

CLONASLEE FLOOD RELIEF SCHEME

Appendix 6.2: Construction Traffic Management Plan (CTMP)



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Prepared by:

Prepared for:

RPS

Laois County Council

Dublin | Cork | Galway | Sligo | Kilkenny rpsgroup.com

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Appendix A Compound Visibility Assessment

1 INTRODUCTION

1.1 Overview

This Construction Traffic Management Plan (CTMP) has been prepared for the Proposed Flood Relief Scheme (FRS) for which Laois County Council is seeking consent in the village of Clonaslee (hereafter referred to as the 'Proposed Scheme'). It considers the potential impacts of construction related traffic generated as part of the Proposed Scheme and sets out the measures considered necessary to ensure that such traffic will be managed and monitored safely and efficiently throughout the construction phase. An assessment of the traffic impacts on the local network is provided in **Chapter 6: Traffic and Transportation**.

It will be the responsibility of the appointed Contractor to further update this CTMP prior to the commencement of the construction phase. The Contractor will be required to agree the contents of the CTMP with both Laois County Council (LCC) and An Garda Síochána before the commencement of works on site. The Contractor will fully implement and maintain the CTMP throughout the construction phase.

1.2 Purpose and Scope

This CTMP seeks to demonstrate how the works can be delivered in a logical, considerate, and safe sequence with the incorporation of specific measures to mitigate and reduce possible impacts which may occur during the construction of the Proposed Scheme.

The objectives of this CTMP are to:

- Outline minimum traffic management measures to be implemented for the works.
- Demonstrate to the Contractor and suppliers the need to adhere to the relevant guidance documentation for such works.
- Provide the basis for the preparation of a final CTMP by the appointed Contractor to carry out the works.

If approval is granted for the Proposed Scheme, the CTMP will address the requirements of any relevant conditions, including any additional mitigation measures which are conditioned. The Employer's Representative will be responsible for ensuring that the Contractor manages the construction activities in accordance with the CTMP.

The CTMP has also been prepared for the purpose of identifying appropriate and safe methods of access for construction traffic to the Proposed Scheme.

This CTMP describes the traffic management for the transportation of construction materials, equipment and personnel along the public road network to facilitate the construction of the Proposed Scheme. Light vehicles, such as cars and vans, will be used by site operatives travelling to and from the site. Heavy Vehicles (HVs) will be required to deliver general construction materials to the site and for the removal of excavated material that is to be disposed of off-site.

1.3 Implementation

Key to the implementation of the CTMP is the appointment of a suitably experienced and qualified person on-site (nominated by the Contractor) who will supervise the implementation of the plan. They will liaise with, and update, the supervising Employer's Representative team on the operation of the CTMP and any proposed improvements.

All site personnel will be responsible for following good practice and will be encouraged to provide feedback and suggestions for improvements. Site personnel will also be required to comply with the requirements of the Proposed Scheme's CTMP.

1.4 Document Revision(s)

The CTMP will be subject to on-going reviews, regular auditing and site inspections throughout the construction phase of the Proposed Scheme.

All the information required to further develop the CTMP will be highlighted in the specification for the construction contract. The Contractor will be required to include further details and/or confirmation, as described below. It will be a requirement of the contract, that the Contractors updated CTMP be prepared prior to commencement of construction.

2 **PROJECT DESCRIPTION**

2.1 Introduction

Clonaslee Village is situated in the upstream Brosna catchment. Two rivers pass through the village; the Clodiagh River to the West and Gorragh River to the East. The Clodiagh River flows northwards through the village, from its source on Knockachorra Mountain in the Slieve Bloom Mountain range. The Gorragh River passes to the east of the village before its confluence with the Clodiagh River approximately 1.5 km north of the village. The Clodiagh River is the main source of flood risk in the village.

The Proposed Scheme was developed following a detailed hydrological and hydraulic study of the catchment. Potential options were developed and compared using the OPW's Multi-Criteria Analysis (MCA) guidelines. All potential options were required to deliver a Target Standard of Protection (SoP) for the 1% Annual Exceedance Probability (AEP) rainfall event. The MCA identified the preferred scheme based on technical, social, environmental, and economic criteria.

All proposed flood relief works are planned for the Clodiagh River; no flood relief works are considered necessary on the Gorragh River (see **Chapter 5: Project Description** for further details).

