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**ADDENDUM TO
SHADOW HABITAT REGULATIONS ASSESSMENT**

**NORTH SITE RESERVOIR
COED DARCY
LLANDARCY
NEATH**

Prepared for: Revantage

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1. INTRODUCTION

Background

- 1.1 An existing reservoir, the North Site Reservoir (NSR) located to the north of Coed Darcy is to be decommissioned, due to no longer being required. The NSR was created as a side-product of the nearby Llandarcy Oil refinery, which is now no longer in operation, hence the reservoir being no longer required. Water in the reservoir is contaminated. An application has been put forward to decommission the reservoir and create a wetland habitat with a stream running through it in its stead, as the restoration to historic condition was included as part of the long-term lease agreement.
- 1.2 SK Environmental Solutions Limited was commissioned by Revantage to produce an addendum to an existing “Information to enable a Habitats Regulations Assessment” document. The original document screened out invasive species and the Local Planning Authority has requested that this be screened in.
- 1.3 The existing “Information to Enable a Habitats Regulations Assessment” (iHRA) was produced by Ecology Solutions in 2023 and has the reference 9011M.HRA.vf1. This present document is an addendum to the existing iHRA and is to be read in conjunction with it.

Relevant Legislation

- 1.4 Relevant legislation is detailed in Section 2 of the existing iHRA and is still current as per the writing of this addendum.
- 1.5 As the proposed works are not considered necessary to the management of the European sites for nature conservation purposes yet have the potential to have a detrimental impact upon the special nature conservation interests of European designated sites, an assessment of the proposed works is required under the terms of the above legislation.
- 1.6 European designated sites (the ‘Natura 2000 Network’) are considered to be of high importance for the conservation of species and natural habitats within Europe. The purpose of undertaking a Habitats Regulation Assessment (HRA) is to ensure that the protection of the integrity of European protected sites forms an integral part of the planning process at both a regional and local level.
- 1.7 The network of European designated sites includes:
- Special Protection Areas (SPAs);
 - Special Areas of Conservation (SACs); and
 - Ramsar sites.

- 1.8 Government guidance advises that potential SPAs (pSPA), candidate SACs (cSAC) and potential Ramsar (pRamsar) sites are also included in HRAs.
- 1.9 Habitats Regulation Assessments comprise a number of discrete stages, which include:
- Stage 1 - Screening
 - Stage 2 – Appropriate Assessment
 - Stage 3 – Assessment of Alternatives
 - Stage 4 – Assessment where no alternatives are available
- 1.10 In 2018, a change to case law as a result of recent decision by the Court of Justice of the European Union (“CJEU”) *People Over Wind and Sweetman v Coillte Teoranta* (C-323/17) means that measures intended to avoid or reduce the harmful effects of a proposed project on a European site may no longer be taken into account by competent authorities during Habitat Regulations Assessment “Stage 1 - Screening”, when judging whether a proposed plan or project is likely to have a significant effect on the integrity of a European designated site.
- 1.11 In summary, this now means that where a potentially harmful impact on a European designated site has been identified and mitigation measures have been put forward, which are not an integral part of the proposed works, these mitigation measures can only be considered as part of a formal “Stage 2 - Appropriate Assessment”.
- 1.12 With regard to the proposal being considered within this report, potentially harmful effects arising from the proposed works have been identified and mitigation measures have been proposed. This Assessment therefore constitutes Stage 2 – Appropriate Assessment.

Proposed Works to be Assessed

- 1.13 In order to deconstruct the reservoir, the main engineering related task will be to remove the existing dam, which forms the western bank of the reservoir. Decontamination of the area will also be necessary as part of the works.
- 1.14 Following the deconstruction of the reservoir, it will be necessary to restore the habitats previously present on site, which will involve the creation of a watercourse that meanders across the site.

2. IDENTIFICATION OF RELEVANT EUROPEAN DESIGNATED SITES

- 2.1 Relevant European Designated Sites have been identified in the iHRA and these remain the same as per the original assessment. The Crymlyn Bog SSSI, SAC and Ramsar site is within close proximity to the existing reservoir and hydrologically connected to it.

3. PATHWAYS OF SIGNIFICANT EFFECTS

- 3.1 Through careful consideration of the proposed works and the operations associated with it, a number of factors that have been identified as having the potential to have a deleterious impact upon the qualifying features of Crymlyn Bog. Note that the existing iHRA screened out any effects arising during construction. Feedback from the Local Planning Authority asked for invasive species to be screened into the assessment, which is carried out below. The other pathways assessed are post-construction long-term impacts.

Hydrological impacts/water levels

- 3.2 This issue has been discussed in the original document and was assessed as not being significant other than during extreme rainfall events.

Water quality

- 3.3 This issue has been discussed in the original document and was assessed as requiring mitigation and was therefore taken forward to appropriate assessment.

Invasive species

- 3.4 Invasive species were screened out during the initial assessment. Survey work in November 2024 identified Japanese knotweed *Fallopia japonica* and Rhododendron *Rhododendron ponticum* to be present to the north of the reservoir. Japanese knotweed was also found present on site at the south-east corner of the reservoir in 2021, these two stands were not found present in 2024. Both species were assessed to be entering the site from land to the north, which is outside of the control of the landowner.
- 3.5 Invasive species can also be spread through equipment and vehicles coming to site from other sites where such species and pathogens are present, if not properly disinfected.
- 3.6 While Rhododendron is pervasive and hard to eradicate, it does not spread very easily. Spread from its current location to Crymlyn Bog is therefore unlikely as part of the works. Japanese knotweed on the other hand spreads very easily and on the basis of small amounts of vegetative material, hence there being a risk of the plant being introduced to Crymlyn Bog. The issue arises both as part of the works and as a long-term risk. Mitigation measures will be necessary and therefore this issue is screened in.

