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Preston and South Ribble FRMS

Areas 1 and 2

Construction Environmental Management Plan (CEMP)

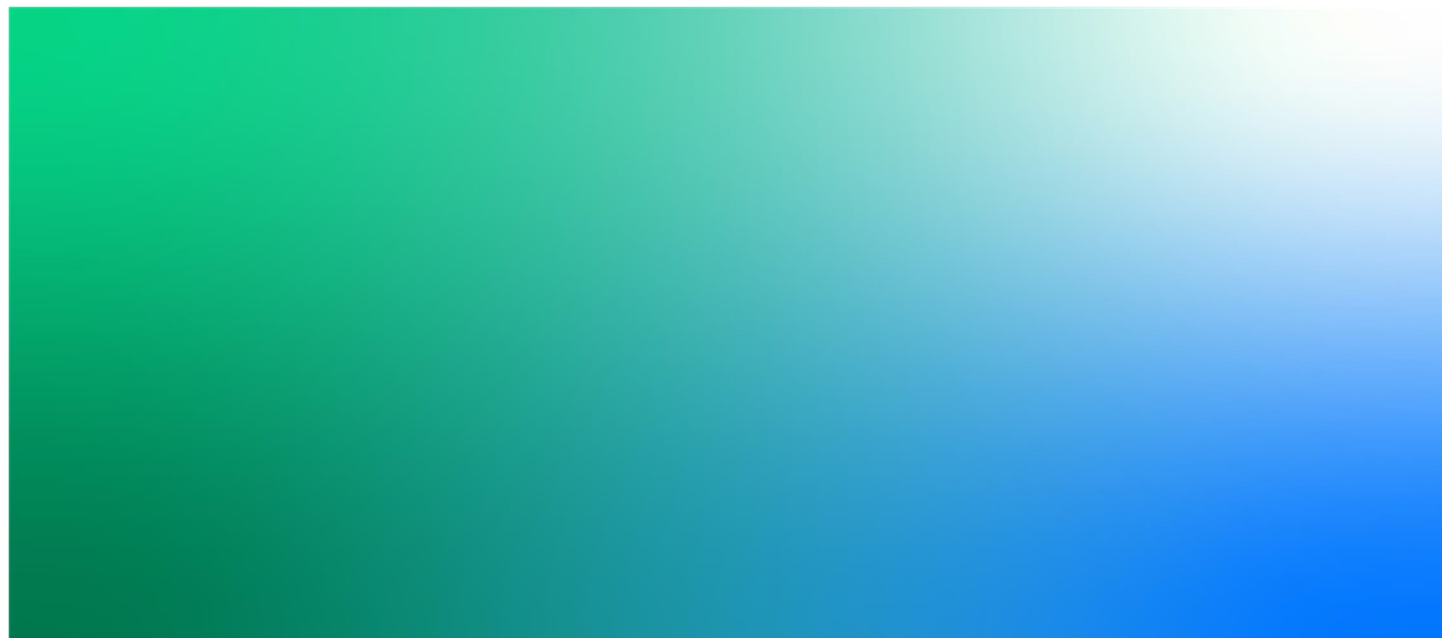
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1. Introduction

1.1 Project Description

The full extent of the Preston and South Ribble FRMS (of which this Construction Environmental Management Plan (CEMP) covers Areas 1 and 2) runs to the south of Preston city centre, along a 4.5 kilometre (km) stretch of the River Ribble, extending from Broadgate to Walton-le-Dale. It also includes a 4.0 km stretch of the River Darwen from the confluence with the River Ribble to Higher Walton. Due to its large scale, the Preston and South Ribble FRMS has been divided into five Phases of works. The 2 Phases relevant to this CEMP (referred to as Areas) consist of the following:

- Area 1 – Riversway and Broadgate – runs along the right bank of the River Ribble between the West Coast Main Line (WCML) Viaduct at the upstream extent and the Liverpool Road Bridge at the downstream extent.
- Area 2 – Lower Penwortham – situated along the left bank of the River Ribble, between the WCML Viaduct and the Cadent gas pipe bridge. The scheme also includes works inland from the river around the Penwortham Methodist Church, and across the Golden Way footpath. There are also works to an existing culvert beneath the WCML railway approximately 500 metres (m) south of the river.

1.2 Site Location and Surrounding Land Use

Much of the site is hardstanding, roads and footpaths. The most notable exceptions being the embankment through the green space of Ribble Sidings, Broadgate Gardens and British Aircraft Association (BAC) sports field.

Key environmental constraints in proximity to the site include multiple Public Rights of Way (PRoW), two historic bridges: Penwortham Old Bridge and the West Coast Main Line (WCML) Viaduct, and the historic parks, Avenham Park and Miller Park. There are also several protected ecological sites, including: the River Ribble Marine Conservation Zone (MCZ); the River Ribble Biological Heritage Site; the Ribble and Alt Estuary Special Protection Area (SPA), and Ribble and Alt Estuary Ramsar, however the SPA and Ramsar sites are situated approximately 6.5 km downstream from the scheme.

1.3 Purpose of this Document

The purpose of this CEMP is to set out the procedures, standards, work practices and management responsibilities that Volker Stevin will follow to comply with environmental legislation, implement best practice and adopt specified mitigation measures that have been developed, in order to address environmental impacts arising from construction of the scheme.

This CEMP has been developed to provide the management framework needed for the planning and implementation of construction activities, in accordance with environmental commitments identified in the environmental report (EN0000009C -JAC-ZZ-00-RP-EN-0005) and other supporting documentation and in legislative requirements.

1.4 Scope of the CEMP

The scope of this CEMP covers the design, construction, completion, and maintenance (up to the end of the 12 months defects period) of the works. It should be read in conjunction with a number of other documents which are highlighted throughout this document.

This CEMP documents the actions that Volker Stevin will undertake and the procedures that they will have to adhere to in order to ensure that they are compliant with current legislation and contractual obligations. It will

also enable them to implement best practice measures and set out their site-specific Environmental Management System (EMS) requirements during the construction phase.

1.5 Structure of the CEMP

The CEMP considers the following subject areas appropriate for the Preston and South Ribble FRMS Areas 1 and 2:

- Developments and updates to the CEMP.
- Volker Stevin Environmental Management System.
- Objectives and Targets.
- Roles and Responsibilities.
- Competence, Training and Awareness.
- Communication.
- Contingency Plans.
- Monitoring and Auditing of Construction Activities.
- Environmental Impacts and Mitigation.

Relevant documents are listed in Appendix B.

1.6 Development and Updates to the CEMP

This CEMP will be reviewed regularly (at least monthly) by Volker Stevin to ensure the required procedures are being followed. The frequency of this will vary, depending on the volume of construction activities and will be agreed between Volker Stevin and the Employer. The review will be coordinated by Volker Stevin in consultation with the Environmental Clerk of Works (ECoW) and other specialists within the engineering and construction team.

Following the review, any changes will be fed back into the document and an updated version will be produced. Any revisions to the CEMP will be submitted to the Environment Agency. A written record of any approved changes to the CEMP shall be kept by the Volker Stevin Environment Manager (see 1.10)

1.7 Volker Stevin Environmental Management System

Volker Stevin will operate a Quality Management System in accordance with the requirements of BS EN ISO 9001: 2015 or equivalent and shall prepare their Project Quality Plan based on their Quality Management System, indicating the specific procedures and assurances to guarantee all operations, whether on or off site, including those of the subcontractors.

A Site Waste Management Plan (SWMP) will also be developed by the Volker Stevin.

1.8 Environmental Standards

The pivotal legislation regarding nature conservation in England is the Wildlife and Countryside act 1981 (as amended) (WCA). The WCA implements, into domestic legislation, the convention on the Conservation of

European Wildlife and Natural Habitats (Bern convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Bird Directive). It sets out various levels of protection for species (Schedules 1 and 5) and designation of Sites of Special Scientific Interest (SSSI). In England, the WCA is supplemented by the Countryside Rights of Way Act 2000 (CROW) and the Natural Environment and Rural Communities Act 2006 (NERC), which enhances the protection to certain habitats and species and places a duty on governments and public bodies/authorities to have regard for nature conservation.

In England, the Conservation of Habitats and Species Regulations 2017 (Habitat Regulations), which consolidates and updates the Conservation (Natural Habitats etc.) Regulations 1994, transposes, into domestic legislation, the Council Directive 92/43/EEC (Habitats Directive). The Habitat Regulations provide designation and protection to European protected habitats (Special Area of Conservation) and species (listed in Annex I and II of the Habitats Directive respectively). Additionally, the regulations require the designation and maintenance of Special Protection Areas (SPA) classified under the Bird Directive.

Developers should be aware that an unlimited fine and/or custodial sentence can be received if a development is in breach of the above legislation. In addition to legislation, planning policy puts responsibility on planning authorities to ensure developers assess and mitigate ecological impacts during the planning process. Specifically, in this context, section 15 Conserving and enhancing the natural environment of the National Planning Policy Framework 2019.

