

Reptile Method Statement

Ynysarwed Mine Water Treatment Scheme

The Coal Authority

Project number: 60624809

April 2021

Quality information

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Revision History

Revision	Revision date	Details	Authorized	Name	Position
V1	14/04/2021	Updated the report with revised Proposed Development description & Site Boundary	UJ	UJ	Principal Ecologist

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1. Executive Summary

AECOM was instructed by The Coal Authority to prepare a Reptile Method Statement for the land at Ynysarwed, hereafter referred to as 'the Site'. The Site is in two parts, a linear built area and areas of woodland in the north-east and a reedbed with surrounding woodland in the south-west. A central grid reference between the two parts is SN 80638 01442 and the boundary of the Site is shown on Figure 1. The Site is a mine water treatment facility and includes an area of woodland adjacent to the B4242 and a reedbed adjacent to the River Neath.

The development proposals are for the replacement of the existing mine water treatment facility and comprises construction of a new building to house a new active treatment scheme, and installation of the new treatment plant; modifications to elements of the existing treatment scheme to allow continuous treatment during construction, and re-use of certain elements of the existing scheme; decommissioning and removal of the existing plant within the existing building, the building will be retained; works around the area of the existing active treatment site to improve landscape, accessibility and water management; and, works to the existing reed beds to improve accessibility and water management. This will include construction of new pipework around the reed beds and improvements to the existing access track (infilling of potholes). Tree removal from the Neath Canal Site of Importance for Nature Conservation (SINC) is required to facilitate construction (shown as Category C trees on Drawing Number MWTS-AEC-YN-XX-DR-C-2009). Further vegetation removal works may be required to facilitate a pipeline along the eastern and southern edges of the reedbed. The Proposed Development will be undertaken via permitted development and is due to commence in March/April 2022.

A Preliminary Ecological Appraisal (PEA) undertaken by RSK (2019) confirmed suitable habitat for common reptiles on Site, namely grass snake (*Natrix helvetica*). Two grass snake records were returned within 100 m of the Site and the PEA recommended that reptile surveys should be undertaken. However, since the original PEA, the development footprint has reduced significantly. Due to the limited amount of reptile habitat now within the development footprint, and isolation from other areas of suitable reptile habitat, AECOM considered that only low numbers of common reptiles would be present and that a Reptile Method Statement would be sufficient to cover the proposed development works.

This Reptile Method Statement details precautionary methods to follow to minimise any impacts upon reptiles, focusing on the use of habitat manipulation to encourage reptiles safely out of the development footprint and into retained habitats adjacent to the site.

The Executive Summary is not a substitute for the full report. Refer to the full text for further detail.

2. Introduction

2.1 Introduction

AECOM was instructed by The Coal Authority to prepare a Reptile Method Statement for the land at Ynysarwed, hereafter referred to as 'the Site'. The Site is in two parts, a linear built area and areas of woodland in the north-east and a reedbed with surrounding woodland in the south-west. A central grid reference between the two parts is SN 80638 01442 and the boundary of the Site is shown on Figure 1.

The purpose of this document is to set out the proposed method statement with regards to reptiles to facilitate vegetation removal at the Site and avoid impacts on reptiles within the Site.

This assessment follows a Preliminary Ecological Appraisal completed by RSK in 2019 (RSK, 2019), which recommended reptile surveys at the Site due to the presence of suitable habitat (woodland, reedbeds and rough grassland) for common species of reptile, including grass snakes. An Ecological Constraints and Opportunities Report was completed in April 2021 (AECOM, 2021), which concluded impacts to reptiles could be managed through a Reptile Mitigation Strategy, as detailed within this report.

2.2 Site Location and Description

The total area of the Site is approximately 4 ha. The northern area of the Site is located either side of the B4242 and adjacent to the Neath Canal. The reedbed is between the A465 and River Neath to the south (see Figure 1).

The Site currently includes six buildings (including temporary structures) used as a mine water treatment facility. There is also an area of woodland adjacent to the B4242 and a reedbed of approximately 1.9 ha with surrounding woodland within the Site boundary. The Neath Canal runs through the north-east section of the Site.

