



# Construction Environmental Management Plan

R605 Ship Pool Bends Improvement Scheme

November 2021

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# Construction Environmental Management Plan

R605 Ship Pool Bends Improvement Scheme

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# 1 Introduction

## 1.1 Project Overview

Cork County Council are undertaking the widening of a section of the R605 regional road south of Ship Pool, a regional road linking Inishannon and Kinsale. This Construction Environmental Management Plan (CEMP) has been prepared as supporting documentation for the Part 8 planning application for the proposed project.

The section of the R605 to be improved is located at a bend which curves around a vertical rock face on the eastern side of the road, with a steep ground fall on the western side to the River Bandon. The current road alignment and width do not allow for the safe passage of heavy goods vehicles (HGVs), with reported incidents of damage to HGVs from contact with the rock face or trees. In the interest of road safety, the improvement works to the R605 at Ship Pool Bends are necessary.

## 1.2 Purpose of this Outline Construction Environmental Management Plan

The purpose of this CEMP is to document and describe the main activities that will be undertaken to facilitate the project and to provide a framework of environmental protection measures that will be implemented prior to commencement of, and throughout the duration of, the proposed road improvement works.

The proposed upgrade works at Ship Pool Bends will be undertaken by a Contractor appointed by Cork County Council. This CEMP will be provided to the appointed Contractor prior to the commencement of works and will form the basis of the Contractor's CEMP and Method Statements, which the appointed Contractor will be required to develop and prepare for approval by Cork County Council prior to commencement of any works. The Contractor's CEMP and Method Statements will set out the approach and methodology which they will follow in scheduling and undertaking the work. This CEMP outlines the control measures in relation to environmental protection associated with the activities and disturbance to road users.

It is the responsibility of Cork County Council to ensure that the requirements of this CEMP and any requirements associated with the Contractor's Method Statements and CEMP are implemented in full.

## 1.3 Legislation and Other Requirements

The CEMP summaries the requirements from legislation and Codes of Practice which apply to the works being undertaken. An example non-exhaustive list of such requirements is provided below:

- Safety, Health, and Welfare at Work Act, 2005
- Safety, Health, and Welfare at Work (Construction) Regulations, 2013
- Safety, Health, and Welfare at Work (General Application) Regulations 2007 – 2016, SI No. 229
- Safety, Health, and Welfare at Work (Confined Spaces) Regulations, 2001
- European Union (Drinking Water) Regulations 2014
- European Communities (Surface water) Regulations, 2009 (as amended)
- European Communities (Groundwater) Regulations, 2010 (as amended)
- European Communities (Good Agricultural Practice for Protection of Waters) (Amendment) Regulations, 2011

- European Communities (Good Agricultural Practice for Protection of Waters) (Amendment) Regulations, 2014
- Local Government (Water Pollution) Act, 1977 and associated Regulations
- European Communities (Birds and Natural Habitats) Regulations 2011
- Wildlife Act 1976 - 2021
- Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects (DoEHLG, July 2006)
- Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (IFI, 2016)
- CIRIA C648 Control of water pollution from linear construction projects Technical Guidance (CIRIA 2006)

## 1.4 Roles and Responsibilities

This initial issue of the CEMP identifies the key roles for the construction works. The appointed contractor will update the CEMP and will set out detailed roles and responsibilities (including named individuals) and an organogram of the team structure.

### 1.4.1 Cork County Council (Employer)

Cork County Council Roads Road Design Office are the Employer for the proposed development and have the following responsibilities following the submission of the Part 8 planning application:

- Post consent management: manage the process towards construction including liaison with key environmental agencies and stakeholders and the public.
- Engineering function: Ensures that the design is delivered as per the planning drawings and that the delivery of the proposed development meets the required design standards.
- Communication: Continued liaison with the public and local residents on the progress of the proposed development.

### 1.4.2 Contractor

A Contractor will be appointed following a tendering process and will be responsible for the implementation of all mitigation as set out in Section 4 and the completion of the works to the satisfaction of the Employer.

### 1.4.3 Site Manager

The Site Manager will be responsible for the day to day running of the site and will direct and oversee the activities of contractor staff and any subcontractors under the Contractor's control throughout the works. The Site Manager will be responsible for programming of the works and will consult regularly with the Employer and will maintain site safety.

