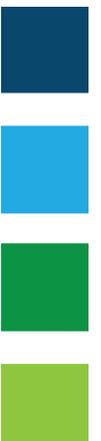




Kerry County Council  
N70 Waterville to Ballybrack  
Road Improvement Scheme  
Preliminary Construction Environmental Management  
Plan  
December 2024



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## Abbreviations

AA – Appropriate Assessment

CEMP – Construction Environmental Management Plan

ECoW – Ecological Clerk of Works

GHG – Greenhouse Gas

IAQM – Institute of Air Quality Management

IFI – Inland Fisheries Ireland

NPWS – National Parks and Wildlife Service

TII – National Roads Authority

OPW – Office of Public Works

PPE – Personal Protective Equipment

PSCS – Project Supervisor Construction Process

PSDP – Project Supervisor Design Process

SHEQ – Safety, Health, Environment and Quality

SuDs – Sustainable Drainage Systems

TII – Transport Infrastructure Ireland

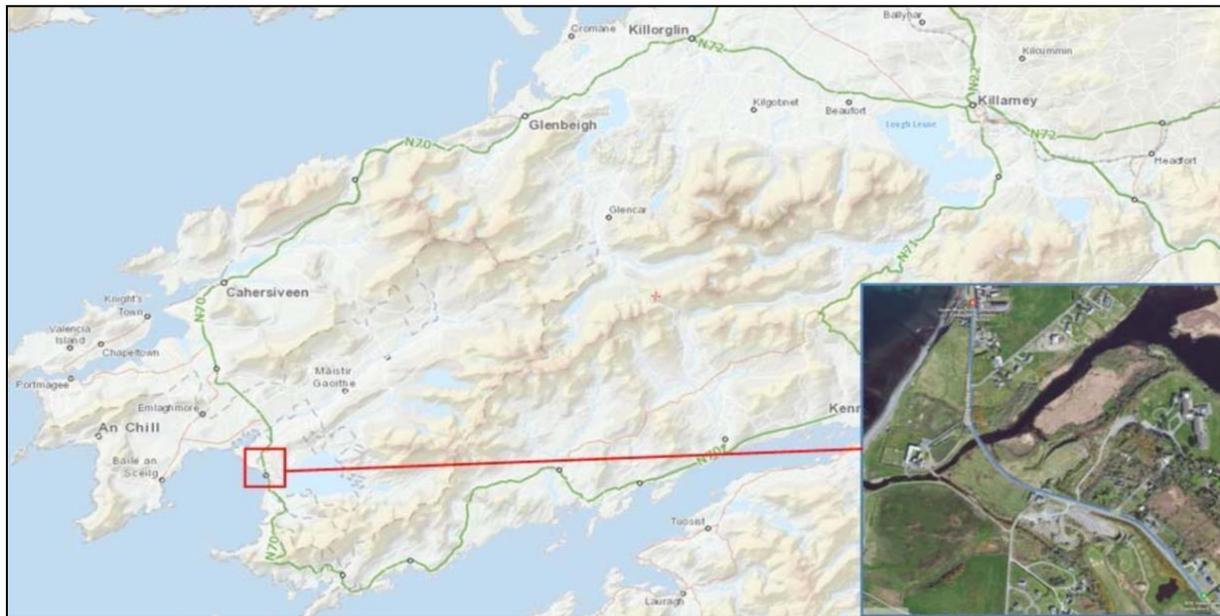
ZOI – Zone of influence



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## 1.0 INTRODUCTION

The proposed N70 Waterville to Ballybrack Road Improvement Scheme is situated just south of the Town of Waterville on the N70 National Secondary Road in County Kerry.



*Figure 1-1 – Site Location*

### 1.1 Purpose of this preliminary Construction Environmental Management Plan (CEMP)

This preliminary CEMP provides a synopsis of the methodologies to be employed in the construction of the proposed development, having regard to the statutory process, the Natura Impact Statement and related documents and any restrictions and/or conditions as made by imposed by An Bord Pleanála in any approval as may be granted. The Preliminary CEMP will be updated by the appointed contractor at construction stage as part of the implementation of any Conditions/Restrictions and/or Mitigation Measures enshrined in such Approval by the Competent Authority as may be granted.

### 1.2 Implementation of the CEMP

Key to the implementation of this preliminary CEMP is the delegation of responsibility for the CEMP to the Environmental Manager/Safety, Health, Environment and Quality (SHEQ) Officer, or other suitably qualified appointed person on behalf of the Main Contractor, who will regularly liaise with and update Kerry County Council on all environmental issues relating to the project during the construction phase. A safety, health, environment and quality (SHEQ) officer is responsible for ensuring compliance with health and safety regulations, environmental regulations, and quality control, on the site.

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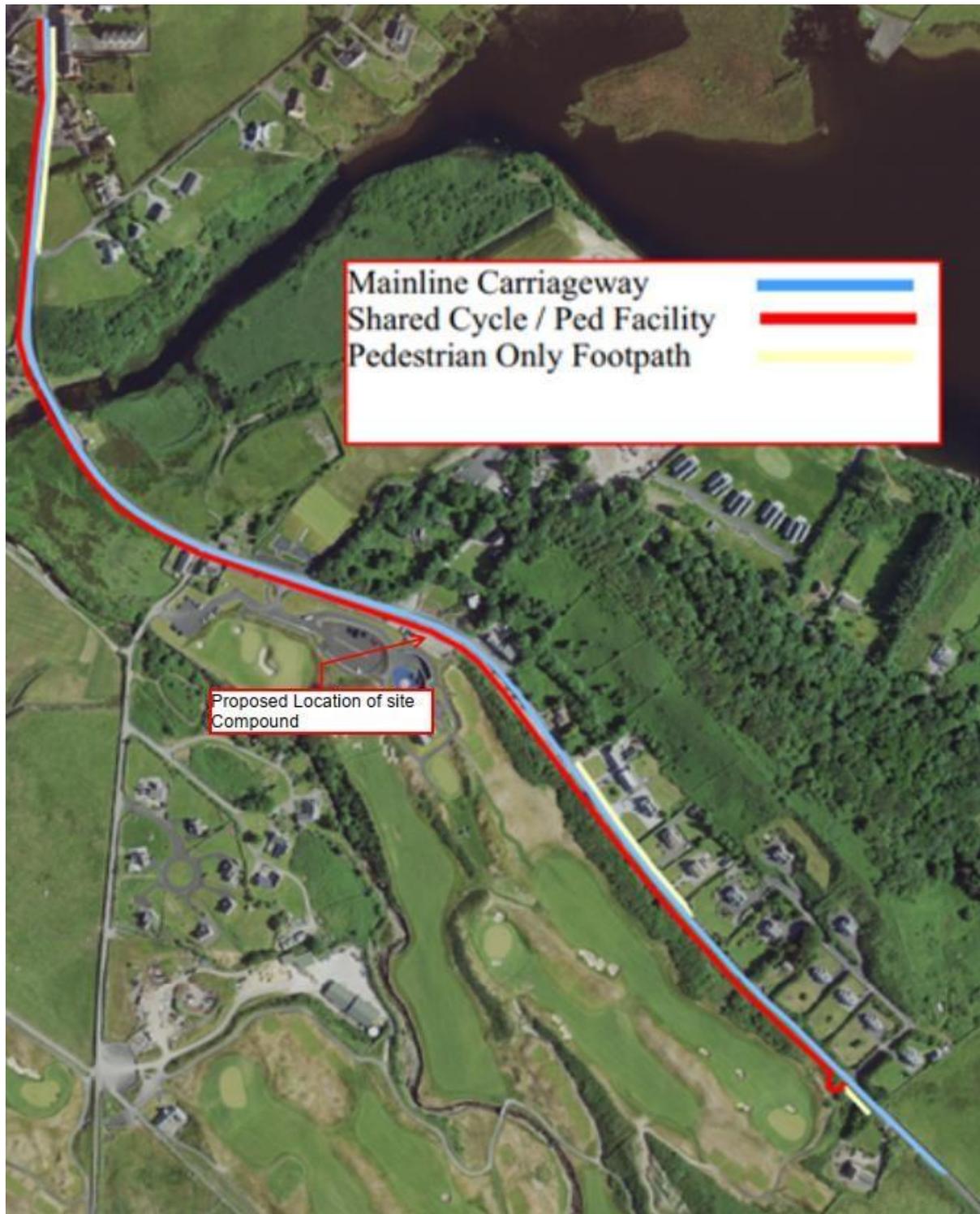
As part of the appointment of a Main Contractor and agreement of Contracts, Kerry County Council will determine the lines of communication for environmental compliance with the local authority and relevant stakeholders.

Furthermore, a suitably qualified Ecological Clerk of Works (ECoW) will be appointed by the Contractor. The ECoW will be present for the duration of the construction phase programme and will ensure that all mitigation measures outlined within this report are implemented during the proposed construction works as part of the implementation of any Conditions/Restrictions and/or Mitigation Measures enshrined in such Approval by the Competent Authority as may be granted.

In terms of overall environmental responsibility, everyone on-site is responsible for ensuring that their actions constitute good environmental practice and will be provided with site specific information to ensure compliance as part of the site induction. All site personnel are charged with following good practice and encouraged to provide feedback and suggestions for improvements. All site personnel are also required to ensure compliance with the requirements of this preliminary CEMP and subsequent revisions thereof as part of the implementation of any Conditions/Restrictions and/or Mitigation Measures enshrined in such Approval by the Competent Authority as may be granted.

## 2.0 SITE LOCATION AND ACCESS

The location of the proposed upgrade works is shown on Figure 2-1 Site Layout below. The construction compound and welfare facility will be located at an existing setback area adjacent to the Hogs Head Golf Course at Ch 640m approximately. Given the width constraints around the Ring of Kerry, the substantial volume of coaches and to facilitate tourist travel, a one-way system around the ring in an anticlockwise direction will be implemented during construction. This is currently the practice for tourist coaches.



*Figure 2-1 Site Layout*

### 3.0 PROPOSED CONSTRUCTION WORKS

#### 3.1 Preliminary Schedule of Works

The schedule of works described below is an outline of the construction activities which will be required to deliver the proposed works. The schedule is a high-level summary and will not be viewed as an exhaustive list of construction activities. The Main Contractor will be required to submit a detailed construction programme as part of their tender proposal.

- Preliminaries
- Site Establishment
- Site Clearance
- Fencing
- Safety Barriers and Pedestrian Guardrails
- Drainage and Service Ducts
- Earthworks
- Pavement
- Kerbs, Footways and Paved Areas
- Traffic Signs and Road Markings
- Accommodation Works
- Structures

## 3.2 Preliminaries

### *3.2.1 Indicative Construction Programme*

The construction works associated with the proposed development are expected to be undertaken in one single phase. It is anticipated that the construction works will be completed within 12 months of commencement.

### *3.2.2 Working Hours*

It is proposed that construction works will be undertaken between the hours of 08:00 and 18:00 from Monday to Friday and 08:00 and 14:00 on Saturdays. No construction works will be carried out on Sundays or Bank Holidays, without the specific agreement of Kerry County Council. Workings hours will be confirmed by Kerry County Council. There will also be a requirement for a one-day road closure of the N70 to facilitate the bridge construction.

