



THE
ENVIRONMENT
PARTNERSHIP



HW021 GAS PIPELINE DIVERSION

CARMARTHEN, WALES

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

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DRAWINGS

RCS/2010935/CARMA/X/003 – Indicative Working Area Drawing Northern Diversion

1.0 Introduction

- 1.1 In January 2023, The Environment Partnership (TEP) was commissioned by Wales and West Utilities (hereafter referred to as 'the client') to prepare a Construction Environmental Management Plan (CEMP) to support proposals to install a new gas pipeline within the floodplain of the River Tywi as a diversion for an existing pipeline.

Site Context

- 1.2 The site is located on the Afon Tywi/River Tywi south of Carmarthen, Carmarthenshire, central grid ref. SN 40576 18975 The anticipated footprint of the project elements including drilling under the main river, is estimated to be c.1.4ha.
- 1.3 The site is primarily pastureland either side of the Afon Tywi/River Tywi with a public footpath running along the western side of the river. The site is enclosed by central Carmarthen to the north and outlying settlements/retail units to the west and east respectively. To the south the river continues bordered by pasture and agricultural land.
- 1.4 The wider area comprises pasture and agricultural land, interspersed with villages and the town of Carmarthen to the north.
- 1.5 Figure 1 shows the location of the site in the context of the wider landscape.

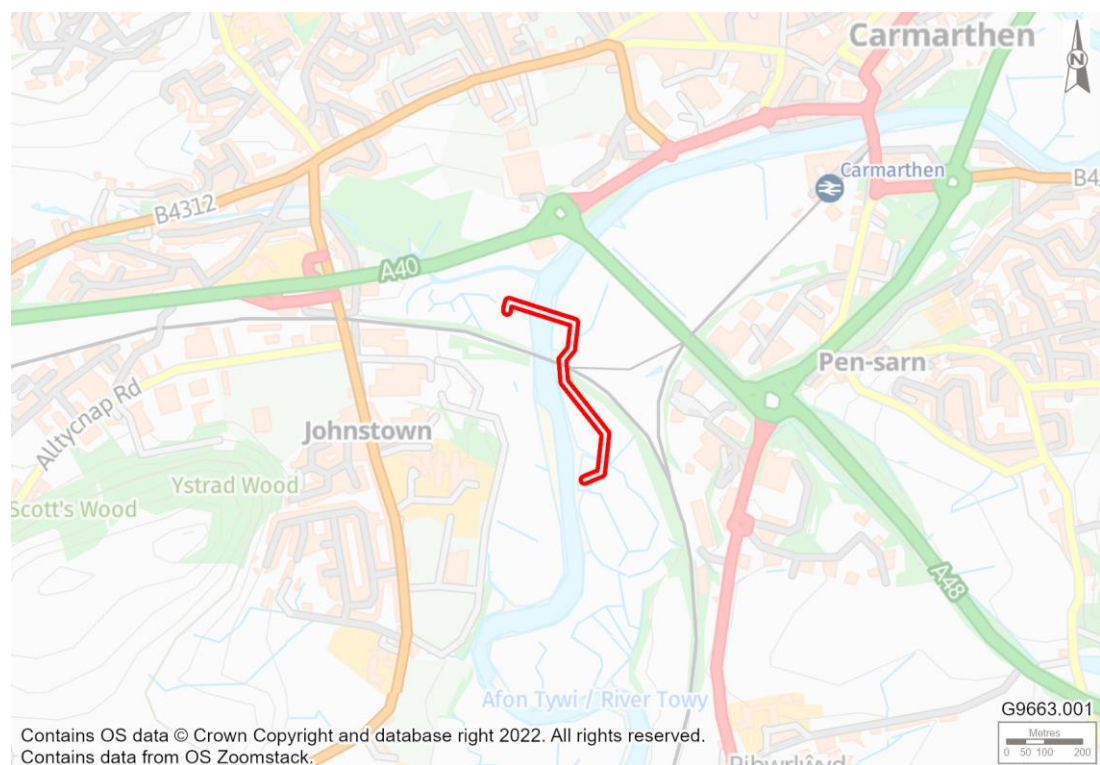


Figure 1. Site Location

Scope of Report

- 1.6 The CEMP sets out a practical working strategy to be implemented during proposed construction works to ensure that features of ecological interest, including designated sites, notable habitats, and protected or notable species, within the working areas, or within influencing distance of the working areas, are not compromised.
- 1.7 The methods detailed within the CEMP follow best ecological working practices in respect of the habitats and species identified within the working areas or within influencing distance of the working areas. The document includes:
- General Ecological/Environmental Protection Measures;
 - Designated Sites and Habitats Protection and Reinstatement Plan (HRPR);
 - Amphibian and Reptile Protection Plan.
 - Badger Protection Plan.
 - Nesting Bird Protection Plan, and
 - Water Vole and Otter Protection Plan.

Summary of Ecological Baseline and Context

- 1.8 Full details of the ecological baseline of the site are provided in the Ecological Assessment (TEP Doc Ref: 9663.001).
- 1.9 The site is located within the boundary of the internationally important Afon Tywi / River Tywi Special Area of Conservation (SAC), which is located on site and is designated for supporting fish species and otter (See Figure 2).
- 1.10 Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd SAC, which is located 1.7km south (and downstream) and designated for its estuarine habitats, fish species and otter.