### 1.4.4 Contractor's Environmental Clerk of Works

The Contractor's Environmental Clerk of Works (EnCoW) will have suitable environmental qualifications and the necessary experience and knowledge appropriate to the role. The EnCoW will be delegated sufficient powers under the construction contract so that they will be able to instruct works to stop and to direct the carrying out of emergency mitigation / clean-up operations. The EnCoW will also manage consultation with environmental bodies/stakeholders. The EnCoW will be responsible for ensuring that all control measures in Section 4 of this report and those within the Contractor's CEMP are fulfilled and are in adherence with applicable standards and legislation.



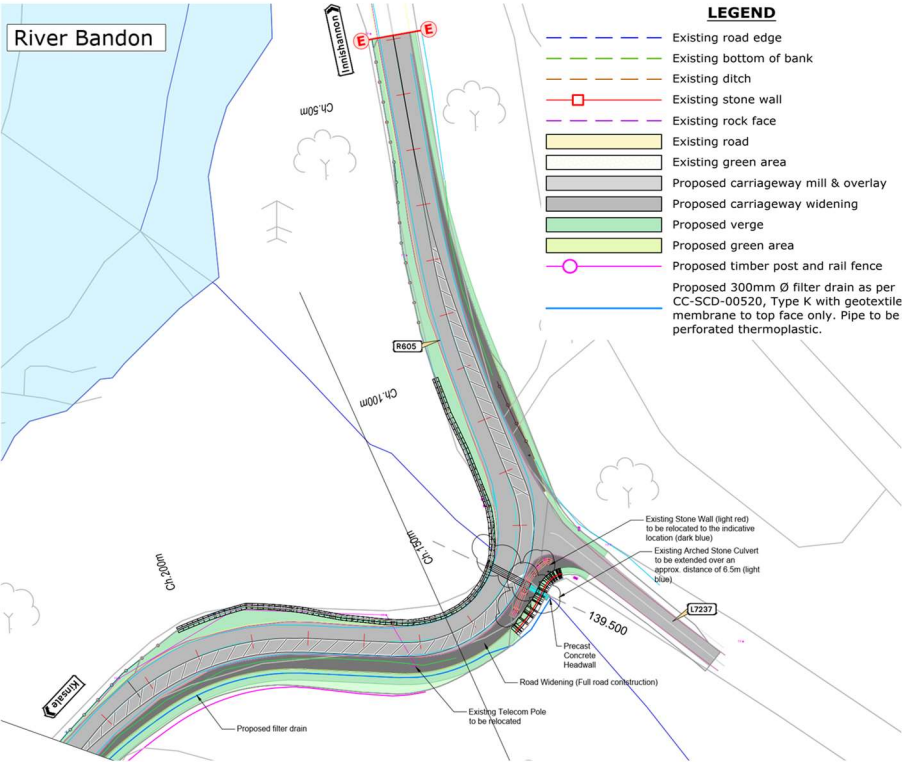
## 2 Project Description

The works comprise alterations to the existing road alignment of the R605 at Ship Pool Bends. There will be no change in traffic levels as a result of the proposed development or other operational phase impacts. The following outlines the planned works required at Ship Pool Bends;

- The inside carriageway will be widened by varying widths along the 450m section of the R605;
- Ghost hatching will be provided between the separate lanes of traffic to allow the safe passage of long wheel-based vehicles over the tightest section of the bend;
- Grass verges will be provided at varying widths along the inside and outside carriageway along the 450m section of the R605;
- The existing arched stone culvert will be extended, and a new precast concrete headwall installed. To facilitate the placement of the culvert, the existing ground on the upstream face of the culvert will require excavation. Rock armour units will be placed upstream. The culvert extension will comprise precast units placed on a bed of granular material;
- The existing stone wall will be broken down to road level and new stone wall to be constructed at new location. The new wall will be comprised of pre-cast units set onto a concrete bed;
- 15m of retaining wall will be installed to support the new alignment;
- Proposed 300mm diameter filter drain will be installed. This will likely require excavation of a trench, and placement of perforated drainpipes, and a washed gravel fill;
- The existing telecom pole will be relocated;
- Vegetation clearance will be required to facilitate the works and to provide for visibility;
- All ancillary works required to deliver the proposed scheme.