2.2 Overview of Proposed Scheme

The Proposed Scheme is divided into three areas as shown in **Figure 2-1**. The proposed flood defence elements in each area are summarised in **Table 2-1** below.

Table 2-1: Summary of Proposed Scheme

| Location | Defence Elements |
|---|--|
| Area 1: Brittas Wood | Embankment Debris trap with access slipway |
| | Culvert remediation |
| Area 2: Chapel Street | Flood wall |
| Area 3: Tullamore Rd and Integrated Constructed | Flood wall |
| Wetland (ICW) | Embankment |



Figure 2-1: Clonaslee FRS Proposed Scheme

2.3 Traffic Generated During Construction (Delivery of Materials to Site)

Table 2-2 below outlines an estimate of the number of construction-related traffic trips generated for the delivery of materials (only) to each of works area.

| Table 2-2: Traffie | c Generated | Durina Co | onstruction | (Deliverv | of Materials | to Site | Only) |
|--------------------|-------------|-----------|-------------|-----------|--------------|---------|----------|
| | | | | (| | | , |

| Location | Estimated Number of Trips (Round Trips) |
|---|---|
| Area 1: Brittas Wood | 107 |
| Area 2: Chapel Street | 152 |
| Area 3: Tullamore Rd and Integrated Constructed Wetland (ICW) | 121 |

2.4 Construction Programme

The construction activities are planned to take place during a 24-month construction campaign. The specific schedule for activities within each area of the Proposed Scheme will be finalised on appointment of a Contractor. Preference will be given to working during the summertime to avoid water high river and groundwater levels. There will be restrictions on the instream works as a result of fish spawning season and restrictions to vegetation clearance activities to protect breeding birds.

A likely construction programme is shown in **Figure 2-2** and will largely depend on the time of year that works commence.

| 1. 24 months total works programme | | Year 1 Year 2 | | | | | | | | | | Year 3 | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|-------------------------------------|---------------|---|--|--|--|--|--|--|----------|----------|--------|-------|-----|------|------|--------|-----------|---------|----------|----------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--|--|--|
| | | | | | | | | | | <u> </u> | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Works Area | Works Description | January | January February March May June June June September October November | | | | | | | January | February | March | April | May | June | July | August | September | October | November | December | January | February | March | April | May | June | July | August | September | October | November | December | | | |
| All | Utility diversions (enabling works) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Area 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Req. Vegetation Clearance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Embankment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Culvert Headwall Installation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Debris Trap | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Area 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Req. Vegetation Clearance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Excavation and cut-off | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Conc Wall Construction | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Area 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Req. Vegetation Clearance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Embankment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Wall | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |







Wall Construction Crew

Figure 2-2: Projected Construction Programme

3 CONSTRUCTION TRAFFIC MANAGEMENT PLAN

3.1 Overview

This section describes the measures that will be implemented to manage traffic on the road network during the construction of the FRS. The CTMP will be termed a 'Live Document', such that any changes to the outline construction programme or operations can be incorporated into the CTMP.

3.2 **Programming**

To reduce impacts on local communities and residents adjacent to the Proposed Scheme, the Contractor will be required to:

- Liaise with both Laois County Council (LCC) and An Garda Síochána to co-ordinate access and egress to the site.
- Schedule deliveries to and from the construction compounds such that traffic volumes on the surrounding road network are kept to a minimum.
- Develop an updated and detailed construction phase programme for the duration of the works having cognisance of all environmental time restrictions e.g. instream works from July to Sept inclusive only.
- Incorporate any specific construction moratoria as indicated by LCC into the construction programme, for example:
 - Winter maintenance salting from October to April access to be maintained in order to treat road surfaces to the county boundary with Offaly during these periods.
 - LCC may undertake road improvement or other maintenance works affecting sections of the site during the course of the Works. The Contractor will check before and during the course of the works whether other work activities are planned by the LCC on or near the Proposed Scheme.
 - Facilitate normal traffic movements during the National Ploughing Championships.
- Interact with members of the local community to ensure that deliveries will not conflict with sensitive events such as funerals.

3.3 Working Hours

As outlined in **Chapter 5: Project Description**, it is proposed that standard construction working hours will apply as follows:

- Monday to Friday: 08:00 to 19:00.
- Saturdays: 08:00 to 14:00; and no work on Sundays and Bank Holidays.