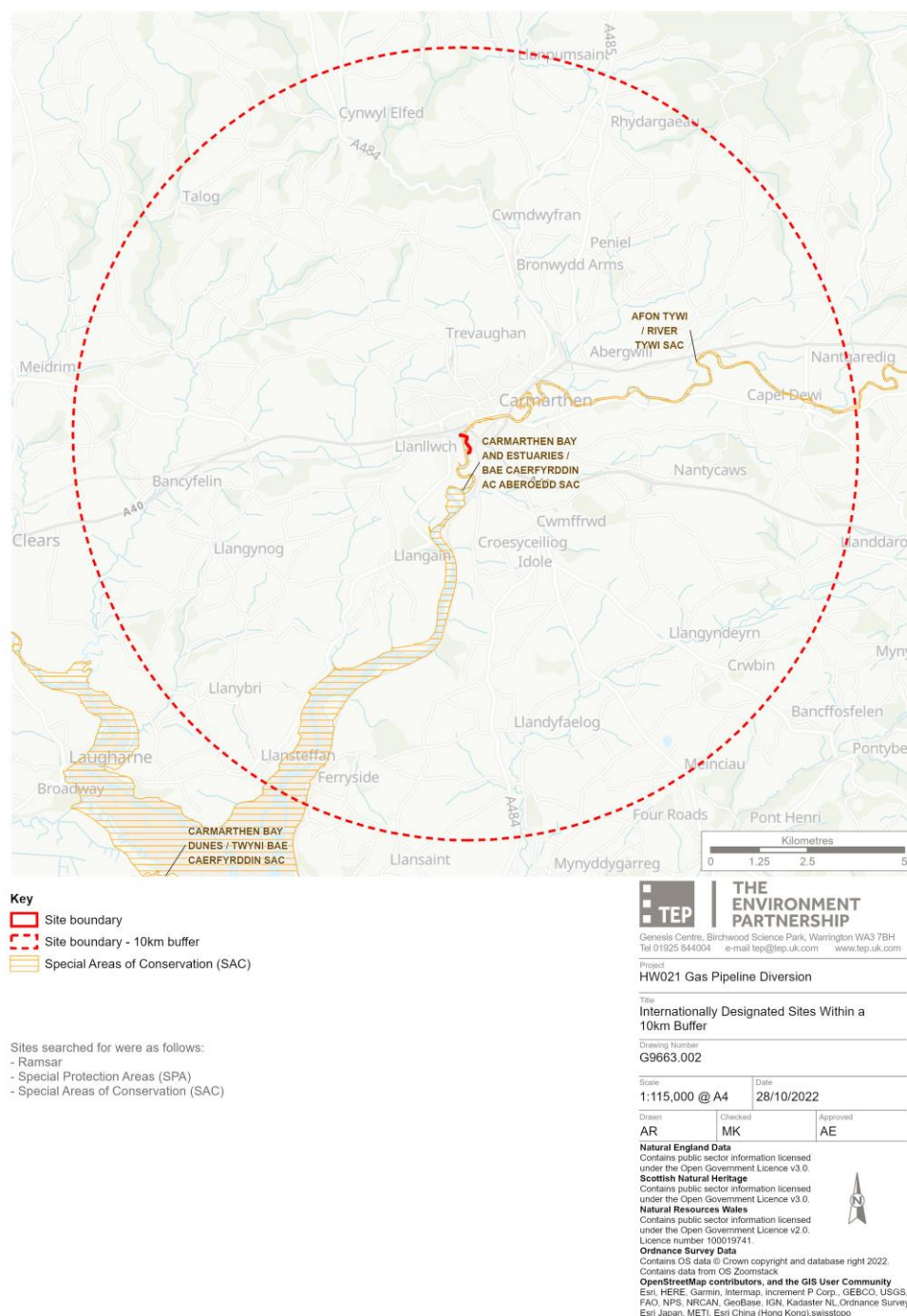


Figure 2. Internationally Designated Sites

- 1.11 The site is located within the boundary of the nationally important Afon Tywi Site of Special Scientific Interest (SSSI), which is located on site and designated for its fish and bird species, habitats, and geological interest (See Figure 3).