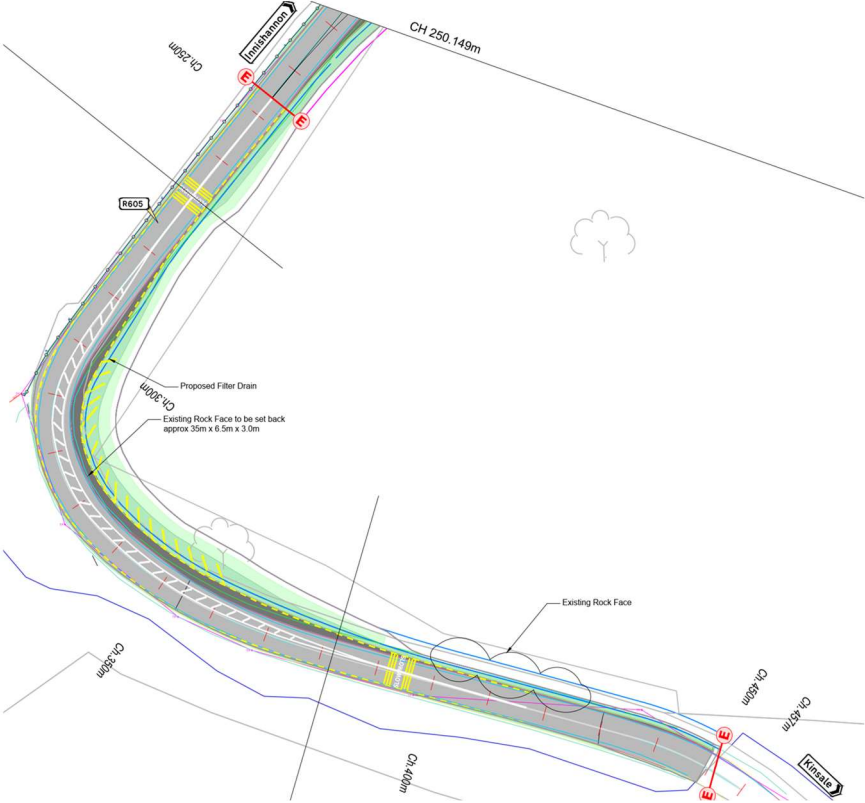
The road will be closed to traffic and a diversion put in place. Following the closure of the road, the site compound will be erected. The location of the compound will be selected by the contractor; however, this is likely to be within the curtilage of the existing road.

Figure 2.1: North section of the proposed road improvements



Source: Cork County Council

Figure 2.2: South section of the propose improvement works



## 3 Proposed Activities

### 3.1 Construction Programme

The commencement date is subject to approval by Cork County Council and any changes which may occur following resolution by the local authority to vary or modify the Part 8 planning application. The proposed construction works are anticipated to commence in Q2 2022. Table 3.1 details the stages of the two month construction programme which is based on experience of similar projects and is meant to be indicative rather than a definitive programme.

**Table 3.1: Indicative Construction Programme**

Construction Stage	Duration	Description
1 - Site Clearance / Construction compound setup	2 weeks	Removal of trees and vegetation required in areas of the road widening
2 - Removal of rock face	1 week	Cut back rock face to required width for road realignment
3 - Extension of culvert	2 weeks	Extend existing culvert and form retaining wall, backfill to formation
4 - Road Widening	2 weeks	Complete formation, cold milling, laying pavement
5 - Road Drainage	0.5 weeks	Excavate trench, lay pipe and backfill
6 - Ancillary Works	0.5 weeks	Road Markings, fencing erection, demobilisation

The construction working hours will be restricted to the following:

- Monday to Friday: 08:00 - 18:00
- Saturday: 08:00 -14:00
- Sunday or Bank Holiday: No construction works programmed

### 3.2 Site Clearance and Preparation

Tree and vegetation removal will be limited to only essential areas. The trees are programmed to be felled outside the bird nesting season (in accordance with the Wildlife Act 1976, as amended). A number of trees were felled circa 2017 and these stumps will be removed to facilitate the removal of the rock face. If a change occurs to the planned construction schedule and works occur during the bird nesting season, 1<sup>st</sup> March to 31<sup>st</sup> August inclusive, then a bird nesting survey will be required for any trees identified for felling.

