 3.12ha will be created as part of this phase. The ES (Table 7.8) does not have such a large focus on woodland creation due to the site being of importance for other habitats such as the SINC adjacent to and being affected by the Ph1A works which are Open Mosaic Habitats on Previously Developed Land, Purple Moor Grass and Rush Pasture.*

CONCLUSION

3. Conclusion

In conclusion, the documents that have been provided to the Local Authority, and summarised or updated here, are considered to meet the requirements to discharge planning conditions associated with Neath Port Talbot Council Local Planning (LPA) Ref: P2023/0336 and Powys LPA Ref P2021/0327, and importantly, allow the local the local authorities to fulfil their duty to promote the biodiversity and resilience of ecosystems, under the Environment (Wales) Act 2016.

The documents have demonstrated measures to ensure the maintenance and enhancement of biodiversity and the resilience of ecosystem through measures such as wildlife corridors and landscaping proposals for the creation of new habitats within the Site and also the management and enhancement of existing habitats. They have ensured the protection of non-statutory sites through a significant decrease in impacts to two SINC's location along the northern boundary of the Site and have presented measures within the EPP to ensure these retained habitats are protected from indirect impacts during construction works. They have demonstrated safeguarding measures for protected species and species of principal importance, thorough the EPP and species-specific mitigation presented within the Reptile Mitigation Strategy and Barn Owl Conservation Strategy and have safeguard exiting asset where possible by reducing the loss of habitats along the northern boundary of the Site. The EPP has also presented measures for priority plant mitigation to ensure prevention disturbance or harm to a species or habitat listed on 'Section 7' of the Environment (Wales) Act 2016.

The following documents have been provided in accordance with the discharge of Planning Conditions (Ref: P2023/0336 and Powys LPA Ref P2021/0327) in relation to the Phase 1a works of the Proposed Scheme by Dalcour Maclaren in 2023;

- Global Centre of Rail Excellence Ecological Protection Plan. Dalcour Maclaren, March 2023
- Global Centre of Rail Excellence Reptile Mitigation Strategy – Phase 1A. Dalcour Maclaren, March 2023
- Global Centre of Rail Excellence Phase 1A Wildlife Corridor Scheme. Dalcour Maclaren, March 2023
- Global Centre of Rail Excellence Barn Owl Conservation Strategy. Dalcour Maclaren, April 2023
- Global Centre of Rail Excellence Strategic Biodiversity Plan. Dalcour Maclaren, March 2023
- Global Centre of Rail Excellence Phased Biodiversity Plan – Phase 1A. Dalcour Maclaren, March 2023

Since the completion and issue of the above-described documents, there has been a change to the proposed construction boundary such that it has reduced impacts to two SINC's located along the northern boundary.

In addition, 12 months have passed since the surveys to inform the above documents, updated surveys and reporting have been completed by AtkinsRéalis for the Proposed Scheme to determine any changes to the documented baseline²⁰ since the above reporting was completed and to provide an updated evaluation of anticipated habitat loss and enhancement proposals considering the latest Scheme change and time elapsing.

Each document associated to the seven planning conditions associated with Phase 1A has been reviewed in line with the updated baseline ecological data and evidence has been presented to confirm the information provided meets the requirement for the discharge of conditions.

This document should be read in conjunction with landscaping proposals^{9,10}

²⁰ AtkinsRéalis (2023) GCRE Washeries Ecological Appraisal Report. Issued April 2024.

APPENDICES

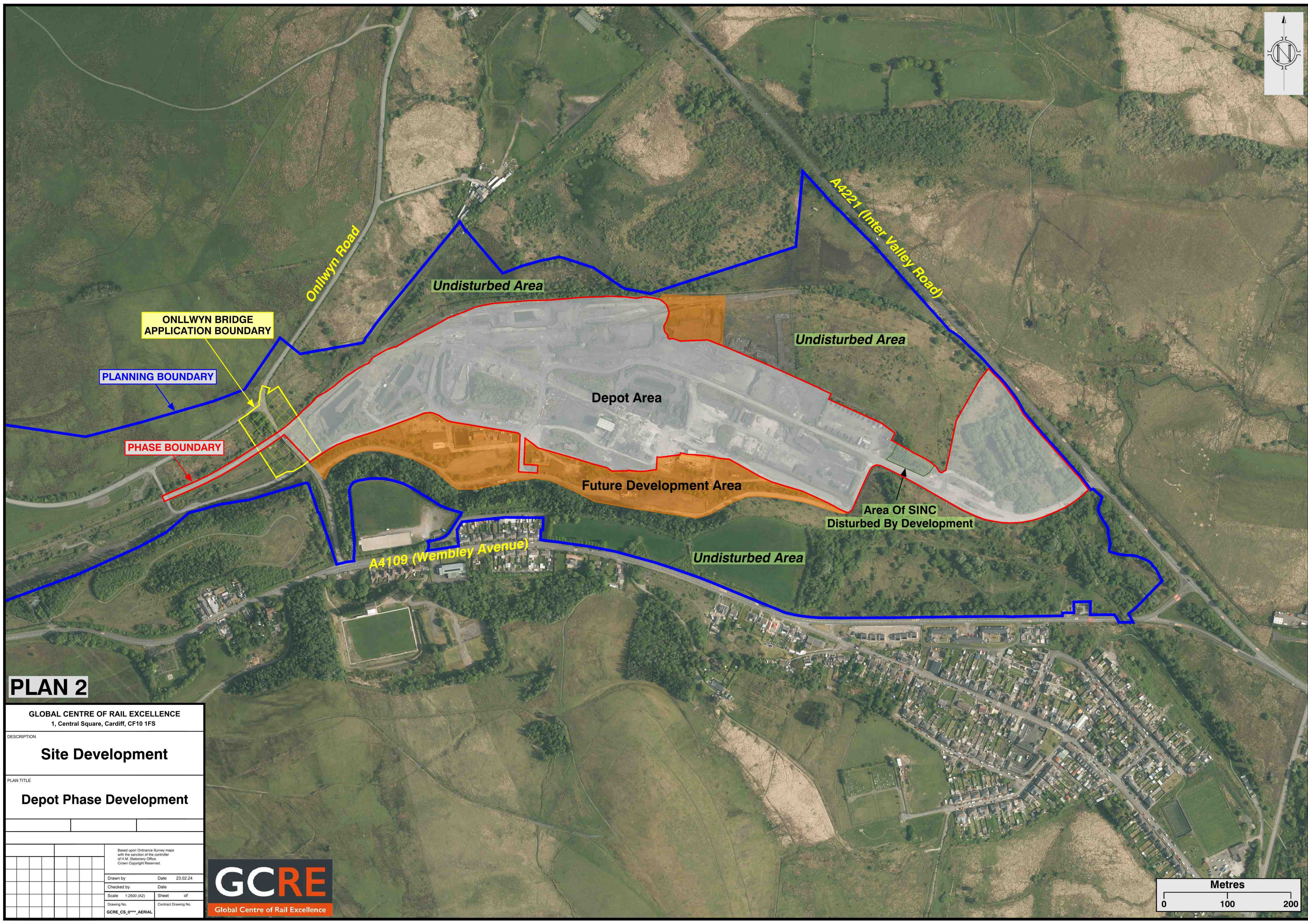
Appendix A. Site Location and Proposed Scheme Drawings



Figure A-1 - Zoned phasing of works for the Proposed Scheme and the wider GCRE Site (note Zone 1A)

Figure A-2 – Red Phase 1a Site boundary and blue washery wider area planning boundary. Onllwyn Bridge Application excluded from this appraisal.





GLOBAL CENTRE OF RAIL EXCELLENCE 1, Central Square, Cardiff, CF10 1FS														
DESCRIPTION														
Site Development														
PLAN TITLE														
Depot Phase Development														
					Based upon Ordnance Survey maps with the sanction of the controller of H.M. Stationery Office. Crown Copyright Reserved.									
					Drawn by _____ Date 23.02.24									
					Checked by _____ Date _____									
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					Drawing No. _____ Contract Drawing No. _____									
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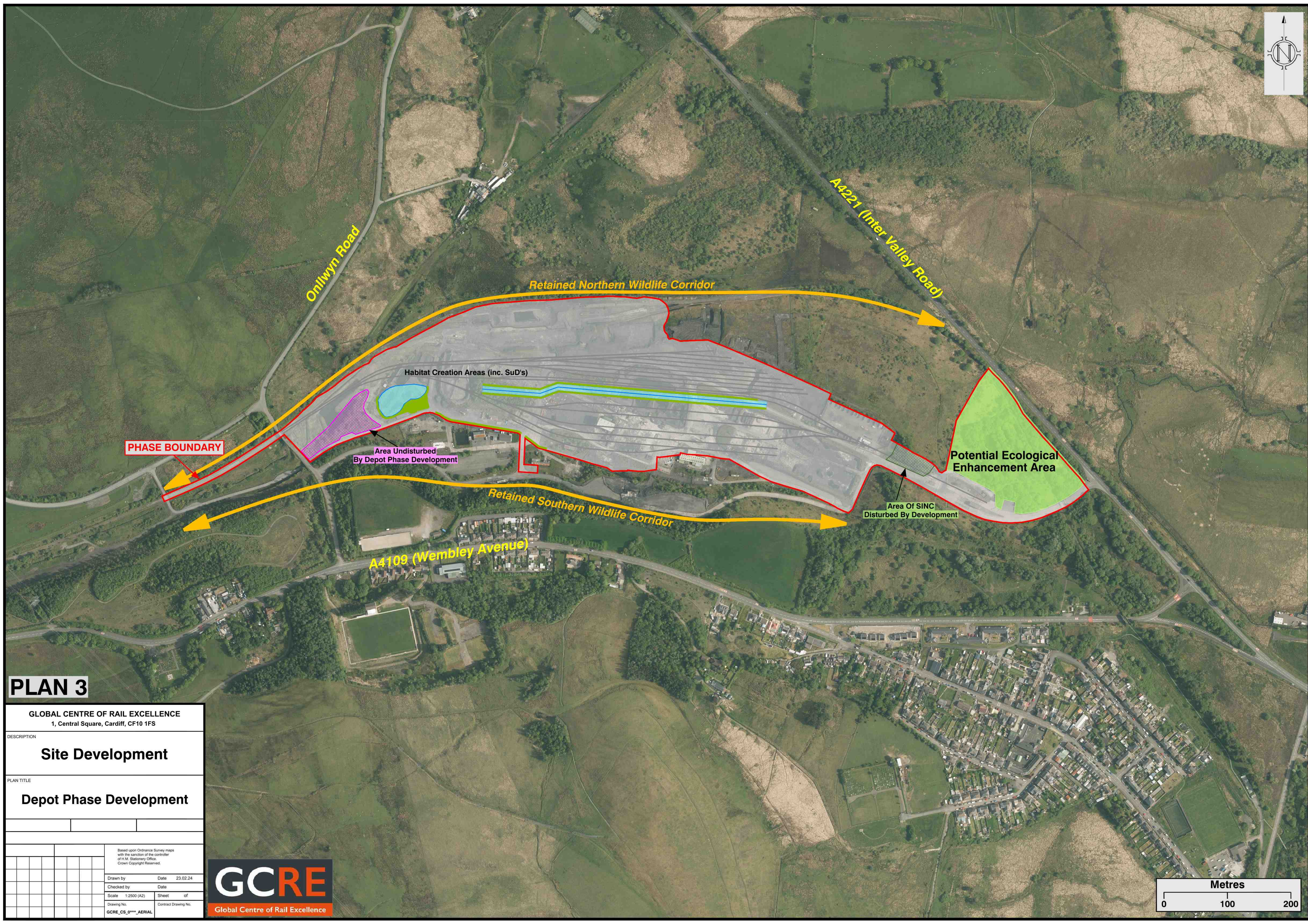
Depot Phase Development

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Figure A-3 – Plan produced by GCRE showing Phase 1a Site Boundary with proposed areas for ecological enhancement and retention.