All works will comply with BS 42020:2013 Biodiversity Code of Practice for planning and development.

All sites will:

1. Comply with all relevant environmental legislation avoiding prosecutions for the contravention of environmental law and regulations
2. Raise environmental awareness throughout the Site Management Team and subcontractors by means of regular environmental tool box talks and awareness sessions
3. Implement suitable and sufficient controls to achieve zero pollution incidents (emergency spills, noise/nuisance, water contamination, waste management issues) whilst maintaining an operational work site
4. Implement the waste hierarchy: prevent waste where we can; reuse materials until we can't use them again; recycle waste where reasonably practicable; recover waste (e.g. energy recovery); and only dispose of waste if no other options within the hierarchy are possible
5. Identify and recognise all designated sites (Sites of Special Scientific Interest, Areas of Outstanding Natural Beauty etc.), listed buildings and protected flora, fauna and wildlife that may potentially be affected by site activities. The site will instigate appropriate mitigation measures to ensure adequate protection and that minimum disturbance is caused.

1.9 Objectives and Targets

Volker Stevin will set Environmental Objectives to continuously improve environmental performance on the site as part of their Environmental Management System. Volker Stevin will set objectives based on each significant environmental impact and they will be reviewed monthly and revised if necessary. Procedures, monitoring requirements, and key performance indicators will be measured against achievable targets.

1.10 Roles and Responsibilities

Volker Stevin is responsible for ensuring that all individuals involved in the construction of the project, including sub-contractors are aware of the environmental risks associated with their activities and comply with the procedures set out in the CEMP to avoid environmental damage.

Volker Stevin is obliged to ensure that all persons allocated specific environmental responsibilities are notified of their appointment and to confirm their responsibilities are clearly understood.

The principal environmental responsibilities for key staff can be identified as follows:

a. Volker Stevin Site Manager:

- Implementation of the CEMP.
- Close liaison with the Environmental Manager to ensure adequate resources are made available for implementation of the CEMP.
- Ensuring that the risk assessments for Control of Substances Hazardous for Health (COSHH) regulations, noise and environmental risk are prepared and effectively monitored, reviewed and communicated on site and
- Managing the preparation and implementation of method statements. Ensuring that the Environmental Manager reviews all method statements and that relevant environmental protocols are incorporated and appended.

b. Volker Stevin Environmental Manager:

- Maintaining the CEMP.
- Maintaining environmental records.
- Providing guidance for the site team in dealing with environmental matters, including legal and statutory requirements affecting the works.
- Reviewing environmental management content of method statements.
- Reporting environmental performance to the Site Manager.
- Ensuring compliance with environmental legislation and the CEMP and
- Liaison with statutory and non-statutory bodies and third parties with an environmental interest in the scheme.

c. Site Staff:

- To receive general environmental awareness training and undertake work in accordance with method statement briefings and toolbox talks.
- Take an active role in site safety and environmental meetings (including those listed above).
- Ensure awareness of the contents of method statements, plans, supervisor's meetings or any other meetings that are concerned with the environmental management of the site.

- Report any operations and conditions that deviate from the CEMP to the Site Manager.

d. Supervisors:

- Ensuring all personnel affected by a method statement are briefed and fully understand its content. Monitor operatives for compliance, including sub-contractors.
- Implementation of environmental management activities required by the CEMP and works method statements and
- Ensuring all inspections are carried out as prescribed in the CEMP.

e. Environmental Clerk of Works (ECoW):

The ECoW will keep an active register of all issues that arise during the works and report, as required, to the Environment Agency. Tasks would include but are not limited to:

- Giving inductions to all site personnel outlining key environmental sensitivities and mitigation measures to be applied during construction. Inductions will be repeated throughout the construction period and will be related to the changing seasons.
- Identifying environmental risks and developing environmental controls as necessary.
- Inspecting working areas and ensuring compliance with the CEMP and the Environmental Action Plan (EAP).
- Regularly communicate with all site personnel regarding any environmental issues, enhancements or benefits, and mitigation measures
- Document and report any environmental issues and incidents as required to the Environment Agency and
- Manage and update the EAP.

Appendix A provides the scope of works for the ECoW.

1.11 Competence, Training and Awareness

All personnel involved in the construction of the works are required to receive environmental awareness training. The environmental training and awareness procedure will ensure that staff are familiar with the principles of this CEMP, the environmental aspects and impacts associated with their activities in accordance with Volker Stevin EMS, the procedures in place to control these impacts and the consequences of departure from these procedures.

Method statements will be prepared for specific activities prior to the works being undertaken and will include environmental protection, enhancement and mitigation measures and emergency procedures appropriate to the activity covered. The Environmental Manager will review method statements prior to their issue.

A specific training plan that identifies the competency requirements for all personnel allocated with environmental responsibilities will be produced by the Principal Contractor. Volker Stevin will provide training to ensure that all persons working on site have a practical understanding of issues and management requirements prior to commencing activities. Method statement briefings will be given prior to personnel carrying out key activities for the first time.

The Environmental Manager will keep a register of completed training. The Site Manager will also ensure that environmental emergency plans are drawn up and the Environmental Manager, in coordination with the ECoW will conduct regular checks to ensure that the plan is effective by means of emergency drills.

Prior to an activity commencing, a Method Statement and Risk Assessment will be produced for the works - with the inclusion of any mitigation measures necessary to ensure the effects of the construction works on the environment are kept to a minimum. The Method Statement and Risk Assessments will be reviewed by the ECoW and distributed further for comment should this be required e.g., to the EA Fisheries Biodiversity and Geomorphology (FBG) team and to the Marine Management Organisation (MMO).

1.12 Communication

1.12.1 External Communication

Volker Stevin will report to the Employer in a format that is acceptable, as a minimum every four-weeks, on his progress with regard to obtaining of consents, permissions or approvals and with regards to the discharging of any specific planning conditions. Volker Stevin will also provide the Employer with copies of all consents, permissions and approvals received and any correspondence exchanged with relevant authorities.

1.12.2 Internal Communication

All staff and contractors will be informed of the content and location of this CEMP and associated controls. The induction of all new employees and contractors will include the contents of this plan and the Environmental Incident Response Procedure. Method statements will be used to communicate specific environmental requirements, as appropriate.

Regular site progress meetings will be the main opportunity for discussing environmental issues relevant to the project. Environmental performance will also be discussed at regular Health, Safety, Environmental and Quality (HSEQ) meetings. This will include dissemination and discussion of the findings of audits, environmental reports, and other inspections, where appropriate.

The Site Manager will have responsibility for maintaining internal communication, including changes to material on display.

1.13 Contingency Plans

The ECoW will establish contingency procedures should additional ecological constraints be identified/occur during the works particularly at times when the ECoW is not on site. The ECoW contract provides for coverage so only in exceptional circumstances will this occur. In such case a secondary provision is made to contact the Environment Agency Project Management and Environment Agency FBG staff.

1.14 Monitoring and Auditing of Construction Activities

The following monitoring will be undertaken:

- Monitoring to ensure compliance with site rules, selection and management procedures, health and safety standards and statutory requirements.
- Environmental auditing to be carried out regularly by the ECoW and

-
- A HSEQ internal audit schedule will be prepared to organise audits of the implementation of the CEMP and audits of any sub-contractors and suppliers' environmental performance by the Environmental Manager.

2. Environmental Impacts and Mitigation

2.1 Designated Sites

The scheme encompasses habitats associated with the urban location along the River Ribble, i.e. amenity grassland, planted trees, treelines (planted and self-seeded), roads, bridges, and pedestrianised areas. The Ribble and Alt Estuary Special Protection Area (SPA), and Ribble and Alt Estuary Ramsar are situated approximately 6.5 km downstream from the scheme.

The Ribble Estuary Marine Conservation Zone (MCZ) is designated for smelt (*Osmerus eperlanus*). An MCZ assessment has been undertaken as the working area extends into the Ribble for the Redi Rock process. The assessment approved by the MMO concluded that there was no risk to the site's conservation objectives.

The Ribble is designated as a Biological Heritage Site.

Biological Heritage Sites are 'local wildlife sites' in Lancashire, they are identified using a set of published guidelines. As above with the MCZ there is no risk to the Biological Heritage Site through the proposed works. However, encroachment into the river is only to occur as part of the agreed works i.e the Redi Rock process.

A Stage 1 Habitat Regulations Assessment (HRA) concluded that there was no significant effect to the qualifying features of the Ribble and Alt Estuary Ramsar or the Ribble and Alt Estuary SPA due to the significant distance from the scheme. Additionally, no plan, permission, or project was identified that could give rise to 'in-combination' effects. Conclusions of these assessments have been discussed in detail with Natural England and the Environment Agency's Fisheries, Biodiversity and Geomorphology team.