Evidence of invasive species listed within Part 1 of the Third Schedule of S.I No. 477 of 2011, European Communities (Birds and Natural Habitats) Regulations 2011 was included in an ecological survey completed on 19th February 2021 and 28th October 2021 by Mott MacDonald Ecologists. No invasive species were identified. It is considered that the establishment of invasive species is unlikely to occur before the commencement of these works and no pre-construction confirmatory invasive species survey is required (where construction works are not subject to significant delay).

### 3.3 Construction Works Phasing

#### 3.3.1 Removal of rock face

To facilitate the construction of the widened road approx. 35m x 6.5m x 3m of the existing rock needs to be broken out. The rock removal activities will be mainly confined to southern area between chainage 250 - 450m.

### 3.3.2 Culvert extension

The new realignment will require the extension of an existing stone arched culvert located at chainage 140m. This extension will take the form of new precast concrete units. To facilitate the placement of the new precast concrete unit's excavation works the creation of a granular bed will be required to create a suitable foundation. Rock armour units will be placed upstream of the culvert.

### 3.3.3 Road Widening

In conjunction with the culvert extension, the surrounding stone wall will need to be broken down to road level. A new wall will be constructed comprising of precast units to facilitate the road widening works chainage from chainage 130 - 145m. The proposed length of the new wall is approx. 15m which will require a new foundation to be constructed in situ.

Full road construction is required for the new road widening outside the original road footprint. Cold milling and overlay will be required to the existing road way to create a uniform road surface.

### 3.3.4 Road Drainage

A proposed filter drain will be installed as part of the works. The filter drain will involve the excavation of a trench, geotextile membrane placed around the trench, placement of a perforated drainpipe with the drain backfilled with suitable washed gravels.

### 3.3.5 Ancillary works

Other works to complete the improvement scheme include:

- Relocation of existing telecommunication services to facilitate the road widening
- Road lining over the realigned section of road including ghost hatching between the lanes to facilitate the safe passage of vehicles through the realignment scheme
- Installation of timber post and rail fencing
- Landscaping works including formation of grass verges

## 4 Control Measures

### 4.1 Introduction

The following sections detail the minimum control measures that will be implemented prior to commencement and throughout the duration of the proposed works.

### 4.2 General Environmental Rules during Construction

- Report any signs of pollution or environmental damage to the site foreman no matter how small;
- Report any spills, incidents or near misses that occur on site immediately to the site foreman;
- Refuel only in designated areas with spill kits available;
- All waste must be stored in the designated site waste management areas;
- Do not throw litter, all waste must be sent to site waste management contractor;
- Do not divert plant or machinery outside the authorised working boundaries of the site;
- The Contractor will ensure ongoing compliance with the recognised Environmental Management System Standard to which it is registered (e.g. EN ISO 14001 or equivalent European Standards);
- The Contractor will develop Environmental Procedures to control the potential impacts from the construction phase of the development. These procedures will be made available in the main site office and at the main Environment, Health and Safety information points on site;
- All personnel will be familiar with the Environmental Policy which will be made available in the main Contractor office;
- An emergency contact list will be prepared and made available to all construction staff employed. The contact list will be displayed prominently on site as well as at suitable locations where construction activity is being carried out around working areas. The contact list will include key environmental representatives that may need to be contacted in the event of an incident. A 24-hour emergency phone number will be maintained for the duration of the construction works. This number will be noted on temporary signage at each works area for cable works, and at the site entrance, at a minimum.

### 4.3 Vegetation Clearance

Only essential areas of vegetation removal and tree clearance will be actioned. Prior to the commencement of works a qualified arborist is required to complete a tree survey in accordance with accordance with British Standard 5837:2012 - *Trees in relation to design, demolition and construction. Recommendations* (30<sup>th</sup> April 2012). An arboricultural impact assessment shall be produced and will identify trees which require removal and any protective measures to be adopted to other trees.

Areas of woodland to be felled will be replanted locally such that there is no permanent net loss of woodland.