GLOBAL CENTRE OF RAIL EXCELLENCE 1, Central Square, Cardiff, CF10 1FS									
DESCRIPTION Site Development									
PLAN TITLE Depot Phase Development									
						Based upon Ordnance Survey maps with the sanction of the controller of H.M. Stationery Office. Crown Copyright Reserved.			
						Drawn by		Date 23.02.24	
						Checked by		Date	
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						Drawing No.		Contract Drawing No.	
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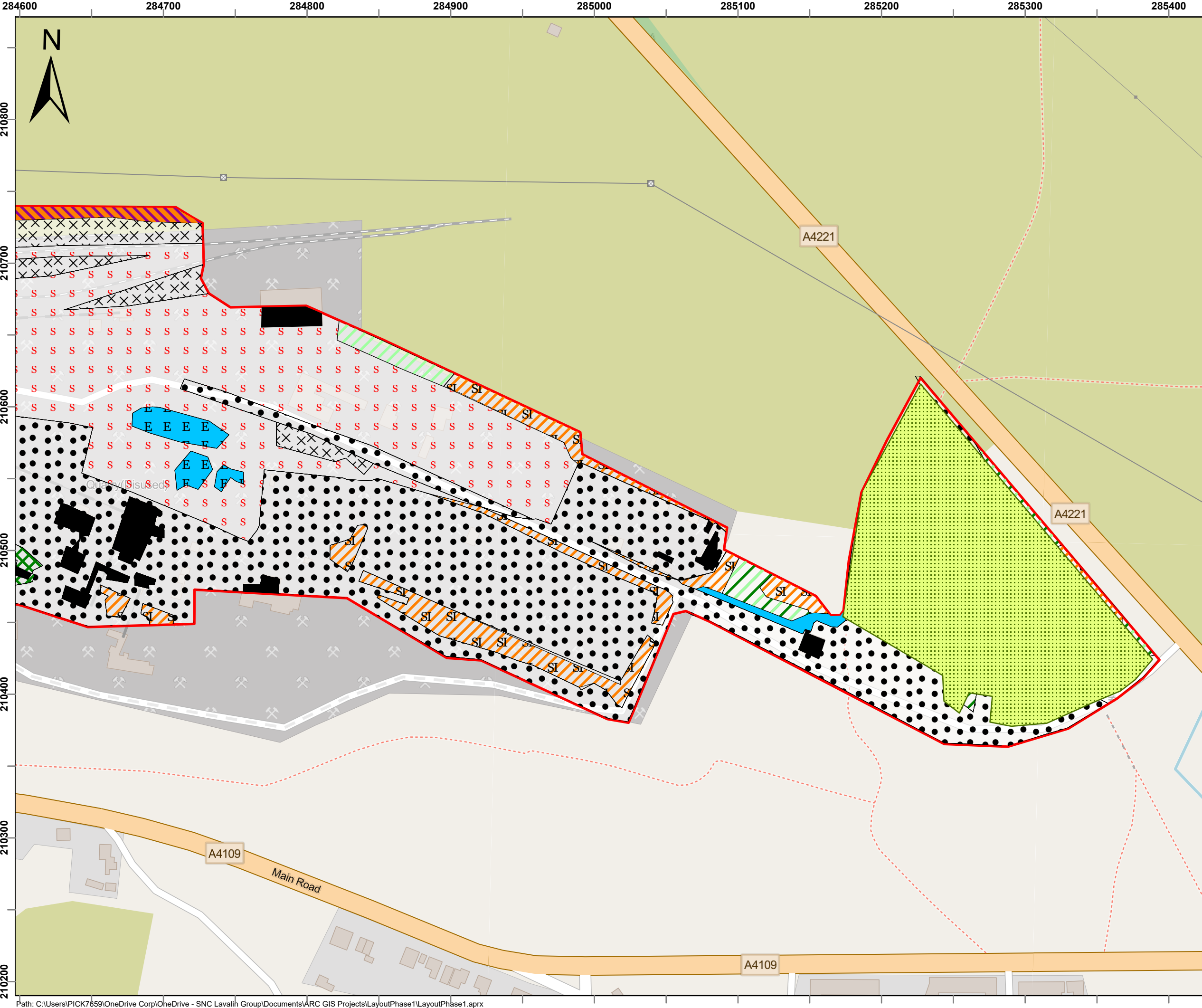
GCRE
Global Centre of Rail Excellence

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Appendix B. NBB Baseline Habitat Condition Maps (RLB-Red Line Boundary)

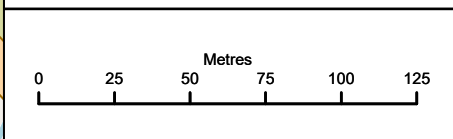
- B.1** **Baseline habitat conditions in west of site**
- B.2** **Proposed enhancement in west of site**
- B.3** **Baseline habitat conditions in east of site**
- B.4** **Proposed enhancements in east of site**





- RLB
- Habitats
 - A1.1.2 - Broadleaved Plantation Woodland
 - A1.2.2 - Coniferous Plantation Woodland
 - A1.3.2 - Mixed Plantation Woodland
 - A2.1 - Dense/Continuous Scrub
 - B1.2 - Semi-Improved Acid Grassland
 - B5 - Marsh/Marshy Grassland
 - G1 - Standing Water
 - G2.1 - Eutrophic Running Water
 - G2.4 - Dystrophic Running Water
 - I2.2 - Artificial Spoil
 - J1.3 - Cultivated/Disturbed Land - Ephemeral/Short Perennial
 - J3.6 - Buildings
 - J4 - Bare Ground
 - J5 - Other Habitat
 - Retained/Enhanced or Created Habitats

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Client

Project

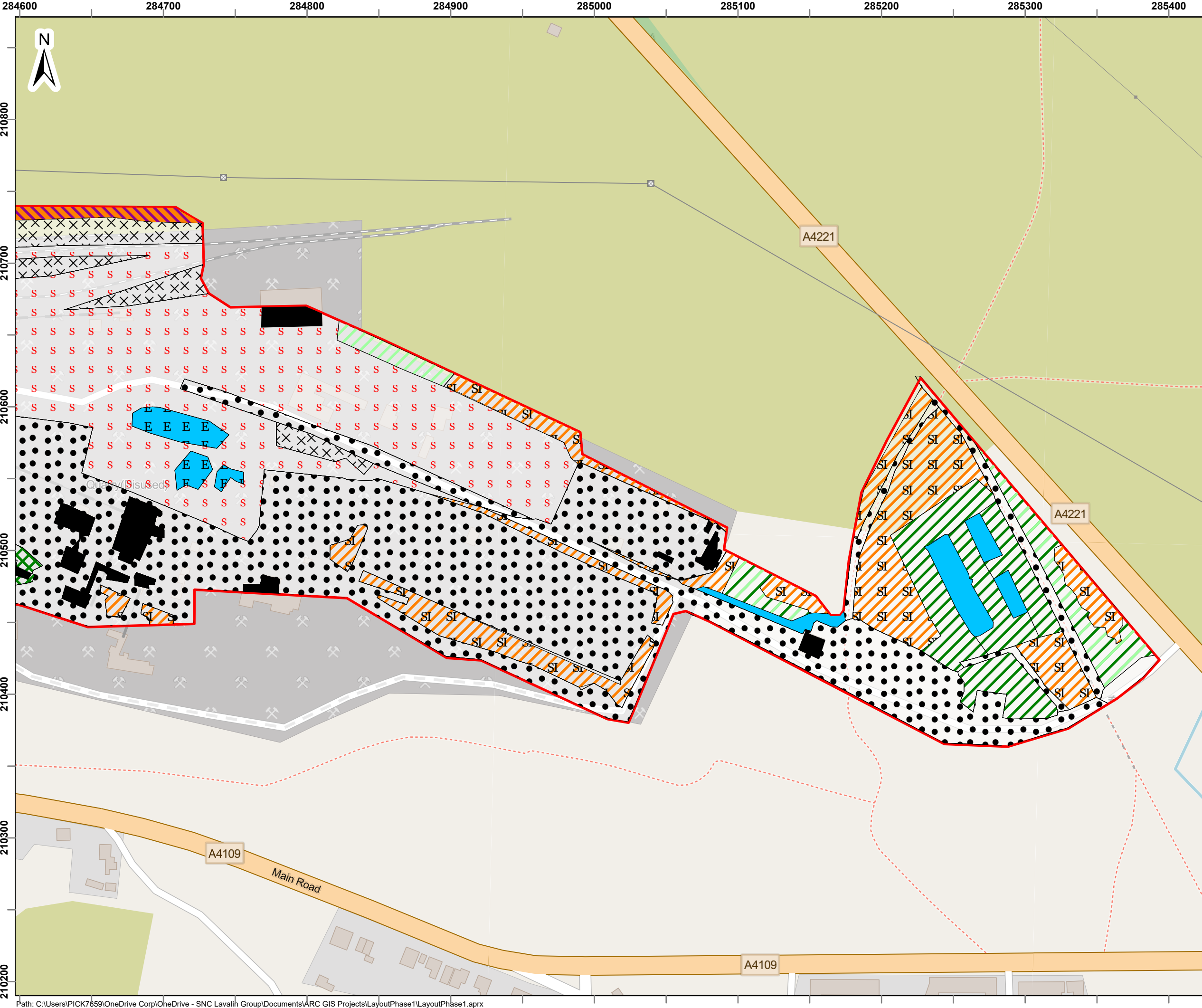
GCRE

Title

GCRE NBB Baseline Habitat Map

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A3	1:2,500	Date 23/05/24	Date 23/05/24	Date 23/05/24

Drawing Number	Rev
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RLB

Habitats

A1.1.2 - Broadleaved Plantation Woodland

A1.2.2 - Coniferous Plantation Woodland

A1.3.2 - Mixed Plantation Woodland

A2.1 - Dense/Continuous Scrub

B1.2 - Semi-Improved Acid Grassland

B5 - Marsh/Marshy Grassland

G1 - Standing Water

G2.1 - Eutrophic Running Water

G2.4 - Dystrophic Running Water

I2.2 - Artificial Spoil

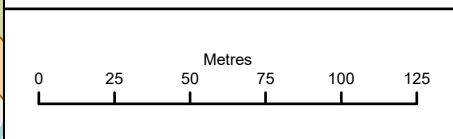
J1.3 - Cultivated/Disturbed Land - Ephemeral/Short Perennial