Deviation from these times will only be allowed in exceptional circumstances where prior written approval has been received from the planning authority. Any works on public roads outside normal working hours will be subject to consultation with LCC and An Garda Síochána.

3.4 **Proposed Construction Traffic Generation**

3.4.1 Overview

As outlined in **Chapter 6: Traffic and Transportation**, **Section 6.9**, the potential impacts of the Proposed Scheme on the road network during the construction phases are:

• Impacts during construction due to the excavation and demolition of materials (Chapel St Road adjacent to existing wall) in order to facilitate construction.

- Impacts associated with the importing of construction materials, equipment, etc to the works areas, and the relevant movements of delivery and construction vehicles.
- Impacts during construction due to lane closures.
- Construction staff commuting to and from the construction site, compounds and working areas.
- General service traffic associated with construction activities (i.e. deliveries, visitors, traffic between compounds and working areas, etc.).

3.4.2 Traffic Generation from the Proposed Scheme

As outlined in **Chapter 5: Project Description**, indicative daily movements for one construction team operating on site are provided below:

- Six vehicles (cars/ light vehicles) will arrive on site in the morning (07:00 08:00) and depart in the evening (18:00 19:00).
- An average of sixteen Heavy Vehicle (HV) will arrive and depart the site throughout the typical working (07:00 19:00) with a maximum of 32 HV movements per day.

The construction phase for each works area will generate up additional 24 no. HV trips per day (equating to no. 48 movements) and 6 no. additional light vehicle (LV) / car trips per day (equating to no. 12 movements) for each distinct site operating during the construction phase. This equates to a peak of 30 two-way trips, or 60 traffic movements / two-way flows per day.

The indicative daily movements of 48 movements for HV vehicles per day incorporates the following:

- Vehicle trips due to excavation and demolition of materials, importing of construction materials, construction staff commuting to and from the construction site, compounds and working areas and general service traffic associated with construction activities.
- Peaks in daily vehicle trips during construction due to construction programming.

The indicative daily movements of 12 movements for LV / cars per day includes workers arriving on site in the morning and departing in the evening.

It should be noted that the above assessment is conservative in terms of trip generation and impact on the network. It includes for staff numbers of 6 travelling in single-occupancy vehicles however, staff numbers will only reach a maximum for a limited period during the overall construction phase of 24 months. Staff are likely to share vehicles to a certain extent, but this will be actively encouraged in an effort to minimise the number of vehicles travelling to site daily.

As presented in **Table 3-1** below, the number of construction traffic trips generated for the delivery of materials (only) to each of the sites is 1 or 2 vehicle trips per day. The work areas are separate and are not expected to have a cumulative impact even if multiple work areas are being worked on simultaneously. The modelled daily traffic movements of 60 traffic movements / two-way flows per day is anticipated to be sufficient to cater for all traffic movements to each operating site.

| Location | Estimated Number of Trips (Round Trips) | Length of Programme (months) | Total Number of Working Days (5- day week) | Average Number of Trips Per Day |
|--|---|------------------------------------|--|------------------------------------|
| Area 1: Brittas Wood | 107 | 8 | 160 | 1 |
| Area 2: Chapel Street | 152 | 15 | 300 | 1 |
| Area 3: Tullamore Rd and Integrated Constructed Wetland (ICW) | 121 | 9 | 180 | 1 |

The Contractor will ensure that any traffic impacts on the surrounding road network will be minimised as much as feasibly possible in order to avoid traffic disruption in the area.

3.5 Temporary Traffic Management

The Contractor will undertake consultation with LCC during the planning of all Temporary Traffic Measures (TTM) for the Proposed Scheme.

The Contractor will provide advanced warning signs in accordance with Chapter 8 of the Department of Transport's Traffic Signs Manual (TSM) and its accompanying Design and Operation Guidance documents. The Contractor will also further develop this CTMP and issue it to LCC for agreement prior to the commencement of works on site. This CTMP will be developed by a qualified TTM designer in accordance with Chapter 8 of the TSM.

The Contractor will provide, erect, and maintain dedicated signage along all public roads affected by the works to ensure the smooth and safe control of traffic entering and exiting the works area and diversion routes. All temporary traffic signs will conform to TSM Chapter 8. All signs will be reflectorised and adequately illuminated by night in a manner approved by the Employer's Representative and the Contractor will keep these signs clean and legible at all times.