2.3 Proposed Development

The development proposals (hereafter referred to as the 'Proposed Development') are for the replacement of the existing mine water treatment facility and comprises the following principal operations:

- Construction of a new building to house a new active treatment scheme, and installation of the new treatment plant;
- Modifications to elements of the existing treatment scheme to allow continuous treatment during construction, and re-use of certain elements of the existing scheme;
- Decommissioning and removal of the existing plant within the existing building. The building will be retained;
- Works around the area of the existing active treatment site to improve landscape, accessibility and water management. This will include changes to surfaces and path levels and new soft landscape areas; and,
- Works to the existing reed beds to improve accessibility and water management. This will include construction of new pipework around the reed beds and improvements to the existing access track (infilling of potholes).

The access track improvement works are not subject to planning as they are limited to minor improvement works (pothole infilling) to aid access; however, for completeness, this scope of works been included the ecology reports and Ecological Opportunities and Constraints Report.

It is uncertain whether trees with limbs overhanging the B4242 may require felling or limb removal, to allow for construction traffic and machinery. Tree removal from the Neath Canal Site of Importance for Nature Conservation (SINC) is required to facilitate construction (shown as Category C trees on Drawing Number MWTS-AEC-YN-XX-DR-C-2009). Further vegetation removal works may be required to facilitate a pipeline along the eastern and southern edges of the reedbed, which may impact upon the reedbed edges and areas of grassland verge adjacent to the public footpath and vehicular access. There is also potential for the reedbed to undergo works to improve accessibility, treatment capacity and water management, but plans are not confirmed at the time of writing and it is assumed for the purposes of this report that no major de-vegetation or de-sludging works are being undertaken within the reedbed.

The Proposed Development will be undertaken via permitted development and is due to commence in March/April 2022.

2.4 Baseline Data

No reptile surveys have been undertaken for this Site. A Preliminary Ecological Appraisal (including a desk study) undertaken by RSK (2019) confirmed suitable habitat for common reptiles on Site, in particular grass snake (*Natrix helvetica*) within the reedbed. RSK (2019) also identified areas of rough grassland and wet ditches suitable for supporting grass snake that are now outside of the Site boundary. RSK (2019) identified suitable habitat for common reptiles within the longer grassland in the arable fields which are now outside of the Site boundary. Two grass snake records were returned from the desk study within 100 m of the Site. No other reptile records were returned within 1 km of the Site.

AECOM identified suitable habitat for slow-worm (*Anguils fragilis*) and viviparous lizard (*Zootoca vivipara*) along the grassland verges of the access track and canal footpath and the woodland habitats within the Site as offering potential as refugia for common reptiles.

Since the PEA, the development footprint has been greatly reduced. Suitable reptile habitat is now limited to the grassland verges of the access track and canal footpath, woodland adjacent to the south of the B4242 and reedbeds with surrounding woodland (see Figure 2).

Site photographs in Appendix A show examples of the habitats on Site suitable for supporting reptiles.

2.5 Legislation

All widespread species of reptile, including adder (*Vipera berus*), grass snake, viviparous lizard (*Zootoca vivipara*) and slow worm, receive legal protection through their inclusion on Schedule 5 (Sections 9(1) and 9(5)) of the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally or recklessly kill or injure a reptile; however, unlike European protected reptile species, sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*), protection does not extend to their habitats.

All reptiles are also listed as 'Species of Principal Importance for Conservation in England' under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 of the same Act requires that local and regional authorities have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Given the geographic location and nature of the habitats present, it is highly unlikely that sand lizard or smooth snake would occur within or adjacent to the Site. As such, neither species are considered further in this report.

This is a brief summary of the legislation. When dealing with individual cases, the client is advised to consult the full texts of the relevant legislation and obtain further legal advice.

2.6 Quality Assurance

This report was undertaken in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, quality, environmental and Health and Safety management. All staff members are committed to maintaining our certification to the international standards BS EN ISO 9001:2015 and 14001:2015 and BS ISO 45001 2018. All AECOM Ecologists who worked on this project are members of (at the appropriate level) the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct (CIEEM, 2019) when undertaking ecological work.