J3.6 - Buildings

J4 - Bare Ground

J5 - Other Habitat

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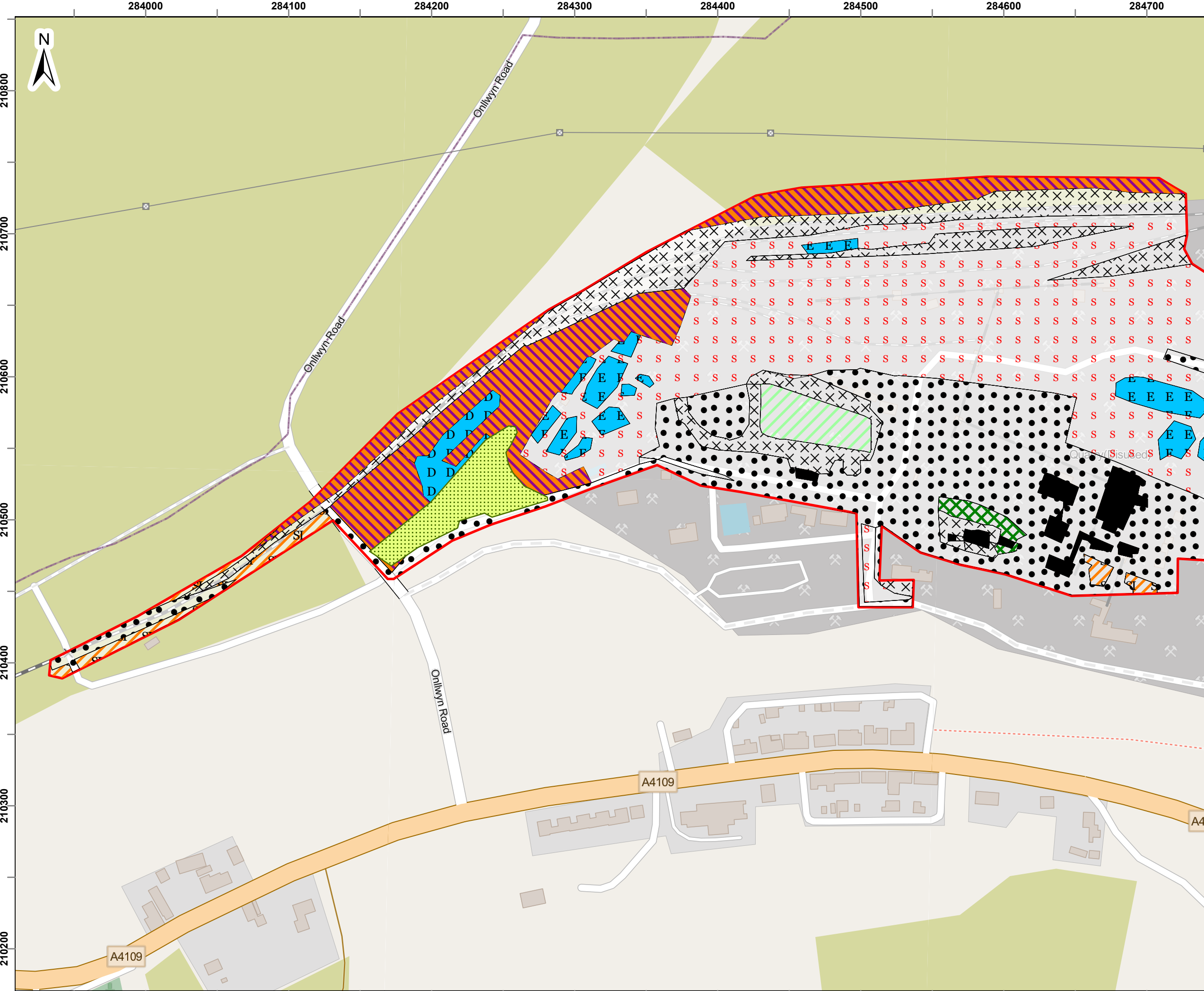
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GCRE

Title

GCRE NBB Baseline Habitat Map

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01				00





RLB

Habitats

- A1.1.2 - Broadleaved Plantation Woodland
- A1.2.2 - Coniferous Plantation Woodland
- A1.3.2 - Mixed Plantation Woodland
- A2.1 - Dense/Continuous Scrub
- B1.2 - Semi-Improved Acid Grassland
- B5 - Marsh/Marshy Grassland
- G1 - Standing Water
- G2.1 - Eutrophic Running Water
- G2.4 - Dystrophic Running Water
- I2.2 - Artificial Spoil
- J1.3 - Cultivated/Disturbed Land - Ephemeral/Short Perennial
- J3.6 - Buildings
- J4 - Bare Ground
- J5 - Other Habitat
- Retained/Enhanced or Created Habitats

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0 25 50 75 100 125

Metres

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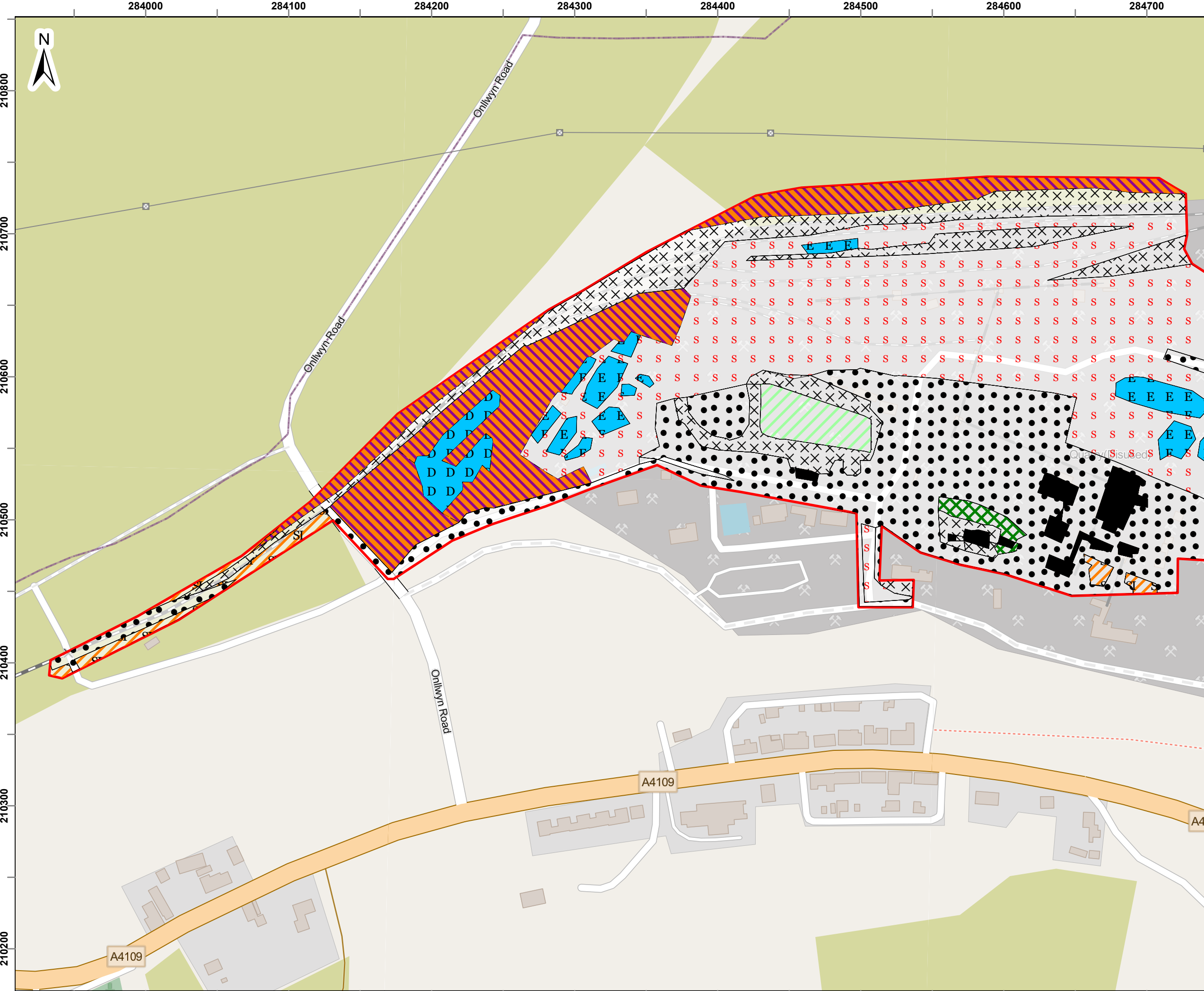
GCRE

Title

GCRE NBB Baseline Habitat Map

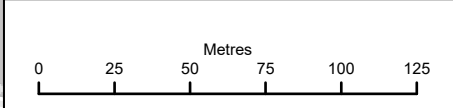
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Drawing Number	Rev
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- RLB
- Habitats
 - A1.1.2 - Broadleaved Plantation Woodland
 - A1.2.2 - Coniferous Plantation Woodland
 - A1.3.2 - Mixed Plantation Woodland
 - A2.1 - Dense/Continuous Scrub
 - B1.2 - Semi-Improved Acid Grassland
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 - J3.6 - Buildings
 - J4 - Bare Ground
 - J5 - Other Habitat

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Client

Project

GCRE

Title

GCRE NBB Baseline Habitat Map

Sheet Size	Original Scale	Designed / Drawn RP	Checked KS	Authorised KS
A3	1:2,500	Date 23/05/24	Date 23/05/24	Date 23/05/24

Drawing Number	Rev
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Appendix C. Ecological Appraisal Report

GCREWasheries_Ecological Appraisal_AtkinsRéalis_April2024

Appendix D. Additional Surveys

Following the completion of the Ecological Appraisal Report completed by AtkinsRéalis in March 2024 (See **Appendix C**), additional ecological surveys have been completed at the Proposed Scheme to inform the discharge of planning conditions. Methodologies and survey results have been presented below.

D.1 Survey Methods

D.1.1 GCN Habitat Suitability Index Assessment and eDNA

The Ecological Appraisal Report identified four waterbodies requiring survey for great crested newt (GCN). A plan showing the locations of waterbodies has been presented within the Ecological Appraisal:

- Pond 1 located at Ordnance Survey National Grid Reference (OSNGR) SN8522710486.
- Pond 2 located at OSNGR SN8525410516.
- Pond 3 located at OSNGR SN8527710481.
- Pond 4 located at OSNGR SN8469910438.