### 4.4 Pollution Control

#### 4.4.1 General

Pollution control measures to prevent impacts to surface waters (the Skanagore stream runs beneath the R605 and is a tributary of the River Bandon) will be designed, installed, and maintained in accordance with *CIRIA guidance for 'Environmental Good Practice on Site'*

(C741) and 'Control of water pollution from linear construction projects. Technical guidance' (C648) and as per the IFI guidance (2016) 'Guidelines on protection of Fisheries During Construction Works in and Adjacent to Waters'. General pollution control measures also including the scheduling of works for dry conditions to reduce the risk of run off. In the event of adverse weather events work will be halted.

### Hydrocarbons

All mobile equipment required for the works (e.g. generators), will be housed in the Contractor's compound in a suitably sized bund / plant nappy so that any leaks / spills are contained. Bund specification will conform to the current best practice for oil storage such as 'Best Practice Guide BPGCS005 Oil Storage Guidelines' Enterprise Ireland.

Drip trays will be placed beneath any standing machinery to prevent discharge of oils and fuel. All waste fuels / oils, and other hazardous wastes will be disposed of in accordance with the requirements of the Waste Management Acts 1996, as amended. Spill-kits and hydrocarbon absorbent packs will be stored in the cabin of each vehicle and operators will be fully trained in the use of this equipment. Any contaminated material used to clean a spill will be correctly disposed of as a hazardous waste and brought to a licenced waste handling site by a licenced waste contractor. Welfare / hygiene facilities will be located at the Contractor's compound only. All water from wheel washes will be removed from site and disposed of in line with Waste Legislation.

### Bitumen and concrete materials

A description of how bitumen and concrete will be utilised for the proposed development to prevent run-off are summarised below (concrete culvert will be a pre-cast structure delivered to site);

- No on-site batching will be permitted at the proposed works areas. Concrete will be transported to the site by concrete truck.
- Quick setting concrete mixes will be used to reduce the risk of contaminated run-off to the watercourse.
- Concrete trucks will only be washed down in a sealed mortar bin / skip which has been examined in advance for any defects. This requirement will be communicated to each concrete truck driver prior to entering into the works area.
- Where concrete pours are to take place instream (e.g. for blinding for the culvert) they will only take place within an isolated, dry, works area.
- Where the isolated working area requires constant pumping to maintain a dry works area, pumps shall be turned off during the pour, and remain off until concrete has hardening negating a run-off risk; and such that the discharge will not result in a change in pH of +/-0.5 units. This can only take place where it is confirmed that there is no flow of water through the location of the pour, and out into the watercourse downstream
- Where concrete pours are required within the watercourse, the EnCoW will regularly monitor the pH of the watercourse during concrete works. Should any change in pH +/-0.5 be detected concrete works shall immediately be ceased (handheld monitors will have maximum variance of +/- 0.1). The entry point to the watercourse will then be identified and implement appropriate measures to prevent further escape to the environment.
- It will be ensured that covers are available for freshly poured concrete to avoid wash off in the event of rain.
- Waste concrete slurry will be allowed to dry and taken to a licensed waste depot for disposal.
- Concrete works will be scheduled during dry weather conditions to reduce the elevated risk of runoff.
- NPWS and IFI will be notified immediately of any concrete spills into watercourses.

## Sediment

- Prior to the works commencing, the measures prescribed in this section shall be installed to prevent the downstream transportation of surface water run off associated with vegetation clearance. This may be through the use of features like straw bales or silt booms. Monitoring of these measures to ensure their continued effectiveness will take place on an on-going basis while the works are proceeding.
- The clearance of riparian vegetation will be kept to the minimum required for the facilitation of the works such that no unnecessary exposure of riverbanks occurs.
- Works to clear vegetation to facilitate the culvert shall take place from the bank with vegetation pulled back towards the land. The vegetation removed shall be transported off site and disposed of appropriately.
- Following the vegetation clearance, a dry works area to allow for the culvert placement shall be established. The measures required to achieve this must be appropriate for the size and flow associated with the watercourse and take into account the potential for increased flow due to rainfall events.
- The dry works area may be achieved by isolating the entire watercourse and over pumping the flow.
- Should pumping out of the isolated area be required to maintain the dry works area, it shall be ensured that any discharge is treated appropriately prior to entering the watercourse. This may be achieved by discharging to a treatment system such as a silt buster or similar, discharge to a silt bag, or discharging to an area of the watercourse that is protected by a silt boom. These measures shall be used in combination where ground conditions are such that just one measure is not achieving sufficient protection. The success of these measures shall be monitored regularly by the Contractor's EnCoW as works proceed.
- Where the implementation of these measures fails, or are found to be inadequate, the Contractor will implement adapted measures (for example replacement sediment treatment system) in agreement with the Contractor's EnCoW and the Employers Representative Team.
- Any diversion or over pumping of watercourses shall be sized such that they will accommodate a 1% AEP flood event over the period in question, so as to prevent the overtopping of work areas.
- Silt fences will be placed along the banks of the stream to prevent surface-water run off from entering the watercourse