### *3.2.3 Ecological Clerk of Works*

A suitably qualified Ecological Clerk of Works (ECoW) will be appointed by the Contractor. The ECoW will ensure that all mitigation measures outlined within this report are implemented during the construction phase of the proposed development.

### *3.2.4 Waste Management*

The wastes expected to arise because of the construction include bituminous materials, subsoil, masonry, concrete, topsoil and unbound road making materials. All solid waste generated during the construction will be adequately segregated and stored prior to transfer to an authorised facility for recovery, recycling or disposal. All waste generated from the proposed development will be managed in accordance with the provisions of the *Waste Management Act* as amended and associated Regulations.

Where possible, off-site reuse opportunities for soils and rock will be sought and the potential for classification of the material as a by-product in accordance with Article 27 of the *European Communities (Waste Directive) Regulations 2011*, as amended, will be explored.

Skips and bins of appropriate sizes will be stored in the construction compound and used to maximise source segregation of waste materials at the site. This will include food and packaging waste from welfare facilities. Appropriate control of food waste in the compound will minimise the potential for pests and rodents to visit the area.

The Main Contractor will encourage all project teams to minimise waste generation and to maximise the segregation of waste at source. The methodology to be used for this segregation will be detailed in the Method Statements submitted by the contractor to the approval of the Employer's Representative as part of the implementation of any Conditions/Restrictions and/or Mitigation Measures enshrined in such Approval by the Competent Authority as may be granted. Material wastage will be avoided by delivering only the required quantities of material to site and utilising off-site manufacturing of concrete materials and other infrastructure as much as possible. The Main Contractor will establish 'just-in-time' deliveries to avoid excess material storage at the site which can lead to waste generation. Delivery drivers will be encouraged to remove any excess packaging from materials delivered to site. Opportunities for material reuse across the site will be sought by the Main Contractor.

Due to the nature of the existing site, it is not anticipated that there will be contaminated soils or materials encountered during the works.

Any contaminated materials used for spill clean-up and equipment maintenance works will be separately stored in a suitable container for collection by an authorised hazardous waste contractor.

Prior to construction the contractor will develop a Construction Waste Management Plan and procedures that will include the following :

- The mitigation measures set out in the NIS as part of the implementation of any Conditions/Restrictions and/or Mitigation Measures enshrined in such Approval by the Competent Authority as may be granted
- This Preliminary CEMP; and any Conditions/Restrictions and/or Mitigation Measures enshrined in such Approval by the Competent Authority as may be granted
- All current Local and National waste management legislative obligations.

The construction waste management plan (CWMP) will identify how waste arisings are to be controlled and managed during the project, and how waste prevention principles can be applied and how on-site waste can be minimised.

The CWMP will include;

- An analysis of the likely waste arisings/surplus materials
- Specific waste management objectives for the project
- Methods proposed for recycling/reuse of wastes
- Material handling procedures
- Proposals for education of the workforce

The proposed scheme has the potential to generate waste material, the primary sources being;

- Excess material from road construction - surplus excavated material
- Excess excavated material from drainage - surplus excavated material
- Excess material from planing of existing road – surplus excavated material (U2)

Residual waste produced because of the construction phases of the proposed will be processed in a way that follows the waste hierarchy as outlined in the current European Communities (Waste Directive) Regulations, ranging from reuse to disposal, in terms of preference. The contractor shall catalogue the source of all wastes on the proposed scheme and determine if any of the wastes can be recycled or reused. If materials must be disposed of, this shall be done in accordance with statutory requirements, using licensed vehicles, delivering to an appropriately licensed or permitted site as part of the implementation of any Conditions/Restrictions and/or Mitigation Measures enshrined in such Approval by the Competent Authority as may be granted.

### *3.2.5 Pre-construction Surveys*

#### *3.2.5.1 Otters*

As stated in the NIS, a pre-construction otter survey will be undertaken by an appropriately experienced ecologist along the Currane River prior to the commencement of any works. This will be carried out to identify any changes in otter activity or the establishment of any new holts prior to the construction phase of the proposed development commencing.

The pre-construction survey will be conducted no more than 10–12 months in advance of the construction phase of the proposed development, as per the TII (2006) guidelines.

If any new otter holts are identified within the Zol of the proposed development, a derogation license will be sought from NPWS, and appropriate mitigation measures implemented.

#### *3.2.5.2 Bats*

The two mature sycamore trees, which were identified as having ‘Moderate’ bat roost potential are not proposed to be felled as part of the proposed development. However, all excavation works located in proximity to these trees will ensure the roots are not impacted upon. There is only planing of the existing road proposed adjacent to these trees.

### *3.2.6 Traffic Management*

On completion of the detailed design, a preliminary construction traffic management plan will be developed by the designer and further developed by the appointed contractor to minimise the effects of traffic on the existing road network. This will be a living document and will be amended to facilitate any changes in mainline traffic flow or construction related traffic. This plan will include:

- i. Geometric Design;
- ii. Position of traffic control point, signals and flag men;
- iii. Width of Lanes;
- iv. Working Areas;
- v. Safety Zones;
- vi. Crossovers;
- vii. Running lane / provision for emergency vehicles;
- viii. Access and exit locations for construction vehicles;
- ix. Access and exit locations for businesses, property owners and other users;
- x. All temporary traffic signs, cones, barriers and traffic control signals necessary for the safe direction and control of public traffic and other road users;
- xi. Temporary road lighting ;

- xii. Provision for pedestrians and cyclists, including road crossing details;
- xiii. Provision for Temporary Bus Stops where Traffic Management proposals require the removal of an existing Bus Stop;
- xiv. Protection/diversion of services, supplies and the like;
- xv. Requirements for Temporary Emergency Telephones;
- xvi. Extent of lane closures;
- xvii. Details of plant working in the vicinity of the works, and measure to be implemented to ensure public safety;
- xviii. Taking up and reinstatement of road studs and markings;
- xix. Existing and proposed permanent road studs and markings;
- xx. Existing and proposed temporary road studs and markings;
- xxi. When no road markings and studs are in place during works, lanes will be delineated by cones and Steady State Lamps to delineate edge of travel through night works;
- xxii. Phasing of works;
- xxiii. Timing of operations; and
- xxiv. Preventing mud and dust on public roads.

### *3.2.7 Dust and Emissions*

The Contractor will have due regard to relevant guidance such as The Control of Dust and Emissions during Construction and Demolition published by the Greater London Authority (GLA) in 2104 and Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes published by the TII in 2011.

To minimise emission of pollutants from plant and equipment, the following measures will be implemented during the construction works:

- Regular maintenance of plant and equipment will be carried out to ensure that the equipment is operated efficiently and generating minimal air emissions
- Plant or equipment will not be left running unnecessarily and low emission fuels will be used.

The following measures will be implemented to minimise the potential for dust generation:

- Minimisation of extent of working areas;
- Stockpiling of excavated materials will be limited to the volumes required to practically meet the construction schedule;
- Drop heights of excavated materials into haulage vehicles will be minimised to a practicable level; and
- Daily inspections by site personnel to identify potential sources of dust generation along with implementation measures to remove causes where found.

A Dust Management Plan has been prepared (Appendix 1) which sets out the measures that will be implemented by the Contractor to minimise and control dust emissions. This DMP will be updated by the Contractor in the CEMP to account for any additional measures identified as part of the implementation of any Conditions/Restrictions and/or Mitigation Measures enshrined in such Approval by the Competent Authority as may be granted.

To ensure mitigation of the effects of dust nuisance, a series of measures will be implemented.

- Site access roads shall be regularly cleaned and maintained as appropriate; dry sweeping of large areas shall be avoided.

- Hard surface access roads shall be swept to remove mud and aggregate materials from their surface while any un-surfaced access roads shall be restricted to essential site traffic only.
- Any road that has the potential to give rise to fugitive dust must be regularly watered, as appropriate, during dry and/or windy conditions.
- Vehicles delivering material with dust potential to an off-site location shall be enclosed or covered with tarpaulin at all times to restrict the escape of dust.
- Vehicles exiting the site will make use of a wheel wash facility prior to entering onto public roads to ensure mud and other wastes are not tracked onto public roads.
- Public roads outside the site shall be regularly inspected for cleanliness daily and cleaned using a street sweeper, as necessary.
- Before entrance onto public roads, trucks shall be adequately inspected to ensure no potential for dust emissions.

The following measures will be implemented to prevent significant dust emissions from material stockpiles.

- Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind.
- Sand and other aggregates will be stored in bunded areas and not allowed to dry out unless this is required for a particular process, in which case appropriate additional control measures will be put in place.
- Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods.
- At all times, the procedures put in place shall be strictly monitored and assessed.
- In the event of dust nuisance occurring outside the site boundary, appropriate procedures shall be implemented to rectify the problem.

The DMP shall be reviewed at regular intervals during the construction phase to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust using best practices and procedures.

Community engagement before works commence on site will be put in place, including a communications plan to be prepared by the appointed contractor. Kerry County Council will engage with the community prior to the appointment of the contractor.

All dust and air quality complaints shall be recorded, and causes identified, along with the measures taken to reduce emissions.

Daily on and off-site inspections shall occur for nuisance dust and compliance with this DMP. This shall include regular dust soiling checks of surfaces such as street furniture, windows, and cars within 100m of the site boundary. Cleaning shall be provided if necessary.

### *3.2.8 Noise*

The Contractor shall comply with the contents and recommendations of BS 5228: Parts 1 and 2, the TII's "Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes, 2014" and European Union (Environmental Noise (Directive 2002/49/EC of the European Parliament and of the Council of 25th June 2002 relating to the Assessment and Management of Environmental Noise.

The Contractor shall employ the best means practicable to minimise the noise produced by on Site operations. Permitted normal working hours will be in accordance with Table 1.

Works other than emergency works shall not be permitted outside these working hours with the exception of the installation of the pedestrian bridge which will require nighttime work. Emergency works may include the replacement of warning lights, signs and other safety items on public roads, the repair of damaged fences, repair of water supplies and other services which have been interrupted, repair to any damaged temporary works and all repairs associated with public safety and working on public roads.

The Contractor shall deal with any complaints in relation to noise and vibration immediately and appropriate measures taken where the limits exceed those specified in Table 1.

The ambient noise level, LAeq (1hr), from all sources measured 2.0m above the ground at noise control station shall either not exceed the appropriate level given in the Schedule or not exceed by more than 3dB(A) the existing ambient noise level, LAeq, control station measured over the same period, whichever level is greater. The maximum sound level at any noise control station shall not exceed the level given in the Schedule.

All vehicles and mechanical plant used on the works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order for the duration of the works in compliance with BS 5228.

All compressors shall be “sound reduced” models fitted with properly lined and sealed acoustic covers and shall be kept closed whenever the machines are in use. Any ancillary pneumatic percussive tools shall be fitted with mufflers or silencers of the type recommended by the manufacturers. Pumps and mechanical static plant shall be enclosed by acoustic sheds or screens.