No parking, unloading or blockages will occur on the access route adjacent to construction compounds. Such vehicles will be immediately requested to move to avoid impeding traffic flow.

3.5.1 **Proposed Temporary Traffic Management Measures**

The following section sets out initial TTM for each area in addition to overall TTM proposals for the Proposed Scheme. These proposals, and the routes identified, were determined though consultation with LCC, as outlined within **Chapter 6: Traffic and Transportation**. The Contractor shall be required to further examine and develop these initial proposals prior to the commencement of construction on site. Additionally, all proposals shall be agreed prior with LCC.

3.5.1.1 Area 1: Brittas Wood

As outlined in **Chapter 5: Project Description**, **Section 5.3.1**, the proposed works include the construction of an embankment, debris trap with access slipway and culvert remediation works. The flood relief embankment will be constructed on a portion of the existing Brittas Loop Trail. The embankment will be 135 m in length with a maximum height above existing ground level of 0.8 m.

The L6002 Local Road is a two-way road. The proposed temporary traffic management to facilitate works in this area will involve maintaining two-way traffic along this section of road with appropriate advanced signage to warn and inform the road user of the forthcoming works and characteristics.

Public access to the Brittas Loop Trail will be restricted during the works, and signage erected at the trail head to direct people to the alternative entrance on the eastern side of the Clodiagh River.



Figure 3-1: Proposed Temporary Traffic Management for L6002 (Source: Bing Maps)

3.5.1.2 Area 2 Chapel Street

As outlined in **Chapter 5: Project Description**, **Section 5.3.2**, the proposed works include the construction of a reinforced concrete 'secondary' wall that builds onto the existing wall. This will have the effect of widening the wall by approximately 0.5 m. This width includes an allowance for stone cladding to maintain the appearance of the wall.

Chapel Street (L6002 Local Road) is a two-way street. The proposed temporary traffic management to facilitate works at Chapel Street will involve a southbound lane closure along a section of Chapel Street with stop/go or temporary traffic signal operation for the duration of the works. Access to local properties and amenities is to be maintained along Chapel Street.



Figure 3-2: Proposed Temporary Traffic Management for Chapel Street (Source: Bing Maps)

Given the vicinity of the R422 Regional Road to the works in this area and the merging of traffic from Chapel Street on the R422, there are a number of scenarios from Chapter 8 of the TSM to allow for this movement.

1. When the distance from the junction to the Stop and Go / Traffic Signal on Chapel Street is less than 60m, full Stop and Go control must be provided on all arms of the junction.

- 2. When the distance from the junction to the Stop and Go / Traffic Signal on Chapel Road is greater than 60m but less than 90m, Stop and Go control can be provided on the minor road (Chapel Steet) only but 2 no. advanced warning signs on the major road approaches to the junction must be provided.
- 3. When the distance from the junction to the first advanced warning sign on the minor road (Chapel Street) is greater than 50m, advanced signage on the major road is not required and TTM can be local to the minor road.

Therefore, as the works progress along Chapel Street away from the crossroad junction, requirements for TTM on the R422 road itself can be reduced.

3.5.1.3 Area 3 Tullamore Road & ICW

As outlined in **Chapter 5: Project Description**, **Section 5.3.3**, the proposed works in this area include an embankment and a retaining wall located along the western and eastern banks of the Clodiagh River, downstream of Clonaslee Village. The proposed embankment area is located in an agricultural field to the west of the River Clodiagh and the proposed wall is located within the ICW property to the east of the River Clodiagh.

The proposed temporary traffic management to facilitate works in this area will involve maintaining two-way traffic along this section of road with appropriate advanced signage to warn and inform the road user of the forthcoming works and characteristics. Close co-ordination with Uisce Éireann Operations will be required to ensure unhindered access to the ICW.



Figure 3-3: Proposed Temporary Traffic Management for L2006 Tullamore Road (Source: Bing Maps)

3.6 Construction Compounds

The appointed Contractor will set up the temporary construction compounds. Compounds will include site offices, welfare facilities, bunded fuel storage areas, designated storage area and construction staff parking. Wastewater will connect to foul sewer networks where available. Where not available, the contractor will provide welfare facilities in accordance with best practice.