Heritage sites include:

- Penwortham Old Bridge (Scheduled Monument ID: 1005092) is also designated as a Grade II Listed building (NHLE ID: 1210865 and 1279848).
- West Coast Mainline Railway Viaduct Over River Ribble Grade II Listed building (NHLE ID: 1218908).
- Miller Park (RPG 1; Grade II* Registered Park and Garden).
- Avenham Park (RPG 2; Grade II* Registered Park and Garden).
- Nine individually Grade II Listed buildings within Miller Park (RPG1).
- Avenham Conservation Area.

See Heritage Statement (ENV0000009C-JAC-XX-00-RP-EN-0003).

2.2 Implementation and Control

Compliance with the CEMP is the key control measure required during construction to ensure mitigation, enhancements and other environmental recommendations are appropriately adhered to. The CEMP documents the processes to be followed to implement all relevant agreed environmental measures.

If any changes are required to any of the proposed procedures set out in this CEMP, due to changing environmental sensitivities, results of pre-construction surveys, unforeseen events or for any other reason, these will be discussed and agreed with statutory bodies in advance of any amended works being carried out. The corresponding section of this document will be revised with any approved changes required resulting from the discussions with the relevant statutory bodies.

Documentation will be reviewed to ensure sufficient information is available to manage environmental and ecological issues, and where necessary, further survey works will be undertaken.

Where protected species are identified on site, mitigation requirements of ecology surveys will be briefed to the workforce and fully implemented on site. Ecologists will be utilised to provide a watching brief where works could impact upon protected species (See Section 2.3 for further details). The Environment Agency has appointed an ECoW.

Where required works will be programmed in accordance with the guidance provided by CIRIA C567 *Working With Wildlife*. Tree and shrub clearance has been undertaken outside of bird breeding season (March - August).

Retained vegetation will be fenced off, appropriately signed and unauthorised entry to the area prohibited.

Materials and plant will not be stored under the canopy of retained trees.

We are aware of invasive plant species throughout the site (see 2.3.7 regarding the identification and management of these).

2.3 Ecology

Trenches, holes, and pits will be kept covered at night or provide a means of escape for mammals that may become entrapped. Gates to compound areas will be designed sensitively to prevent mammals from gaining access and will be closed at night.

Where deemed necessary, steel mesh (or timber board) will be attached to the bottom of the site entrance gates to prevent the ingress of small mammals into the construction site. Gates will be closed at the end of shift. Toolbox talk will be presented to all operatives working on the scheme detailing additional mitigation measures required to prevent mammal access. i.e no littering of food, leaving boards within excavations at night to provide means of exit etc.

Construction can have significant and irreversible effects on species and habitats both on and off site. The works will be managed to minimise any ecological effects, and where possible enhance the ecological condition of the site. An Environmental Action Plan (ENV0000009C-JAC-ZZ-00-DR-EN-0001) has been produced for the works. See also the verification walkover report (ENV0000009C-JAC-ZZ-00-MO-BD-0001) and the environmental constraints plan (ENV0000009C-JAC-ZZ-ZZ-DR-EN-0004).

Otters, nesting birds, bats, fish, and trees are considered below. No evidence of badger was recorded during the site visits, a pre-commencement check was recommended for badger prior to the construction works (during site mobilisation) with the only positive findings on the eastern side of the WCML.

2.3.1 Pre-Construction Surveys

Dates and survey areas for pre-works surveys for protected and priority species.

Otter pre-construction survey for Areas 1 and 2 (+200 m) 3rd August 2021. The survey covered both banks of the River Ribble with a 200 m buffer up and downstream from the works, north past the Liverpool Road bridge and south past the railway bridge. No otter field signs or resting sites were identified during the survey. The majority of the embankments in the vicinity of the proposed works were identified as being unsuitable for otter resting sites due to the muddy substrate or man-made stone slopes. Otter are known to frequent the area and mitigation measures in place, such as no working at night, will limit any disturbance to commuting or foraging otter.

Invasive non-native species pre-construction survey

- 12th July 2021 throughout working areas of Areas 1 and 2,
- 16th July 2021 for confirmation of absence of Japanese rose following request to confirm potential sighting by contractor,
- 11th August 2021 survey in the vicinity of the Sea Cadet building.

Ecological constraints for area on the eastern side of the WCML on 25th October 2021. The visit found:

- Habitats – on the east side of the WCML security fencing, there is a sports pitch and to the north of this is the banking of the Greenway which comprises secondary broadleaved woodland dominated by poplars with very occasional oak. The understory had a mix of bramble, alder, hazel, harts-tongue fern and male fern. On the bank of the WCML, the habitat is a mix of scrub, ruderal vegetation and tall grasses.
- Badgers – An old badger latrine was identified at SD 53668 27623 on a pile of sand. No other evidence of badgers was recorded. The Greenway within the survey location is criss-crossed by secondary footpaths and considered sub-optimal to support the species. The bank of the WCML contained very dense vegetation and could not be accessed so the visual assessment was constrained to 5-10 m beyond the security fencing. No immediately observable evidence was noted (e.g., pathways under the fence) but the security fencing limited the survey.
- Bats – The trees were most semi-mature / early mature with no potential bat roost features observed.
- Birds – Suitable nesting habitat within scrub and woodland.
- Other – Himalayan balsam was observed on the north-west boundary of the sports pitch. The plant was scattered along this boundary with a notable stand at SD 53692 27759. The plant had passed begun to die back, so more plants may be present along the WCML. No other invasive species observed.

2.3.2 Nesting Birds

All tree and scrub vegetation clearance has been programmed to take place outside of the bird nesting period. However if any such clearance works are required during the bird nesting season in areas of habitat suitable for nesting birds (trees, shrubs, bridges, gabions). Volker Stevin will submit to the ECoW a survey, undertaken by a competent Ornithologist that confirms that nesting birds are not present. The proposed work will be undertaken within 48 hours of the survey. If nesting birds are found to be present then a minimum 5m exclusion zone (based on best practice, but species dependant) is to be erected around the nests (an appropriate species-specific exclusion zone to be established by a competent Ornithologist and the ECoW) and no works shall commence within the exclusion zone until the chicks have fledged.

2.3.3 Bats

Overall, bat activity within the survey area was generally low. This is likely a result of the relatively high ambient light levels and the urban location which are likely to limit the presence of species typically associated with more rural habitats. In the context of the habitat requirements of common pipistrelle and the numbers recorded, the potential impacts to this species from the scheme (including affects to the distribution and abundance of bats) are not considered to be significant outside of site level. Impacts to other species from the proposed scheme are considered to be negligible given the very low numbers recorded (ENV0000009C-JAC-ZZ-ZZ-RP-BD-0003).

Lighting will be restricted to compound locations and may be potentially necessary in isolated areas where works are taking place. Low spill directional lighting will be used throughout. Work hours are restricted to 08:00 hrs to 18:00hrs and therefore only lighting outside of these hours will be necessary at compound locations for security purposes only. Lighting will be placed in strategic locations to ensure they have minimum effect on the River corridor and adjacent residential properties.

Therefore, no further surveys are required however works should not take place at night. Task lighting must be directed away from the river corridor and have baffles fitted or screening to avoid light spill See also section 2.10. Locations for bat boxes and for planting to improve bat foraging have been identified in the Landscape Habitat Environmental Management Plan (ENV0000009C-JAC-ZZ-ZZ-RP-0002).

2.3.4 Otters

Historically there has been evidence to suggest otter activity close to the West Coast Mainline Railway Viaduct and Old Penwortham Bridge.

Otter survey undertaken July 2020 (ENV0000009C-JAC-ZZ-00-MO-BD-0002): Clear aerial views of the vegetation found no signs of mammal pathways, depression in the vegetation or otter slides. No evidence of otter were recorded within or around these features. A precautionary pre-construction survey for otter was completed six weeks prior to start of proposed works, to ensure availability of up-to-date information and confirm the baseline results.

Otter are largely nocturnal and therefore any construction works at night-time may adversely impact otter movement and foraging success along this stretch of river. To avoid this impact, night-time works will only be undertaken where there is no alternative, however, it is anticipated that no night-time working will be required

The whole scheme length has been checked and no holts or couches have been identified within 250 m of the site (ENV0000009C-JAC-ZZ-00-MO-BD-0002 updated otter survey). A further check was undertaken on the 3rd August 2021 which confirmed these findings.

Protection of deep excavations will be provided overnight or when not actively worked. Any excavations will be made safe by securely covering over at the end of the work shift if this is not possible boards and ramps will be placed at either end of the excavation to create a temporary ramp to allow otters to exit safely. Excavations will be checked for the presence of otter and wildlife before being filled. Whilst no otter holts or couches have been identified within close proximity to the site, the river is frequently used by otters as a foraging and connective link.