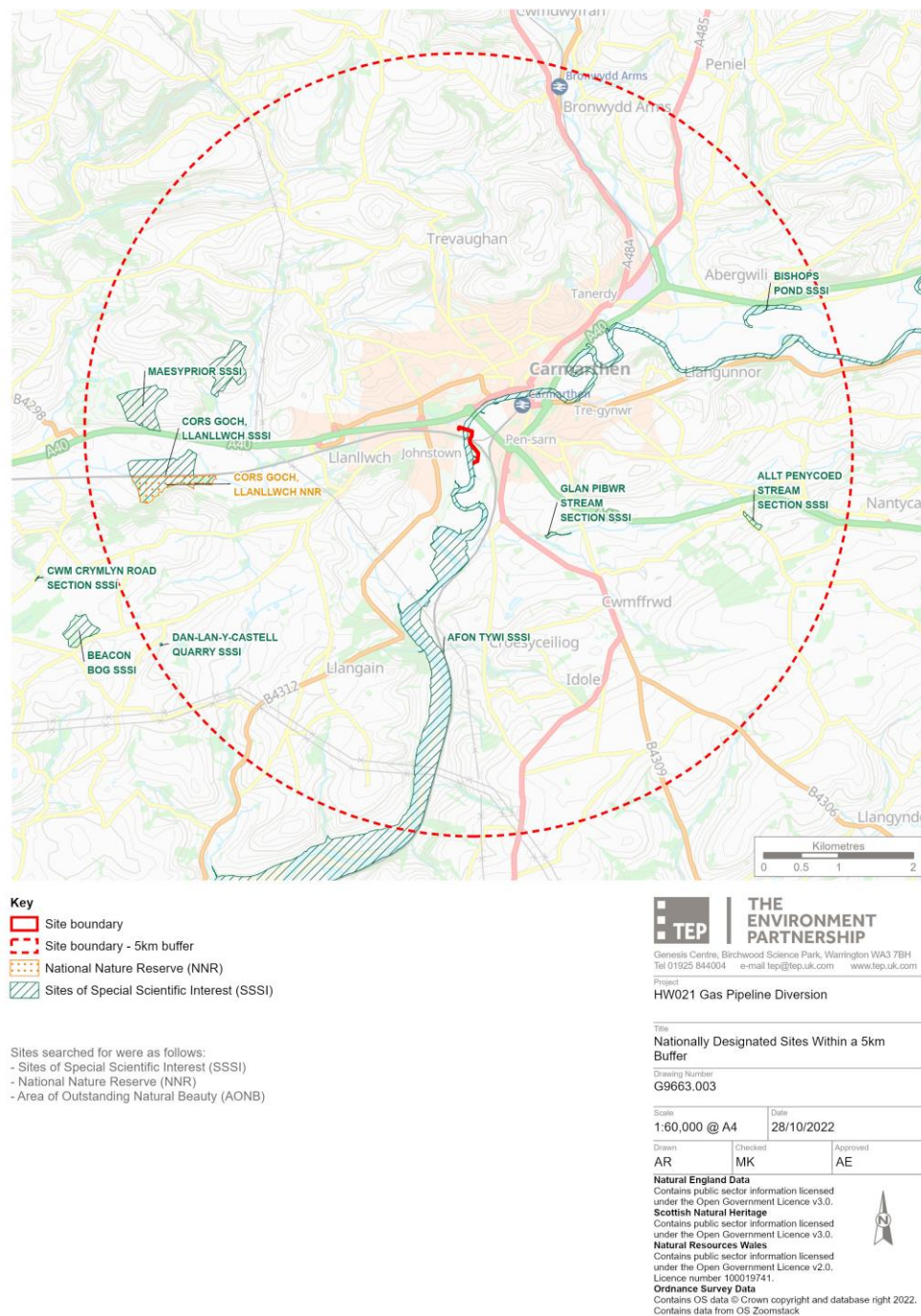


Figure 3. Nationally Designated Sites

- 1.12 The site/working corridor comprises improved and semi-improved grassland, marginal vegetation, intertidal mud, the river, and small area of hardstanding.

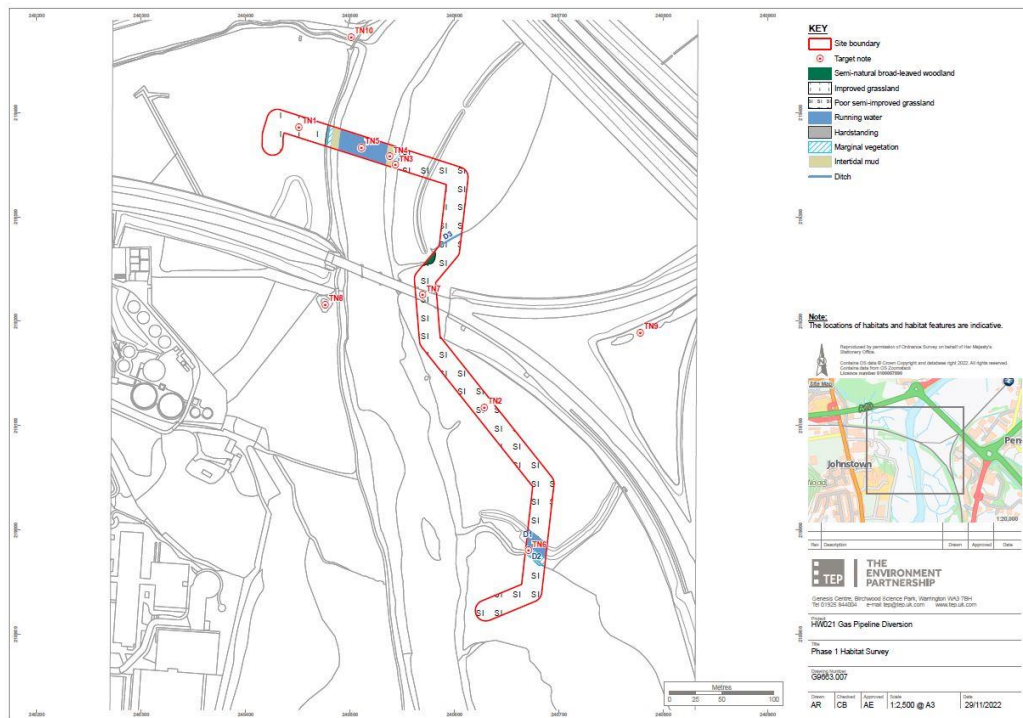


Figure 4. Phase 1 Habitat Plan

2.0 Methods and Timings of Works

- 2.1 The project consists of the installation of a new gas pipeline in the floodplain of the Afon Tywi/River Tywi south of Carmarthen as a diversion from the existing pipeline. The works consist of open cut trenching within the fields (approximately 500m in length) east and west of the river and Horizontal Directional Drilling (HDD) for approximately 170m under the Afon Tywi/River Tywi. The existing pipeline will be abandoned. Site compounds and an access track for the works will be required.
- 2.2 The works are to be undertaken over an approximate 5-month period, starting in early April and completing in early September 2023. A construction programme of works is provided at Appendix A.
- 2.3 Details of the companies undertaking the works are as follows:
 - Wales and West Utilities (WWU), Wales and West House, Spooner Cl, Coedkernew, Celtic Springs, Coedkernew, Newport NP10 8FZ
- 2.4 For the purpose of this report 'the client' and 'the contractor' refers to WWU.

3.0 General Ecological/Environmental Protection Measures

Pre-construction Measures

3.1 Table 1 details Ecological/Environmental Protection Measures which must be implemented prior to, and during construction.

Table 1. Pre-construction Ecological Protection Measures

Item	Ecological Protection Measure	Method	Timing	Person Responsible	Persons Required to Carry Out Works
1	Appointment of Ecological Advisors	The Project Ecologist will provide an advisory role during the development as required. An Ecological Clerk of Works (ECoW) shall be appointed who will provide a supervisory role on site as and when required. An 'Environmental Champion' shall be appointed. This person will be responsible for daily monitoring of site activities and conformance to the Precautionary Working Measures (PWMS) that are set out within this document and other environmental documents. This role should be fulfilled by an experienced contractor with a daily site presence.	Appointment prior to works	Developer / Main Site Contractor	Developer / Main Site Contractor to appoint Ecological Advisors as detailed.