The ponds were assessed for potential to support GCN using a Habitat Suitability Index (HSI) and eDNA survey, following good practice guidance^{21,22} on 07/05/2024. These ponds returned negative results for GCN DNA; great crested newt have not been recorded within waterbodies within 500m of the construction boundary.

A HSI is a numerical index between 0 and 1, where 0 indicates an unsuitable habitat and 1 represents an optimal habitat. A score is calculated based on the results of 10 suitability indices, all of which are factors thought to affect GCN presence. The resulting score categorises the pond based on its suitability to support GCN and can be used to influence the decision as to whether further detailed survey work is required, as shown in **Table D-1** below.

Table D-1 - Habitat Suitability Index Scoring System

HSI Score	Suitability to support GCN
<0.5	Poor
0.5-0.59	Below Average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

In accordance with HSI methodology, the following features were assessed;

- Geographical location,
- Pond area,
- Pond permanence,

²¹ Amphibian and Reptile Groups of the United Kingdom (2010). ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index. ARGUK
²² Biggs *et al.*, (2014). Technical Advice Note for Field and Laboratory Sampling of Great Crested Newt eDNA in Analytical and Methodological Development for Improved Surveillance of the Great Crested Newt. Defra Project WC1067. Appendix 5. Freshwater Habitats Trust, Oxford.

- Water quality,
- Pond shading,
- Number of Waterfowl,
- Occurrence of fish,
- Pond density/other ponds within 1km,
- Terrestrial habitat quality; and,
- Macrophyte cover.

The eDNA survey protocol was devised in accordance with guidance set out by Biggs et al. (2014)²³. Twenty water samples were taken from around the perimeter of each pond using a 40ml ladle, focusing on areas most likely to be used by GCN. The water samples were then transferred into a whirl Pak bag. Before each sample was taken, the water was gently stirred using the ladle. This is because eDNA will often be present in larger quantities at the bottom of the pond as it tends to sink in water. The whirl Pak bag was then gently shaken to mix eDNA across the whole water sample. A pipette was then used to transfer 15ml of water from the whirl Pak bag into each of the six conical tubes containing a preserving fluid. Each conical tube was then vigorously shaken for ten seconds to mix the water sample and the preservative. The six conical tubes were then labelled and sent to the lab for analysis.

The eDNA samples collected were express couriered to SureScreen Scientifics who carried out analysis of the samples.

These surveys were conducted by suitably qualified and experienced ecologists including one ecologist who holds a Natural Resources Wales class licence for surveying GCN.

D.1.2 Enhancement Area Phase 1 Survey

The geographical area for undertaking ecological field surveys has been determined using the current survey guidance, professional judgement and the zones of influence, which have been determined based on likely effects arising from the Proposed Scheme.

Following CIEEM's Guidelines for Preliminary Ecological Appraisal a walkover survey was undertaken, focusing on protected and priority habitats and/or species.

The walkover survey was undertaken on 08/05/2024. This included all land within the ecological enhancement area presented within Appendix A.

Habitats were mapped using the extended Phase 1 habitat survey methodology²⁴, to ensure that survey methods and data are consistent with previous surveys completed by Sturgess Ecology on behalf of Dalcour Maclaren in July 2022 and AtkinsRéalis in February 2024, which also made use of Phase 1 habitat classification methodology to allow for consistency in data comparison and analysis.

An assessment of the possible presence of priority habitats (as defined by CIEEM PEA guidance), was also undertaken during the walkover survey.

²³ Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F (2014) Analytical and methodological development for improved surveillance of the Great Crested Newt. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA. Freshwater Habitats Trust, Oxford.

²⁴ Joint Nature Conservation Committee (2010) Handbook for Phase 1 habitat survey - a technique for environmental audit.

Vascular plant names recorded during this survey follow Stace²⁵.

Target notes (TNs) were used to record specific details on the plant species composition of the habitats, current management and quality. TNs were also used to record features of ecological importance (e.g., ponds, complex habitat mosaics).

D.1.3 Surveyor Competencies

All the surveys were led by surveyors who have been assessed to be at least of capable experience following the Chartered Institute of Ecology and Environmental Management (CIEEM) competency framework²⁶. Additionally, the lead surveyor is qualified to FISC²⁷ level 3.

D.2 Survey Results

D.2.1 GCN Habitat Suitability Index Assessment

The results of the HSI surveys have been presented within **Table D-2** below.

Table D-2 - HSI Survey Results

Pond Reference	Location Score	Pond Area Score	Permanence Score	Water Quality Score	Shade Score	Waterfowl Score	Fish Score	Pond Count Score	Terrestrial Habitat Score	Macrophyte Score	HSI Result
Pond 1	0.5	0.1	0.9	1	1	0.01	0.67	0.9	1	0.4	0.4 Poor
Pond 2	0.5	0.1	0.9	1	1	0.67	0.67	0.9	1	0.5	0.62 Average
Pond 3	0.5	0.1	0.9	1	1	0.67	0.67	0.9	1	0.55	0.63 Average
Pond 4	1	0	1	0.67	1	1	1	0.65	0.67	0.61	0.45 Poor

²⁵ Stace (2019) *New Flora of the British Isles* 4th edition.

²⁶ CIEEM's Competency Framework. Available at: <https://www.cieem.net/competency-framework> [Accessed February 2024].

²⁷ [Field Identification Skills Certificate – Botanical Society of Britain & Ireland \(bsbi.org\)](https://www.bsbi.org) [Accessed February 2024]

D.2.2 GCN eDNA Survey

The results of the GCN eDNA survey undertaken on the 07/05/2024 were negative, confirming the likely absence of GCN within these ponds.

D.2.3 Enhancement Areas Phase 1 Survey

The field survey found that habitats present within the enhancement area comprised the following;

- A1.3.1 – Mixed woodland – semi-natural
- B1.2 – Acid grassland – semi-improved (comprising tussocks of purple moor grass and rush pasture (UK BAP Priority Habitat))
- B5 – Marsh/ Marshy Grassland
- G1 – Standing water – comprising three waterbodies (Pond, Pond 2 and Pond 3 – See **Section D.1.1**)

Species recorded have been presented within each habitat have been presented within **Section D.3**.

D.3 Site Plant Species List

Table D-3 - Site plant species list

Species name (Stace ⁶⁸ where possible)	Scientific name	Protected or priority status
A1.3.1 – Mixed woodland – semi-natural		
Blackthorn	<i>Prunus spinosa</i>	None
Bracken	<i>Pteridium sp.</i>	None
Bramble	<i>Rubus sp.</i>	None
Broom	<i>Cytisus scoparius</i>	None
Cleavers	<i>Galium aparine</i>	None
Comfrey	<i>Symphytum sp.</i>	None
Common nettle	<i>Urtica</i>	None
Creeping thistle	<i>Cirsium arvense</i>	None
Curly doc	<i>Rumex crispus</i>	None
Cut leaved cranesbill	<i>Geranium dissectum</i>	None
Dandelion	<i>Taraxacum sp.</i>	None
Dogwood	<i>Cornus sanguinea</i>	None

Species name (Stace ⁶⁸ where possible)	Scientific name	Protected or priority status
Elder	<i>Sambucus nigra</i>	None
Field vetch	<i>Vicia sativa</i>	None
Gorse	<i>Ulex europaeus</i>	None
Hawthorn	<i>Crataegus mongyna</i>	None
Hazel	<i>Corylus avellana</i>	None
Herb Robert	<i>Geranium robertianum</i>	None
Holly	<i>Ilex aquifolium</i>	None
Horsetail	<i>Equisetum sp.</i>	None
Moss sp.	<i>Bryophyta sp.</i>	None
Oak	<i>Quercus sp.</i>	None
Pearly everlasting	<i>Anaphalis margaritacea</i>	None
Pine	<i>Pinus</i>	None
Ragwort	<i>Jacobaea vulgaris</i>	None
Red clover	<i>Trifolium pratense</i>	None
Ribwort plantain	<i>Plantago lanceolata</i>	None
Rosa	<i>Rosa sp.</i>	None
Rosebay willowherb	<i>Chamaenerion angustifolium</i>	None
Rowan	<i>Sorbus subg. Sorbus</i>	None
Silver birch	<i>Betula pendula</i>	None
Sheep's fescue	<i>Festuca ovina</i>	None
Strawberry	<i>Fragaria vesca</i>	None
Violet	<i>Viola sp.</i>	None
Willow	<i>Salix sp.</i>	None
Yarrow	<i>Achillea millefolium</i>	None

Species name (Stace ⁶⁸ where possible)	Scientific name	Protected or priority status
Yorkshire fog	<i>Holcus lanatus</i>	None
B1.2 – Acid grassland – semi-improved		
Bracken	<i>Pteridium sp.</i>	None
Bramble	<i>Rubus sp.</i>	None
Cleavers	<i>Galium aparine</i>	None
Creeping thistle	<i>Cirsium arvense</i>	None
Purple moor grass	<i>Molinia caerulea</i>	None
Rough hawkbit	<i>Leontodon hispidus</i>	None
Rosebay willowherb	<i>Chamaenerion angustifolium</i>	None
Soft rush	<i>Juncus effusus</i>	None
B5 – Marsh/ Marshy Grassland		
Broom	<i>Cytisus scoparius</i>	None
Coltsfoot	<i>Tussilago farfara</i>	None
Comfrey	<i>Symphytum sp.</i>	None
Common daisy	<i>Bellis perennis</i>	None
Common heather	<i>Calluna vulgaris</i>	None
Common vetch	<i>Vicia sativa</i>	None
Cowslip	<i>Primula veris</i>	None
Creeping buttercup	<i>Ranunculus repens</i>	None
Creeping thistle	<i>Cirsium arvense</i>	None
Cut leaved cranesbill	<i>Geranium dissectum</i>	None
Cuckooflower	<i>Cardamine pratensis</i>	None
Dandelion	<i>Taraxacum sp.</i>	None
Field woodrush	<i>Luzula campestris</i>	None
Field vetch	<i>Vicia sativa</i>	None

Species name (Stace ⁶⁸ where possible)	Scientific name	Protected or priority status
Glaucous sedge	<i>Carex flacca</i>	None
Gorse	<i>Ulex eropaeus</i>	None
Hawthorn	<i>Crataegus mongyna</i>	None
Horsetail	<i>Equisetum sp.</i>	None
Meadow pea	<i>Lathyrus pratensis</i>	None
Moss sp.	<i>Bryophyta sp.</i>	None
Mouse-ear hawkweed	<i>Pilosella officinarum</i>	None
Pine	<i>Pinus</i>	None
Ragwort	<i>Jacobaea vulgaris</i>	None
Red clover	<i>Trifolium pratense</i>	None
Ribwort plantain	<i>Plantago lanceolata</i>	None
Rough hawkbit	<i>Leontodon hispidus</i>	None
Rosebay willowherb	<i>Chamaenerion angustifolium</i>	None
Rowan	<i>Sorbus subg. Sorbus</i>	None
Sheep's fescue	<i>Festuca ovina</i>	None
Sheep's sorrel	<i>Rumex acetosella</i>	None
Silver birch	<i>Betula pendula</i>	None
Silverweed	<i>Potentilla anserina</i>	None
Soft rush	<i>Juncus effusus</i>	None
Strawberry	<i>Fragaria vesca</i>	None
Wild carrot	<i>Daucus carota</i>	None
Violet	<i>Viola sp.</i>	None
Wild angelica	<i>Angelica sylvestris</i>	None
Willow	<i>Salix sp.</i>	None

Species name (Stace ⁶⁸ where possible)	Scientific name	Protected or priority status
Yarrow	<i>Achillea millefolium</i>	None
Yorkshire fog	<i>Holcus lanatus</i>	None

Appendix E. Net Benefits for Biodiversity

E.1 Background/ Methodology

The quantitative assessment of habitat loss and creation was calculated by mapping habitats present within the Site before any works associated with the Proposed Scheme had taken place (the baseline scenario). The baseline scenario map was compiled using habitat maps created by Dalcour Maclaren, included in the Preliminary Ecological Appraisal – Phase 2A (November 2022) with updates from the AtkinsRéalis habitat maps included in the Ecological Appraisal in **Appendix C**. Satellite imagery was also used to establish the extent of some baseline habitats.