2.3.5 Fish

The conditions of the MMO Marine Licence will be adhered to at all times. Weekly inspections of the work area will be conducted to ensure compliance with the Flood Risk Activity Permit and daily inspections of silt fencing around stockpiled material to prevent silt runoff will be undertaken. A fish rescue of any areas to be temporarily de-watered e.g. as part of the construction for the Redi Rock, is to be conducted following liaison between the ECoW and the Environment Agency fisheries officer. Soft-start measures will be adopted for noise generating activities, such as piling, to allow fish to move away from the noise source. Soft start procedures must be used to ensure an incremental increase in pile power over a set time period until full operational power is achieved. The soft start duration must be a period of not less than 20 minutes. Should piling cease for a period greater than ten minutes, then the soft start procedure must be repeated.

The annual working window for operations within the river is June 16th – January 31st. See also MCZ assessment (ENV0000009C-JAC-XX-RP-EN-0002) and WFD assessment (ENV0000009C-JAC-XX-00-RP-EN-0001). These dates have been confirmed by the MMO as part of the Marine Licence.

2.3.6 Trees

Consent for tree works has been approved as part of planning permission. An Arboricultural Impact Assessment ENV0000009C-JAC-XX-00-RP-EN-0004 was produced to accompany the planning permission.

The trees to be felled and pruned have been agreed with both Local Authorities. The works have been undertaken outside of the bird nesting season. All tree works are being undertaken by an approved arboricultural contractor and carried out in accordance with BS 5837.

Should any further tree removal be required this will be subject to approval and prior agreement with the Environment Agency Project Manager and confirmed with the planning and Local Authorities. See section 2.5.2 for details regarding tree removal during the bird nesting season.

Trees in the Avenham Conservation Area are afforded the same level of protection as a Tree Preservation Order (TPO).

The mature tree at the rear of Lower Penwortham Methodist Church has a TPO. The removal of this tree was included in planning permission; no further consent is therefore required. All trees along the old railway embankment adjacent to the church are also protected by a TPO.

Tree protection fencing to be in accordance with BS 5837 and is to be erected before any work commences in the surrounding area (see Figure 1). Deviation from this type of tree barrier must be agreed between the Contractor, the Environment Agency Project Manager and the ECoW. All retained trees within or on the edge of the working areas are to have associated Root Protection Areas (RPA).

Materials toxic to tree roots (e.g. wet concrete, oils, bitumen...etc.) will not be allowed to come into contact with tree roots. Nothing will be attached to trees and nor will they be used as anchorages and in no circumstances shall plant and/or materials be stored within the Root Protection Areas.

The ECoW will inspect tree root protection (both fencing and any ground protection) weekly and report any failings to the Environment Agency Project Manager and the Site Manager immediately.

Tree protection will remain in place until all adjacent works and ancillary works including any landscaping works are completed and it is agreed with the ECoW and the Environment Agency Project Manager that the tree protection can be removed.

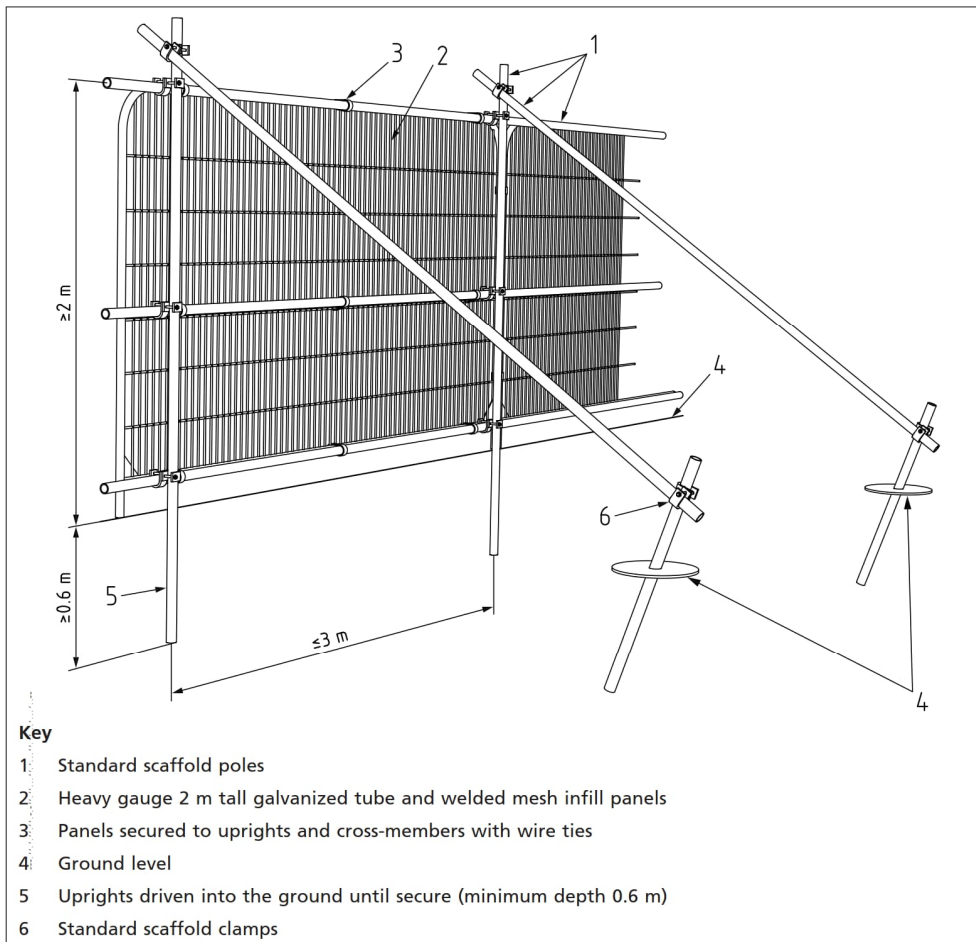


Figure 1. Standard tree protection fencing (from BS 5837)

Construction access around retained street trees along Broadgate.

Tree protection measures will be established in accordance with ENV0000009C-JAC-ZZ-41A-DR-EN-0001/0002/0003. It is accepted that access between the protected trees and the existing wall/new wall construction is limited. Ideally the fencing should extend several metres toward the river to create a protected circle around the tree. However, the area between the trees and the wall is a tarmac footpath and access to construct the new wall will be required between the trees and the wall. Beyond the wall the land immediately slopes steeply to the river. Heras fencing to be erected a minimum 1m set into the verge. No loading of the verge to take place; however, the fencing will have to be aligned to ensure for the movement of plant/tail swing of excavators to turn 180 degrees as shown in ENV0000009C-JAC-ZZ-41A-DR-EN-0001/0002/0003. and where possible (i.e. where the path is wide enough to allow construction access) extend further away from the trees.

As identified in BS 5837 the tarmac footpath will be retained for as long as possible during construction to allow increased root protection from construction plant. So, for example in the demolition of the existing wall as much of the footpath as possible will be retained. The use of small plant has also been agreed to further facilitate access and reduce loading. Additional ground protection on top of the tarmac will be used where the tarmac is within the RPA. Additional measures will consist of a combination of navi-matts, stone and geo-textiles and will be designed by the Volker Stevin temporary works team once the final permanent works design has been confirmed.

Where access for plant is across the areas of grass verge, between trees, soil/ground protection measures will be installed. Access for heavy plant across the grass verge will only be permitted outside the RPA.

The Volker Stevin Arboriculturist and ECoW to confirm the location of all working within the RPAs of the trees on Broadgate. Where deemed necessary the Volker Stevin Arboriculturist will undertake a watching brief during wall removal and construction works where the works take place within the RPA.

Monitoring of the health of the trees on Broadgate Street will be undertaken by the Volker Stevin Arboriculturist at three monthly intervals for the duration of the project.

Other sections of the project.

Areas are covered by tree root protection drawings (see table 1). In these areas there is an expectation that there will be no works required within any RPA. Should works be required within the RPA then the Volker Stevin Arboriculturist will be informed and where deemed necessary the Arboriculturist will undertake a watching brief during any excavation activities.

Table 1 Tree Root Protection Drawings

ENV0000009C-JAC-ZZ-41B-DR-EN-0001/0002/0003/0004	Root Protection Zones Area 1B
ENV0000009C-JAC-ZZ-41C-DR-EN-0001	Root Protection Zones Area 1C
ENV0000009C-JAC-ZZ-42A-DR-EN-0001/0002	Root Protection Zones Area 2A
ENV0000009C-JAC-ZZ-42B-DR-EN-0001/0002/0003/0004/0005	Root Protection Zones Area 2B
ENV0000009C-JAC-ZZ-42C-DR-EN-0001	Root Protection Zones Area 2C

2.3.7 Invasive Species

It is known that invasive plant species Himalayan balsam, Giant hogweed and Japanese knotweed are present along Areas 1 & 2. The relevant control measures will be taken to prevent the spread of each species identified. i.e. removal/burial/treatment/use of control barrier. See Invasive Non-Native Species report ENV0000009C-JAC-XX-00-RP-EN-0005 and location plan ENV0000009C-JAC-ZZ-ZZ-DR-EN-0002.