Item	Ecological Protection Measure	Method	Timing	Person Responsible	Persons Required to Carry Out Works
2	Ecological Toolbox Talks	Toolbox talks will be provided to contractors by the Project Ecologist or ECoW. Toolbox talks will explain the potential presence of protected or notable species on site (particularly amphibians, badgers, bats, birds, water voles, otters, and reptiles), implications regarding these species, required working methods and locations of any exclusion zones. Protection zones for retained habitats of interest, including the river and ditches, will also be addressed. Toolbox talks will be updated as required where any new ecological issues arise (including seasonal variations/restrictions), or where changes to working methods are required. The initial toolbox talk will be provided by the Project Ecologist or ECoW prior to each phase of work. Any further toolbox talks required will be provided to new contractors by the Environmental Champion using this CEMP as a basis.	Prior to works commencing	Main Site Contractor	Project Ecologist and Environmental Champion
3	Root Protection Zones	Exclusion fencing should be installed around retained trees and woodland to protect them from accidental damage in accordance with BS5837:2012 Trees in relation to design, demolition, and construction.	Prior to works commencing	Main Site Contractor	Main Site Contractor
4	Herpetofauna (Amphibians and Reptiles) - Precautionary Working Method Statement (PWMS)	PWMS will be implemented prior to and during vegetation clearance and construction works to avoid harm or injury to amphibians and reptiles. Full methods are presented in Section 5.	Prior to and during vegetation clearance	Main Site Contractor and Project Ecologist	Main Site Contractor and ECoW
5	Badger - Precautionary Working Method Statement (PWMS)	PWMS will be implemented prior to and during vegetation clearance and construction works to avoid harm or injury to badger. Full methods are presented in Section 6.	Prior to works commencing	Main Site Contractor and Project Ecologist	ECoW

Item	Ecological Protection Measure	Method	Timing	Person Responsible	Persons Required to Carry Out Works
6	Bats – Temporary construction lighting	Any temporary lighting required during construction must avoid illuminating or light spill onto retained habitats such as the river, ditches, and scrub.	During all construction works	Main Site Contractor and Project Ecologist	Main Site Contractor and ECoW
7	Nesting Birds - Nesting Bird Check	Vegetation clearance will be undertaken outside the breeding bird season (March to August inclusive), wherever possible, to avoid harm to nesting birds. Where vegetation clearance is required during the breeding bird season, the ECoW will carry out a nesting bird check of the affected areas no more than 24 hours prior to vegetation clearance taking place. If no active birds' nests are identified, the works will proceed following instruction to do so from the ECoW. If an active nest is identified, exclusion zones will be applied (see Item 5 below). Full methods are presented in Section 7.	Prior to vegetation clearance (March - August inclusive)	Main Site Contractor	Main Site Contractor and ECoW
8	Nesting Birds - Exclusion zones for vegetation clearance	Following the nesting bird check, any areas supporting active nests will be fenced-off with hi-vis 'Netlon' fencing (or similar). The fencing will mark an exclusion zone in which no machinery or site workers should enter. Signs should also be installed to highlight the exclusion zone. The locations and extent of exclusion zones will be marked on a plan by the ECoW to be provided to the site contractor. All active nests within the exclusion zones will be monitored by the ECoW. The ECoW will advise when the nest(s) are no-longer active. On instruction from the ECoW, the fencing will then be removed, and vegetation clearance will proceed.	Prior to vegetation clearance (March - August inclusive)	Main Site Contractor	Main Site Contractor and ECoW

Item	Ecological Protection Measure	Method	Timing	Person Responsible	Persons Required to Carry Out Works
9	Water Voles – Presence/Absence Surveys	Water vole presence/absence surveys must be completed prior to any works commencing on the three identified ditches. Full survey methods and timings are presented in Section 8.	Prior to any work commencing within the ditch habitat	Main Site Contractor	Main Site Contractor and ECoW
10	Water Vole and Otter - Precautionary Working Method Statement (PWMS)	PWMS will be implemented prior to and during vegetation clearance and construction works to avoid harm or injury to water vole or otters. Full methods are presented in Section 8.	During all construction works	Main Site Contractor and Project Ecologist	ECoW
11	Contractor Risk Assessment and Method Statements	This document should be provided to all contractors prior to accessing site to inform their Risk Assessment and Method Statements (RAMS) for all items of work. Any works carried out by contractors should be accompanied by a RAMS. All RAMS should take into consideration and include awareness of the measures set out in this document where appropriate and shall include biosecurity measures to be observed for the duration of the works. All RAMS should be signed off by the Site Manager, with support from the ECoW or EC where required, prior to commencement of works.	Prior to any work commencing and throughout construction	Site Manager/ ECoW or EC/ Contractors	Main Site Contractor

Item	Ecological Protection Measure	Method	Timing	Person Responsible	Persons Required to Carry Out Works
12	Pollution Incidents	Preventative measures will be implemented throughout the works to avoid pollution incidents which may indirectly affect terrestrial and aquatic habitats, namely the River Tywi and associated ditches. Refuelling of machinery will take place in appropriate designated areas away from River Tywi and associated ditches by a minimum distance of 15m. All powered equipment operated within 15m of water will use biodegradable chain oil. Should any incidents of pollution occur, the Site Manager will be informed with appropriate rectification measures implemented as soon as practicably possible. All hazardous materials will be stored away from the River Tywi and associated ditches and other ecologically sensitive areas and stored off the ground in fenced off and secure areas. For further information please see the Pollution Prevention Guidelines (PPGs).	Throughout construction	Site Manager/ ECoW or EC	Main Site Contractor

4.0 Designated Sites and Habitats Protection and Reinstatement Plan (HRPR)

Background

- 4.1 The proposed development is within the Afon Tywi/River Tywi SAC and SSSI. Although direct impacts have been largely avoided through the use of HDD under the main river channel the alignment of the open cut trenching as proposed does cut through part of a small ditch within the designated site.
- 4.2 The improved and poor semi-improved grassland within and adjoining the site meets the definition of S7¹ floodplain grazing marsh habitat. There will be temporary impacts on this habitat as a result of the opencut trenching and positioning of HDD launch points. There will be an unavoidable temporary impact on S7 habitat coastal floodplain and grazing marsh as a result of the works.
- 4.3 Consultation with NRW has confirmed that because proposed works fall adjacent the river, a Flood Risk Activity Permit (FRAP) must be applied for and granted prior to works commencing. NRW confirmed that any ecological considerations regarding designated sites shall be made through the FRAP process within NRW.