The Contractor shall organise his operations about the positioning of plant and the location of haul routes etc., so it minimises Construction noise to adjacent properties.

*Table 1 - Permitted Noise Levels*

Schedule		Total Noise Levels at Control Stations		
Period	Hours	Ambient Noise Level, LAeq measured at Control Station: dB(A)	Period of Hours over which LAeq is applicable	Maximum Sound Level (see Note(iv) below measured at Control Station: dB(A))
Mondays to Fridays	09:15 - 18:00	70	15 Mins	80*
Mondays to Fridays	18.00 – 09.15	60*	15 Mins	65*
Saturdays	08:00 – 16:30	65	15 Mins	75
Sundays and Bank Holidays	09:00 – 16:00	60*	15 Mins	65*
All unattended plant outside normal working hours		45		

To ensure compliance with the specified noise limit in Table 1, monitoring at Control stations shall be undertaken by the Contractor using a sound level meter. Control Stations shall be established having regard to the nature of the work being carried out, its location and proximity of noise sensitive buildings.

The location of the Control Stations need not be within the Works, but the Contractor shall obtain all necessary permissions for stations located outside the Site. The Contractor shall provide for at least two No. separate noise monitoring stations to be in operation at any one time at selected locations specified by the Employer's Representative. The location of the Control Stations shall move relative to the progression of the Works.

The Contractor shall provide instrumentation suitable for monitoring noise. Each sound level meter shall be certified as being in proper working order and shall unless otherwise approved, record noise levels with a print-out showing the noise level in dB(A). The results of the noise monitoring will be made available for inspection at the offices of the Local Authority within 1 week of the measuring of the noise level.

Where the Contractor's execution activities result in the permitted noise levels being exceeded, the Contractor shall stop work in the area and shall not recommence such execution activities until the activities have been modified to reduce the noise impact and until the Contractor has received written consent of the Employer's Representative to recommence the execution activities.

### *3.2.9 Vibration*

The Contractor shall select and utilise methods of working and items of plant so that the maximum measured ground vibrations do not exceed a peak particle velocity of 5mm per second at any occupied property, 10mm per second at any other residential property or 12.5mm per second at any boundary wall (block or stone).

The Contractor shall select and utilise methods of working and items of plant so that the maximum measured ground vibrations do not exceed the following peak particle velocities:

- 4mm per second at any location within 100m of freshly poured concrete, i.e., concrete placed within the previous seven days;
- At the closest part of any building or structure, the maximum measured ground vibrations shall not exceed the peak particle velocities in Table 1/9.2 of this Appendix 1/9;

Frequency (Hz)	Corresponding Peak Particle Velocity (mm/s)
Less than 10	8
10 – 50	12.5
50 – 100 and above	20

*Table 2 Vibration levels*

The Contractor shall install vibrographs for monitoring vibration as required to demonstrate that the requirements of the above are met. Each vibrograph shall be certified as being in proper working order and shall unless otherwise approved, record vibrations in three directions simultaneously with print-out showing the amplitude and frequency of the vibrations.

#### *3.2.9.1 Disturbance / Displacement Measures*

Construction noise will be kept to a minimum in accordance with British Standard BS 5228 1:2009 'Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1: Noise'. The appointed Contractor will be obliged to take specific noise abatement measures outlined in the BS guidance and will comply with the best practice outlined in BS 5228 and the

TII guidelines 'Good practice Guideline for the Treatment of Noise during the Planning of National Road Schemes'<sup>1</sup>. Noise levels will be monitored using standard noise meters.

To reduce disturbance, all temporary lighting associated with the construction phase of the proposed development will be placed strategically by the Contractor following consultation with the appointed ECoW. This will ensure that illumination beyond the works area is controlled. Lighting will be cowled and directional to reduce significant light splay. No lighting will be directed towards the Currane River or adjacent treelines.

### *3.2.10 Oil and Fuel Storage*

Subject to the mitigation measures in the NIS, refuelling of vehicles and equipment will not be carried out on site to minimise the potential for spills or leaks to occur. However, some fuel, lubricants and hydraulic fluids will need to be stored on site during construction works for equipment such as excavators and generators.

Fuelling and lubrication of equipment will only be carried out in a designated areas of the site away from any existing manholes or gullies. Refuelling will be carried out at least 50m from any watercourse. At present, it is proposed that fuel and lubricants will be stored adjacent to the compound. Fuels and oils will be contained within a bunded structure with capacity for 110% of the storage capacity of the largest container/tank.

This bunded fuel storage area will be roofed appropriately to exclude rainwater. The fuel storage area will be properly secured to prevent unauthorised access or vandalism, and all triggers will be locked when not in use. Spill kits and drip trays will be used during refuelling to collect any potential spills or overfills. No vehicles or containers will be left unattended during refuelling.

Mobile fuel bowsers may be used for refuelling heavy equipment. Bowsers used will be double skinned and spill kit/drip tray equipment will be used during refuelling which will take place away from any nearby drains or watercourses and from any surface water drainage gullies.

### *3.2.11 Environmental and Response Procedures*

Spill kits will be made available on site and identified with signage for use in the event of an environmental spill or leak. A spill kit will be kept near the fuel storage area for use in the event of any incident during refuelling or maintenance works. Heavy machinery used on the site will also be equipped with its own spill kit.

In the event of an environmental incident, the appointed Environmental Manager will be notified immediately, and absorbent materials used to prevent the spread of the spill/leak. The contaminated materials will be transferred to leak-proof storage containers, and any contaminated soils or gravels excavated and removed off-site. A record of the incident will be kept, and Kerry County Council will be notified.

### *3.2.12 Training and Awareness*

To ensure that environmental awareness and compliance is communicated effectively at the start and throughout the construction works, this CEMP and its contents will be communicated to all site personnel, including management staff, operatives and sub-contractors.

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<sup>1</sup> National Roads Authority (TII) (2014). Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes.

The key elements of this CEMP will form part of the site induction which will be mandatory for all employees, contractors and visitors attending the site. Environmental toolbox talks during the staff induction will particularly highlight sensitive environmental issues such as:

- Sensitive archaeological sites;
- Sensitive ecological sites
- Traffic management;
- Works within and close to water bodies;
- Water pollution and silt control;
- Water pollution in relation to cement and concrete handling;
- Spill prevention and control;
- Dust management;
- Noise Management; and
- Waste management.

### *3.2.13 Roles and Responsibilities*

Kerry County Council will have overall responsibility for the organisation and execution of all related environmental activities as appropriate, in accordance with regulatory and project requirements. They (and the Main Contractor appointed by Kerry County Council) will be responsible for delivering the CEMP.

The principal duties and responsibilities of the Main Contractor in relation to the implementation of the CEMP will include:

- Provision of Construction Method Statements for approval by Kerry County Council;
- Overall responsibility for the construction works and implementation of the CEMP;
- Resource allocation including appointment of a Site Manager;
- Participation in the regular review of the CEMP for suitability, adequateness and effectiveness; and
- Set the focus of environmental policy, objectives and targets for the site staff.

The principal duties and responsibilities of the Site Manager in relation to the CEMP will include:

- Implementing the CEMP, monitoring the performance of subcontractors and maintaining records to demonstrate compliance with and implementation of any Construction Method Statements;
- Ensuring all site staff receive an induction prior to starting work on-site and are provided with the relevant information concerning environmental sensitivities and protection measures;
- Review of all risk assessment method statements and ensuring an appropriate programme of toolbox talks are developed and effectively communicated;
- Working closely with the assigned Environmental Manager to ensure pre-construction surveys and inspections are undertaken as required;
- Ensuring that all relevant permits and consents are in place in advance of works commencing and that their requirements are adhered to; and
- Dealing with all queries and complaints from the public. The Site Manager will be responsible for responding to each of these. The Site Manager will also be responsible for maintaining a register of complaints together with details of follow up actions which have been undertaken.

A safety, health, environment and quality (SHEQ) officer is responsible for ensuring compliance with health and safety regulations, environmental regulations, and quality control, on the site.

The Ecological Clerk of Works (ECoW) will be appointed by the Contractor. The ECoW will be present for the duration of the construction phase programme and will ensure that all mitigation measures outlined within this report are implemented during the proposed construction works as part of the implementation of any Conditions/Restrictions and/or Mitigation Measures enshrined in such Approval by the Competent Authority as may be granted.

### *3.2.14 Incidents*

All safety or environmental incidents associated with the project will be reported and investigated in line with the Emergency Response Plan. Typically, the following procedures will be followed in the event of an incident:

- Works will stop immediately where safe to do so;
- The Environmental Manger will be contacted;
- The size of the incident will be assessed and determined if it can be controlled by site staff or if emergency services are required to attend;
- The appropriate enforcing authority will be contacted;
- The Environmental Manger will investigate after the incident;
- The findings will be sent to the appropriate authority; and
- An action plan will be prepared to set out any modifications to working practices required to prevent a recurrence.

### *3.2.15 Environmental Complaints*

The Site Manager will develop and implement an appropriate complaints procedure and maintain a register detailing information on any complaints received and follow up actions taken. If the grievance cannot be adequately addressed by the Site Manager, the complaint/concern will be escalated to an appropriate contact within Kerry County Council.

The following measures will be implemented to deal with complaints, and the Main Contractor's CEMP will contain more specific details about phone numbers to contact:

- Clearly display a notice board at the site entrances so that the public know whom to contact if they have a complaint or comment;
- Personnel on site, including sub-contractors are required to perform their duties in accordance with this preliminary CEMP, and in such a way as to minimise the risk of complaints from third parties;
- All complaints received regarding the construction works will be recorded and categorised (e.g., noise, property damage, traffic, dust, etc.) within a central Site Complaints Log. This complaints log will include the following key details:
  - Name, address and contact details of the complainant (with the complainant's permission);
  - Brief outline of the complaint;
  - Date of Complaint;
  - Name of person receiving complaint details; and
  - Agreed timeline for response to complaint.
- All complaints will be communicated to the Site Manager and Kerry County Council immediately;
- The Site Manager will notify the Environmental Manager regarding any environmental complaints received and incidents that occur on site;
- All complaints will be followed up and resolved; and

- The complainant, Kerry County Council and other stakeholders will be kept informed of the progress on resolving the complaint.

### 3.3 Site Compound

Adequate hoarding or fencing will be erected to establish a secure site boundary in agreement with the Kerry County Council. The hoarding or fencing will be maintained and kept clean for the duration of the works. A temporary site construction compound and material storage areas will be established at the location shown in Figure 2-1 Site Layout (approximately 200m from the Currane River).

The construction compound and welfare facilities will be located adjacent to the road within the site application boundary.

All oils and solvents used during the construction phase of the development will be stored within specially constructed dedicated bunded areas. This will minimise any impact on the underlying sub-surface strata. Refuelling of construction vehicles and the addition of hydraulic oils to vehicles, will take place in a designated area of the site, away from surface water features. Spill kits and hydrocarbon adsorbent packs will be stored in this area of the site and operators will be fully trained in the use of this equipment.