3. Method Statement

3.1 Rationale

The PEA (RSK, 2019) initially recommended that reptiles surveys should be undertaken at the Site due to the availability of suitable reptile habitat within the rough grassland, arable and reedbed, particularly for grass snakes. However, since the production of the PEA, the Proposed Development footprint has reduced considerably (see Figure 2). As such, suitable habitat for reptiles is limited to the reedbed and woodland adjacent to the south of the B4242 along with small areas of species poor grassland adjacent to the existing vehicular access track and public footpath adjacent to the canal. The north of the Site is primarily hardstanding and built structures, both of which offer negligible suitability for reptiles. The woodland to the north of the B4242 does not include open areas and is not linked to water and as such is unlikely to support reptiles.

Both the reedbed and woodland are sub-optimal for grass snake and only the very edges of the reedbed are likely to be impacted upon by the works. While the areas of vegetation associated with the footpaths are broadly suitable for common species of reptile, such as slow-worm and viviparous lizard, they are isolated narrow strips that are highly disturbed by dog walkers and other members of the public. Therefore, they are unlikely to support a significant population of these two species. Adders are considered to be likely absent from the Site due to a lack of dry, open, sunny areas which are considered essential (Edgar et al, 2010).

Taking into consideration the minimal amount of vegetation clearance required to facilitate the works, it is considered that only low populations of slow-worm, common lizard and grass snake could be affected by the Proposed Development.

Reptile surveys were recommended within the PEA (RSK, 2019). However, any suitable habitats present on Site are highly disturbed by members of the public (including fishing, public footpaths and the canal). There is potential for direct interference or via incidental disturbance of the reptile survey mats and reptiles. This would likely skew any results obtained from the Site potentially resulting in a false negative or potentially cause injury or killing of reptiles if present. The Froglife (1999) reptile survey guidelines suggest in areas of high public pressure that the use of reptile surveys mats are to be avoided.

Since only low numbers of common reptiles are likely to be present based on the habitats present within the Site boundary, and it is not possible to undertake surveys without a risk of injury or killing reptiles or skewing the survey results, a Reptile Method Statement is considered sufficient to comply with legalisation and minimise any impacts on these species.

3.2 General Mitigation Measures

The following general mitigation measures will be implemented on Site during works:

- Land and vegetation clearance and occupation will be limited to the minimum area necessary for the works;
- Site compounds, materials and temporary stockpiles will be located in defined storage areas, on hard standing; and,
- Temporary lighting will be selected and sited so as to avoid light spill on to adjacent vegetated habitats.

3.3 Habitat Manipulation and Supervision

Areas of habitat identified as suitable for reptiles (woodland adjacent to the south of B4242 and surrounding the reedbed, the reedbed and grassland verges of the access track and canal footpath) that will be impacted (i.e. disturbed or cleared) as a result of the Proposed Development will undergo a combination of strategic habitat manipulation and ecological supervision by a suitably experienced Ecological Clerk of Works (ECoW). Works to the access track are limited to pothole infilling only. This 'active displacement' approach will encourage any reptiles present to move away from the affected areas thereby minimising the risk of killing and injury.

For this method to be successful, a suitable lead in time prior to the start of ground works needs to be provided as works will be subject to seasonal constraints. Works in reptile habitat must be undertaken during the active season; (April and September inclusive) and not the winter period to avoid the risk of disrupting reptile hibernation.

Directly prior to the vegetation clearance works, contractors will be given an ecological toolbox talk by the ECoW prior to habitat manipulation works commencing including advice on the identification of reptiles, which species are expected on site, habitats they use and the legal protection afforded to these species.

The tool box talk is provided in Appendix B.