Permits and Assent

- 4.4 As the proposed works fall within the boundary of the Afon Tywi SSSI, SSSI assent is likely to be required in order for the proposed works to commence within the designated site. Details of this requirement will be made available once NRW have granted the FRAP as previously mentioned.

Site Access Measures

- 4.5 To prevent degradation of the S7 qualifying grassland habitat, temporary construction haul roads will be installed on either side of the river. Topsoil will be removed and stored to the side of the haul roads ready to be reinstated post completion. A temporary membrane will be placed on the ground prior to the installation of hardcore or Type 1 aggregate, which will then be compacted. Where the haul road crosses ditches, these will be flumed where required.

Eastern Side

- 4.6 The haul road, totalling approximately 600m in length will measure approximately 6m wide and start at the 'Site Entrance' at Carmarthen railway station car park located to the north and will follow the route of an existing farm track adjacent to the railway line. It will pass under the A40 where it will meet the Site compound area.

¹ Section 7 of the Environment Act requires The Welsh Ministers to publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales. This is known as the S7 list.

Western Side

- 4.7 A temporary haul road will also be installed on the western side of the river. This haul road will also measure approximately 6m wide and totals approximately 450m in length. The haul road will be located a minimum of 5m from the banks of the adjacent Tawalen Brook. The haul road will meet the working area set out for the HDD entry compound.

Temporary Site Compound

- 4.8 A temporary site compound is required for the construction works and will be established on an area of grassland on the eastern side of the river. The compound will measure approximately 100m x 50m.
- 4.9 Topsoil will be removed and stored to the side of the compound ready to be reinstated post completion. A temporary membrane will be placed on the ground prior to the installation of hardcore or Type 1 aggregate, which will then be compacted.

General Working Corridor

- 4.10 The working corridor will be approximately 20m wide, narrowing at certain points due to existing features such as railway bridge piers. Topsoil will be stripped and stored to the side ready for reinstatement upon completion. Bog mats will be used within the working corridor where required to reduce the impact on subsoils.

Reinstatement

- 4.11 Once all works have been completed, all imported material will be taken off-site and all habitats reinstated to the satisfaction of the client, ecologist and landowner.

Standard Pollution Prevention Measures

- 4.12 Standard pollution prevention and dust control measures should be implemented during construction works.
- 4.13 The control measures will ensure that indirect impacts on statutory designated sites, including Afon Tywi/River Tywi SAC and SSSI are avoided.
- 4.14 Measures outlined within government Best Practice Pollution Prevention Guidelines will be followed.
- 4.15 Measures will include, but are not limited to, the following:
- Ensure all plant/machinery is clean from soil and debris before accessing or leaving the site;
 - Ensure footwear is visually clean from soil and debris before accessing or leaving the site;
 - Any works carried out by contractors should be accompanied by a Risk Assessment and Method Statement (RAMS). The RAMS should detail appropriate biosecurity measures to be observed during the duration of the works, and outline the scope of the works and any ongoing monitoring/works required;
 - Fuel, oil, and chemical storage will not be stored on site. They will be sited on an impervious base and secured. The base will be impermeable to the

material stored and of adequate capacity. Storage areas will be located away from the site; and

- Standard dust prevention measures will be implemented.

Ground Contamination

- 4.16 Liquids such as fuels, oil or paint will not be stored on site and will only be brought on to for task-specific reasons. This is to avoid contamination of the through accidental spillage.
- 4.17 Good construction practices should be implemented, e.g., use of permeable surfacing to prevent excessive and/or polluted run-off entering the ground.
- 4.18 An Ecological Clerk of Works (ECoW) will be appointed to advise the contractor to ensure impacts on qualifying habitats are minimised and the measures contained within this method statement are employed.

5.0 Amphibian and Reptile Protection Plan

Background

- 5.1 The Ecological Assessment concluded that the grassland, marginal vegetation and ditches on site provide suitable foraging, ranging, and sheltering habitats for common amphibian and reptile species especially grass snake *Natrix helvetica*.

Legislation

- 5.2 Killing or injury to GCN or damage to their hibernation sites is a criminal offence under the *Wildlife and Countryside Act 1981* (as amended) and the *Conservation Regulations 2017* (as amended). It is an offence to handle GCN without either a survey licence or a development licence obtained from Natural England.
- 5.3 Common toad *Bufo bufo* is a Section 41 Species of Principal Importance under the Natural Environment and Rural Communities (NERC) Act 2006.
- 5.4 All reptile species are given limited protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). These include adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow worm *Anguis fragilis*. Under the Wildlife and Countryside Act 1981 (as amended), reptiles are protected against:
- intentional or reckless killing and injury
 - trade – i.e., sale, barter, exchange, transport for sale, or advertise for sale or to buy.

Mitigation Measures

- 5.5 Mitigation will be implemented to ensure no harm or injury to reptile or common amphibian and reptile species present on site during site clearance and construction works.
- 5.6 The mitigation strategy, as set out below, will involve various tasks being conducted under a Precautionary Working Method Statement (PWMS) and under ecological supervision.