The compound will consist of a hardstanding area housing all necessary site offices, site reception, spill kits, canteen and welfare facilities for construction workers. Necessary Covid-19 prevention measures (such as hand wash stations, sign in areas, temperature check areas, etc) will also be identified within the submission, as required. Portaloos will be provided in the compound initially, with a dedicated toilet block installed later and connected to the existing foul drainage network. Electrical and potable water supply will be provided via temporary connections to the existing services located near the site, in agreement with the service providers. Car parking for construction workers and visitors will be located within the construction compound. Waste facilities will be located within the site compound, as necessary. Containers and skips intended for construction waste will be located close to works areas, as required.

The construction site compound will include provision for dust control, surface water control and wheel washing facilities. Incoming construction materials will be offloaded and stored within a materials compound.

The site entrances will be sufficiently wide for Heavy Good Vehicles (HGVs) and construction vehicles to enter the site without causing an obstruction on the road network. Provision will be made to ensure there is sufficient space within the site for HGVs to turn before joining the public road network.

Signage will be erected on all approaches to the site to notify motorists of the construction works ahead. Signage at the compound site entrances will be provided to ensure members of the public do not enter the compound by mistake.

The site will be secured using temporary fencing or always hoarding to ensure that the ongoing works are separated from the public. Netting will be erected on any fencing used, where required, to prevent debris and dust release from the site and provide screening of the construction and demolition works. A secure lockable gate will be erected at the site entrance and visitors to the site will be directed to the adjacent site office. The site management team will carry out regular inspections and maintenance of the security fencing/hoarding while also ensuring areas are kept clean.

Deliveries of materials, plant or machinery to site will be restricted to the working hours identified above. Deliveries will be scheduled as “just-in-time” to ensure the arrival and departure of vehicles will have minimal interference with residents and other road users. Just-in-time deliveries will also reduce the quantity of materials stockpiled within the site. Deliveries will not be allowed to queue on public roadways.

The Main Contractor will be responsible for ensuring the site compound and site are always adequately secured. The contractor will be required to:

- Operate a Site Induction Process for all staff
- Ensure all staff hold a current “Safe Pass” card and always have appropriate Personal Protective Equipment (PPE)
- Install adequate site hoarding to the site boundary
- Always maintain security

## 3.4 Site Clearance

### 3.4.1 Clearance of Vegetation

The proposed construction works area will be clearly demarcated to ensure no works or vegetation removal occurs outside the designated works area. Minor construction works (e.g., the installation of the outfall pipe and headwall on the northern bank of the Currane River) will be undertaken within the SAC site boundary. Following the completion of the works the disturbed lands will be fully reinstated. No machinery will be allowed within the watercourse.

In the first instances, breeding bird habitats (e.g., hedgerows, treelines, scrub and wet grassland) will not be removed, cleared or trimmed between the 1<sup>st</sup> March and 31<sup>st</sup> August, to avoid impacts on nesting birds, which are protected under the Irish Wildlife Acts. In the event however that the construction programme does not allow this time restriction to be observed, then these areas will be inspected by a qualified ecologist for the presence of breeding birds prior to commencement of construction works. Where any nests are found, the appointed ECoW will provide recommendations as to whether a licence is required for vegetation removal and will detail the process for obtaining such derogation licence from the NPWS.

### 3.4.2 Management of Invasive Species and Pathogens

As set out in the NIS and PECR, Japanese knotweed was recorded in two locations within the proposed development site boundary and at one location outside the proposed development site. Giant Rhubarb and Himalayan Honeysuckle were also identified within the site. The appointed Contractor will be required to update the Invasive Species Management Plan (ISMP), which will outline an appropriate eradication and treatment plan for the invasive species prior to the construction phase of the proposed development commencing. The ISMP will be informed by a pre-construction invasive species survey. The ISMP will be prepared in line with Transport Infrastructure Ireland (TII) guidelines for invasive species (TII, 2020a)<sup>2</sup> and (TII, 2010)<sup>3</sup>.

In addition, the appointed Contractor will ensure general biosecurity measures are implemented throughout the construction phase of the proposed development to ensure the introduction and translocation of new invasive species is prevented.

<sup>2</sup>Transport Infrastructure Ireland (TII) (2020). The Management of Invasive Alien Plant Species on National Roads – Technical Guidance. GE-ENV-01105.

<sup>3</sup>TII (2010). The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads

The following mitigation measures are prescribed to control the translocation or spread of invasive species and/or pathogens:

- All machinery and equipment used during the construction works on arrival to and when leaving the proposed development site, will be thoroughly cleaned and then dried using a high-pressured steam cleaning, with water >65 °C, in addition to the removal of all vegetation material. Disinfectant, such as a Virkon® Aquatic solution, will be used. The appointed Contractor will establish and clearly delineate a bunded cleaning/washing area which will be located within the construction compound.
- No removed material or run-off will be allowed to enter any water bodies (e.g., drainage ditches) .
- A strict biosecurity demarcation area will be installed by the ECoW within zones where invasive species exist.
- Evidence that all machinery and equipment has been cleaned will be required to be on file for review by the statutory authorities and the appointed ECoW.

### *3.4.3 Management of Protected Fauna*

As stated in the NIS, Breeding bird habitats (e.g., hedgerows, treelines, scrub and wet grassland) will not be removed, cleared or trimmed between the 1<sup>st</sup> March and 31<sup>st</sup> August, to avoid impacts on nesting birds, which are protected under the Irish Wildlife Acts.

## 3.5 Fencing, Safety Barrier and Pedestrian Guardrails

Temporary fencing is to be carried out at the earliest possible time to clearly delineate the boundaries of the works. The temporary fencing will surround all CPO lands including the temporary land take except where existing walls form that boundary. This will ensure that there will be no works outside of the red line boundary submitted with the application.

## 3.6 Drainage and Service Ducts

As stated in the NIS, in relation to drainage, the scheme is divided into two sections:

- Section 1 - Chainage 0 – 1240m out falling to a wetland
- Section 2 - Chainage 1240m - End out falling to existing surface water system in Waterville

There is currently no formal drainage system in place to cater for road runoff along the section of the N70 road outside of the Waterville Village extents. A new drainage system is therefore proposed and will include the following:

- A kerb and gully system will be used to collect surface water from the mainline and side road paved areas. The gullies will outfall to a combined filter drain running in the grass verge/margin adjacent to the kerb. The cycleway will fall towards the verge with water flowing over the edge to the grass verge and ultimately to the combined filter drain.
- Two outfall pipes are proposed within the drainage system: one (the northern outfall) will be located adjacent of the Waterville Bridge, and the second (the southern outfall) will be located south of the existing pumping station. A description of the two outfalls is provided hereunder.

## Northern Outfall

One outfall pipe and headwall will be constructed to the northern bank of the Currane River adjacent to the eastern side (lakeside) of the existing bridge (as shown in Figure 3-1 below). This outfall will cater for surface water runoff from Ch 1060m to 1240m on the northern end of the scheme. This runoff will go through treatment via a grassed Channel / swale and petrol interceptor.

A section of the pipeline works (ca. 5m of the pipeline and the proposed headwall) will be located within the Killarney National Park, Macgillycuddy's Reeks and River Caragh River Catchment SAC. The pipeline and headwall will be constructed in an existing access track, which consists of gravel and amenity grassland and is currently being used to access a boat house from Waterville House (refer to Figure 3-2).

*Figure 3-1: Proposed Northern Outfall*



*Figure 3-2: Existing Access Track Through the SAC*



### Southern Outfall

A second outfall pipe is proposed south of an existing pumping station to accommodate road drainage from the south of the scheme. Currently runoff runs untreated off the road into the verge, eventually depositing at the lowest spot located adjacent to the existing pumping station.

To improve road drainage within this area, the new proposed drainage scheme will include a combined filter drain which will run on the southern side of the mainline from Ch 0 to Ch 785m where it crosses the road to Ch 812m via a carrier pipe. From Ch 812m to 978m a combined filter drain will convey the water to a petrol interceptor and wetland area. Drainage across the bridge will be provided by surface water Channels to CC-SCD-01109 Type 3 tight to the parapet wall with gullies conveying to the outfall manhole at CH 978m.

A petrol interceptor will be buried into the embankment adjacent to the manhole. The outlet of the interceptor will be piped to a head wall supporting the embankment. The existing ground will be shaped slightly to ensure water from the headwall travels slowly through the wetland to the outlet stream. The minor excavation required for this is shown in Figure 3-3 below.

Figure 3-3: Southern Outfall



All works associated with the installation of the headwall on the northern bank of the Currane River will be undertaken outside of the salmon spawning season. The construction works will only be undertaken during the period July-September. In addition, Inland Fisheries Ireland (IFI) will be consulted prior to works commencing and a detailed method statement outlining the proposed works and timing of works will be agreed.

As part of good site practice and to avoid/reduce the release of suspended solids with surface water run-off, the following procedures will be employed:

- Consultation with Inland Fisheries Ireland (IFI) has taken place. Further consultation will be carried out prior to works commencing and a detailed method statement outlining the proposed works and timing of works will be agreed as part of the implementation of any Conditions/Restrictions and/or Mitigation Measures enshrined in such Approval by the Competent Authority as may be granted.
- Silt fences will be erected along the northern and southern banks of the Currane River using a permeable filter fabric (Hy-Tex Terrastop Premium silt fence, or similar) and not a mesh. The silt fences will be positioned to allow an appropriate working area but

will not be positioned within areas prone to flood, or below the high-water mark. The silt fencing must be installed as per the manufacturer's guidelines. Silt fences will be installed under the ECoW supervision and will be maintained until all ground disturbance has ceased. Once installed, the silt fence will be inspected regularly during construction and more frequently during heavy rainfall events. The ECoW will also supervise the removal of the silt fences following the completion of the works.

- Prior to the commencement of excavations, an area for stockpiling excavated material will be identified >50m away from any watercourse. This area will be located where surface water percolates freely into groundwater. The amount of excavated material is expected to be small, but stockpiling of large volumes of loose soil material onsite will be avoided, and surplus material removed from the site as soon as work is completed;
- Excavation works will not be carried out during or following heavy rainfall (i.e., if there is a yellow weather warning in place or 5mm in a 1-hour period) this will be monitored by the appointed Contractor and ECoW. Excavations will be covered during high rainfall to avoid the creation of surface water with high concentrations of suspended solids that would require dewatering.
- Dewatering of excavations will be avoided. If required, the process will consist of pumping excess water to settlement tanks or filtration systems located at the proposed development site, separated by the nearest watercourse by a minimum of 50m. Silt dewatering bags will be used when water is being discharged.

Further measures to protect aquatic habitats will also be put in place.