The potential temporary compounds are detailed below:

- **Compound Site A Brittas Wood** This area is intended to store embankment material, and dealing with large delivery vehicles that will not be able to access the Brittas Wood works area; and
- Compound Site B Chapel Street This location will house the main compound for welfare/offices etc. Wall reinforcement steel and formwork will be stored here.

3.6.1 Compound Visibility Assessment

A sightline assessment of the proposed compound accesses onto the local road network has been undertaken and the result of this analysis is summarised below and presented in **Appendix A**. The accesses were checked in accordance with TII Publication DN-GEO-03060 - Geometric Design of Junctions (priority junctions, direct accesses, roundabouts, grade separated and compact grade separated junctions) (June 2017) and the Department of Transport standard - Design Manual for Urban Roads and Streets (May 2019).

Compound A

The sightline assessment demonstrates that the required junction visibility splay of 45 m is achievable from the 2.4m setback in the northbound direction. It is not achievable however in the southwest direction from 2.4m setback or the 2.0m relaxation setback. A vehicle controller / flagman may be required during the works to facilitate movements in and out of the compound.

Compound B

The sightline assessment demonstrates that the required junction visibility splay of 45 m is achievable from the 2.4m setback in both directions.

Area 3 ICW/Tullamore Road

The sightline assessment demonstrates that the required junction visibility splay of 160 m is achievable from the 2.4m setback in the northbound direction. It is not achievable however in the southwest direction from 2.4m setback or the 2.0m relaxation setback. A vehicle controller / flagman may be required during the works to facilitate movements in and out of the compound.

3.6.2 Haul Routes

Haul routes have been identified for the two construction compounds. Delivery of materials and other infrastructure associated with the Proposed Scheme will be carried out using HV. Deliveries to the site will adhere to the hierarchy of roads where possible utilising the National Primary and Secondary Roads, Regional Roads then Local Roads.

It is assumed that that majority of aggregate, concrete and steel will be delivered to site from Tullamore town, the nearest, large town on a direct route from the Proposed Scheme, with several operating licenced quarries nearby.

The potential haul routes for the Proposed Scheme will vary depending on the Contractor's specific procedures and programme. All routes are subject to the agreement of LCC and TII where appropriate and alternative routes may be considered. However, for the purpose of this CTMP, potential routes are shown in **Figure 3-4** below.

The road network surrounding Clonaslee provides multiple potential haul routes for material to be transported to and from the site. It is currently envisaged that the preferred haul route will be to and from the N80 National Road to Tullamore via the L2002 and L2006 Local Roads. The preferred haul route is highlighted in red in **Figure 3-4** below.



Figure 3-4: Potential haul routes to the Proposed Scheme (Source: Google Maps)

3.7 Site Management of Construction Stage Vehicles

The Contractor will ensure the safe and efficient management of site related traffic during construction. This will involve progressing the works with reasonable skill, care, diligence and proactively managing the works in a manner most likely to ensure the safety and welfare of those carrying out the construction works. Each element of the works will be constantly under review to ensure the safety and accessibility throughout the works.

If issues arise pertaining to construction traffic on site, the measures outlined in this plan will be reviewed and updated accordingly. The Contractor will ensure that all aspects of the works comply with good industry practice, codes of practice, statutory instruments, and all necessary consents.

3.7.1 Visitors

Visitors to site must first report to the compound office for induction and sign in. Visitors will be directed to the compound car park and shown the designated area to park their vehicle. Visitors must be supervised at all times whilst on site and sign out when leaving.

3.7.2 Plant and Equipment

The Contractor will ensure that all plant, equipment, and vehicles used during the works are operated by suitably competent personnel.

- Plant and equipment will only be operated by persons who have been trained in their specific use, and in possession of the appropriate Construction Skills Certification Scheme (CSCS) card.
- All work equipment has been tested and inspected in compliance with regulatory and site requirements.
- All plant will be inspected prior to use.
- All equipment will be checked before use and any defects reported.

- A banksman/ spotter will always be present for reversing site vehicles.
- All site construction plant will have a flashing beacon when in use.
- All guards and auxiliary devices will be in position on equipment.
- If required, barriers will be installed around equipment to protect others.
- Manufactures instructions will be followed at all times.