Once the baseline scenario map was compiled, the construction plans were overlayed to establish where habitats would be lost, as well as where new habitats would be created and/or enhanced because of proposed enhancement areas. This therefore enables a quantitative assessment of habitat loss and creation.

E.2 Baseline Scenario and Habitat Loss

Table E-1 below details the baseline habitats present within the Site and anticipated habitat to be impacted/ lost and also retained as a result of the proposed works in accordance with the current construction boundary.

Table E-1 - Habitat baseline and post construction areas

Habitat Type	Habitat Area (Ha) – Pre-construction and percentage of Site (%)	Habitat Area (Ha) to be impacted/ lost during construction	Habitat Area (Ha) to be retained and enhanced
A1.1.2: Broadleaved woodland - plantation	1.21 (5.4%)	0.35	0.86
A1.3.2: Mixed woodland - plantation	0.38 (0.13%)	0.13	0.25
A2.1: Scrub - dense/continuous	0.08 (0.4%)	0.08	0.00
B1.2: Acid grassland - semi-improved	1.90 (8.5%)	0.95	0.95
B5: Marsh/marshy grassland	1.89 (8.4%)	1.63	0.26
G1: Standing water	0.27 (1.2%)	0.06	0.21
G2.1: Running water - eutrophic	0.41 (1.8%)	0.41	0.00
G2.4: Running water - dystrophic	0.21 (0.9%)	0.14	0.07
I2.2: Spoil	6.52 (29.1%)	6.52	0.00
J1.3: Cultivated/disturbed land - ephemeral/short perennial	1.78 (7.9%)	1.78	0.00
J3.6: Buildings	0.31 (1.4%)	0.31	0.00
J4: Bare ground	7.45 (33.2%)	7.04	0.41

E.3 Habitat Creation and Enhancement

When assessing the impacts to habitats associated with the Proposed Scheme, a step-wise approach has been applied in line with Planning Policy Wales (See **Appendix G**).

In the first instance, loss of habitats has been avoided (Step 1) and minimised (Step 2) through the amendment of the Construction Boundary which has moved to the south and thus reducing impacts and habitat loss to grassland habitats, of particular note those associated with two SINC. For the Gorsllwyn Meadows SINC it has been possible to avoid impacts to this site such that no loss of habitats from this site will occur. For the Onllwyn Coal Washery SINC amendments to design have facilitated a minimisation in impacts reducing the extent of habitats loss from this site by 1 Ha from 1.1 Ha of loss to 0.1 Ha of loss. It has not been possible to avoid this SINC in its entirety though design changes to the Proposed Scheme, however this minimisation in impacts has ensured the SINC can be compensated for through the enhancement and creation of approximately 0.2 Ha of grassland habitats which have been proposed within the enhancement area which is functionally linked to the designated site. Thus, creating additional habitats to those which were present prior to the construction works.

In accordance with Step 2 the proposals aim to minimise the impact on biodiversity and ecosystems through the maintenance existing habitats to the north and to the south of the Site, as detailed within the Wildlife Corridor Strategy and also expanded within **Section 2.2**. The two wildlife corridors provide continuity of suitable habitats to support protected and priority species and are well connected to adjacent habitats. The provision of these corridors will ensure that significant habitat fragmentation will not occur both during construction and during the operational phases of the Proposed Scheme.

In accordance with Step 3, proposals have been made to mitigate and restore habitats within the site. An enhancement area of approximately 2.4 Ha to the eastern extent of the Site which is functionally connected to the Onllwyn Coal Washery SINC will be retained during construction and proposals in this area predominantly comprise management of existing habitats. This management of habitats will facilitate creation of grassland habitats consistent with those present within the SINC, including thinning/ removal of approximately 0.2 Ha of woodland.

In addition to the above, in accordance with Step 4 on-site compensatory habitats have been proposed above those issued by Dalcour Maclaren¹⁷ for the Proposed Scheme which have been presented within landscape strategy and design reports^{9,10}. These measures include the creation of a new drainage swale and waterbody with suitable ecological features designed to encourage biodiversity within the Site.

Supplementary to the swale and attenuation pond the Landscape Strategy aims to keep any habitat removal to a minimum. It includes introducing new habitat features into the Washery Site area in the form of extending species rich grasslands, providing wetland habitats (ditches) with appropriate aquatic planting, shrub and trees to supply varied and rich new habitats to previously barren areas. The landscape strategy looks extend, connect, and complement existing habitats within and outside of the Site and demonstrates landscape specifications designed for establishment maintenance and monitoring required and also considers the on-going development of the Site that was previously targeted in the Environmental Statement.

In line with the DECCA framework for ecosystem resilience²⁸ the proposals have considered four key attributes when developing the Proposed Scheme which are considered to be sufficient to meet the requirements of discharge of planning conditions;

- **Diversity:** The Site currently supports predominantly cultivated/disturbed land, bare ground and spoil making up 70.3% of the total area. These habitats are species poor and provide limited suitability to support protected and priority species. The Proposed Scheme landscaping proposals will increase the diversity of habitats present within

²⁸ Natural Resources Wales. Defining and assessing Ecosystem Resilience. Available at:

<https://cdn.cyfoethnaturiol.cymru/media/696279/ecosystem-resilience-in-a-nutshell-1-what-is-ecosystem-resilience.pdf>

the Site where feasible in line with design. This includes the creation of a drainage swale and a new waterbody within the Site. In addition to management of the enhancement area to the east of the Site to encourage grassland sward in line with those habitats present within the adjacent SINC.

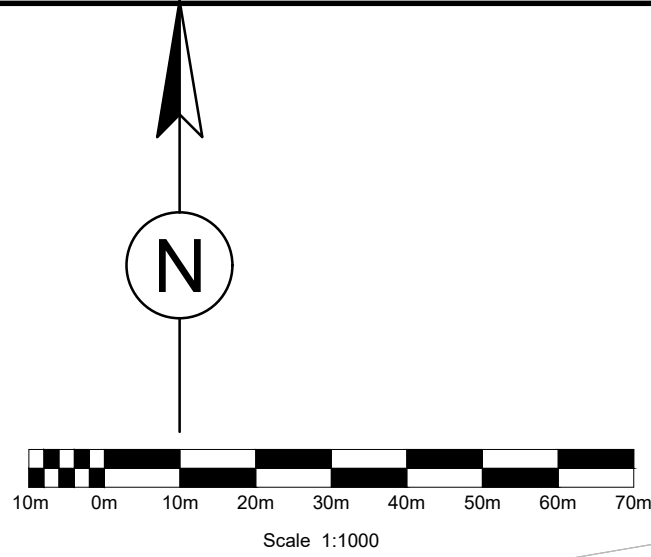
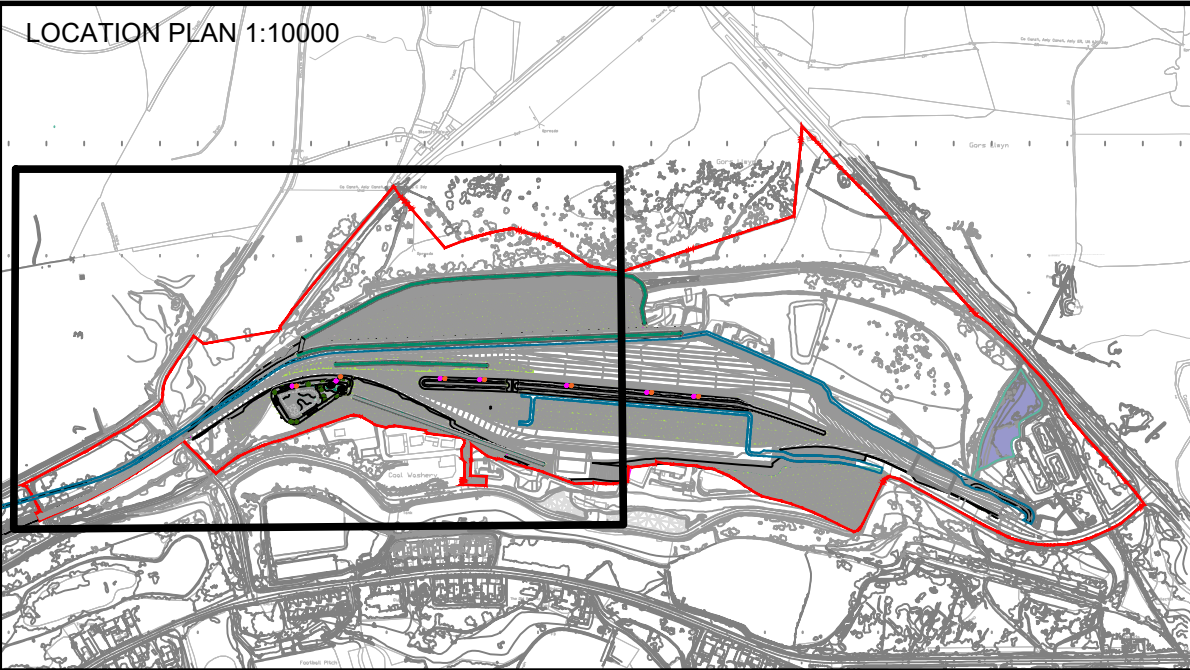
- **Extent:** Where feasible areas of retained habitat are of a sufficient size and are naturally connected to adjacent habitats to increase the resilience of these habitats and the likelihood of longevity. This will also be supported by long-term management.
- **Condition:** Leading on from the extent of habitats, by introducing landscaping proposals within functionally linked habitats, there is a similarity in the baseline conditions present, for example it can be seen within the species list presented in **Table D-3** a similar assemblage of ground flora is present within the woodland and the adjacent marsh/ marshy grassland. Thus, this information has been taken into consideration when determining areas of woodland which would be suitable for management (e.g., thinning) to encourage natural encroachment of grassland which also has consistent environmental conditions.
- **Connectivity:** Two wildlife corridors have been proposed which stretch approximately 1.4 km along the northern extent of the Site and 1.1 km along the southern extent of the Site. Thus, providing an area which can support a number of protected and priority species as well as habitats associated with two SINC. These habitats also provide connectivity to habitats within the Site and within the wider landscape both during and post construction.