- All works must align with the guidance set out in the guidance documents entitled: "*Control of Water Pollution from Construction Sites. Guidance for consultants and contractors (C532)*" (CIRIA, 2001)<sup>4</sup> and TII (2008) '*Guidelines for the Crossing of Watercourses During the Construction of National Road Schemes*'. National Roads Authority;
- An emergency plan for the construction phase of the proposed development to deal with accidental spillages will be drawn up, which all site personnel must adhere to and receive training in;
- Spill-kits and hydrocarbon absorbent packs will be stored in the cabin of all construction vehicles and in specific areas around the site during the construction phase of the proposed development. All machine operators and site staff will be fully trained in the use of this equipment;
- All machinery will be regularly maintained and checked for leaks. Any refuelling of construction machinery/vehicles will not be undertaken within 50m of any surface water feature. If it is not possible to bring machinery to the refuelling point, fuel will be delivered in a double-skinned mobile fuel bowser. A drip tray will be used beneath the fill point during refuelling operations to contain any accidental spillages that may occur. No refuelling will be carried out within 50m of the Currane River;
- The temporary welfare facilities will be within the Site Compound and will not have any discharge to ground or surface waters and will be located a minimum of 50m from the Currane River. All wastewater will be collected in a large tank, and will be emptied as required by a licenced waste collector according to the manufacturer's guidelines;
- Waste will be removed from the site and disposed of by an approved waste contractor in accordance with prevailing waste management regulations;
- On completion of the construction phase of the proposed development, all apparatus, plant, tools, offices, sheds, surplus materials, rubbish and temporary erections or works of any kind will be removed from the site;

<sup>4</sup> CIRIA (2001). Control of Water Pollution from Construction Sites. Guidance for consultants and contractors (C532).

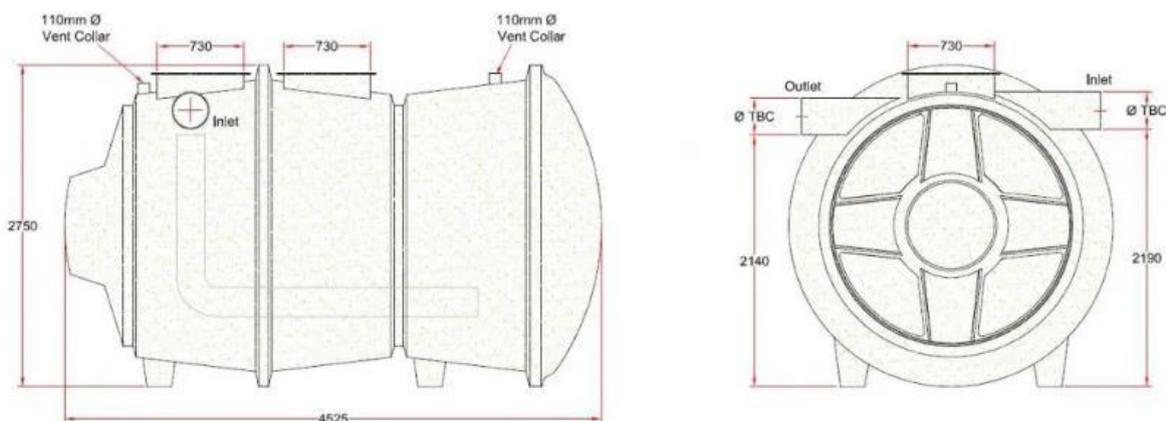
- No on-site batching will be permitted at the proposed development area. All concrete will be transported to the site by truck;
- The installation of the new outfall will be undertaken from the riverbank and will be isolated from the watercourse and constructed in the dry. A pre-cast head will be brought to site to reduce the amount of pouring and mixing of concrete undertaken;
- Wash-down of concrete contaminated equipment will not take place within the proposed development site. All washdown of vehicles/equipment will be undertaken off-site, in a designated area, separated by at least 50m of any surface water feature. All concrete waste will be managed in accordance with waste legislation; and
- No water will be abstracted from the Currane River. Any water requirements will be obtained from the existing water network.
- The construction compound and welfare facility will be set back a minimum of 50m from any water feature.

There is currently no formal drainage system in place to cater for road runoff along the section of the N70 road outside of the Waterville village extents. Currently runoff runs untreated off the road into the verge or along the road edge. This runoff eventually ends up at the low spot adjacent to the pumping station.

The drainage design incorporates filter drains and is run at the same gradient as the road. This ensures that there is a certain amount of filtration, attenuation and flow control before reaching the outfall. From old ordnance survey mapping, it was established that there was an old pond at this outfall location, but the pumping station was built on top of it. The area lends itself to the use of the existing wetland as an outfall location for the following reasons:

- Contours and Flow Arrows provide for a slow movement of water towards the stream adjacent to the Currane River.
- It is the low point of the scheme
- There is existing wetland at this location
- There is no requirement for excavation or entry into the SAC

Water from all gullies from CH 965m south will discharge into a manhole at CH 965m. This manhole will also pick up the bridge drainage. A petrol interceptor will be buried into the embankment adjacent to this manhole. The interceptor will have similar dimensions to that shown in Figure 3-4 Petrol Interceptor. The embankment will be mainly imported material, and the depth of the interceptor will be such so that the invert of the manhole will be slightly higher than the inlet of the interceptor. All necessary mitigation for excavation as outlined in [Earthworks](#) will be followed in this process.



*Figure 3-4 Petrol Interceptor*

The outlet of the interceptor will be piped to a head wall supporting the embankment. The existing ground will be shaped slightly to ensure water from the headwall travels slowly through the wetland to the outlet stream. The minor excavation required for this is shown in Figure 3-3.

### 3.7 Earthworks

As with the above mitigation measures, the contractor will be obliged to follow the following measures to remove any risk of a pollution incident:

- On completion of the works, all apparatus, plant, tools, offices, sheds, surplus materials, rubbish and temporary erections or works of any kind will be removed from the site;
- All works must follow the guidance set out in the Guidance document entitled: CIRIA guidance note Control of Water Pollution from Construction Sites (CIRIA, 2001);
- A 24-hour, seven-day week Emergency Response protocol will be drawn up and implemented. This must be implementable in the unlikely event of an accidental spillage of chemicals, hydrocarbons or release of sediment to the surface or ground water system;
- Works near watercourses will not be carried out during or following heavy rainfall (i.e., if there is a yellow weather warning in place or 5mm in a 1-hour period) this will be monitored by the appointed Contractor and ECoW by consulting Met Eireann forecast rainfall radar data. All excavated material will be removed to suitable stockpile areas. The volume of material to be managed is minor;
- Stockpiling will be limited to areas where the ground is stable and well drained;
- Spoil disposal areas will be located where the risk of soil erosion and water quality deterioration is minimal and must also have an adequate buffer from aquatic zones; These areas will be agreed with Kerry County Council prior to construction commencing.
- Where spoil disposal areas are bunded, the bunds will extend to a level above the top of the spoil;
- Any water discharge from the stockpiles will be monitored. Runoff water will be prevented from flowing directly into nearby watercourses.
- Refuelling of machinery will be carried out on level, hard surfaced designated areas where possible. If refuelling is required outside of these areas, fuel will be transported in a mobile double skinned tank and a spill tray will be employed during re-fuelling operations.
- All machinery will be regularly maintained and checked for leaks. Services will not be undertaken within 50 m of aquatic features. Servicing must be undertaken on level, hard surfaced designated areas;
- An adequate supply of spill kits and hydrocarbon adsorbent packs will be available at labelled stations throughout the sites with all vehicles on-site carrying spill kits. All relevant personnel will be fully trained in the use of the equipment. Any used spill kits will be disposed of appropriately off-site;
- All concrete will be mixed off-site and imported into the site. All concrete bowsers will be washed down at a dedicated concrete washout on-site at least 50 m from a drainage ditch or watercourse. Concrete washings will not be disposed of on-site to any surface or ground water feature. All washings will be removed off-site and treated at a licensed facility; and
- All equipment and machinery must be cleaned prior to entry as bio security measure. This is to avoid transfer of invasive species on equipment and machinery which may have been used elsewhere to the receiving catchment. Reference will be made to IFI bio security protocol found at <http://www.fisheriesireland.ie/Biosecurity/biosecurity.html>.

The combined application of these measures will ensure that inputs to, and subsequent contamination of, the water environment do not occur during normal and/or emergency conditions.

### 3.8 Pavement

The existing pavement will be removed by means of cold milling to remove all bituminous material. This material (U2) will be removed to a licenced receiving facility off site. Upon widening of the existing road at the identified location, the total area of the proposed road will be constructed in bituminous layers in accordance with the specification using machinery required.

### 3.9 Kerbs, Footways, Paved Areas and Headwalls

Precast concrete products, which will be manufactured off-site, will be used where possible. In the event of in-situ concrete pouring required on-site, the following measures will be followed.

Only ready-mixed concrete will be used, with all concrete being delivered from local batching plants in sealed concrete delivery trucks. The use of ready-mixed concrete deliveries will eliminate any potential environmental risks of on-site batching. Concrete trucks will be washed out fully at the batching plant, where facilities are already in place, and will not be permitted to wash-out at the site. The Main Contractor will establish this agreement with suppliers in advance of commencement of the works.

Measures to prevent contamination from concrete pouring on-site will include:

- Using weather forecasting to assist in planning concrete pours and avoiding pours where prolonged periods of heavy rain is forecast; (i.e., if there is a yellow weather warning in place or 5mm in a 1-hour period) this will be monitored by the appointed Contractor and ECoW by consulting Met Eireann forecast rainfall radar data).
- Restricting concrete pumps and machine buckets from slewing over watercourses while placing concrete;
- Ensuring that excavations are sufficiently dewatered before concreting begins and that dewatering continues while concrete sets;
- Ensuring that covers are available for freshly placed concrete to avoid the surface washing away in heavy rain; and
- Disposal of surplus concrete after completion of a pour off-site.

### 3.10 Traffic Signs and Road Markings

Traffic signs and road markings will be installed as per the specification and any excavation required will be carried out in accordance with the measures outlined in Section 3.7.

### 3.11 Works at House Fronts

All works at House fronts to tie the new construction into existing driveways will be installed as per the specification and any excavation required will be carried out in accordance with the measures outlined in Section 3.7.

## 3.12 Structures

### *3.12.1 Install Water Protection Measures*

As stated in the NIS, the following methodology will be applied to the construction of the Cycleway / Footway bridge and foundations:

- Install sandbag cofferdam bunding as per Figure 3-5.
- Bunding shall be comprised of 1-1.5 tonne sandbags typically 1m high x 1m wide which will be closed at the top.
- A sheet of heavy gauge polythene shall be laid on the ground.
- Bags shall then be placed on top of the polythene and then the polythene shall be returned around the sandbags. The sandbags shall be lifted into place commencing upstream adjacent to the existing bridge abutments and working downstream and returning perpendicular to the river. The bags shall be lifted into place using a mechanical excavator. The cofferdam shall be provided as shown to prevent runoff from the worksite flowing into the river. The top of the sandbag cofferdam shall be at a minimum of 4.2m OD (1% AEP flood level) to prevent flood water from entering the worksite.
- A run-off settlement area shall be set up within the sandbag cofferdam. This shall consist of a mobile settlement tank with a pump to discharge to a vegetated grassed area (>50m from the river) to act as natural filter. No direct discharge to the river shall be permitted at any time during the works. Terrastop silt fencing shall be placed below where the water is discharged to the grassed area. Any sediment collected by settlement tanks/silt fencing shall be transported off site by a licensed waste operator for appropriate disposal.
- Install sheet pile cofferdam around proposed abutment locations to facilitate excavation to the founding level. Sheet piles shall be installed using an excavator mounted vibrator. Impact driving of sheet piles shall not be permitted.
- These works will be monitored by the ECOW to ensure compliance.