The vegetation clearance will follow steps listed below:

- Stage One – vegetation marked for removal within the footprint of the Proposed Development (including areas of material and plant storage and vehicle/machinery access) will first be checked by the ECoW for the presence of reptiles by way of a fingertip search of vegetation and any refugia that may be present. If no reptiles are present, vegetation should initially be reduced to 150 mm. Cutting will proceed in a linear direction to allow reptiles to move to suitable retained habitat and prevent animals from being trapped. Any reptiles identified during works will be captured and moved by hand by the ECoW into suitable retained habitat adjacent to the Site. Vegetation clearance works will only be undertaken in suitable weather (dry, temperatures not below 9°C).
- Stage Two – After two days of suitable weather a second cut reducing the vegetation to 50 mm should be undertaken using the same approach as for Stage 1, under supervision of the ECoW. Again, the area will be left undisturbed for two further suitable days.
- Stage Three – Following the completion of the cutting regime, the vegetation will be first checked by the ECoW then stripped from the footprint of the Proposed Development, with any tree roots grubbed out under ECoW supervision.. Any reptiles found during this stage would be moved to retained suitable reptile habitats adjacent to the Site. After this stage, ground works may continue without the presence of an ECoW.

It is important during vegetation clearance to remove any cuttings which arise as vegetation remaining on clearance areas could inadvertently act as reptile refugia. Arisings should be collected and deposited in piles within retained habitat in predetermined locations (as advised by the ECoW) where these will not be disturbed.

3.4 Log Piles

If any trees or large shrubs require removal, the arisings should ideally be kept on Site to form log piles in line with guidance within the Reptile Habitat Management Handbook (Edgar et al, 2010). Key points are as follows:

- Partially buried in the ground (this will increase thermal properties of these features during winter and minimise disturbance in areas with public access);
- Piles will contain logs with a mixture of sizes and shapes, with some small diameter material present (similarly-sized timber should be avoided as it is of limited value to reptiles);
- Placed in a sunny location within areas of long grass or long grass and scrub (this provides cover immediately adjacent to the pile); and,
- Located away from busy public areas, to reduce the risk of disturbance.

3.5 Nesting Birds

Vegetation removal will include habitats that are also suitable for nesting birds, such as the woodland and reedbeds. These works are anticipated to be within active nesting season (1st March – end August, inclusive). While it is unlikely that the active nesting season can be avoided, the areas of affected habitat are very limited in extent. Therefore, it is considered appropriate for an ecologist to check any areas of vegetation flagged for removal 48 hours prior to the commencement of vegetation clearance (Stage One). Any identified nests will have designated a species-specific buffer installed and left undisturbed until the nest has fledged (this can take up to eight weeks). If any further nests are identified during the works while an ecologist is not present, works will cease and the ecologist contacted for advice.