4. INITIAL SCREENING OPINION WITHOUT MITIGATION CONSIDERED

Table 1 below highlights the potential pathways from which a deleterious impact has the potential to occur on the Crymlyn Bog SAC and Ramsar site as a result of the proposed works and whether mitigation is considered to be required. N.B. Only qualifying features deemed likely / possible to be present within or adjacent to the proposed working area, through a review undertaken above, have been considered below.

Table 1 – Potential Harmful Factor				
Qualifying Feature	Potential Factors	Potential for Effect	Potential Impact on SAC Qualifying Feature	Mitigation Measures Required (?)
Transition mire and quaking Bogs	Spread of invasive species / pathogens	Non-sterile vehicles or equipment could spread invasive species / pathogens from one watercourse to another.	Addition / spread of invasive species / pathogens within the watercourse will have a deleterious impact upon the watercourse itself, adjacent terrestrial habitats and the species utilising them.	Mitigation required
Calcareous fens				
Alluvial forests				
Transition mire and quaking Bogs	Spread of invasive species / pathogens	Restoration of hydrological link leads to Japanese knotweed being washed into the Bog and establishing there. .	Addition / spread of invasive species / pathogens within the watercourse will have a deleterious impact upon the watercourse itself, adjacent terrestrial habitats and the species utilising them.	Mitigation required
Calcareous fens				
Alluvial forests				

5. ASSESSMENT OF POTENTIAL IMPACTS WITH PROPOSED MITIGATION MEASURES INCORPORATED

- 5.1 Table 1 above identifies the presence of invasive species requiring mitigation, this poses a risk to the SAC both during the works and in perpetuity. In order to avoid the potential impacts, the following measures are proposed **in addition** to those stipulated in the existing documentation.

Impacts from Invasive Species/Pathogens During Construction

- 5.2 Locations of invasive species must be fenced off prior to any works commencing and clearly marked as no-go zones, due to the presence of invasive species. No access, storage of materials or other activity must be carried out within this area at any time during the works.
- 5.3 A single clump of Japanese knotweed was identified along the water's edge and this must be removed prior to works commencing. Adequate treatment by an appropriately experienced contractor must be carried out to ensure the eradication is carried out as per industry standard. Material must not be removed from site unless it is to a licenced landfill site that deals with invasive species.
- 5.4 All equipment including dry suits / boots / waders etc., will be thoroughly cleaned and allowed to dry for 24-hours prior to arriving on site to ensure no invasive species or pathogens are accidentally introduced to the site and surrounding areas. The same cleaning and inspection will also be undertaken prior to equipment leaving the site.
- 5.5 All equipment must be inspected when it first arrives on site to ensure it is in a sufficient state of cleanliness. Any new equipment that arrives at the site following the commencement of works will also follow the above procedure.
- 5.6 It is considered that by following the mitigation outlined above **no adverse effect on site integrity** is anticipated as a result of the proposed work, with regard to biosecurity.

Impacts from Invasive Species Post Construction

- 5.7 As invasive species are entering the reservoir site from the land to the north which is outside of the control of the site owner, it will not be possible to successfully eradicate all invasive species from site and permanently keep the site invasive species free. An annual inspection must therefore be carried out and if encroachment of the invasive plants to within the current edge of the woodland belt is found, an eradication must be carried out.

5.8 As above, all equipment must be inspected upon arrival and prior to departure from site, to ensure it is in a sufficient state of cleanliness. Any new equipment that arrives at the site following the commencement of works will also follow the above procedure.

5.9 It is considered that by following the mitigation outlined above **no adverse effect on site integrity** is anticipated as a result of the proposed work, with regard to biosecurity.

Adverse Weather

5.10 Works will be timed to coincide with a period of low flow, to ensure easiest access to the working locations. Regular monitoring of weather patterns will be undertaken to ensure that the works are undertaken during suitable conditions.

In-Combination Effects

5.11 It is a requirement of HRA screening assessments to take account of any possible 'in-combination' (cumulative) effects that could have deleterious impact upon any European designated site, that could occur as a result of other developments nearby. There is the potential for a low number of minor impacts to occur simultaneously, which would not be considered likely to have a negative effect when assessed in isolation, but which could potentially combine to cause a more significant effect.

5.12 At the time of writing this document, two further applications within the vicinity of Crymlyn Bog are being considered by the Local Authority. The first is an outline application for residential housing on land immediately to the south of the reservoir and running along the eastern edge of Crymlyn Bog. A separate shadow HRA has been provided for this project. The second is an application for the remediation of the tip area of the former Llandarcy oil refinery. Neither of these projects have watercourses present within their boundaries and they are not hydrologically connected to the site. It is therefore considered that no cumulative impacts arise from these three projects.

6. CONCLUSIONS AND RECOMMENDATIONS

- 6.1 As a result of the initial screening process for the HRA, it has been established that the Crymlyn Bog SAC has the potential to be affected by the proposed works, without mitigation. This report only concerns itself with the presence of invasive species, all other aspects have been covered by the initial iHRA. Both of these documents must be reviewed once a detailed Construction Environmental Management Plan (CEMP) for the site has been produced.
- 6.2 Following a review of the above it has been concluded that the proposed works are not considered likely to have a deleterious impact upon the integrity of the qualifying features of the SAC, provided the mitigation measures detailed within the original iHRA and this addendum are implemented.
- 6.3 No in-combination effects are anticipated as a result of the proposals.
- 6.4 This review concludes that if the mitigation measures set out within this document are adhered to then ***there will be no adverse effect on site integrity of the Crymlyn Bog SAC*** as pertains to invasive species.

7. REFERENCES

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