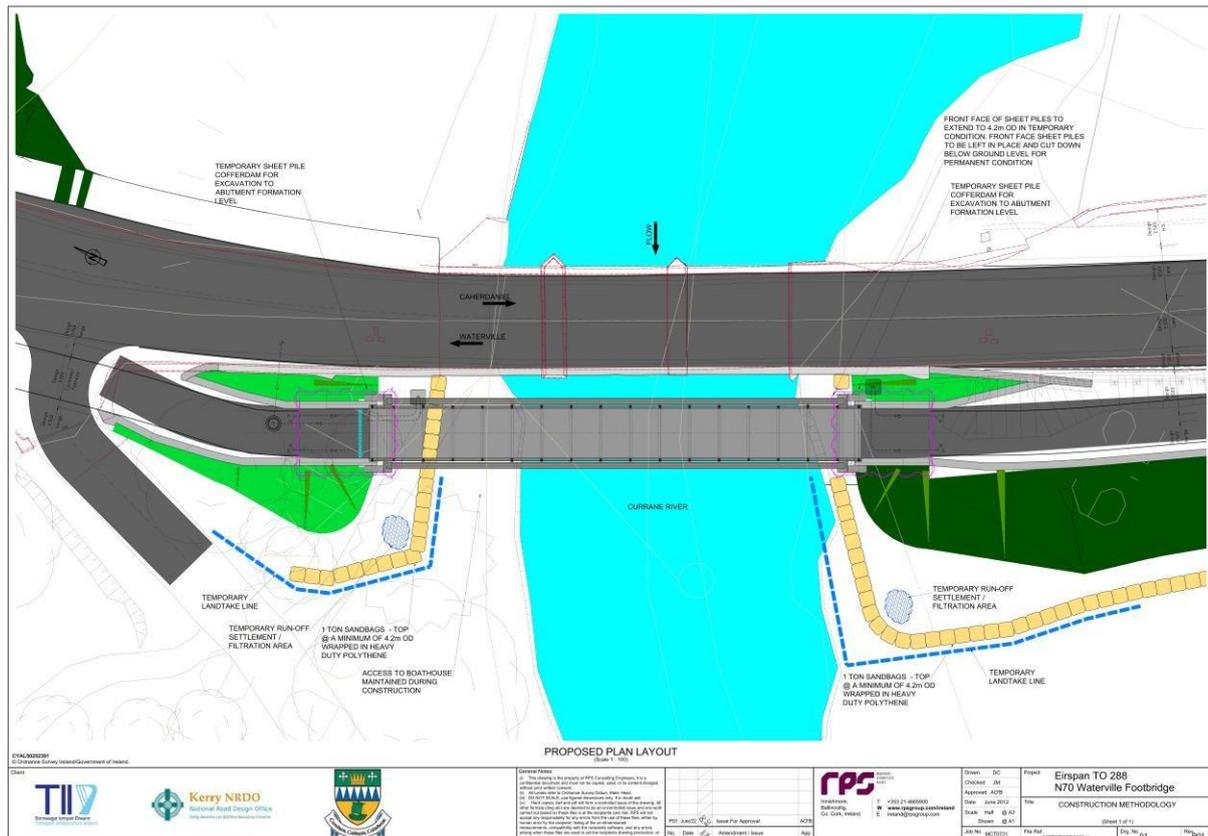


Figure 3-5 Proposed Bridge Works

### 3.12.2 Construct Abutment Substructures

Access tracks shall be created from the existing N70 to the abutment locations. This shall involve removal of existing topsoil and transporting it off site. Imported fill material shall be placed and levelled using a mechanical excavator to create access tracks from the N70 to the abutment locations. These access tracks shall be within the footprint proposed shared footway/cycleway.

Excavate to founding level within the sheet pile cofferdam using a mechanical excavator. The spoil shall be loaded into dumpers and removed from site or stockpiled for re-use elsewhere on site. No spoil shall be stockpiled or stored within 50m of the Currane River.

If necessary, a sump shall be created within the excavation and groundwater pumped to the mobile settlement tank.

Blinding shall be placed at the base of the excavation. Reinforcement shall be fixed, and formwork placed. In-situ concrete shall be poured into the formwork within the sheet pile excavation to form the abutment base slab. Concrete shall be poured directly from concrete wagons that access the worksite from the adjacent N70.

Reinforcement for the new abutment walls shall be placed in situ, formwork shall be erected, and concrete shall be poured.

Concrete shall be transferred from the concrete wagon directly or using a mechanical excavator with a concrete skip if required. Once the concrete has cured the formwork shall be removed.

### *3.12.3 Backfill Abutments*

The area around the sides of the abutment footings shall then be backfilled with a clean granular material to existing ground level.

The sheet pile cofferdams shall be removed. The sheet piles shall be extracted using an excavator mounted vibrator. The sheet piles on the front face of the south abutment (along the edge of the river) shall be left in place and cut down to just below ground level. These piles shall act as permanent scour protection to the abutment foundation.

The abutment walls shall be backfilled to 300mm below bearing shelf level. This shall be undertaken in conjunction with the construction of the adjacent approach embankments.

### *3.12.4 Bridge Superstructure*

The bridge superstructure (steel deck including handrail posts) shall be fabricated offsite in a steel fabrication yard.

The bridge superstructure shall then be delivered to site via the N70 (under a police escort and/or nighttime closure(s) of the N70 if required) using a lorry and trailer complete with rear steering bogie. The lorry shall be positioned on the existing masonry arch road bridge to facilitate crane set up.

If necessary, the bridge could be delivered to a suitable staging area close to the site in two or three pieces and welded together to form a single structure before transporting the complete structure up the N70 under a nighttime road closure.

A crane (or tandem cranes) shall be setup on the N70 under a nighttime road closure. Crane outriggers shall extend over the newly constructed approach embankments. The deck superstructure shall be lifted into position and fixed in place in a single operation.

### *3.12.5 Bridge Finishing Works*

Stone masonry facing shall be constructed on the outside faces of the abutment walls. Stone masonry approach walls shall be constructed on the approaches to the bridge. The handrailing cables shall be installed, tensioned and completed.

### *3.12.6 Roadside finishing works*

Drainage on the approaches to the bridge shall be completed and the bridge deck drainage connected. The approach paths shall be surfaced, safety barriers installed, and landscaping completed.

### *3.12.7 Remove Water Protection Measures*

Following completion of all earthworks, landscaping of the approach embankments, the runoff system shall be removed and the sandbag cofferdam bunding shall be lifted out using a mechanical excavator and removed from site using dumpers. Access to the sandbags is available via a track at the base of the new permanent embankment within the temporarily acquired lands.

The ground within the temporarily acquired lands shall be reinstated and grass seeded as per landscape design to be provided at detailed design stage as part of the implementation of any Conditions/Restrictions and/or Mitigation Measures enshrined in such Approval by the Competent Authority as may be granted.

### 3.12.8 Management of Headwall Works

- Two stormwater outfall pipes will be installed as part of the proposed improvement works. One outfall pipe and headwall will be constructed to the north bank of the Currane River adjacent to the existing bridge and the second will include an outfall pipe located south of the existing pumping station discharging into a wetland.
- The construction works associated with the installation of the headwall and outfall pipe on the northern bank of the Currane River will be undertaken in the dry and isolated from the river using small sandbags. Although the works area will be predominantly located on the bank of the river, a small area may extend into the river. The works area may therefore require the removal of any water ingress which will be over pumped to a grassy area located a minimum of 50m from the river.
- Prior to the removal of any water, the isolated area will be inspected by the ECoW for the presence of fish and lamprey which will be translocated downstream if found. In addition, all excavated material from this area will be checked for lamprey.

Once a dry works area has been established minor excavation works will be undertaken either by hand or with a single tracked excavator. No machinery will be allowed into the watercourse. A pre-cast headwall will be used and brought to site and lifted into place. No onsite batching of concrete will be undertaken. Once the headwall has been installed the sandbag cofferdam will be removed. Any sediment accumulated within the cofferdam will be removed prior to removal of the sandbags.

- All works associated the installation of the headwall on the northern bank of the Currane River will be undertaken during the period July-September, outside the salmon spawning season. In addition, Inland Fisheries Ireland (IFI) will be consulted prior to works commencing and a detailed method statement outlining the proposed works and timing of works will be agreed.
- The southern outfall pipe will be constructed on land. Silt fences will be installed around the perimeter of the excavation works.

### 3.13 Emergency Plan

The Main Contractor is required to provide a best practice working environment for all employees involved in the construction of the proposed development. This includes a responsibility to consider all relevant statutory laws and guidelines.

All construction activity will be carried out in accordance with the requirements of the *Safety, Health and Welfare at Work (Construction) Regulations 2013*. The main contractor will be required to prepare a *Construction Health & Safety Plan* prior to commencement of construction activities.

In the case of an emergency at the site, the following procedures shall be followed:

- 
- Emergency services will be contacted immediately by dialling 112 or 999;
  - Exact details of the emergency/incident will be given by the caller to the emergency line operator to allow them to assess the situation and respond in an adequate manner;
  - The emergency will then be reported to the Site Manager;
  - Where available, trained site first aiders will attend the incident; and
  - The Site Manager will maintain contact with the emergency services to ensure they have directions to the site.

In the case of an incident where the emergency services are not required, any persons injured will be taken to the nearest hospital by the Site Manager or other appointed person. The nearest hospital to the site is:

*Cahersiveen Community Hospital*

*Phone No. - (066)9472100*

*Driving Time - c 19 minutes*

## 4.0 CONCLUSIONS

Having regard to the documents submitted as part of the statutory approval process, the preliminary CEMP outlines the proposed specific environmental measures that are proposed to be implemented and the procedures to be followed for the scope of constructions works, subject to any Conditions and/or Restrictions as may be imposed by An Bord Pleanala in any statutory Approval.

## Appendix 1 – Dust Management Plan



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## Kerry County Council

# N70 Waterville to Ballybrack Road Improvement Scheme

## Dust Management Plan

October 2024

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## 1. INTRODUCTION

The length of the proposed development is 1.373km with an overall site boundary area of 2.617 hectares (ha). The proposed development will comprise the following:

- Realignment and improvement of 1373m of existing carriageway
- Construction of a separate pedestrian and cycle lane facility, totalling 1253m in length
- Provision of a shared pedestrian and cycleway bridge, c. 32m in length

This is the Dust Management Plan for the construction stage of the project.

## 2. STATEMENT OF COMPETENCE

TOBIN is a multi-disciplinary consultancy employing over 180 people. TOBIN provides environmental and engineering consultancy services nationwide, to both public and private clients. This Dust Management Plan has been prepared by members of the TOBIN Roads and Ecology teams.