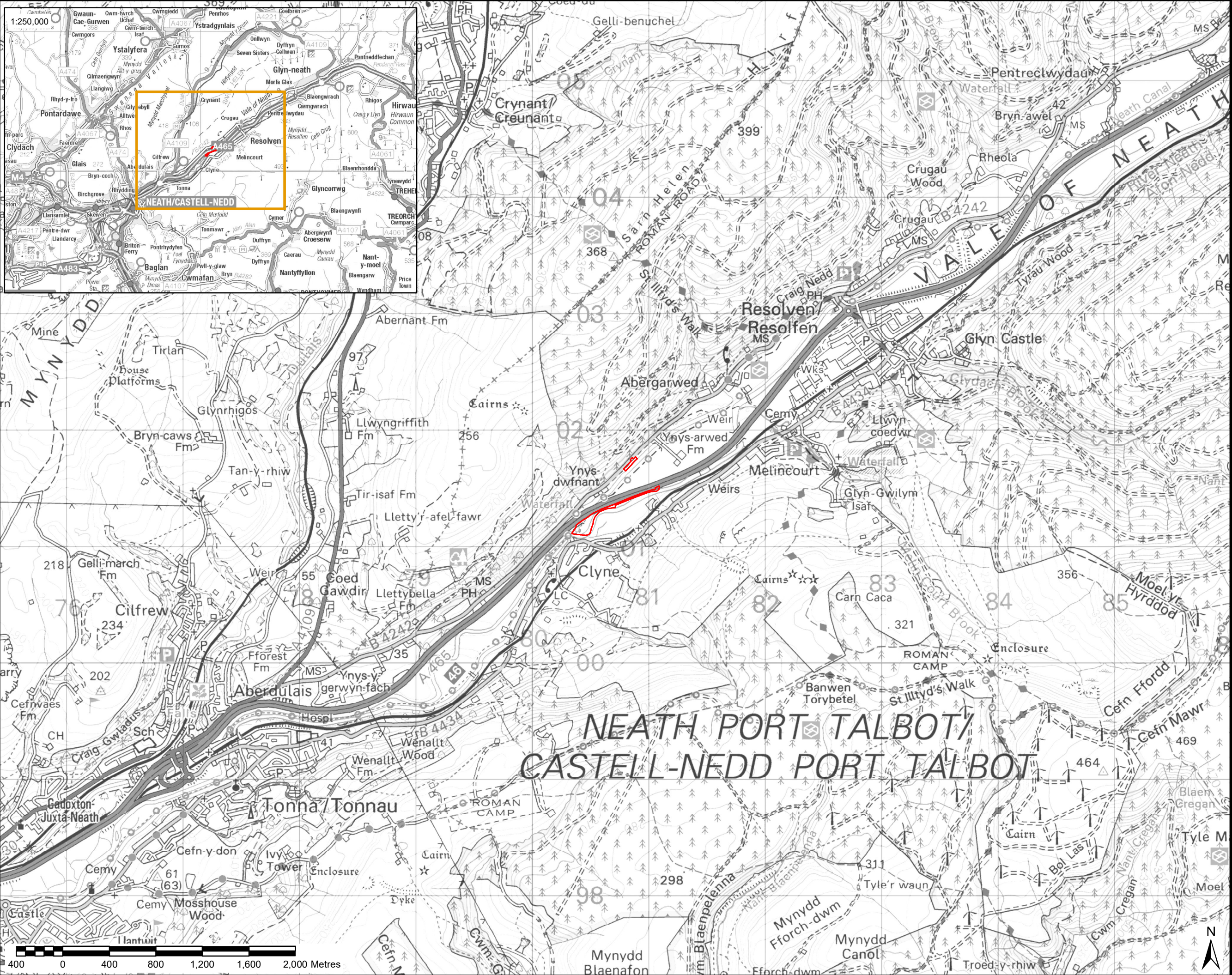
3.6 Invasive Non-Native Species

A separate Method Statement should be prepared for invasive non-native species, which are present on Site. This Method Statement should be read in conjunction with this document.

4. References

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Figure 1: Site Location and Boundary



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Project Title:

**YNYSARWED MINE
WATER TREATMENT
SCHEME**

Client:

THE COAL AUTHORITY

LEGEND

Project Boundary

Copyright:

Contains Ordnance Survey data ©
Crown copyright and database
right 2020
Ordnance Survey 0100031673

AECOM Internal Project No:

60624809

Drawing Title:

SITE LOCATION

Scale at A3: 1:30,000

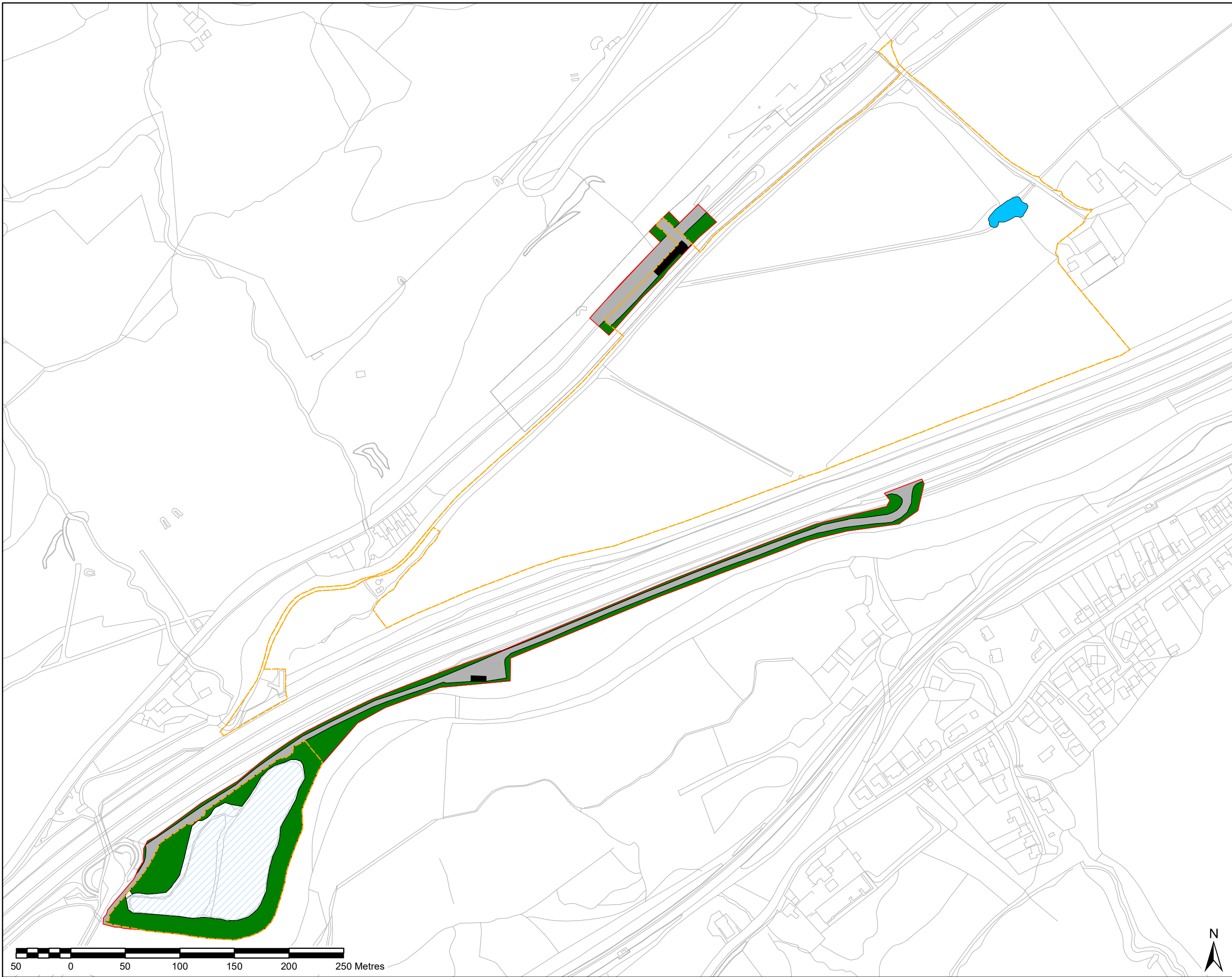
Drawing No:

FIGURE 1

Drawn: Chk'd: App'd: Date:

AM GM UJ 12/04/21

Figure 2: Phase 1 Habitat Map



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Project Title:

**YNYSARWED MINE
WATER TREATMENT
SCHEME**

Client:

THE COAL AUTHORITY

LEGEND

- RSK Survey Area
- Site Boundary
- Rough grassland
- Running water
- Agricultural land - no access to survey
- Broad-leaved semi-natural woodland
- Buildings
- Hardstanding
- Standing water
- Swamp

Copyright:

Contains Ordnance Survey data ©
Crown copyright and database
right 2020
Ordnance Survey 0100031673

AECOM Internal Project No:

60624809

Drawing Title:

**RSK SURVEY AREA
AND PHASE 1 HABITATS**

Scale at A3: 1:3,200

Drawing No: **Rev:**

FIGURE 2 **A**

Drawn: Chk'd: App'd: Date:

AM GM UJ 12/04/21

Appendix A Site Photographs



Photograph 1: View of the Access Track with associated grassland and scrub verges. March 2020.



Photograph 2: Showing a typical view of the woodland. March 2020.



Photograph 3: View of the reedbed. March 2020.



Photograph 4: View along the canal footpath with associated grassland verges. February 2020.

Appendix B Reptile Tool Box Talk

REPTILE TOOL BOX TALK

This tool box talk aims to highlight the potential for reptiles on Site and what you should do whilst undertaking works for the Ynysarwed Mine Water Treatment Works.