2.4 Archaeology/Heritage

A Heritage Statement has been produced (ENV0000009C-JAC-XX-00-RP-EN-0003). This identified the main areas of interest being works within or close to:

- Avenham Conservation Area.

- Avenham and Miller Parks, a pair of linked historic public parks (heritage assets) sited to the south/south-west of Preston City Centre which are both Grade II* Registered Parks and Gardens (RPGs).
- The Grade II Listed Viaduct (WCML) Over the River Ribble (1218908).
- The Scheduled Monument, Penwortham Old Bridge (1210865; also a Grade II Listed Building).
- Any buried remains associated with the old Penwortham Ferry Crossing (A watching brief has been recommended for the works in this area).

If any archaeological finds are made, work at that point will cease with any artefact left in-situ. The Environment Agency Project Manager and Environment Agency archaeologist/heritage officer will be informed immediately for advice on what measures will be taken.

2.5 Noise and Vibration

Excessive noise and vibration not only represent a major hazard to site workers but can annoy neighbors and also disturb wildlife. Volker Stevin will control and limit noise and vibration levels so that affected properties and other sensitive receptors are protected from excessive noise and vibration levels associated with construction activities.

Best Practical Means (BPM) will be employed which will balance noise and vibration against the works to be completed. The following factors will be considered:

- Proximity to residents.
- Duration of the works.
- Time of day the works are to be undertaken.
- The engineering practicability and safety.

Working hour restrictions that have been placed on the project will be adhered to. Night-time works will only be undertaken where there is no alternative, however, it is anticipated that no night-time working will be required.

The noise control hierarchy will be implemented - Eliminate > Substitute > Isolate > Control – to minimise the effect of our operations and plant and machinery on adjacent residencies.

Where works adjacent to sensitive receptors are unavoidable, the construction method utilised will be chosen to minimise noise and vibration.

Where possible, noise and vibration will be controlled at source.

Plant shall be positioned so that emissions do not cause nuisance to sensitive receptors.

Where noise cannot be avoided, screening and acoustic enclosures will be utilised to minimise noise transmission off the construction site. Cut off trenches will be created where excessive vibration is likely to be transmitted off site e.g. use of acoustic barriers on the access track to the BAC sports pitches.

The site layout will be created and maintained to avoid creation of unnecessary noise and vibration, e.g. one way traffic routes created and haul routes regularly inspected and maintained.

Where the works are likely to cause disturbance to sensitive locations noise / vibration monitoring will be carried out to ensure effects are measured. Additional controls will subsequently be put in place should any issues arise. Background readings will be undertaken in these circumstances so ongoing monitoring can be assessed against noise levels prior to works commencing.

In river piling will where ever possible be carried out in periods of low water, assuming the piling area will be relatively dry during low water, this will reduce noise attenuation towards the river.

Vibro-piling will be used as much as possible with impact piling kept to the absolute minimum.

Piling operations located within the river to only take place between 16th June and 31st January, to minimise impacts on the aquatic environment.

Methodologies for construction will be considered that minimise vibration as far as is reasonably practicable to avoid the need to divert a significant length of service.

Volker Stevin shall optimise the position of generators and pumps, required to undertake the works, to minimise the level of disturbance to properties and businesses. All potential measures will be taken to reduce noise and dampen vibration throughout the course of the works. Residents who are affected by noise and vibration shall be notified and all ongoing complaints will be resolved.

A trigger level of 65dB for any noise receptors used on the scheme will be applied to identify any works that are producing high levels of noise.

Should vibration measurements be required, which should only happen if complaints are received, equipment will be installed at the property and left to run for several days or for the duration of the activities that have caused the complaint. There is potential for construction noise levels to exceed the levels required to trigger the installation of Noise Insulation or Temporary Re-Housing measures. In order to mitigate this, restrictions on the timings of the noisiest works will be implemented. Construction works will not exceed:

- A period of ten or more days in any fifteen consecutive days; or,
- A total number of days exceeding forty in any six consecutive months.

In accordance with good site practice, the following measures will be implemented:

- Noise and vibration control at source: e.g. selection of quiet and low vibration equipment, location of equipment on site, control of working hours and the provision of acoustic enclosures; and,
- Screening: e.g. local screening of equipment or perimeter hoarding.

These periods are related to a specific receptor not to the whole scheme. See also the Construction Noise Report ENV0000009C-JAC-ZZ-ZZ-TN-EN-0001.

Noise and vibration in relation to sensitive ecological receptors. The key ecological sensitive receptor is fish. Mitigation regarding key ecological sensitive receptors has been discussed and agreed with Environment

Agency specialists and with the MMO. Mitigation will be a soft start procedure which must be used to ensure incremental increase in pile power over a set time period until full operational power is achieved. The soft start duration must be a period of not less than 20 minutes. Should piling cease for a period greater than ten minutes, then the soft start procedure must be repeated. No piling or other noisy operations will take place during hours of darkness. Other ecological receptors include otter, bats and birds.

Otter: The whole scheme length has been checked and no holts or couches have been identified within 250 m of the site (ENV0000009C-JAC-ZZ-00-MO-BD-0002 updated otter survey). A further check was undertaken on the 3rd August 2021 which confirmed these findings. Whilst no otter holts or couches have been identified within close proximity to the site, the river is frequently used by otters as a foraging and connective link. Otter are largely nocturnal and therefore any construction works at night may adversely impact otter movement and foraging success along this stretch of river. To avoid this impact night-time works will only be undertaken where there is no alternative, however, it is anticipated that no night- time working will be required.

Bats: Overall, bat activity within the survey area was generally low. This is likely a result of the relatively high ambient light levels and the urban location which are likely to limit the presence of species typically associated with more rural habitats. To avoid any impact upon bats night-time works will only be undertaken where there is no alternative, however, it is anticipated that no night- time working will be required.

Birds: The site has been cleared of trees/scrub and grassland that could be utilized by birds for nesting, roosting and foraging. As such there is no noise or vibration effect on bird species.

2.6 Dust

As well as causing a nuisance to neighbours, dust can lead to both health issues to persons on and off site and can have adverse ecological impacts. Potential sources of emissions must be identified, and appropriate controls applied to eliminate or minimise effects on neighbours and other sensitive receptors.

Where possible, dust creating activities will be completed away from sensitive receptors e.g. crushing or cutting of concrete materials. The following control measures will be implemented as a minimum:

- All dust-producing activities will be dampened down, preferably at source.
- Dust controls will be planned prior to demolition and maintained during demolition.
- Debris netting will be utilised during potentially dusty demolition and construction activities.
- Hard standing will be utilised to provide a running surface for vehicles so that it is easier to control dust emissions.
- Wheel wash facilities will be provided where mud is likely to be transported onto the public highway, this will be combined with road sweeping to reduce the possibility of dust even further. Proposed wheel wash facilities to be located at Margaret Rd compound (Ribble Sidings – 2C) & South Meadow Lane access/exit point. Volker Stevin to monitor the cleanliness of adjacent roads and, if required, amend the location of existing/install additional wheel wash.

- Haul routes will be regularly damped down with mobile suppression systems and regularly cleaned.
- Maximum speed limits of 5mph on unsurfaced haul routes and work areas and 10mph on surfaced haul routes and work areas will be imposed.
- All vehicles carrying loose or potentially dusty material to or from the site are to be fully sheeted.
- Drop heights will be minimised from conveyors, loading shovels, hoppers and other loading or handling equipment, additional water suppression will be utilised where possible.
- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction.
- Vehicles will be well maintained to minimise release of particulate matter through the exhaust.
- Regular inspections to monitor dust levels and the effectiveness of any suppression in use will be carried out.
- Dust monitoring will be carried out where dust is likely to cause potential nuisance or damage to adjacent sensitive receptors. The results of this monitoring will be assessed against background readings to determine any effect of our works on dust levels.

2.7 Waste

Waste can have significant effects on the environment. Waste on site will be managed in accordance with the waste hierarchy: Eliminate > Reduce > Reuse > Recycle > Recover > Dispose. Waste management contractors will be selected to help Volker Stevin achieve its goals, increasing reuse and recycling rates, and reducing waste sent to landfill.

Volker Stevin EMS-03 *Site Waste Management Plan* (or the Clients own Site Waste Management Plan) will be completed for all waste and non-waste movements and maintained as a live record.

Where waste is produced, and where possible, reports will be requested to show the actual tonnage of waste produced and the breakdown of how this waste was dealt with, e.g. diversion from landfill rate.

Volker Stevin Procedure E04 *Waste Management* provides further detail on managing waste.

Where possible, precast or precut materials will be used to eliminate waste creation on site.

Testing shall be conducted on all materials that are to be removed during excavation works and material shall be recycled and used within the scheme where possible.

Waste Storage:

Waste will be stored to prevent its escape and will not be stored near sensitive receptors.

Hazardous waste will be stored separately from inert and non-hazardous waste, and different hazardous waste will not be co-mingled.