3.7.3 Unauthorised Arrivals

In the instance where any person enters the site unintentionally, they will not be permitted access unless authorised by site management.

Such persons will be instructed to turn in a safe manner to exit the site.

3.7.4 Compound Car Park/Site Offices

The Contractor will define designated parking bays within the site compounds. A reverse in/drive out policy will also be enforced within the car park. Reverse only signs will be erected to ensure all vehicles are reversed into the parking bay.

Once exiting the compound, all vehicles will stop and must yield to all traffic approaching either way. Directional and regulatory signage will be erected on exit of the compound.

3.7.5 Deliveries

Any deliveries to the compounds will be notified in advance to allow for staggered times into the compounds. This action will aim to prevent congestion at the construction compound entrances and any resulting queues forming along the routes. All deliveries will be controlled by a delivery booking system which will ask delivery drivers to arrive at a designated time.

3.8 Road Condition

The extent of the HV traffic movements and the nature of the cargo may potentially create impact on the local public road network through:

- Fugitive losses from wheels, trailers, or tailgates.
- Localised areas of subgrade and wearing surface damage or failure.

The Contractor will ensure that:

- Loads of materials leaving the site will be evaluated and covered if considered necessary to minimise potential dust impacts during transportation.
- The Contractor will take all reasonable measures while transporting waste or any other materials likely to cause fugitive loses from a vehicle during transportation to and from site, including but not limited to:
 - Covering of all waste or materials with suitably secured tarpaulin / covers to prevent loss.
 - Utilisation of enclosed units to prevent loss.
- The roads forming part of the haul route will be monitored visually throughout the construction phase and a truck mounted vacuum mechanical sweeper will be assigned to roads along the haul route as required.

In addition, the Contractor will:

- Undertake a survey / inspection of the roads forming the haul routes prior to the construction phase to record the condition of these roads at that particular time.
- Such survey will comprise, as a minimum, video footage which shall confirm the condition of the road corridor immediately prior to commencement of construction. This will include footage of the road

surface course, the appearance and condition of boundary treatments and the condition of any overhead services that will be crossed.

Upon completion of construction, the survey / inspection carried out at preconstruction phase will be repeated and a comparison of the pre and post construction road conditions will be carried out. Where such comparative assessments identify a section of road as having been damaged or as having deteriorated as a result of construction traffic, the road will be repaired to an appropriate standard.

The construction campaign is planned to take place over a 24-month period. The programme length for each works areas varies from 8 months to 15 months. The road condition surveys and inspection, frequency and extent may be agreed between the Contractor and LCC to reflect the construction programme and duration of works.

3.9 Recommended Traffic Management Speed Limits

Adherence to posted / legal speed limits will be emphasised to all staff and suppliers during induction training.

3.10 Road Cleaning

The Contractor will ensure that road sweeping is undertaken, if required, to remove any Proposed Scheme related dirt, debris and material deposited on the surrounding road network and along the haul route by construction / delivery vehicles. Road sweepers will dispose of material following sweeping of the road network, to a licensed waste facility.

As discussed in **Section 3.8**, the Contractor will assess loads of materials leaving the site and loads may be covered if considered necessary to minimise potential dust impacts during transportation. These measures may include but not limited to, covering of all waste or materials with suitably secured tarpaulin / covers and utilisation of enclosed units.

3.11 Vehicle Cleaning

The Contractor will provide wheel washing facilities, and any other necessary measures to remove mud and organic material from vehicles exiting the site. These measures will be provided to prevent the transfer of mud and sediment to the surrounding road network and surface water drains, reduce air pollution and the spread of invasive plants.

3.12 Enforcement of CTMP

Throughout the construction phase, the Contractor will ensure that all project staff and material suppliers adhere to this CTMP. The Contractor will define and implement monitoring measures to confirm the effectiveness of the CTMP and compliance will be monitored by the Employer's Representative. Regular inspections / spot checks will also be carried out to ensure that all project staff and material suppliers follow the agreed measures adopted in the CTMP.

3.13 Noise & Vibration

The Contractor will ensure that noise and vibration levels from the construction traffic will not result in a nuisance to the area surrounding the permitted site. During the construction works the Contractor will use best practice and all required mitigation measures to prevent or minimise noise and vibration levels from construction traffic.