## Dust

The proposed works will result in a short-term increase in dust. The following measures will be employed in order to minimise the levels of dust on the site and its potential dispersion:

- Site roads with the potential to give rise to dust as a result of the works will be regularly watered as appropriate.
- All water used for damping of dust will be brought on to site in a tank.
- Material handling systems and material storage areas will be designed to reduce exposure to wind, which will include appropriate placing of hoarding and covering of material.
- Transport of materials with the potential to generate dust will be undertaken in tarpaulin covered vehicles.

### **Reinstatement of Bankside Vegetation**

Vegetation regrowth on banksides will be monitored for at least three years post works to ensure appropriate development of native semi natural riparian plant growth. Where required replanting or control of non-native species such as [cherry] laurel will be carried out.



## 4.5 Pre-Construction Confirmatory Surveys

In advance of enabling works, the Contractor's ECoW will complete pre-construction confirmatory surveys of the following protected species:

1. Otter - A confirmatory otter survey will be undertaken in advance of the commencement of any works. This will incorporate an area within 150m of the works areas as per "*Guidelines for the Treatment of Otters Prior to the Construction of National Road Schemes*". This will allow for the identification of any holts have been established prior to commencement of works.
2. Badger - Surveys will be conducted having regard to Surveying Badgers (Harris et al.1989) and record signs of badgers including tracks, hair, latrines and setts. The extent of survey area will be defined with regard to "*Guidelines for the Treatment of Badgers during the Construction of National Road Schemes*" (NRA, 2006) as 150m beyond all works areas within suitable habitat.
3. Bats - Prior to felling of any trees, a confirmatory bat survey of trees to be felled will be undertaken, by a licensed qualified specialist, to assess the suitability of the tree to contain bat roosts as per "*Bat Surveys for Professional Ecologists: Good Practice Guidelines*2.
4. Red Squirrel - Prior to works commencing in areas of suitable habitat (woodland and scrub habitat) a targeted survey for the species will be carried out prior to any works taking place. Surveys may include observation surveys, drey counts and feeding remain searches.
5. Breeding Birds - Pre-construction confirmatory surveys will be carried out for kingfisher and other riparian breeding bird species including dipper and yellow wagtail. These will incorporate a survey area of approximately 100m upstream and downstream of the works where suitable habitat exists, which is an extensive enough survey area to include the possible zone of influence of the project. Features likely to be of note to kingfisher and other breeding riparian bird species will be recorded and watches of suitable nest areas undertaken. If actual nest sites (i.e. confirmed or presumed) are present at the culvert, the NPWS will be consulted regarding the potential requirement to stop works.

Subsequent to the pre-construction confirmatory surveys the protection measures listed in Table 4.1, where applicable, will require to be adhered too.