Precautionary Working Method Statement (PWMS)

- 5.7 This PWMS outlines measures to ensure no harm or injury to common amphibians or reptiles if present on site during the site clearance and construction works.
- 5.8 The PWMS will also ensure no harm to any small mammals such as hedgehog present on site during the works.
- 5.9 The PWMS will apply to all vegetation clearance and construction works.

Toolbox Talk (TBT)

- 5.10 All staff will be made aware of the potential presence of herptiles on site.

- 5.11 An Ecological Clerk of Works (ECoW) will be appointed prior to the commencement of works on site. A toolbox talk will be delivered to all contractors by the ECoW before any site clearance and commencement of construction activities within the works area. The toolbox talk will include identification of amphibian and reptile species, details of their legislative protection, details of this Method Statement, and what to do in the eventuality that common amphibians or reptiles are found during the clearance works or construction phase.

Site Clearance Methodology

- 5.12 The ECoW will be present on site to supervise works taking place within the works area including vegetation clearance and topsoil strip.
- 5.13 Clearance of any scrub, hedgerows or trees should, where possible, avoid the breeding bird season (considered to be March to August inclusive). Vegetation clearance during the breeding bird season will require a nesting bird check by a suitably qualified ecologist immediately prior to vegetation removal (see Section 8).
- 5.14 Any scrub or trees requiring removal may be cut to stump/20cm level at any time of year. As amphibians and reptiles may hibernate within the root systems of trees and dense scrub, pulling up of the root systems of these features must only be conducted outside of the hibernation period. The hibernation period is typically considered to be November to February, although is temperature dependent. Once the hibernation season is considered to have ended, i.e., there is a period of five consecutive nights of temperatures greater than 5°C, disturbance to underground root systems can commence.
- 5.15 Pulling up of root systems of mature trees and scrub must be supervised by the ECoW. Once uprooted, the ECoW will hand search the root balls for amphibians and reptiles, following which they can be removed from site.
- 5.16 If the grassland sward and/or ditch vegetation measures over 15cm in height, then strimming of all grassland habitats to ground level will be undertaken using a staged approach. The ecologist will search the grassland for reptiles and amphibians. Following the search, the grassland may be cut to 15cm. The grassland should be cut in a single direction only to allow amphibians and reptiles opportunity to move away from the area into suitable retained habitats. The arisings must remain in-situ for 24 hours. A final check will then be conducted by the ECoW. Once confirmed clear, the arisings may be removed, and the remainder of the grassland cut to ground level.
- 5.17 Strimming of all grassland and cutting of scrub habitats can be undertaken over the winter/hibernation period (November to February) without an ECoW but can only be cut to 15cm above ground level. From March onwards, clearing these habitats to ground level will have to take a similar staged approach to what is outlined above.
- 5.18 Following any vegetation clearance, the initial ground scrape to remove the topsoil will be conducted under the supervision of the ecologist/ECoW.
- 5.19 Any amphibians or reptiles found on site will be captured and released into suitable habitat within or adjacent to the site.

- 5.20 In the unlikely event that GCN are identified within the works area, works must cease immediately. The GCN must not be moved or handled. The Project Ecologist will be contacted who will liaise with Natural Resource Wales. Depending on the outcome of this a mitigation licence may be required to complete the works. Works must not recommence until confirmed by the Project Ecologist.

General Precautionary Working Measures

- 5.21 The following standard precautionary working measures must also be implemented during the works:
- Excavations will be boarded or otherwise suitably covered at night. Where this is not practicable, a ramp will be provided (at an angle of no more than 45°) to allow any animal that may become trapped to escape.
 - Materials for works should be stored off the ground on pallets or in bags where possible.
 - Pipes stored on site would be capped or if caps are not available, stored vertically to prevent entrapment.
- 5.22 Any spoil piles present on site will be compacted to prevent them being used as refugia by amphibians and reptiles.

6.0 Badger Protection Plan

Background

- 6.1 Two records of badger *Meles meles* were identified with 1km of the site, the closest record as a road casualty on the A40 approximately 160m north of the site.
- 6.2 No evidence of badger activity was identified on or within 30 metres of the previously surveyed area during the initial site survey. The majority of the site is not suitable for sett construction as it is low lying and waterlogged.

Legislation

- 6.3 Badgers and their setts are protected under the Protection of Badgers Act 1992 and by Section 11 (Schedule 6) of the Wildlife and Countryside Act 1981, as amended, which makes it illegal to kill, injure or take badgers or to interfere with a badger sett. Interference with a sett includes blocking tunnels or damaging the sett in any way.

Precautionary Working Method Statement (PWMS)

Toolbox Talk (TBT)

- 6.4 A toolbox talk will be delivered by the ECoW to ensure that all site contractors are made aware of the potential presence of badgers on site. The toolbox talk will include identification of badger, details of their legislative protection, details of precautionary working measures and what to do in the eventuality that badger or badger setts are found on site during the works.

General Precautionary Working Measures

- 6.5 As some areas of works, namely the proposed haul road location on the western side of the river were not surveyed initially, it is recommended that a pre-construction walkover of the entire works area is undertaken no later than 1 month prior to the commencement of works.
- 6.6 Standard precautionary working measures will be implemented to ensure no harm or disturbance to foraging or ranging badgers because of the works. The measures must be implemented during the site clearance and construction phases. The standard working measures are as follows:
- Appropriate speed limits will be enforced, and signage installed on site to mitigate against potential collision impacts during the construction phase.
 - Night-time working will be avoided if possible, including within the hour before dusk and an hour after dawn.
 - If temporary lighting is required during construction works, it should avoid direct lighting of any tree canopies, the river, and ditches which are being retained.
 - Excavations will be boarded or otherwise suitably covered at night. Where this is not practicable, a ramp will be provided (at an angle of no more than 45°) to allow any animal that may become trapped to escape.
 - Pipes stored on site would be capped or if caps are not available, stored vertically to prevent entrapment.