Appendix F. GCRE Washeries landscape plans 1-3



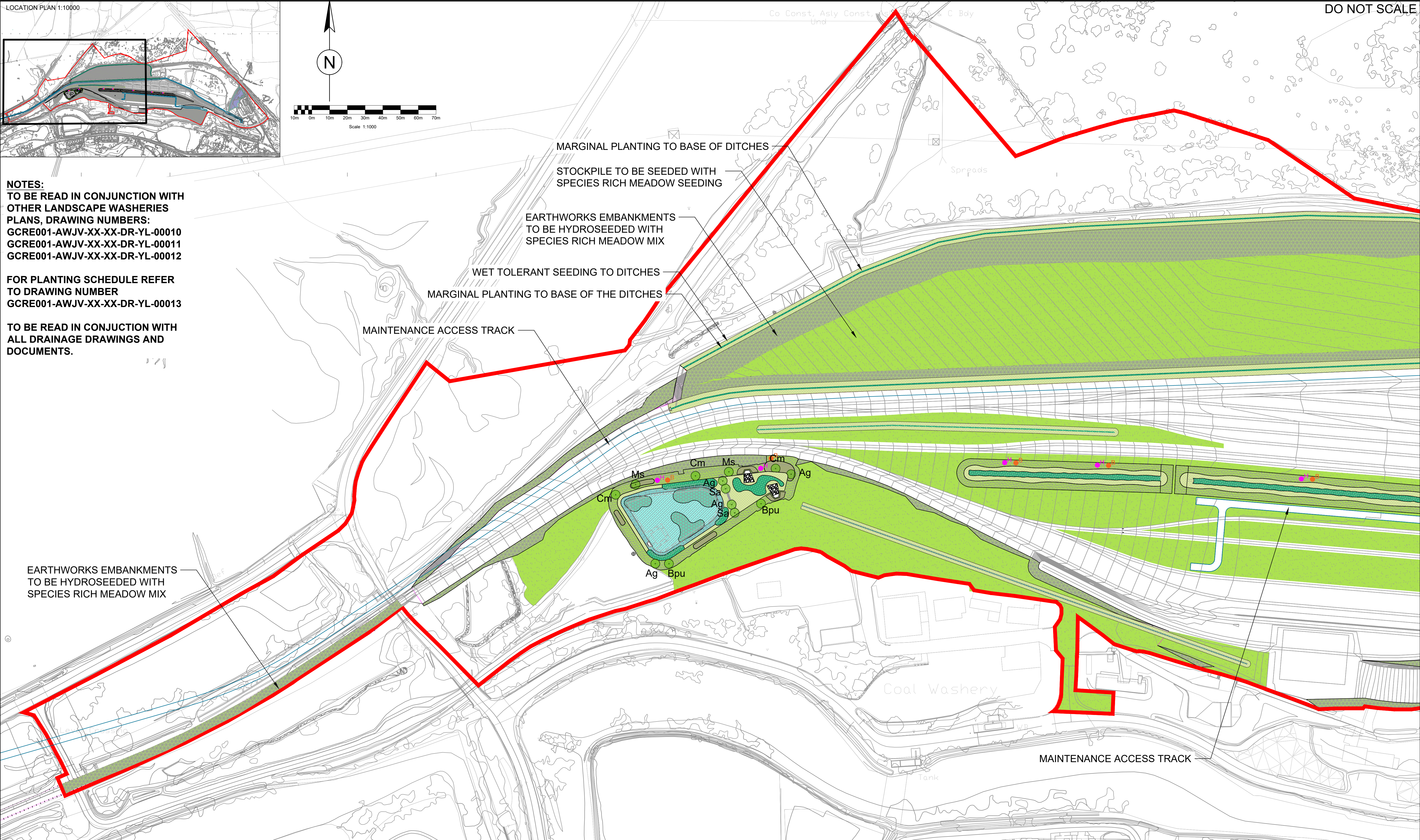
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NOTES:
TO BE READ IN CONJUNCTION WITH
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GCRE001-AWJV-XX-XX-DR-YL-00011
GCRE001-AWJV-XX-XX-DR-YL-00012

FOR PLANTING SCHEDULE REFER
TO DRAWING NUMBER
GCRE001-AWJV-XX-XX-DR-YL-00013

TO BE READ IN CONJUNCTION WITH
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KEY

	PROPOSED TREES		OXYGENATOR/FLOATING PLANTING		HYDROSEEDING TO EARTHWORKS EMBANKMENTS
	SCRUB PLANTING		SPECIES RICH MEADOW SEEDING		PROPOSED PLANTING OF BS-MARSHY GRASSLAND SPECIES
	MARGINAL PLANTING		WET MEADOW SEEDING		HIBERNACULUM - CONSTRUCTED FROM ROCKS, LOGS OR RUBBLE AND CAPPED IN SOIL TO ALLOW GRASS GROWTH, POSITIONED ON SOUTH FACING SLOPES.
	EMERGENT PLANTING		POND EDGE SEEDING		REFUGIA BRASH PILES, CONSTRUCTED FROM LOGS AND BRANCHES OVER 100MM DIA IN LAYERS

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION
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DECOMMISSIONING/DEMOLITION
N/A

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Rev.	Date	Description	By	Chk'd	App'd
001.1	24/05/24	FOR PLANNING	JS	DB	RL

Drawing Status: **WORK IN PROGRESS**

Suitability: **SO**

Project Title: **GLOBAL CENTRE OF RAIL EXCELLENCE**

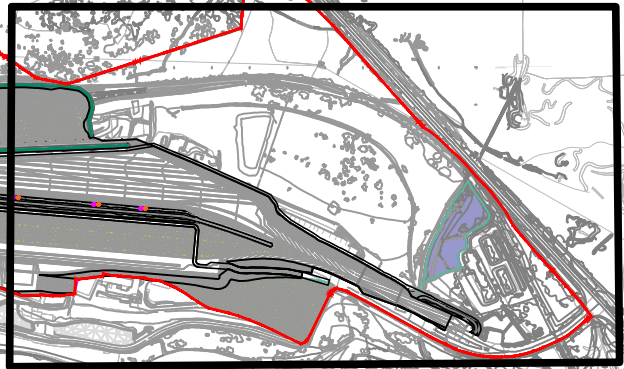
Drawing Title: **WASHERIES LANDSCAPE PLAN 1 OF 3**

Client: **GCRE**
Global Centre of Rail Excellence
Canolfan Fyd-Eang Rhagoriaeth Rheilffyrdd

Scale	1:1000	Drawn	JS	Checked	DB	Approved	DB	Authorised	RL	
Original Size	A1	Date	24/05/24	Date	24/05/24	Date	24/05/24	Date	24/05/24	
Drawing Number	GCRE001-AWJV-XX-XX-DR-YL-00010								Revision	P01

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Millimetres

LOCATION PLAN 1:10000



NOTE: 'ALIGNMENT OF THE EARTHWORKS BATTER IS TO BE AMENDED TO ENSURE NO IMPACT ON EXISTING WATERCOURSE' (REFER TO DRAINAGE DRAWINGS FOR FURTHER DETAILS)

STOCKPILE TO BE SEEDED WITH SPECIES RICH MEADOW SEEDING

MAINTENANCE ACCESS TRACK

WET TOLERANT SEEDING TO DITCHES

MARGINAL PLANTING TO BASE OF DITCHES

EARTHWORKS EMBANKMENTS TO BE HYDROSEEDED WITH SPECIES RICH MEADOW MIX

AREA OF PROPOSED THINNING OF WOODLAND AND PLANTING OF B5-MARSHY GRASSLAND SPECIES TO ENCOURAGE EXTENSION OF GRASSLAND HABITATS FROM SINC. AREA TO BE SIMILAR/LARGER IN SIZE TO THE AREA OF SINC TO BE LOST IN DEVELOPMENT

AREA OF SINC DISTURBED BY DEVELOPMENT

REMOVAL OF DEBRIS AND MARGINAL PLANTING AROUND WATERBODIES THINNING OF UNDERSTORY THROUGH REMOVAL OF SELF-SEEDS SAPLINGS

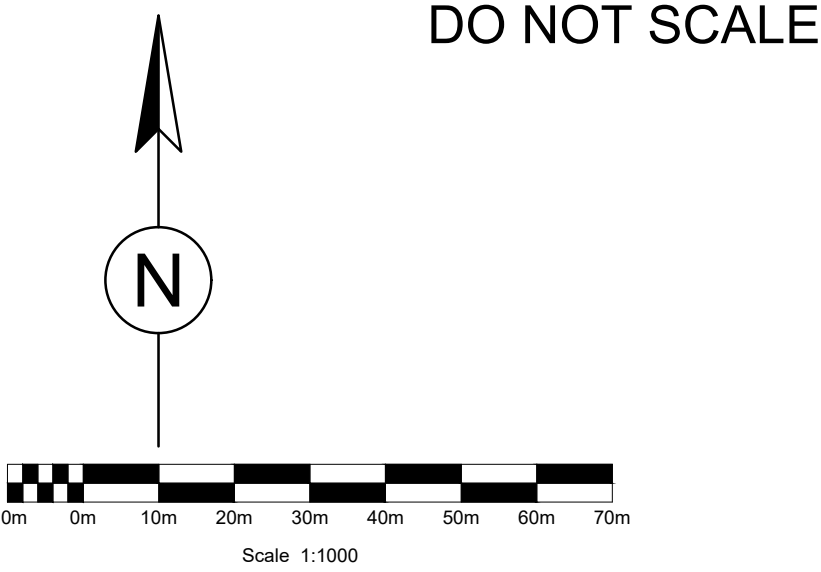
REMOVAL/THINNING OF SELF-SEEDS SAPLINGS TO PROVIDE MORE ROOM FOR TREES TO MATURE

MAINTENANCE ACCESS TRACK

NOTES:
TO BE READ IN CONJUNCTION WITH OTHER LANDSCAPE WASHERIES PLANS, DRAWING NUMBERS:
GCRE001-AWJV-XX-XX-DR-YL-00010
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KEY

	PROPOSED TREES		OXYGENATOR/FLOATING PLANTING		HYDROSEEDING TO EARTHWORKS EMBANKMENTS
	SCRUB PLANTING		SPECIES RICH MEADOW SEEDING		PROPOSED PLANTING OF B5-MARSHY GRASSLAND SPECIES
	MARGINAL PLANTING		WET MEADOW SEEDING		HIBERNACULUM - CONSTRUCTED FROM ROCKS, LOGS OR RUBBLE AND CAPPED IN SOIL TO ALLOW GRASS GROWTH. POSITIONED ON SOUTH FACING SLOPES.
	EMERGENT PLANTING		POND EDGE SEEDING		REFUGIA BRASH PILES, CONSTRUCTED FROM LOGS AND BRANCHES OVER 100MM DIA IN LAYERS