**Table 4.1: Protected Species Protection Measures**

Protected Species	Protection Measures
Otter	<p>Should holts be identified within 150m of the proposed development the following will, at a minimum, be employed, unless otherwise agreed with the NPWS:</p> <ul style="list-style-type: none"> <li>• No works will be undertaken within 150m of holts where breeding females or cubs are present.</li> <li>• Works within 150m of such a holt can only take place following consultation and in agreement with the NPWS</li> <li>• No wheeled or tracked vehicles of any kind will be used within 20m of active but nonbreeding holts</li> <li>• No light work such as digging by hand or scrub will take place within 15m of such holts except under license from NPWS</li> <li>• The identified exclusion zones will be fenced and clearly marked on site prior to any invasive works.</li> <li>• All contractors on site will be made fully aware of the procedures in relation to the holts by the EnCoW</li> </ul>
Badger	<p>a. Prior to works commencing, sett activity at any identified setts within 150m will be confirmed. This may be confirmed through the use of camera monitoring, setting of footprint traps, soft blocking of the sett entrance or similar. Any risk of disturbance to badger will be subject to disturbance license requirements.</p>

Protected Species	Protection Measures
	<ul style="list-style-type: none"> <li>b. A description of the setts i.e. main sett, annex sett, or outlier sett will be provided by the ECoW along with the level of activity at the sett. This will allow for an understanding of the importance of the setts in the wider context of the local population.</li> <li>c. As per the Guidelines for the Treatment of Badgers during the Construction of National Road Schemes (NRA, 2006), where setts have been confirmed, no heavy machinery will be used within 30m of badger setts (unless carried out under licence from the NPWS). Lighter machinery (generally wheeled vehicles) will not be used within 20m of a sett entrance; light work, such as digging by hand or scrub clearance will not take place within 10m of sett entrances.</li> <li>d. Unless otherwise agreed, and under license from the NPWS, during the breeding season (December to June inclusive), none of the above works will be undertaken within 50m of active setts nor blasting or pile driving within 150m of active setts. An assumption that the sett is active will apply unless proven otherwise during the course of investigation.</li> <li>e. All identified exclusion zones as outlined above will be clearly marked out on site and communicated to all site staff prior to works commencing.</li> </ul>
<b>Bat</b>	<ul style="list-style-type: none"> <li>a. Trees with suitability for roosting bats will not be felled in advance of surveying for bats, unless in agreement with the ECoW, and NPWS as relevant. Trees identified with potential roost features of a Moderate to High value will be thoroughly examined, under licence from the NPWS, to ascertain the presence or absence of roosting bats. This will be conducted by an experienced bat expert. The trees will be examined for the presence or absence of bats / bat roosts immediately prior to felling. Where timing facilitates it (i.e. when felling is being undertaken during the active season for bats), emergence surveys may be carried out to confirm presence or absence of roosting bats. Where felling does not occur within one day of the examination, the trees will be re-assessed</li> <li>b. Where evidence of a roost, or roosting bats has been determined, a license for destruction of a roost and/or exclusion of bats will be required from the NPWS. The procedures for the exclusion of bats and destruction of roost as detailed in the license document will be obeyed, at all times, by the Contractor.</li> <li>c. Where bat exclusions are required, they will be undertaken in accordance with the requirements of the bat specialist. They will not be carried out unless under license from the NPWS. Where the felling of trees found to be suitable as bat roosts cannot be avoided, appropriate mitigation will be agreed with the NPWS and put in place at least one month in advance of any felling or disturbance.</li> </ul>
<b>Red Squirrel</b>	Any dreys not confirmed or likely (given sightings) to be those of red squirrel will be removed under license from NPWS. These dreys will be replaced using artificial dreys. Any additional measures outlined by the NPWS under the terms of their license will also be incorporated.
<b>Breeding Birds</b>	In accordance with Section 40 of the Wildlife Acts, the removal of scrubs and trees, which may be used as nesting sites by breeding birds, will be cleared outside of the birds nesting season (1st March to 31st August inclusive).

#### 4.5.1 Habitat Creation

It is proposed to install four bat boxes at suitable tree locations within the wider woodland. The bat boxes should be of a long-lasting material such as woodcrete and placed at least 3 to 6m above ground level for each chosen tree and located in a relatively sunny position.

Tree planting will also be carried out to replace trees removed to facilitate the construction works. Trees will be planted locally with native tree species found in the existing woodland to ensure no net loss occurs as a result of the proposed project.