If significant noise or vibration activities are to be carried out, the Contractor will appoint a site representative who will be responsible for matters relating to noise and vibration. Such mitigation measures may include:

- Avoiding unnecessary idling and revving.
- Limiting or banning the use of horns.
- Avoiding excessive braking or accelerating.

The Contractor will closely monitor noise and vibration generated by construction traffic and implement appropriate mitigation measures and further monitor the effectiveness of such measures.

3.14 Emergency Procedures During Construction

The Contractor will maintain contact details of key personnel and will also outline emergency procedures and drills.

The Contractor will ensure that unobstructed access is provided along the local public road to all emergency vehicles in particular at the construction compounds accesses.

The Contractor will provide LCC and An Garda Síochána with contact details of the Contractor's personnel responsible for construction traffic management.

An Environmental Incident and Emergency Response Plan will be established by the Contractor to deal with environmental incidents or accidents. The plan will contain details of emergency scenarios and relevant procedures and actions that will apply. The Contractor will communicate the plan as part of the site induction to all staff and visitors.

In the case of a traffic or road related emergency the following procedure 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 Construction Site Manager and the Safety Officer.
- All construction traffic shall be notified of the incident (where such occurs off site).
- Where required, appointed site first aiders will attend the emergency immediately.
- The Safety Officer will ensure that the Emergency Services are en-route.

3.15 Communication

The Contractor will ensure that close communication with LCC and An Garda Síochána is maintained throughout the construction phase. Such communications shall include:

- Submissions of proposed TTM measures for LCC comment and approval.
- An Garda Síochána must be consulted prior to the implementation of traffic control in accordance with Chapter 8 of the TSM.
- Information relating to local and community events that could conflict with proposed TTM measures and construction traffic, in order to implement alternative measures to avoid such conflicts.

The Contractor will also ensure that the local community is informed of proposed traffic management measures in advance of their implementation. Such information shall be disseminated by delivering leaflets to houses and businesses in the local area. Such information will contain contact information for members of the public to obtain additional information and to provide additional knowledge such as local events, sports fixtures, etc. which may conflict with proposed traffic management measures.

4 CONCLUSION

This CTMP will form part of the construction contract and is designed to reduce possible impacts which may occur during the construction of the Proposed Scheme.

The Contractor will ensure that the contents of this CTMP are implemented during the construction phase.

This CTMP will remain a 'live' document throughout the construction phase and the Contractor will develop the CTMP in line with any changes to the construction programme of sequence of operations.

The Contractor will update the CTMP prior to commencement of construction, will keep the CTMP updated throughout, will agree the CTMP with LCC and An Garda Síochána and will fully implement the CTMP.

The Employer's Representative will be responsible for ensuring that the Contractor manages the construction activities in accordance with this CTMP and will ensure that any conditions of planning are incorporated into the site specific CTMP.

5 **REFERENCES**

Department of Transport (DoT), 2019. Design Manual for Urban Roads and Streets (DMURS), Dublin: DoT.

Department of Transport (2019) Traffic Signs Manual, Chapter 8: Temporary Traffic Measures and Signs for Roadworks.

Transport Infrastructure Ireland (TII), May 2023. *Geometric Design of Junctions (priority junctions, direct accesses, roundabouts, grade separated and compact grade separated junctions) (DN-GEO-03060)*, Dublin: TII.

Appendix A Visibility Assessment



| PO PO UNITARIA TREATMENT PLANT | (i) The drawing. All other formats (dwg etc.) are deemed to be an uncontrolled issue and any work carried out based on these files is at the recipients orn risk. RPS will not accept any responsibility for any errors from the use of these files, either by human error by the recipient, listing of the un-dimensioned measurements, compatibility with the recipients software, and any errors arising when these files are used to aid the recipients drawing production, or setting out on site. (ii) DO NOT SCALE, use figured dimensions only. (iii) This drawing is the property of RPS, it is a project confidential classified document. It must not be copied used or its contents divulged without prior written consider. The needs and expectations of client and RPS must be considered when working with this drawing. (iv) Information including topographical survey, geotechnical investigation and utility detail used in the design have been provided by others. (v) All Levels refer to Ordnance Survey Datum, Malin Head. Legend Construction Site & Compound Instream Works Area 366m2 Visibility Splay | | | | | | |
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