What?

Species you may encounter: **Slow-worm, Common lizard and Grass snake**

Slow-worm

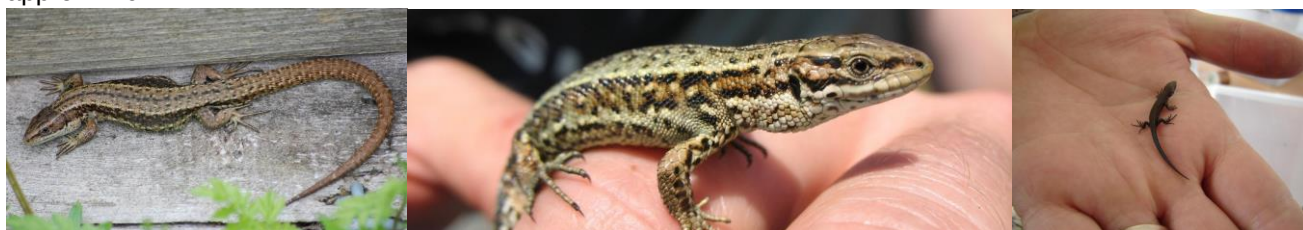
Slow-worm are legless lizards. They have a shiny appearance. Males are a greyish brown and females are brown with dark sides. Juvenile slow-worms are very thin, have black bellies and gold or silver dorsal sides.



Photography: ©AECOM David Plant and Lisbeth Nash

Common lizard

Adults 13-15 cm. Coloration and markings variable. Background colour generally brown. Some have few markings, being solid brown or black. Females often have stripes on back. New-borns are dark in colour, almost black, approx. 4 cm.



Photography: ©Froglife

Grass snake

Adults 70-100 cm. Body colour ranges from bright green to dark olive, but mostly the latter. Darker specimens can appear black from a distance. Grass snakes have a cream, yellow or white collar behind the head, bordered to the rear by black marks.



Photography: ©David Chamberlain ©Ben Limburn ©Fred Holmes – Arc Trust

Reptiles are active in late spring to early autumn. During winter they hibernation within the soil, near or within tree roots, and under log piles.

Why?

- Reptiles are Protected under UK Law from killing and injury.
- Without due care, your work (the digging of a trench within the SWTRA soft estate) has the potential to kill or injure reptiles.

Where on Site?

Slow-worm

- You are likely to find slow-worms in the grassland verges of the access track and the woodland.
- In all habitats, slow-worms require dense vegetation, especially grasses coupled with sunny areas.

Common lizards

- Found in similar habitat to slow-worm but typically differs in preferring sites with a greater variation in the height of vegetation cover.
- Highest densities tend to be found in damp or wet areas, especially where abundant grass tussocks are present to provide food, shelter, basking and hibernation sites.

Grass snake

- Most likely in the reedbed or in the woodland next to the reedbed.
- The grass snake requires some cover and a degree of structural diversity.

What Should I Do?

- You must follow actions set out in the Reptile Method Statement so that the works avoid injury and killing of reptiles.
- A three-staged cutting approach will be followed, each cut followed by a period of no less than 48 hrs to allow reptiles to move out of the cleared vegetation before the next cut.
- Any reedbed, grassland, woodland or scrub clearance will be supervised by an ecologist. They will check the works areas for reptiles, prior to vegetation clearance.
- Arisings will be removed from the cleared areas. Material will not be chipped in situ, to avoid smothering the ground. Where possible, log piles will be created in areas of retained woodland.
- **If you find a reptile –STOP WORKS, tell the Site Manager and contact the Project Ecologist. Works must not re-start until confirmed by the Project Ecologist. Do not touch or move the reptile.**

Contact Details

Ecologist

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Jake Middleton: 07741 551809– AECOM Project Ecologist – Cardiff.

ECOLOGICAL BRIEFING SIGNATURE SHEET

Please sign below to confirm that you have read and understood the above ecological briefing.

NAME (PRINT)	SIGNATURE	COMPANY	DATE