All waste containers will be signed to show the accepted waste stream.

Where feasible, different waste streams will be segregated to aid in maximising reuse and recycling rates.

Waste Disposal:

Carrier licenses will be obtained and checked for all companies who remove waste from site.

Full environmental permits, exemptions or other evidence will be obtained and checked to ensure that disposal locations can accept the waste type to be sent there, and in the quantity required.

- All waste transfer notes/ hazardous waste consignment notes are to be checked before signature to ensure all required information is recorded before the waste is removed.
- All waste duty of care information and waste movements will be captured in EMS-03 *Site Waste Management Plan*.
- Where possible excavated natural material will be used in accordance with CL:AIRE The Definition of Waste: Development Industry Code of Practice. This will ensure that these materials do not get classified as waste and are used in a sustainable manner.
- Where feasible, inert waste from demolition and construction will be crushed in line with the WRAP Quality Protocol for the Production of Aggregate from Inert Waste and reused either on site or transported for use at other construction sites.

Volker Stevin Procedure E09 *Use of Materials on Projects* gives more detail on the options to be considered on site.

2.8 Ground and Water Pollution

If works are not planned properly, construction activities have the potential to cause pollution to the land and water environments.

Where contaminated arisings need to be stockpiled, these will be placed on and covered by a polythene liner or similar to prevent cross contamination with the underlying ground.

Where dewatering of excavations is required, this will be carried out in accordance with the Environment Agency position statement *Temporary Water Discharges from Excavations*.

When pumping anything other than clean uncontaminated rainwater, a settlement tank is to be used to remove suspended solids and if required, hydrocarbons.

Fuel/oil and chemical storage along with all refuelling will take place at least 10 m away from water courses or surface/ foul drainage.

Concrete washout will be undertaken into a lined skip or pit and will not take place within 10 m of a watercourse or surface/ foul drainage.

Wash waters from wheel washing will not be allowed to enter water courses or drainage.

Controls to prevent uncontrolled runoff into watercourses will be put in place and agreed with the in full where required.

Where abstraction of water is required, only 20 m³ per day will be abstracted from surface/ground water. If more water needs to be abstracted, consent will be sought from the Environment Agency.

A flood defence consent will be sought from the Environment Agency where works are required in, over or within 8 m of a main river (16 m of a tidal watercourse). Consent will be sought from the Local Authority where works that will affect the flow of ordinary watercourses is required.

Volker Stevin shall protect the water environment at all times and will comply with the measures set out in the following former Pollution Protection Guidance documents:

- PPG1 – General guide to the prevention of water pollution.
- PPG5 – Work near or liable to affect the watercourse.
- PPG6 – Working at construction and demolition sites.
- PPG8 – Storage and Disposal of used oils.

The following points will always be complied with:

- Any timing restrictions and working methodology required by the *Client's* fisheries team.
- Requirements for working within water course including use of biodegradable oil.
- Requirements to ensure oil/diesel and concrete do not contaminate the watercourse, such as double walled pipes for concrete pumping, continual monitoring for spillages and refuelling operations away from the watercourse.
- Procedures to ensure bunds and spill kits to be available at all times.
- Methods for settlements of silts out of and disposal of surface water from site. At no point shall additional water be discharged into the surface water drainage system without prior approval from the *Client*.
- Necessary methods to prevent sediment entering the watercourse.
- Necessary methods of watering translocated turf and plants that does not require local abstraction.
- Necessary methods to prevent additional tipping of fill entering the watercourse.

The works shall be delivered in accordance with the Environment Agency's SHEW CoP manual which is current at the date of contract award.

2.9 Temporary Site Fencing and Gates

Temporary fencing to the site shall be HERAS type fencing 1.8 m high. For areas requiring high levels of security, post and chain-link fencing 1.8 m high shall be used to BS 1722: Part 1. Fencing shall be provided with additional strutting where this is necessary. If requested on the drawings (for example adjacent to dwellings), this shall be faced with a fine gauge green mesh netting to reduce dust intrusion.

- Temporary fencing shall be erected as soon as Volker Stevin are granted possession of the site.
- Temporary gates shall be provided where shown on the drawings and as required by Volker Stevin to match the associated temporary fencing.

- The fencing requirements specified above will be regarded as the minimum standard for security purposes.
- A set of keys for all site entrance locks shall be provided to the Project Manager and allow the Client's Operations team emergency access at all times.

2.10 Lighting

At present no works are expected to take place beyond the agreed working hours i.e. there will be no night-time working.

If external lighting is required during construction, it will be designed to prevent light spillage onto hedgerows, woodland, lines of trees and the banks of watercourses, including the River Ribble. Lighting where-ever possible must be directed away from these sensitive areas and have baffles fitted or screening to avoid light spill.

This will be implemented in accordance with the Institute of Lighting Professionals and Bat Conservation Trust (2018) Guidance Note 08/18: Bats and artificial lighting in the UK.

2.11 Materials

The construction industry is a major consumer of natural resources, this use can be minimised through the consumption of recycled materials, and the effects minimised by using sustainably sourced materials. Also, the way materials are used and stored can have an impact where these are damaged and need to be replaced.

- Where possible, recycled, or secondary aggregates will be used to avoid the use of virgin aggregate.
- Products with a recycled content will be used in preference to those without where possible.
- Locally sourced materials will be used preferentially where this is economically feasible.
- Where specification allows, the use of cement replacements will be investigated to lower the embodied carbon or concreting operations.
- Only timber that is from a demonstrable sustainable source will be used. Delivery tickets will be on file with each line item stating whether it is from an FSC / PEFC source and referencing the chain of custody certificate number. The chain of custody certificate will also be on file showing the list of products covered under the certificate. This will be followed in line with Volker Stevin best practice procedures.
- Materials vulnerable to damage through the weather/vehicle movements etc. will be stored in designated areas and suitably protected.
- Low carbon concrete to be used where possible.
- Where possible 90% recycled steel to be utilised.

2.12 Site Restoration

At the end of the contract, those areas of natural habitat affected by construction activities but not permanently lost to development shall be left to regenerate naturally or be replanted in accordance with the contract requirements. A series of landscape detailed design drawings have been developed:

ENV0000009C-JAC-ZZ-ZZ-DR-L-0013 to

ENV0000009C-JAC-ZZ-ZZ-DR-L-0033

Along with a Landscape and Habitat Environmental Management Plan:

ENV0000009C-JAC-ZZ-ZZ-RP-EN-0002

And a Landscape specification:

ENV0000009C-JAC-ZZ-ZZ-SP-L-0001

If there is any 'waste' or surplus material after the construction has been completed, it shall be removed from the site, including any potential contaminants, such as cement, concrete, diesel, formwork oils etc.

2.13 Animal Welfare

Nearest RSPCA Vet Clinic:

196 Lancaster Rd, Preston PR1 2QL

Opening Times are:

Monday & Wednesday 9am - 6pm

Thursday 10am - 4.30pm

Friday 10am - 6pm

CLOSED EVERYDAY BETWEEN 1-2pm

Telephone Number: 01772 880764

General RSPCA injured wildlife line: 0300 1234 999

How to handle an injured animal:

- Weigh up the risks: only lift a wild animal if you're sure that you can do so without risk to yourself or others.
- Keep the animal away from your face, as they may bite or scratch.
- Wear gloves when handling all wild animals, especially oiled wildlife - pollutants like oil can be hazardous.
- Always wash your hands thoroughly after handling an animal.
- Take care in dangerous locations, such as a busy road. Watch from a distance first to see whether the animal is still alive and call for help if you can't reach it safely.

Do not handle or transport the following animals - call RSPCA instead:

- Deer
- Seal
- Wild boar
- Otter
- Badger
- Fox
- Snake

-
- Bird of prey (including owls)
 - Swan
 - Goose
 - Heron
 - Gull

If you see any of these animals injured, keep a safe distance, and call 0300 1234 999

National Bat Helpline: 0345 1300 228

3. A Project Specific Programme of Operations Relevant to Ecology.

Table 1 below shows the programme of activities with the anticipated dates associated and the expected impact upon ecology.