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

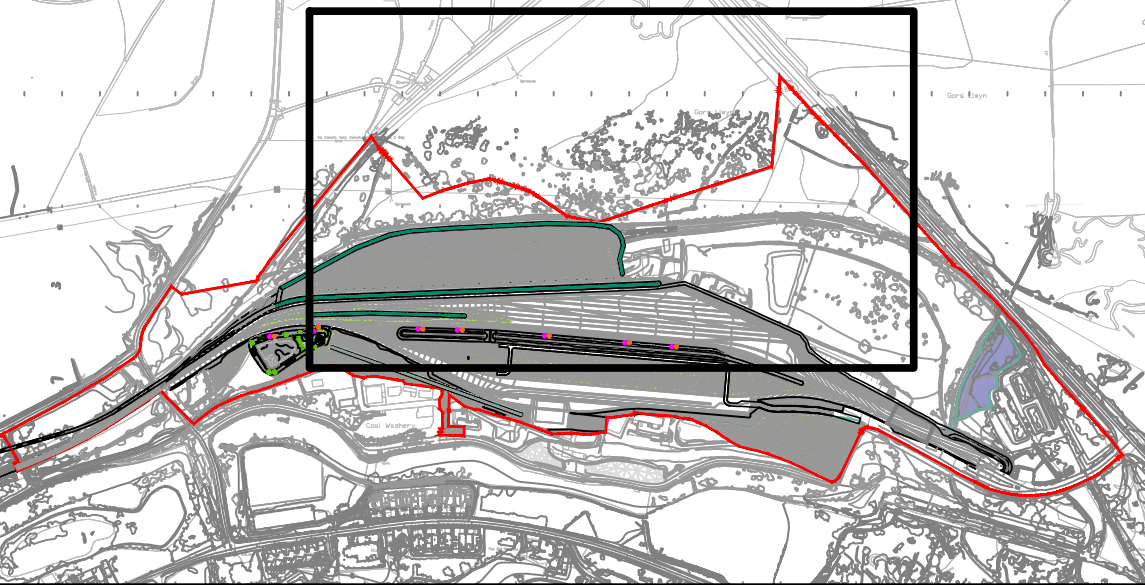
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MAINTENANCE/CLEANING				
N/A				
DECOMMISSIONING/DEMOLITION				
N/A				
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Rev.	Date	Description	By	Chk'd	App'd
P01	24/05/24	FOR PLANNING	JS	DB	RL

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GCRE				P01									

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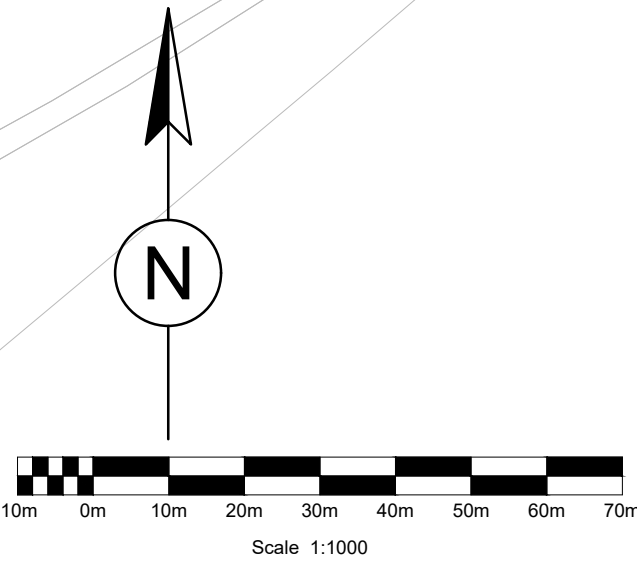
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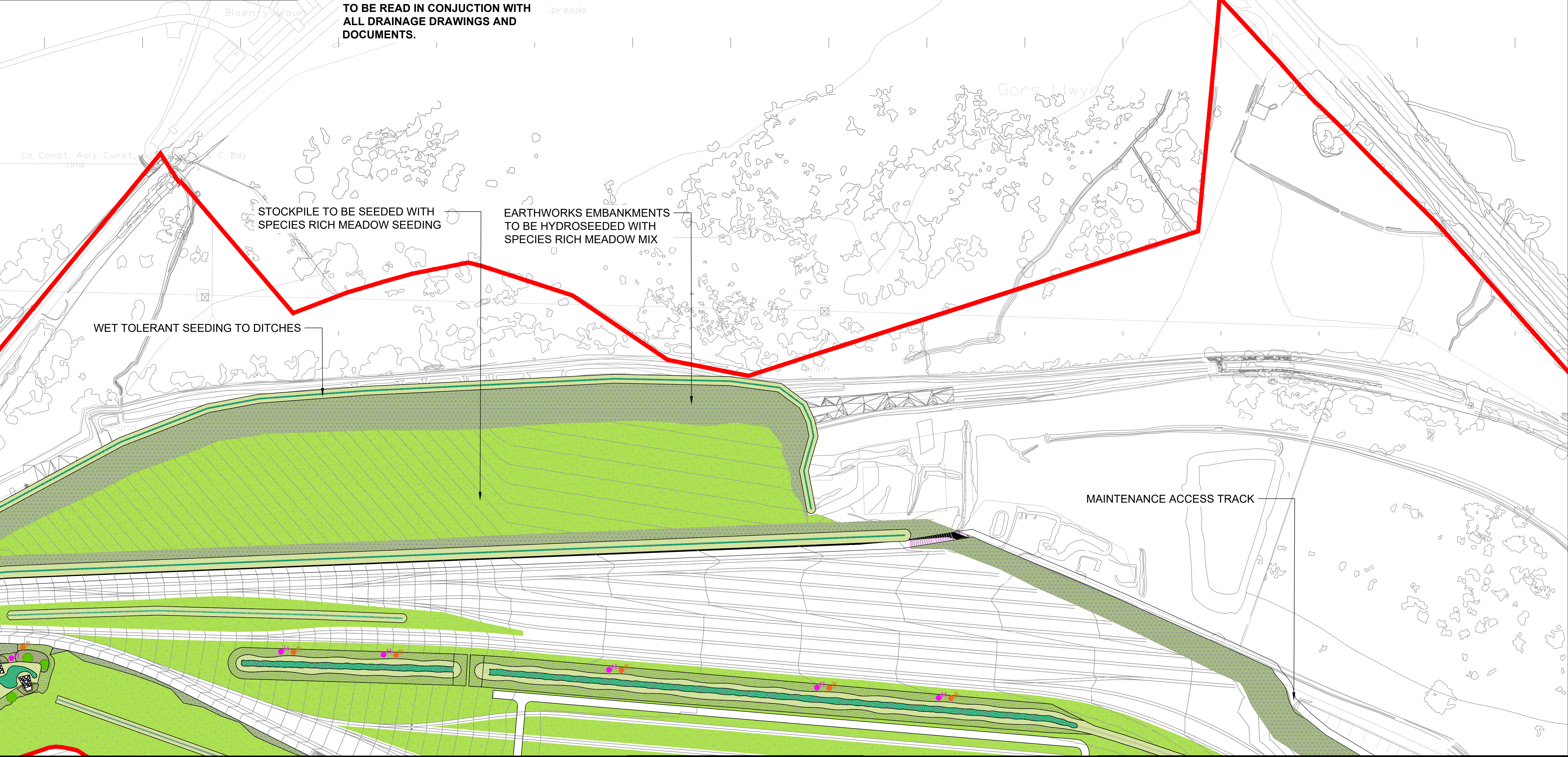
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PLANS, DRAWING NUMBERS:
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GCRE001-AWJV-XX-XX-DR-YL-00013

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DOCUMENTS.



DO NOT SCALE



KEY

	PROPOSED TREES		OXYGENATOR/FLOATING PLANTING		HYDROSEEDED TO EARTHWORKS EMBANKMENTS
	SCRUB PLANTING		SPECIES RICH MEADOW SEEDING		PROPOSED PLANTING OF B5-MARSHY GRASSLAND SPECIES
	MARGINAL PLANTING		WET MEADOW SEEDING		HIBERNACULUM - CONSTRUCTED FROM ROCKS, LOGS OR RUBBLE AND CAPPED IN SOIL TO ALLOW GRASS GROWTH. POSITIONED ON SOUTH FACING SLOPES.
	EMERGENT PLANTING		POND EDGE SEEDING		REFUGIA BRASH PILES, CONSTRUCTED FROM LOGS AND BRANCHES OVER 100MM DIA IN LAYERS

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION
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MAINTENANCE/CLEANING
N/A

DECOMMISSIONING/DEMOLITION
N/A

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Drawing Status		Suitability		Project Title		
WORK IN PROGRESS		SO		GLOBAL CENTRE OF RAIL EXCELLENCE		
		Client		Drawing Title		
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		Scale		Drawn	Checked	
				Original Size	Date	
Global Centre of Rail Excellence Canolfan Fyd-Eang Rhagoriaeth Rheilffyrdd		Date		Approved	Authorised	
				Date	Date	
Rev.		Date	Description	By	Chkd	App'd
P01		24/05/24	FOR PLANNING	JS	DB	RL
				JS	DB	RL

Drawing Number		Revision	
GCRE001-AWJV-XX-XX-DR-YL-00012		P01	

ISSUED: 24/05/24
DRAWN: 24/05/24
CHECKED: 24/05/24
APPROVED: 24/05/24
AUTHORISED: 24/05/24

Appendix G. Planning Policy Wales

G.1 Planning Policy Wales, February 2024²⁹

Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales. PPW, the TANs³⁰, ³¹and policy clarification letters³² comprise national planning policy.

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, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation and resultant duties such as the Socio-economic Duty. A well-functioning planning system is fundamental for sustainable development and achieving sustainable places.

PPW promotes action at all levels of the planning process which is conducive to maximising its contribution to the well-being of Wales and its communities. It encourages a wider, sustainable and problem-solving outlook which focuses on integrating and addressing multiple issues rather than on an approach which is fragmented, un-coordinated and deals with issues in isolation. It provides an opportunity to remove any actual or perceived problems in current approaches and stimulate and support innovative and creative ideas as well as high standards of evidence and assessment to underpin the preparation of development plans and strategies and individual proposals. Monitoring and learning from development outcomes so as to drive sustainable improvements in planning practice is also important.

The Well-being of Future Generations Act places a duty on public bodies to carry out sustainable development. This is not a new concept for the planning system as the principles of sustainable development have been at the heart of planning policy since PPW was first published in 2002. However, the concept has been expanded under the Well-being Act and it requires an improvement in the delivery of all four aspects of well-being: social, economic, environmental and cultural.