- Any spoil piles present on site will be compacted to discourage use by badgers for sett building.
 - Any chemicals or pollutants used or created by the development must be stored and disposed of correctly according to COSHH regulations.
- 6.7 If a sett is discovered during any stages of works, works will stop immediately and a 30m buffer will be put in place around it.
- 6.8 There should be no works within the 30m buffer zone of any sett. If works take place within the buffer zone, there is potential for disturbance to badgers because of higher levels or activity, noise and possibly vibration. If there is a high level of disturbance, it may not be possible to retain the set in-situ. In this case, the sett will require closure, and a licence will be required to complete works.
- 6.9 If no works are undertaken within a 30m buffer of any of the sett entrances, vibration should not be a significant issue, the sett will not require closure, and a licence will not be required.
- 6.10 If it is not possible for an appropriate buffer zone to be either implemented or maintained around the badger setts during future works, the requirement for a licence from Natural Resource Wales will be reviewed.

Licensing

- 6.11 It should be noted that if a Natural Resource Wales development licence to permit the closure of any badger sett on-site is required, the sett closure works can only be undertaken between July and November (inclusive).

7.0 Nesting Bird Protection Plan

Background

- 7.1 Records of a number of Schedule 1 bird species were returned in the desk study, including kingfisher, Cetti's warbler, green sandpiper, red kite and barn owl. It is an offence to intentionally or recklessly disturb Schedule 1 birds and their young at, on or near an 'active' nest.

Legislation

- 7.2 All nesting birds are protected under the Wildlife and Countryside Act 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage, or destroy its nest whilst in use or being built, or intentionally take or destroy its eggs.

Precautionary Working Method Statement (PWMS)

- 7.3 As Schedule 1 bird species are known to be present in the local area, it is recommended that a pre-commencement site inspection is carried out by a suitably experienced ornithologist to ensure no Schedule 1 bird species are nesting in the area.
- 7.4 Where possible, all vegetation clearance/grass strimming will avoid the core breeding bird season, March to August inclusive; although it should be noted that bird nesting can take place outside this period.
- 7.5 Prior to any vegetation clearance within the nesting bird season, or at any time when bird nesting is suspected, a nesting bird check will be conducted of the affected area by the ECoW to confirm that no nesting birds are present which will be harmed by the works. The nesting bird check will take place no more than 24 hours prior to the planned vegetation clearance works.
- 7.6 If an active bird nest is found, the ECoW will provide advice on setting up a suitable exclusion zone around the nest. The extent of the exclusion zone will depend upon the bird species present.
- 7.7 The exclusion zone will ensure that there is no disturbance to the nest because of the works. Works will not take place within the exclusion zone until the young have fledged, as confirmed by the ECoW. Monitoring visits will be undertaken by the ECoW of the active nest to confirm when the young have fledged.
- 7.8 If no active bird nests are found during the nesting bird check, vegetation clearance must take place within 24 hours of completion of the nesting bird check. This will ensure that no bird nests are built within the intervening period between the nesting bird check and vegetation removal.

8.0 Water Vole and Otter Protection Plan

Background

- 8.1 The Ecological Assessment included a water vole habitat suitability assessment of the river and three ditches which the proposed pipeline route crosses. All three ditches provide suitable habitat for foraging, commuting and shelter for the species. Ditches 1 and 3 also provide suitable habitat for burrows given their steep bank profiles.
- 8.2 Although the river is likely to support foraging and ranging otter, the Ecological Assessment concluded that direct disturbance on otter is unlikely due to the existing levels of human disturbance, particularly on the western side of the river and limited evidence of otter activity found during the initial site survey.

Legislation

- 8.3 In England and Wales water voles are listed on Schedule 5 of the Wildlife and Countryside Act (WCA) 1981, receiving full protection since 2008. The WCA 1981, together with amending legislation, lists the following as offences:
- Intentionally killing, taking or injuring a water vole (Section 9(1));
 - Possessing or controlling any live or dead water vole, or any part or derivative (Section 9(2));
 - Intentionally or recklessly damaging or destroying a water vole's place of shelter or protection (Section 9(4)(a));
 - Intentionally or recklessly disturbing a water vole whilst it is occupying a structure or place which it uses for shelter or protection (Section 9 (4)(b));
 - Intentionally or recklessly obstruction access a water vole's place of shelter or protection (Section 9(4)c);
 - Selling, offering for sale, or possessing or transporting for the purposes of sale, any live or dead water vole, or any part or derivative, or advertising any of these for buying or selling (Section 9(5)).
- 8.4 Otters are internationally protected under The Conservation of Habitats and Species Regulation 2017 (as amended). In England and Wales, otters are listed on Schedule 5 of the Wildlife and Countryside Act 1981. The act makes it an offence to:
- Intentionally kill, take or injure these species;
 - Possess or control any live or dead, or any part or derivative;
 - Intentionally or recklessly damage or destroy a place of shelter or protection;
 - Intentionally or recklessly disturb whilst it is occupying a structure or place which it uses for shelter or protection;
 - Intentionally or recklessly obstruct access to a place of shelter or protection;
 - Sell, offer for sale, or possess or transport for the purposes of sale, any live or dead, or any part or derivative, or advertising any of these for buying or selling.

Water Vole Surveys

- 8.5 As drilling beneath the three water vole suitable ditches is not possible from an engineering perspective and the proposals will involve the direct impacts of the ditches, water vole surveys must be completed prior to any works commencing on either ditch to confirm the presence or absence of the species.
- 8.6 A site visit will be made by an ecologist and health and safety assistant in order to survey the three ditches for evidence of water voles. The latest guidance (Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016). The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series) requires all habitat within the site boundary and 200m in either direction from the site boundary/works area of a linear feature to be surveyed. Two surveys are required to accurately determine the presence or absence of water vole. One between Mid-April and June and another at least two months later between July and September.
- 8.7 Water vole field signs include burrows, latrines, footprints, feeding remains and runs. The relative suitability of the habitats for water vole will also be recorded in detail during these surveys.
- 8.8 Should the surveys confirm the presence of water vole in any of the ditches, it will not be possible to commence works on or near to the ditch until a water vole mitigation licence has been submitted and granted by NRW. If the surveys confirm the absence of water vole, then proposed works can commence with no constraints.