Table 1: Programme of operations relevant to ecology

Area of Works	Type of work	Anticipated Start and End Dates	Related Ecology	Ecology Mitigation	Further information
Area 1 – Downstream to Upstream					
Sea Cadets	Wall and reinstatement of access ramp	3 May 22 > 28 June 22	1 small tree removed by Sea Cadets building and tree management around slipway (removal/cutting back of low branches)	Cleared in winter	
Broadgate Gardens and Broadgate	Wall	29 July 22 > 12 May 23	Tree removal and tree management	Cleared in winter	
Redi-Rock Revetment Broadgate downstream of Penwortham Old Bridge	Piling and rock revetment	15 June 22 > 29 August 22	Works in river and adjacent to river Noise and vibration impact upon fish species	Timing of work Slow start piling	Approved by MMO and Environment Agency Fisheries Biodiversity and Geomorphology. See also section 2.3.5
Penwortham Old Bridge to Cadent Gas Pipe Bridge	Wall	27 Jan 23 > 12 May 23	None		
Cadent Gas Pipe Bridge to Miller Gardens Apartments	Wall	31 Jan 23 > 18 July 23	Minor Tree and scrub removal	Cleared in winter	

Area of Works	Type of work	Anticipated Start and End Dates	Related Ecology	Ecology Mitigation	Further information
Redi-Rock Revetement Pipe Bridge to Miller Gardens	Piling and rock revetement	3 August 22 > 2 Nov 22	Works in river and adjacent to river. Noise and vibration impact upon fish species	Timing of work Slow start piling	Approved by MMO and Environment Agency Fisheries Biodiversity and Geomorphology. See also section 2.3.5
Miller Garden Apartments to Mini Centre	Wall and flood gates	12 Aug 22 > 12 Jan 23	Tree and non-native hedge removal	Cleared in winter	
Mini Centre to WCML Viaduct	Wall	1 Dec 22 > 21 July 23	Minor Tree Removal	Cleared in winter	
Redi-Rock BAC Sports field to WCML	Piling and rock revetement	23 September 22 > 7 December 22	Works in river and adjacent to river. Noise and vibration impact upon fish species	Timing of work Slow start piling	Approved by MMO and Environment Agency Fisheries Biodiversity and Geomorphology. See also section 2.3.5
WCML Western Arch	Wall and flood gates	28 November 22 > 4 January 23	Minor Tree Removal and non-native hedge removal	Cleared in winter	
Area 2 – Downstream to Upstream					
Penwortham Methodist Church	Wall and vehicular access and footpath raising	5 April 22 > 15 July 22	Minimal Tree removal and tree management (removal/cutting back of low branches)	Cleared in winter	
Ground raising along footpath into Penwortham Residential Park	Ground raising	30 May 22 > 15 July 22	Tree management (removal/cutting back of low branches)	Undertaken in winter	
Cadent Gas Pipe Bridge	Wall	15 September	None		

Area of Works	Type of work	Anticipated Start and End Dates	Related Ecology	Ecology Mitigation	Further information
(infilling arch)		22 > 27 September 22			
Cadent Gas Pipe Bridge to end of Riverside Road	Wall	29 September 22 > 15 May 23	Minor scrub removal	Cleared in winter	
End of Riverside Road to Ribble Sidings	Wall	27 January 23 > 25 May 23	Tree removal and tree management (removal/cutting back of low branches)	Cleared in winter	
Redi-Rock Revetment Riverside Road	Piling and rock revetement	31 October 22 > 3 February 23	Works in river and adjacent to river. Noise and vibration impact upon fish species	Timing of work Slow start piling	Approved by MMO and Environment Agency Fisheries Biodiversity and Geomorphology. See also section 2.3.5
Ribble Sidings Embankment	Embankment	17 March 23 > 21 July 23	Tree removal and tree management (removal/cutting back of low branches)	Cleared in winter	Re use of tree trunks and root plates for habitat improvements
WCML Culvert Infill	Ground raising	11 May 22 > 5 July 22	Tree management (removal/cutting back of low branches)	Undertaken in winter	

Appendix A. Scope for Environmental Clerk of Works

ENVIRONMENT AGENCY

customer service line
03708 506 506

www.environment-agency.gov.uk

incident hotline
0800 80 70 60

floodline
0845 988 1188

NEC4 professional services contract (PSC) Scope – Environmental Clerk of Works (ECoW)

Project / contract Information

Project name	Preston & South Ribble FRMS
Project SOP reference	ENV0000009C
Contract reference	
Date	8 th September 2020
Version number	1
Author	Connor McIlwrath, NEAS

Revision history

Revision date	Summary of changes	Version number
	First issue	1

This Scope should be read in conjunction with the version of the Minimum Technical Requirements current at the Contract Date. In the event of conflict, this Scope shall prevail. The services are to be compliant with the version of the Minimum Technical Requirements.

Details of the Scheme

- Preston has a long history of flooding which has led to the construction of an extensive network of linear defences. These defences have done an excellent job in protecting Preston from both tidal and fluvial flooding. For example, there have been various high flow events since the year 2000 and had these defences not been in place Preston would have suffered extensive flooding on 5 occasions (Oct 2000, Jan 2008, June 2012 and twice in Dec 2015).
- The largest recent flood event was Storm Eva (26th Dec 2015), which came very close to overtopping the defences. Storm Eva is estimated to have been a 2.9 % AEP (1 in 35 year return period) event, compared with typical standard of protection of 2~3% AEP along the Ribble and Darwen.
- The Environment Agency, in partnership with the European Regional Development Fund (ERDF), North West Regional Flood & Coastal Committee, Lancashire County Council, Preston City Council, and South Ribble Borough Council, are proposing a flood risk management scheme to better protect approximately 4,800 properties along the rivers Ribble and Darwen through Preston and South Ribble.
- The proposed solution consists of replacing and raising the existing defences along the same alignment.
- The full extent of the scheme (as shown in figure 1.1) runs to the south of Preston City Centre, along a 4.5 kilometre (km) stretch of the River Ribble, extending from Broadgate to Walton-le-Dale. It also includes a 4 km stretch of the River Darwen from the confluence with the River Ribble to Higher Walton. Due to its large scale, the scheme has been divided into five phases of work.

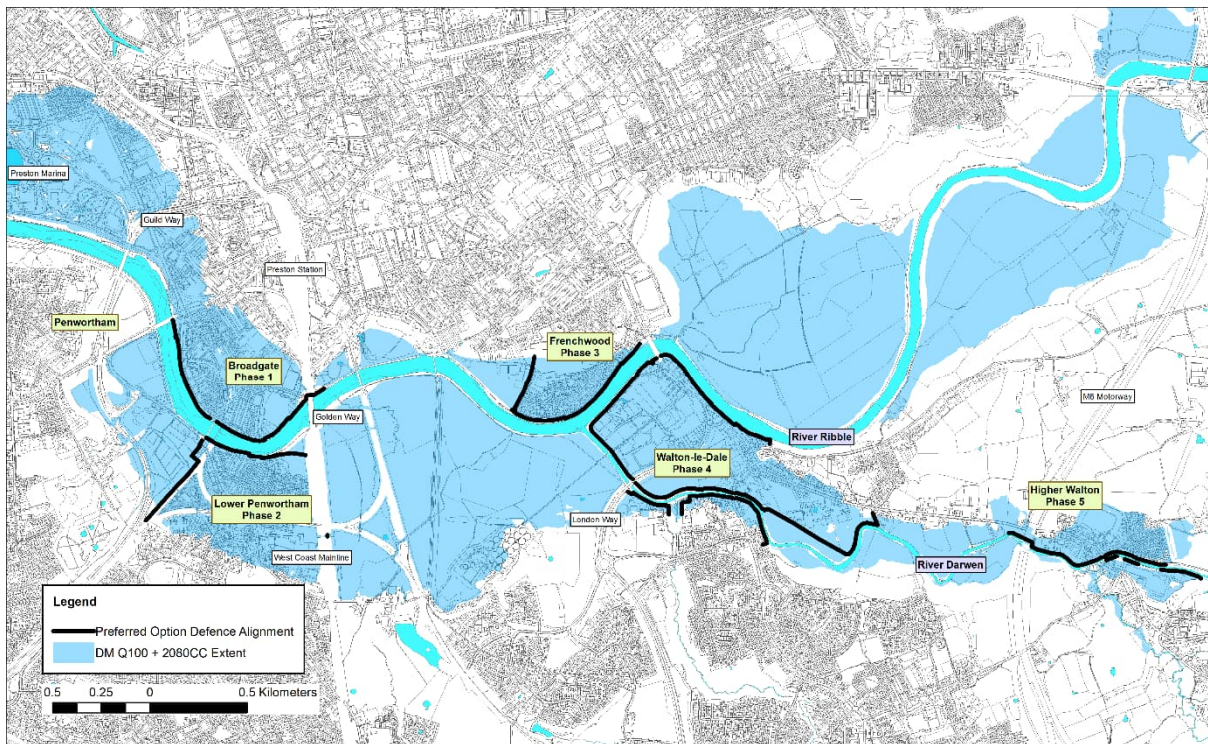
Phase 1, Riversway and Broadgate – runs along the right bank of the River Ribble between Liverpool Road Bridge and the West Coast Main Line (WCML) Viaduct.

Phase 2, Lower Penwortham – situated along the left bank of the River Ribble, between the WCML Viaduct and the gas pipe bridge. This phase includes works inland from the river around Penwortham Methodist Church, and across the Golden Way footpath tying into the old railway embankment.

Phase 3, Frenchwood and Walton-le-Dale along the Ribble – extends along the right bank of the River Ribble between Walton Bridge and the Esplanade, and along the left bank of the Ribble between Church Brow and the confluence of the River Darwen.