Biodiversity and Planning

The Environment (Wales) Act 2016 introduced an enhanced biodiversity and resilience of ecosystems duty (Section 6 Duty). This duty applies to public authorities in the exercise of their functions in relation to Wales and will help maximise contributions to achieving the well-being goals. Section 7 of the Act requires Welsh Ministers to publish and maintain lists of species and types of habitats that are regarded as of 'principal importance' for the purpose of maintaining and enhancing that biodiversity. The Nature Recovery Action Plan supports this legislative requirement to reverse the decline in biodiversity, address the underlying causes of biodiversity loss by putting nature at the heart of decision-making and increasing the resilience of ecosystems by taking specific action focused around the 6 objectives for habitats and species.

The planning system has a key role to play in helping to reverse the decline in biodiversity and increase the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement. Recognising that development needs to take place and some biodiversity may be impacted, the planning system should ensure that overall there is a net benefit for biodiversity and ecosystem resilience,

²⁹ https://www.gov.wales/sites/default/files/publications/2024-02/planning-policy-wales-edition-12_1.pdf

³⁰ www.gov.wales/technical-advice-notes

³¹ www.gov.wales/minerals-technical-advice-notes-mtans

³² https://gov.wales/publications?field_policy_areas%5B57%5D=57

resulting in enhanced well-being. Addressing the consequences of climate change should be a central part of any measures to protect, maintain and enhance biodiversity and the resilience of ecosystems. Information contained in the State of Natural Resources Report 2029 (SoNaRR)³³, Area Statements, Local Nature Plans, Local Nature Recovery Action Plans, Local Biodiversity Action Plans and held by Local Environmental Record Centres should be taken into account. Development plan strategies, policies and development proposals must consider the need to:

- support the maintenance and enhancement of biodiversity and the resilience of ecosystems;
- ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats, including the most recent targets set out in the 2022 UN Global Biodiversity Framework;
- ensure statutorily and non-statutorily designated sites and habitats are properly protected and managed and their role at the heart of resilient ecological networks is safeguarded; 124 Resilient ecological networks are vital for nature recovery and are networks of habitat in good ecological Condition linking protected sites and other biodiversity hotspots across the wider landscape, providing maximum benefit for biodiversity and well-being (Future Wales, Policy 9).
- safeguard protected species and species of principal importance and existing biodiversity assets from direct, indirect or cumulative adverse impacts that affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water, air and soil, including peat; and
- secure the maintenance and enhancement of ecosystem resilience and resilient ecological networks by improving diversity, extent, condition, and connectivity.

It is important that biodiversity and ecosystem resilience considerations are taken into account at an early stage in both development plan preparation and when proposing or considering development proposals. Since these considerations are not confined by administrative boundaries, nor by sectoral activity or regulatory regimes, they must be addressed strategically through consultation and collaboration with adjoining planning authorities and other bodies such as NRW and the third sector. All reasonable steps must be taken to maintain and enhance biodiversity and promote the resilience of ecosystems and these should be balanced with the wider economic and social needs of business and local communities. Where adverse effects on biodiversity and ecosystem resilience cannot be avoided, minimised or mitigated/restored, and as a last resort compensated for, it will be necessary to refuse planning permission. With this in mind it is vital to ensure all mitigation, compensation and enhancement measures are considered and acted upon within the continuation of this project.

G.1.1 Net Benefits for Biodiversity

G.1.1.1 Biodiversity and Ecological Networks

The planning system should ensure that overall, there is a net benefit for biodiversity and ecosystem resilience, resulting in 'enhanced wellbeing'. 'Addressing the consequences of climate change should be a central part of any measures to protect, maintain and enhance biodiversity and the resilience of ecosystems.'

G.1.1.2 Biodiversity and Resilience of Ecosystems (Section 6 Duty) – Net Benefit for Biodiversity

'The Environment (Wales) Act 2016 Section 6 Duty means public authorities must seek to maintain and enhance biodiversity and resilience of ecosystems in the exercise of their functions in Wales'. This means development should not cause any significant loss of habitats or populations of species (not including non-native invasive species), locally or nationally, must work alongside nature, and it must provide a net benefit for biodiversity and improve, or enable the

³³ [Natural Resources Wales / SoNaRR interim report 2019: Progress on SoNaRR 2016 evidence gaps](#)

improvement, of the resilience of ecosystems. 'A net benefit for biodiversity is the concept that development should leave biodiversity and the resilience of ecosystems in a significantly better state than before'.

There is a step-wise approach, outlined below, aimed to help guide decision makers in securing a net benefit for biodiversity. The responsibility is on developers to bring forward proposals in a way which will achieve a net benefit for biodiversity. Owners can demonstrate how they have used the step wise approach. The broad framework for implementing the Section 6 Duty, securing a net benefit for biodiversity, and building resilience through the planning system includes addressing all of the following attributes, known as the DECCA Framework:

- Diversity between and within ecosystems;
- Extent or scale of ecosystems;
- Condition of ecosystems including their structure and functioning;
- Connections between and within ecosystems; and
- Adaptability of ecosystems including their ability to adapt to, resist and recover from a range of pressures likely to be placed on them through climate change for example.

G.1.1.3 Maintaining and Enhancing Biodiversity

'Planning authorities must follow a step-wise approach to maintain and enhance biodiversity, build resilient ecological networks, and deliver net benefits for biodiversity by ensuring that any adverse environmental effects are firstly avoided, then minimised, mitigated, and as a last resort compensated for. Enhancement must be secured by delivering a biodiversity benefit primarily on site or immediately adjacent to the site, over and above that required to mitigate or compensate for any negative impact'.

Having worked iteratively, through the stages of the step-wise approach below and providing evidence in the Green Infrastructure Statement that the step-wise approach has been followed, a 'scheme of enhancements must be provided to ensure a net benefit for biodiversity', and unless other significant material considerations indicate otherwise, it will be necessary to refuse permission.

Improving ecosystem resilience, particularly improving connectivity to the immediate surroundings, would be a key contribution to on-site avoidance, minimisation, and mitigation strategies and enhancement. How a development would improve the attributes of resilience should be demonstrated as far as this is reasonably practical.

G.1.1.4 The Step Wise Approach

Step 1: The priority is to avoid damage to biodiversity. Any reasonable alternative sites (including alternative siting and design options) that would result in less harm, no harm, or benefit, need to have been fully considered.

Proposals in statutory designated sites are, as a matter of principle unacceptable, and therefore must be excluded from site searches undertaken by developers. This principle also extends to those sites containing protected species and habitats which are irreplaceable. It will be wholly exceptional for development to be justifiable in such instances.

Step 2: Developers, in discussion with planning authorities must seek to minimise the initial impact on biodiversity and ecosystems by maintaining the largest possible area of existing habitat supporting biodiversity and functioning ecosystems. Retained habitats and features must continue to be well connected to adjacent habitats to provide connectivity.

Step 3: Where, after measures to minimise impact, biodiversity and ecosystems could still be damaged, or lost through residual impacts, the proposed development should mitigate that damage. Mitigation measures must be put in place to limit the negative effects of a development.

Effective mitigation or restoration measures should be incorporated into the design proposal following the consideration of steps one and two above. Mitigation or restoration measures must be designed to address the specific negative effects by repairing damaged habitats and disturbed species.

Step 4: When all the steps above have been exhausted, and where modifications, alternative sites, conditions or obligations are not sufficient to secure biodiversity outcomes further onsite/ immediately proximate, and as a last resort off-site compensation for unavoidable damage must be provided. This must be of significant magnitude to fully compensate for any loss.

The onus is on applicants to address the following:

- Off-site compensation should be informed by a full ecological assessment to establish a formal baseline before habitat creation or restoration starts and secured far enough in advance before the loss of biodiversity on site.
- The green infrastructure assessment should be used to identify suitable locations for securing off-site compensation.
- Where compensation for specific species is being sought, the focus should be on maintaining or enhancing the population of the species within its natural range.
- Any proposed compensation should be place based, take account of the Section 6 Duty (Biodiversity and Resilience of Ecosystems Duty), the DECCA framework and appropriate ecological advice.

Step 5: Each stage of the step-wise approach must be accompanied by a long term management plan of agreed and appropriate avoidance, minimisation, mitigation/restoration and compensation measures alongside the agreed enhancement measure. The management plan must set out how a net benefit for biodiversity will be achieved within as short a time as possible and be locally responsive and relevant to local circumstances.

Step 6: Finally, where the adverse effect on biodiversity and ecosystem resilience clearly outweighs other material considerations, the development should be refused.

Key factors which will affect the implementation of the above step-wise approach:

- Pre-application surveys, research and data searches by developers will be necessary to establish the baseline state of biodiversity and ecosystem resilience on site;
- A net benefit for biodiversity must be achieved for sites cleared prior to development. Habitat status prior to clearance can be established through evidence remaining on site and desk-based assessments. Sites will be presumed to have had good habitat status in the absence of any evidence to the contrary.
- All development must deliver a net benefit for biodiversity and ecosystem resilience from the baseline state.

G.1.1.5 Designated Sites

PPW is clear that development within statutory designated sites, or those not within but likely to damage, which is not necessary for the management of the site, must be avoided. However, development may be acceptable in wholly exceptional circumstances (see Section 6.4.27 in PPW). Development within non-statutory sites must secure the written opinion from the local authority ecologist.

G.1.1.6 Protected and Priority Habitats and Species

'Section 7' of the Environment (Wales) Act 2016 requires Welsh Ministers to publish and maintain lists of species and types of habitats that are regarded as of 'principal importance'². In fulfilling their duty to maintain and enhance biodiversity, planning authorities and developers must have regard to Section 7 habitats and species when following the step-wise approach.

The presence of a species protected under European or UK legislation, or a Section 7 species is a material consideration when a planning authority is considering a development proposal which would be likely to result in disturbance or harm to a species or its habitat and to ensure that the range and population of the species is sustained.

G.1.1.7 Trees, Woodlands and Hedgerows

- **Retention:**

Where trees, woodland, and hedgerows are present within a development site, their retention, protection, and integration should be identified within planning applications, and where capable of making a significant contribution to the area, these trees should be retained and protected.

- **Replacement Planting:**

Permanent removal of trees, woodland, and hedgerows will only be permitted where it would achieve significant and clearly defined public benefits. Where individual or groups of trees and hedgerows are removed as part of a proposed scheme, planning authorities must first follow the step-wise approach. Replacement planting shall be at a ratio equivalent to the quality, environmental, and ecological importance of the tree(s) lost, and this must be preferably onsite, or immediately adjacent to the site, and at a minimum ratio of at least 3 trees of a similar type and compensatory size planted for every 1 lost. Where a woodland or a shelterbelt area is lost as part of a proposed scheme, the compensation planting must be at a scale, design and species mix reflective of that area lost. In such circumstances, the planting rate must be at a minimum of 1600 trees per hectare for broadleaves, and 2500 trees per hectare for conifers.

- **Protection:**

Ancient woodland, semi-natural woodlands, individual ancient, veteran and heritage trees and ancient hedgerows are to be afforded protection from development which would result in their loss or deterioration unless very exceptionally there are significant and clearly defined public benefits; this protection must prevent potentially damaging operations and their unnecessary loss.

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