John O'Flaherty is a Chartered Engineer with over 26 years' post graduate experience in Civil Engineering. He has led multi-disciplinary teams in the delivery of Road Projects for over 18 years. In that time, he has delivered multiple National and Non-National Road Projects from Concept through to Handover.

Áine Sands (B.Sc.) is a qualified Senior Ecologist with seven years post-graduate experience in ecology and environmental consultancy. She has predominantly been involved in large public and private infrastructure projects where she has carried out numerous Screenings for Appropriate Assessments, Natura Impact Statements and Ecological Impact Assessments for the proposed developments. Áine has a strong understanding of National and European legislation associated with biodiversity and is cognisant of relevant rulings by the Court of Justice of the European Union (CJEU) associated with Appropriate Assessment. Áine also has experience with undertaking ecology surveys for protected habitats and species.

### 3. DESCRIPTION OF SITE

The site is located on the N70 National Secondary Road commencing at the southern end of the promenade in Waterville town and extends south towards Caherdaniel. The proposed scheme provides for 1373m of realigned and strengthened National Secondary Road together with 1253m of shared cycleway/footway. The scheme also includes a proposed shared pedestrian and cycleway bridge over the Currane River along the western side of the existing bridge. The location of the proposed upgrade works within the wider geographical setting is shown in Figures 1-1 and 1-2 below.

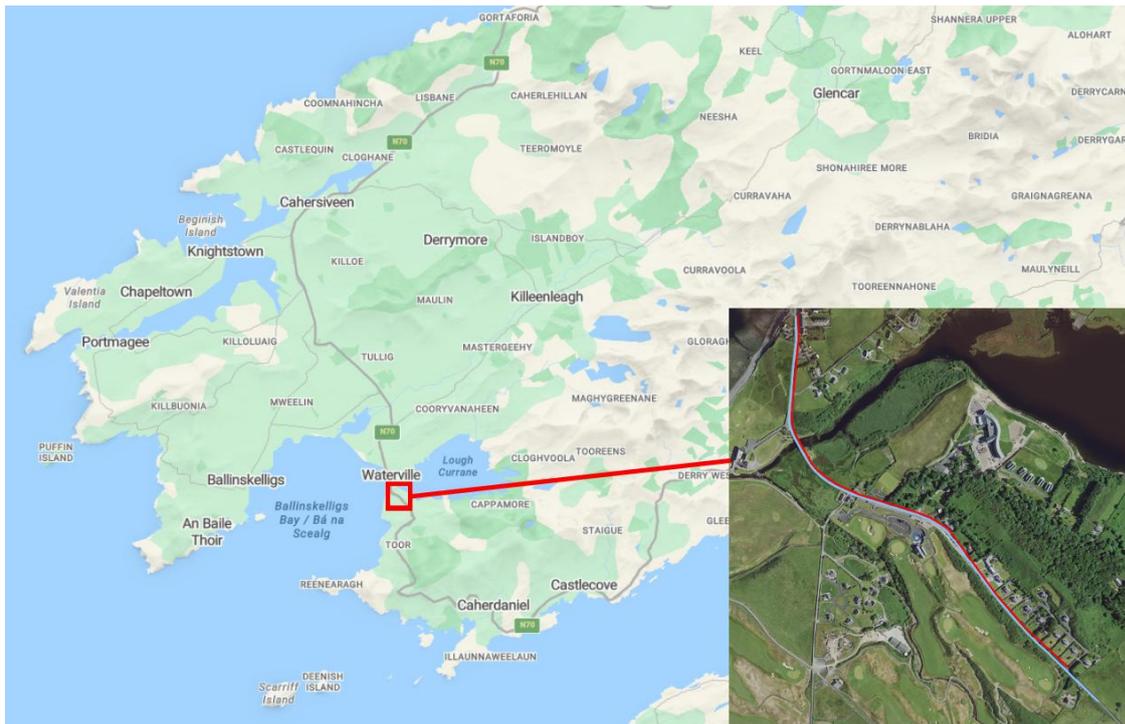


Figure 1 Site Location

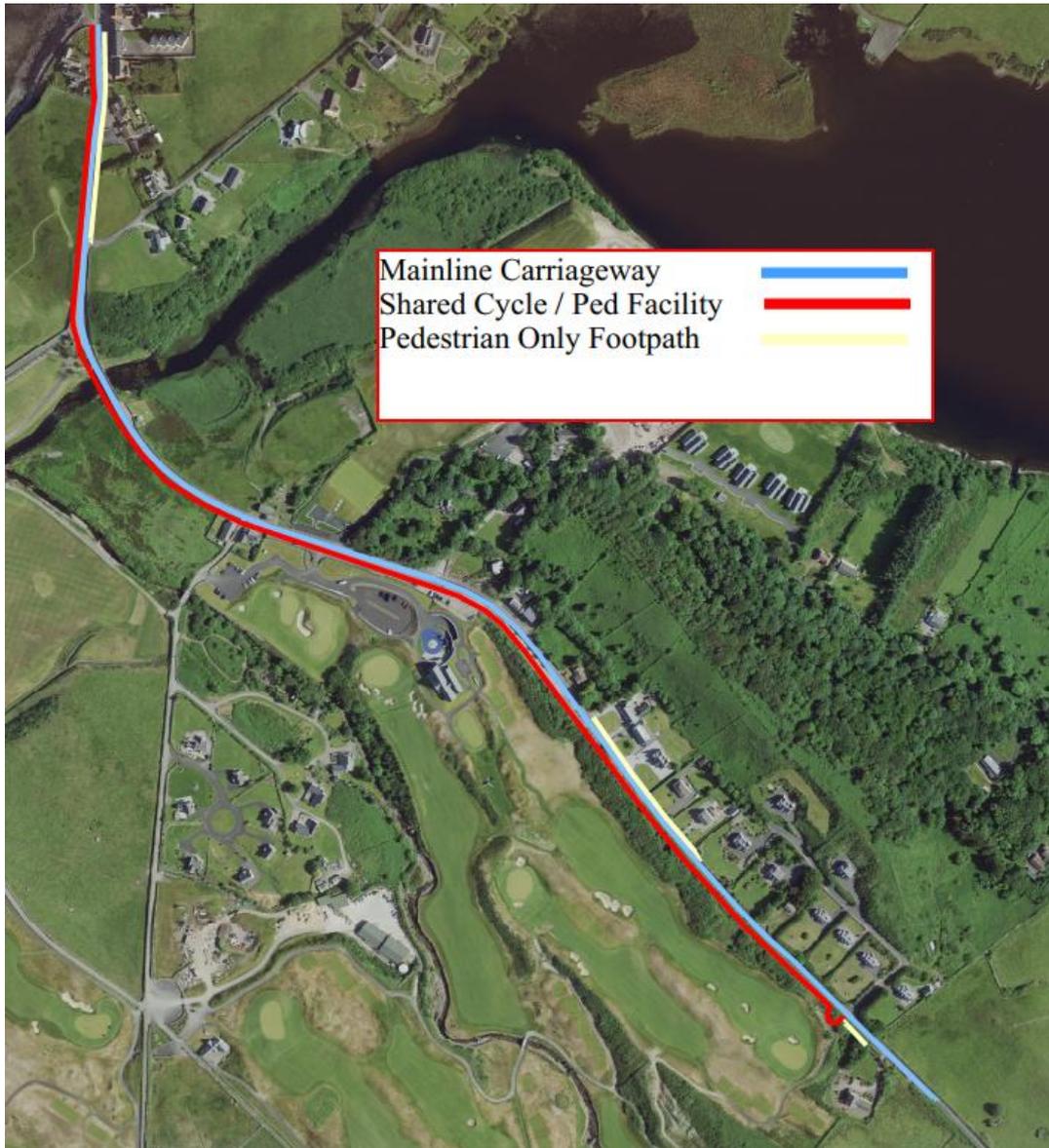


Figure 2 Project Location

## 4. DESCRIPTION OF PROPOSED DEVELOPMENT

The proposed development will begin at the southern end of the promenade in Waterville town and extend 1.373km south towards Caherdaniel.

The proposed development includes 1373m of realigned and improved carriageway with a separate pedestrian and cycle lane facility provided on one side. The proposed cycle lane facility will extend from the southern end of the promenade in Waterville town to the Benjamin Close housing development. The total distance of shared cycleway / footpath to be provided is 1253m. The proposed development will provide a new bridge for shared pedestrian and cycleway use over the Currane River.

In summary, the scheme will involve:

- Removal of 320m of hedgerow located along the route realignment at the southern end and other associated earthworks;
- Removal and replacement of stone walls
- Excavation and/or fill of route realignment, although most of the works relate to levelling of existing surface;
- Construction of new independent, single span steel arch footbridge c.32m in length;
- Overlay of the existing carriageway involving excavation and overlay of existing N70 road bridge to tie in with the new scheme; and
- All associated drainage works and other ancillary works.

## 5. SENSITIVE RECEPTORS

Whilst construction activities are likely to produce some level of dust during earth moving and excavating phases of the project, these activities will mainly be confined to particles of dust greater than 10 microns. Particles of dust greater than 10 microns are considered a nuisance but do not have the potential to cause significant health impacts.

There are no statutory guidelines regarding the maximum dust deposition levels that may be generated during the construction phase of a development in Ireland. Furthermore, no specific criteria have been set in respect of this development. However, PE-ENV-01107 of the TII Publications provides guidance and the following Dust Management Plan complies with this guidance and is proportionate to the potential for significant effects to occur.

Recommendations outlined by the Department of the Environment, Health & Local Government, apply this limit of 350 mg/m<sup>2</sup>\*day to the site boundary of quarries.

In terms of establishing the extent of the area likely to be affected by nuisance dust effects, the IAQM Guidance on the assessment of dust from demolition and construction suggests that disamenity dust impacts are not usually experienced beyond 350 m of the sources.

On this basis, to ensure a worse-case scenario, consideration has been given to sensitive receptors within 350 m of the site boundary, as depicted in Figure 3.

Receptors are present at greater distances, but these are unlikely to be affected by nuisance dust during the construction phase of the development.

At the construction planning stage, the siting of activities and storage piles will take note of the location of sensitive receptors and prevailing south westerly wind directions in order to minimise the potential for significant dust nuisance

Particulate emissions are anticipated to be generated by activities including:

- Site Preparation
- Site Clearance
- Regrading and Re-profiling Works
- Excavations
- Earthworks
- Construction traffic on haul roads
- Material Transportations
- Finishing and Landscaping

The potential for dust to be emitted depends on the type of construction activity being carried out in conjunction with ambient conditions including rainfall, wind speed and wind direction. The potential for impact from dust also depends on the distance to potentially sensitive locations and whether the wind can carry the dust to these locations. Most of the dust would be deposited close to the potential source. Off-site receptors within 20 m of the site include 15 houses along the route. There will be road excavation and construction activities outside of these houses and enforcement of the mitigation measures herein is critical at this location. Trigger levels have been defined to reduce nuisance dust effects at the nearest receptors during high-risk conditions.