Phase 4, Walton-le-Dale along the Darwen – extends along the right bank of the River Darwen from Knot Lane in Walton-le-Dale to the confluence with the River Ribble, and along the left bank from Drakes Hollow (off Chorley Road) to the A6 London Way.

Phase 5, Higher Walton – extends along the right bank of the River Darwen between Bannister Hall Crescent and the M6, and along the left bank from Higher Walton Mill to Cann Bridge.

Figure 1: Preston & South Ribble Scheme


A copy of the Environmental Report is included in the tender which provides detailed information on the scheme, the environmental impacts, and how these will be managed prior, during and after construction.

This Contract requires services from an Ecological Clerk of Works (ECoW) for all phases of the scheme which is due to run until the end of 2024.

1. Outcomes required

- a) The *Consultant* shall provide a designated ECoW to monitor the site set-up works, clearance works, construction works, and site reinstatement, and supervise any environmental surveys or environmental high risk works for Phase 1&2 of the scheme.
- b) The ECoW has professional membership of a recognised and appropriate chartered institute. The ECoW also has an approved environmental auditing qualification recognised by the Institute of Environmental Management and Assessment (IEMA).
- c) The ECoW will be responsible for:
 - Advising (not instructing) the *Contractor*; should the ECoW consider that an instruction is required, he/she must advise the *Project Manager* and *Client* immediately.
 - If necessary (and with the *Client's* agreement) provide environmental toolbox talks to the site team, or arrange for a competent person to deliver these toolbox talks, including archaeological and ecological toolbox talks at site set-up, and when required during the construction period of the scheme.
 - Completing all actions assigned to the ECoW in the EAP.
 - Ensuring that each action of the EAP is completed in the necessary timeframe by the party named in the 'Responsibility' column of the EAP for that action. The ECoW will also ensure that

the *Contractor* adheres to all other environmental legislation and the *Client's* environmental policies and the *Client's* SHE guidance standards.

- If there are non-conformances, the ECoW must immediately inform the Supervisor who will notify a defect to the *Contractor* for corrective action within the timeframe identified by the ECoW. The non-conformance, action required, correction timeframe and completion must be added to the EAP by the ECoW.
- Monitoring adherence by the *Contractor* to the *Contractor's* EMS and advising the *Client* of any incidences of non-compliance.
- Where required, in agreement with the *Client*, the ECoW will attend monthly progress meetings to update the team on compliance with EAP actions.
- As a minimum, the ECoW must audit the site(s) monthly in advance of progress meetings recording audit details, including photos, on the 'Environmental Audit Record' appended to the EAP.
- At the beginning of the Contract, the ECoW will attend site a minimum of one day per week and audit the site every week. The frequency of audits will be reduced to monthly in agreement with the *Client* based on *Contractor* performance.
- Inputting to the Supervisor's Weekly Site Record on environmental matters, including bi-weekly monitoring of EAP actions, recording environmental issues/ non-conformances, actions taken, and changes to design. Monitoring should include inspecting the whole of the project working area and site access routes on a monthly basis.
- The ECoW must maintain a file of site visit reports, monthly updates, incident reports, correction notices and EAP amendments. This file will be passed to the *Client* on completion of the project and will constitute a condition of Completion.
- The ECoW shall review current itemised programmes and method statements as required by the *Project Manager* or *Client*. They must be involved in discussions regarding changes and advise the *Project Manager* and *Client* of the implications of these changes.
- If applicable, the ECoW will notify and assist the *Project Manager* and *Client* with any environmental incidents for the duration of the services.
- The ECoW will inform the *Client* upon completion of each section (i.e. Pre-construction, Construction and Post-construction) of the EAP actions and ensure that each section is signed off by the *Client*, *Contractor* and ECoW.
- The ECoW will produce a short summary report at the end of the works to compare predicted effects against actual impacts of the temporary and permanent works. This should be supported by photographic evidence, especially of the condition of the site upon completion of site reinstatement and submitted to the *Client* within 4 weeks of issue of the construction contract completion certificate.

d) Completion is only achieved when all of the *services* have been provided and accepted by the *Client*.

A Defect is any *service* provided which is not in accordance with the Scope, the law or acceptable good practice in the industry. This includes any *service* which is not in accordance with the work practices stated as being employed by the *Consultant* to ensure the quality of their *services* is consistent with their quality plan.

2. Constraints on how the *Consultant* provides the *services*

a) The *Consultant* shall ensure that appropriate use is made of existing data, to avoid duplicating work already undertaken.

b) The named ECoW is not to delegate their duties or powers without prior written agreement from the *Client*.

c) The ECoW must have the personal skills detailed below:

- Environmental awareness of all potential issues (including site specific mitigation, local residents' concerns, consultee comments, *Contractor's* Environmental Management Systems (EMS) issues, general conditions of the site (fencing, tidiness etc) and an eye for detail and thoroughness to ensure best environmental standards.
- Proactive liaison and communication skills (verbal, written and graphic) to communicate with all members of the project team and stakeholders in a professional manner that positively represents the Environment Agency.
- Able to pre-empt and prevent potential construction impacts on ecology and the environment, and have a good understanding of the main works contract.
- Understanding of contractual roles and responsibilities of all parties involved in the construction process.
- Proven ability to produce good quality site diaries and reports.
- Able to evaluate information in order to assess the impact and predict mitigation and enhancements.
- Able to work under own initiative to quickly and effectively resolve site issues/ queries, but also recognise when assistance is required.
- Be a good team player as they will work closely with the *Contractor's* staff.

3. Specific Project Requirements

- Assumed construction start: October 2021
- Assumed construction completion: June 2023

The ECoW will be required during the construction phase of the works.

4. Services and other things provided by the *Client*

Access to Sharepoint

The *Client* will provide to the *Consultant* an electronic copy of the Main Works contract to be administered. This will include the Works Information, Site Information, and Environmental Action Plan.

Other information referred to in the contract will be available on Sharepoint.

a) Data and information management and intellectual property (IP) rights

All of the data listed as being supplied to the Consultant as part of this study remains the IP of the *Client*.

Any data created by the Consultant as part of this contract will be the IP of the *Client*.

b) Data custodianship

The data custodian for project deliverables from this commission will be the *Client*.

c) Licensing information

No further information will be supplied to the Consultant.

d) Timesheets

Timesheets as normally utilised by the Consultant shall be submitted in accordance with the CDF Framework. Electronic submissions will be acceptable.

e) Payment procedure

Payment is subject to the procedure agreed in or under the CDF Framework.

f) Quality

The quality management system complies with the requirements of the CDF Framework.

Appendix B. Schedule of Relevant Information

Ref	Title
ENV0000009C -JAC-ZZ-00-RP-EN-0005	Environmental Report
ENV0000009C -JAC-XX-00-RP-EN-0003	Heritage Statement
ENV0000009C -JAC-ZZ-00-RP-EN-0006	Environmental Action Plan
ENV0000009C -JAC-ZZ-00-MO-BD-0001	Biodiversity verification walk over.
ENV0000009C -JAC-ZZ-ZZ-DR-EN-0004	Environmental Constraints Plan
ENV0000009C -JAC-ZZ-ZZ-RP-BD-0003	Bat Report
ENV0000009C -JAC-ZZ-ZZ-RP-EN-0002	Landscape Habitat Management Plan (LHEMP)
ENV0000009C -JAC-ZZ-00-MO-BD-0002	Otter Survey
ENV0000009C -JAC-XX-00-RP-EN-0002	MCZ Assessment
ENV0000009C -JAC-XX-00-RP-EN-0001	WFD Assessment
ENV0000009C -JAC-XX-00-RP-EN-0004	Arboricultural Assessment
ENV0000009C -JAC-ZZ-41A-DR-EN-0001/0002/0003	Root Protection Zones, Broadgate Area 1A
ENV0000009C -JAC-ZZ-41B-DR-EN-0001/0002/0003/0004	Root Protection Zones Area 1B
ENV0000009C -JAC-ZZ-41C-DR-EN-0001	Root Protection Zones Area 1C
ENV0000009C -JAC-ZZ-42A-DR-EN-0001/0002	Root Protection Zones Area 2A
ENV0000009C -JAC-ZZ-42B-DR-EN-0001/0002/0003/0004/0005	Root Protection Zones Area 2B
ENV0000009C -JAC-ZZ-41C-DR-EN-0001	Root Protection Zones Area 2C
ENV0000009C -JAC-XX-00-RP-EN-0005	Invasive Non-Native Species Report
ENV0000009C -JAC-ZZ-ZZ-DR-EN-0002.	INNS Location plan

ENV0000009C-JAC-ZZ-ZZ-TN-EN-0001	Construction Noise Report
ENV0000009C-JAC-ZZ-ZZ-DR-L-0013 to L-0033	Landscape detailed design drawings
ENV0000009C-JAC-ZZ-ZZ-SP-L-0001	Landscape specification