Precautionary Working Method Statement (PWMS)

Toolbox Talk (TBT)

- 8.9 A toolbox talk will be delivered by the ECoW to ensure that all site contractors are made aware of the potential presence of water voles and otters on site. The toolbox talk will include identification of both species, details of their legislative protection, details of precautionary working measures and what to do in the eventuality that either species or a burrow/otter holt are found on site during the works.

General Precautionary Working Measures

- 8.10 Working measures to minimise any potential impacts on water voles and otters are set out below:
- Working in the vicinity of suitable otter habitat during the hours of darkness and within 2 hours after sunrise and 2 hours before sunset should be avoided where possible.
 - If applicable, exclusion zones should be clearly marked on site around known otter holts and shelters.
 - Screen fencing or planting of thicket-type vegetation to reduce noise and visual disturbance should be considered.
 - Exposed pipe systems should be capped when contractors are off site, and ramps exit ramps should be installed within any excavations that are left uncovered overnight to ensure otters and other species are able to escape.

- Pre-construction surveys and regular survey visits are recommended to be undertaken throughout the works to check for any newly created holts or resting places that may arise after the original survey.

9.0 Summary

9.1 A summary of the CEMP measures, responsibilities, timings, and requirements for ecological supervision are provided in Table 2.

Table 2. Summary of CEMP Measures

Protection Plan	Task Reference	Timings and Notes	Responsibility	Ecologist Required on Site
Designated Sites and Habitat Protection Plan	Site Access Measures	Duration of Works	The client and the site contractor	No
	Standard Pollution Prevention Measures	Duration of Works	The client and the site contractor	No
	Ground Contamination	Duration of Works	The client and the site contractor	No
Amphibian and Reptile Protection Plan	Toolbox Talk	Duration of Works	The client to appoint qualified ecologist to deliver toolbox talks as and when required.	Yes (for initial one); 'Environmental Champion' to deliver talks to new contractors
	Following PWMS set out in Section 5.0	Duration of Works	The client and the site contractor	No
Badger Protection Plan	Toolbox Talk	Duration of Works	The client to appoint qualified ecologist to deliver toolbox talks as and when required.	Yes (for initial one); 'Environmental Champion' to deliver talks to new contractors
	Pre-commencement badger survey	Prior to works commencing	The client to appoint qualified ecologist to complete survey	Yes

Protection Plan	Task Reference	Timings and Notes	Responsibility	Ecologist Required on Site
	Following PWMS set out in Section 6.0	Duration of Works	The client and the site contractor	No
Nesting Bird Protection Plan	Pre-commencement Schedule 1 bird survey	Prior to works commencing	The client to appoint qualified ecologist to complete survey	Yes
	Sensitive Timing of Works	Vegetation clearance works to be undertaken outside of nesting bird season where possible	The client and site contractor	No
	Nesting Bird Checks	Between March and August inclusive, if vegetation clearance works are to be undertaken within this period	The client to appoint qualified ecologist to complete the nesting bird check(s)	Yes

Protection Plan	Task Reference	Timings and Notes	Responsibility	Ecologist Required on Site
Water Vole and Otter Protection Plan	Water vole surveys	Prior to works commencing on identified ditches. Two surveys are required; one between Mid-April and June and another at least two months later between July and September.	The client to appoint qualified ecologist to complete the surveys	Yes
	Following PWMS set out in Section 8.0	Duration of Works	The client and the site contractor	No

DRAWINGS

**RCS/2010935/CARMA/X/003 – Indicative Working Area Drawing Northern
Diversion**

APPENDIX A: Programme of Works (Provided by the Client)

ID		Task Name	Duration	Start	Finish	Nov '22						28 Nov '22						05 Dec '22						12 Dec '22					
						T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T
1																													
2																													
3		Haul Road	3 wks	Mon 03/04/2	Fri 21/04/23																								
4		West Fencing	2 days	Mon 24/04/2	Tue 25/04/23																								
5		East Fencing	3 days	Wed 26/04/2	Fri 28/04/23																								
6		mobilisation & welfare	1 wk	Mon 17/04/2	Fri 21/04/23																								
7		west top soil strip	3 days	Wed 26/04/2	Fri 28/04/23																								
8		West P18 works	1 wk	Mon 01/05/2	Fri 05/05/23																								
9		Q10	1 day	Fri 05/05/23	Fri 05/05/23																								
10		West Connection pit	1 wk	Mon 08/05/2	Fri 12/05/23																								
11		West pit P9	1 wk	Mon 15/05/2	Fri 19/05/23																								
12		East top-soil strip (inc matting & ditches)	13 days	Mon 15/05/23	Wed 31/05/23																								
13		East Connection pit	1 wk	Thu 01/06/23	Wed 07/06/23																								
14		stringing ditching	6 wks	Mon 22/05/2	Fri 30/06/23																								
15		East pit p9	1 wk	Mon 03/07/2	Fri 07/07/23																								
16		Pressure test	1 wk	Mon 10/07/2	Fri 14/07/23																								
17		Drill, Tie ins, stopple	2 wks	Mon 17/07/2	Fri 28/07/23																								
18		coating	1 wk	Mon 31/07/2	Fri 04/08/23																								
19		East side backfill & reinstate	2 wks	Mon 07/08/2	Fri 18/08/23																								
20		West side backfill & reinstate	1 wk	Mon 21/08/2	Fri 25/08/23																								
21		demob	1 wk	Mon 28/08/2	Fri 01/09/23																								
22																													

Project: cardigan program

Date: Wed 15/02/23

Task

Split

Milestone

Summary

Project Summary

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

External Tasks

External Milestone

Deadline

Progress

Manual Progress



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