The trigger levels established for the site include the following:

- Winds that are, or are forecast to be, above a moderate breeze (Beaufort scale 4 – described as conditions under which ‘dust and loose paper are raised. Small branches begin to move and are, or are forecast to be, from the south or south-west on days when there has been no rainfall for the last 3 days or more;
- The chance of further daily rainfall is forecast to be, below 40% on five consecutive days according to the met office website;
- Routine checks/inspections/surveys on site have identified evidence of dust off-site;
- A dust complaint is received
- A failure in equipment or control is identified, or an abnormal/unintentional situation occurs, e.g. a spillage

The additional controls to be employed if a trigger level is exceeded are set out below:

- Increase frequency of use of the road sweeper, both on-site and on local roads;
- Temporary cessation of the activities responsible for causing the dust impact until the trigger level is no longer exceeded;
- Use of additional dust suppression measures such as dampening of specific surfaces
- Relocation of activities so that the distance between the source of emissions and the receptors is increased.

Implementation of the above additional measures (either singly or in combination) will be applied as necessary to effectively control dust emissions, as evidenced by the visual and monitoring checks described in the next section. The Site Manager will be responsible for implementing these risk management measures in accordance with procedures.

The Ecological Clerk of Works (ECoW) will make daily inspections at the site boundary to ensure that visible dust is not leaving the site. Particular attention will be given to the eastern part of the site boundary, closest to the residential properties identified as being most susceptible to nuisance dust.

The results of the inspections will be recorded in a site log. The prevailing weather conditions and the activities undertaken at the time of the inspection will also be recorded in the site log.

In the event that any of the trigger levels are exceeded and additional measures are employed, the frequency of the visual site boundary inspection will increase to twice daily until such time as no dust is visible at the site boundary. If after two days, the results of such monitoring indicate that the additional control measures are not effective, the Site Manager will instruct all site operatives that the operations will cease until the issue can be resolved.

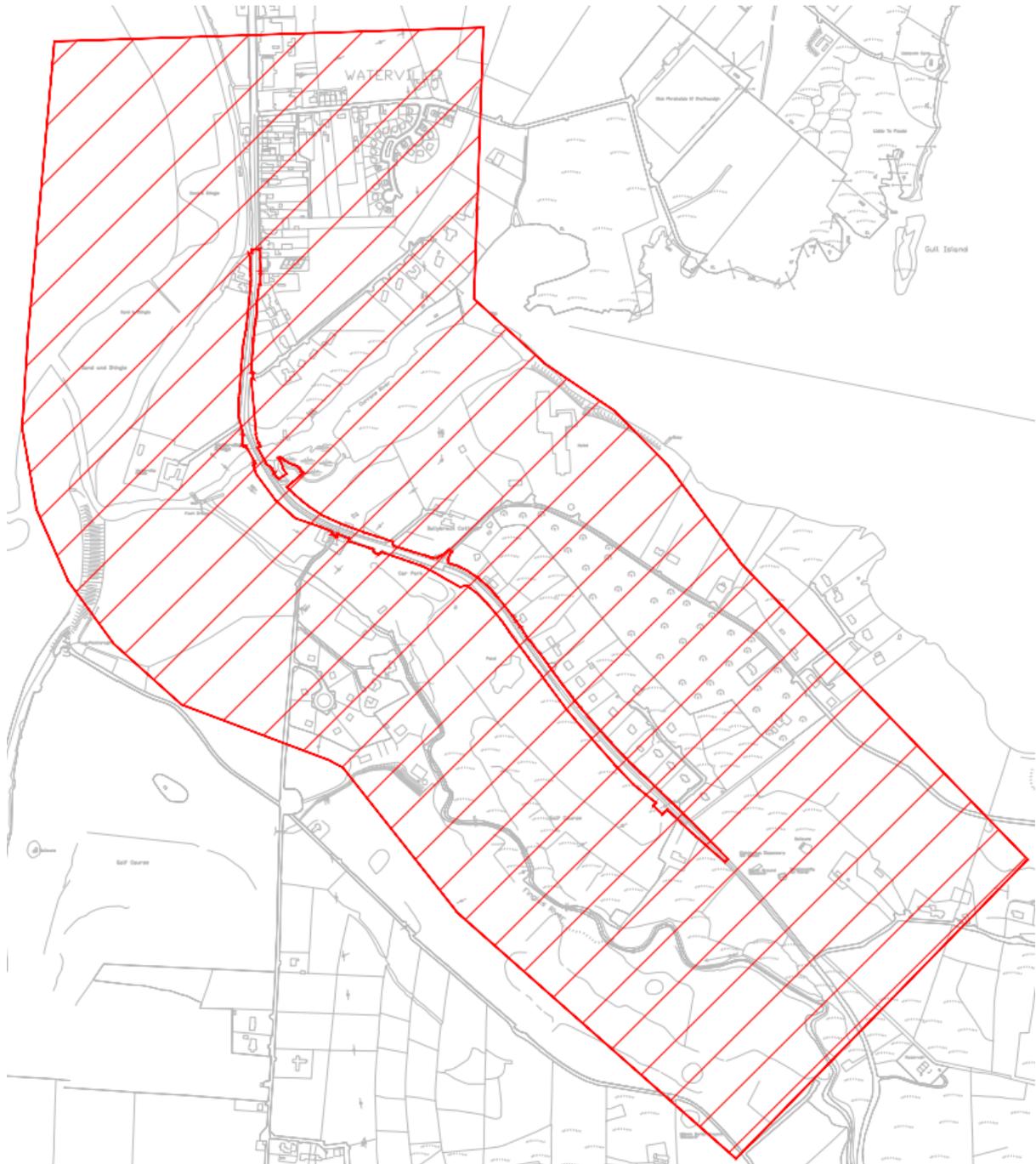


Figure 3 350m Zone

## 6. MITIGATION MEASURES

### 6.1 SITE MANAGEMENT

The Contractor will implement the following measures :

- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
- Display the head or regional office contact information
- A speed restriction of 20 km/hr will be applied as an effective control measure for dust for on- site vehicles on unpaved haul roads and for all roads within 100m of the SAC.
- Any hard surface roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only.
- A suitably qualified ECoW will be appointed by the Contractor. The ECoW will be present for the duration of the construction phase programme and will ensure that all mitigation measures outlined within this report are implemented during the proposed construction works.
- The ECoW will monitor the contractors' performance to ensure that the proposed mitigation measures are implemented, and that dust impacts and nuisance are minimised;
- During working hours, dust control methods will be monitored as appropriate by the ECoW, depending on the prevailing meteorological conditions. The prevailing wind in the area is south-westerly and this should be considered when planning construction activities and programme.
- Community engagement will be undertaken before works commence on site explaining the nature and duration of the works to local residents and businesses;
- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
- The dust minimisation measures shall be reviewed at regular intervals during the works to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust through the use of best practice and procedures. In the event of dust nuisance occurring outside the site boundary, site activities will be reviewed, and satisfactory procedures implemented to rectify the problem. Specific dust control measures to be employed are described below.
- Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where possible
- Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the logbook.

- All staff on the site will be made fully aware of the need to be constantly vigilant with regard to site dust control and management procedures. New staff will be trained to deal with dust management issues and will be made aware of the DMP during the induction process. All staff will be made aware of the details of changes to the DMP.
- The Site Manager will maintain a statement of training requirements for each operational post and keep a record of the training received by each person whose actions may have an impact on the environment.
- Any sub-contractors working on site will be made aware of the DMP and will be expected to comply with the DMP at all times.
- Staff responsible for the operation, maintenance or repair of dust suppression systems will be trained and competent. Training records will be maintained, demonstrating compliance with this.
- A list of approved repair contractors will be kept in the site office and relevant site operatives will be made aware of the existence and the location of the list. Where appropriate, essential spare parts will be kept on site.

### 6.1.1 Complaints Procedure

The following procedures will be followed in dealing with complaints:

- Record and respond to all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- A complaints register will be kept on site detailing all telephone calls and letters of complaint received in connection with dust nuisance or air quality concerns, together with details of any remedial actions carried out;
- Make the complaints log available to the local authority when asked.
- In the case of complaints submitted, an acknowledgement and initial response will be given by telephone or by email within 48 hours, provided that telephone or email contact details have been given by the complainant. The site manager will respond as rapidly as possible to the complaint to maximize the opportunity for identifying the source of the nuisance dust.
- A representative of the site manager will inspect the nuisance dust location referred to in the complaint.
- Where complaints cannot be resolved on initial contact and further investigations are required, a written response will be made within 10 working days of submission of the complaint although sometimes longer may be needed. The complainant will be told if this is the case and how long it will take to give a response.

## 6.2 SOIL AND ROCK EXCAVATION

Soil and Rock Excavation have the potential to generate nuisance due to dust generation and the following mitigation measures will be applied during such activities:

- During dry and windy periods, and when there is a likelihood of dust nuisance, a bowser will operate to ensure moisture content is high enough to increase the stability of the soil and rock and thus suppress dust.
- During periods of very high winds (gales), construction activities likely to generate significant dust emissions will be postponed until the gale has subsided.
- Fully enclose specific operations where there is a high potential for dust production and the site is active for an extensive period.
- Avoid site runoff of water or mud.
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.
- Cover, seed or fence stockpiles to prevent wind whipping.
- Ensure all vehicles switch off engines when stationary - no idling vehicles.
- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.
- Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.
- Only remove the cover in small areas during work and not all at once.
- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use. If sweeping using a road sweeper is not possible due to the nature of the surrounding area, then a suitable smaller scale street cleaning vacuum will be used.

## 6.3 OPERATIONS

The following measures will be applied during specific operations:

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- Use enclosed chutes and conveyors and covered skips.

- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.
- For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.

## 6.4 SITE TRAFFIC ON PUBLIC ROADS

Construction traffic can generate nuisance emissions and dust. Spillage and blow-off of debris, aggregates and fine material onto public roads should be reduced to a minimum by employing the following measures:

- Vehicles delivering material with potential for dust emissions to an off-site location shall be enclosed or covered with tarpaulin at all times to restrict the escape of dust;
- At the main construction traffic exit, a wheel wash facility shall be installed. All trucks leaving the site must pass through the wheel wash. The wheel wash will be located a minimum of 20m but sufficiently far from the exit to allow trucks to 'drip off' prior to exit. In addition, public roads outside the site shall be regularly inspected for cleanliness, as a minimum on a daily basis, and cleaned as necessary. A road sweeper will be made available to ensure that public roads are kept free of debris.
- Vehicles onsite shall turn off engines when not in use to prevent idling emissions.
- Carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and provide an inspection log to the local authority when asked
- Increase the frequency of site inspections by the ECoW when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- Ensure all non-road mobile machinery (NRMM) comply with the standards set within this guidance.
- Impose and signpost a maximum-speed-limit of 15kph on surfaced haul routes and work areas (if long haul routes are required these speeds may be increased with suitable

- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).
- Ensure vehicles entering and leaving sites are securely covered to prevent escape of materials during transport.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).

## 6.5 WASTE MANAGEMENT

In addition to construction operations, waste generated from the activities will have the following controls in relation to air quality and dust control:

- There will be no bonfires and burning of waste materials.
- Reuse and recycle waste to reduce dust from waste materials.

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