## 4.6 Noise Control Measures

There will be a short-term increase in noise during the construction phase of the proposed works. The immediate area surrounding the proposed works area is considered to be agricultural grassland, however, a number of residential dwellings occur in proximity to proposed development, the closed inhabited house is approximately 90m to the east. Noise reduction measures will be implemented during construction. These measures will comply with *British Standard 5228:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites*, which include but are not limited to:

- Construction works will be restricted to those permissible under planning consent;
- Revving of engines will be avoided and equipment will be switched off when not in use;
- Use of effective exhaust silence systems or acoustic engine covers as appropriate;
- Plant will always be used in accordance with manufacturers' instructions. Care will be taken to site equipment away from noise-sensitive areas. Where possible, loading and unloading will also be carried out away from such areas;
- Regular and effective maintenance by trained personnel will be undertaken to keep plant and equipment working to manufacturers specifications.
- Local screening will be provided where considered necessary;
- Noisy plant will be located as far as possible from noise sensitive receptors;
- Adjacent neighbours will be kept informed on the expected construction works programme;
- A person will be appointed with responsibility for maintaining noise levels within acceptable limits investigating any complaints arising and liaison with the local authority, as appropriate, in relation to noise related issues, and
- Noisy construction works will be limited and will not be undertaken outside of normal working hours.

## 4.7 Traffic

A Traffic Management Plan will be prepared by the appointed Contractor which conforms fully to Article 9(1) (a) (iii) and (xi) of the *Planning and Development Regulations, 2001, as amended*.

The Traffic Management Plan will be prepared in consultation with Cork County Council Roads Department and will identify the road closures and traffic diversions required and local access safety measures required for the L7237.

## 4.8 Environmental Emergency Preparedness and Response Plan

An Environmental Emergency and Response Plan (EERP) will be completed by the Contractor for inclusion in the Contractor's Method Statement which will outline details of the appropriate prevention and control measures relating to potential accidents or emergency situations. These measures will be conveyed to all staff on site during inductions, toolbox talks and method statement briefings.

These plans will detail the key personnel responsible for responding to an incident so that the relevant parties can be informed in the event of one occurring. The Environmental Incident Register will be updated by the Contractor following any incident or near miss on site and discussed with the Employers Representative at any team meetings.

The Environmental Emergency and Response Plan will address the following:

- Containment measures;
- Emergency discharge routes;

- List of appropriate equipment and clean-up materials;
- Maintenance schedule for equipment;
- Details of trained staff, location, and provision for 24-hour cover;
- Details of staff responsibilities;
- Notification procedures to inform the Employer, Environmental Protection Agency (EPA) or Environmental Department of Cork County Council;
- Audit and review schedule;
- Telephone numbers of statutory water consultees; and
- List of specialist pollution clean-up companies and their telephone numbers.

#### 4.9 Training and Environmental Awareness Induction

The Contractor's Method Statement will detail the environmental awareness training and induction which is required to be undertaken by all staff, including sub-contractors. This will ensure that they are acutely aware of their responsibilities detailed within the CEMP and the associated sub-plans, as well as the Environmental Control Measures in place to ensure that the commitments/ requirements are met throughout construction. This will ensure that during construction all personnel will exercise due diligence regarding environmental matters.

- Training of all site staff and personnel will include as a minimum:
- Induction training including environmental requirements of all operatives and subcontractors
- More detailed training for staff or sub-contractors with specific environmental responsibilities
- Tool box talks will reflect the type of works being undertaken and the environmental impacts that may result from these activities e.g. training on water pollution prevention before works near watercourses. Training to be given will include the contents of this CEMP incorporating the following as appropriate:
  - Protected species/habitats;
  - Invasive species;
  - Environmental incidents;
  - Water pollution prevention;
  - Spill control and spill kits;
  - Dust and air quality;
  - Noise;
  - Erosion and sediment control; and
  - Storage and use of petrol, diesel, and oils.
- Any contract specific information will be briefed to all staff and displayed on notice boards. Training records regarding any environmental training will be provided on site by the Contractor.
- Any works which require a site-specific method statement will require a toolbox talk to be provided to all personnel involved. This is to ensure that the Environmental Control Measures in place are understood and practiced.

## 5 Conclusion

This Construction Environmental Management Plan has been developed to outline the environmental principles to be adopted to ensure that potential environmental impacts associated with the construction processes are effectively prevented, managed, minimised and / or eliminated based on the information available.

This CEMP will be developed and updated by the appointed Contractor prior to the commencement of the works and in agreement with Cork County Council.

