

## **Appendix 2D**

# **Traffic Management Plan**

**MWP**

**Outline Traffic Management Plan  
(TMP)**

**Ballycar Wind Farm, County Clare**

**Ballycar Green Energy**

**January 2024**

## Contents

1. Introduction .....	1
2. Transport Management Principles .....	1
3. Construction Works .....	2
3.1 Wind Farm.....	2
3.1.1 Mitigation Measures .....	3
3.1.2 Road Safety and Courtesy Protocol .....	4
3.1.3 Construction Phasing.....	4
3.1.3.1 Access Track/Crane Hardstand/Substation Construction .....	4
3.1.3.2 Turbine Base Construction .....	5
3.1.3.3 Turbine Erection .....	5
3.1.4 Schedule of Wind Farm Construction Works/Construction Schedule .....	7
3.2 Underground Grid Connection and Substation .....	7
3.2.1 Substation and Grid Connection Construction Programme .....	9
3.2.2 Description of Works for Construction of Substation.....	9
3.2.3 Description of Works for Construction of Grid Connection Cable Route .....	9
4. Existing Road Network .....	10
4.1 Motorway Network, National and Regional Roads.....	10
4.2 Local Road Network.....	11
5. Outline Traffic Management Plan .....	12
5.1 Duties and Responsibilities.....	12
5.1.1 Appointed Contractor.....	12
5.1.2 An Garda Síochána .....	13
5.1.3 Road Engineers for Local Authority .....	13
5.1.4 Emergency Services.....	13
5.2 Traffic Management Procedures.....	13
5.2.1 Traffic Control Tools .....	13
5.2.2 Road Closures.....	14

5.2.3	Traffic Diversions .....	14
5.2.4	Lane Width Restrictions.....	14
5.2.5	Public Notices .....	15
5.2.6	Communications.....	15
5.3	Traffic Management and Control Procedures .....	15
5.3.1	General.....	15
5.3.2	Access to Commercial/Business Properties.....	15
5.3.3	Pedestrian Safety.....	15
5.3.4	Signage .....	16
5.3.5	Cleanliness of Roads.....	16
5.3.6	Operator Training.....	16
5.3.7	Emergency Crew.....	16
5.4	Traffic Management Plan for Works .....	17
5.4.1	Single Lane Closures .....	17
5.4.2	Road Closures.....	17
5.4.3	Diversions .....	17
5.4.4	Road Crossings .....	17
5.4.5	Joint Bays.....	18
5.4.6	Personnel Traffic.....	18
6.	Delivery Route for Materials .....	18
Appendix 1	.....	21
	Sample Schedule of Signs .....	21
Appendix 2	.....	24
	Sample Traffic Management Drawings and Check Sheets.....	24

## Tables

Table 3-1: Typical Development Phasing.....	7
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## Figures

Figure 1-1: Site Location.....	1
Figure 3-1: Site Entrance .....	3
Figure 3-2: Proposed TDR From Foynes Port to Ballycar Wind Farm .....	6
Figure 3-2: Substation and Grid Connection .....	8
Figure 4-1: Road Network Map .....	12
Figure 6-1: Location of O’Connell Quarries relative to the proposed development .....	19
Figure 6-2: Overview of the road network in the vicinity of the development (Source: Google Earth) .....	20

## Appendices

Appendix 1 – Sample Schedule of Signs

Appendix 2 – Sample Traffic Management Drawings and Check Sheets

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## 1. Introduction

The traffic management plan outlines the procedures to be implemented during the construction of the proposed development, location shown in **Figure 1-1** and the underground grid connection route. Prior to the development commencing, a detailed traffic management plan will be produced by the appointed Contractor.

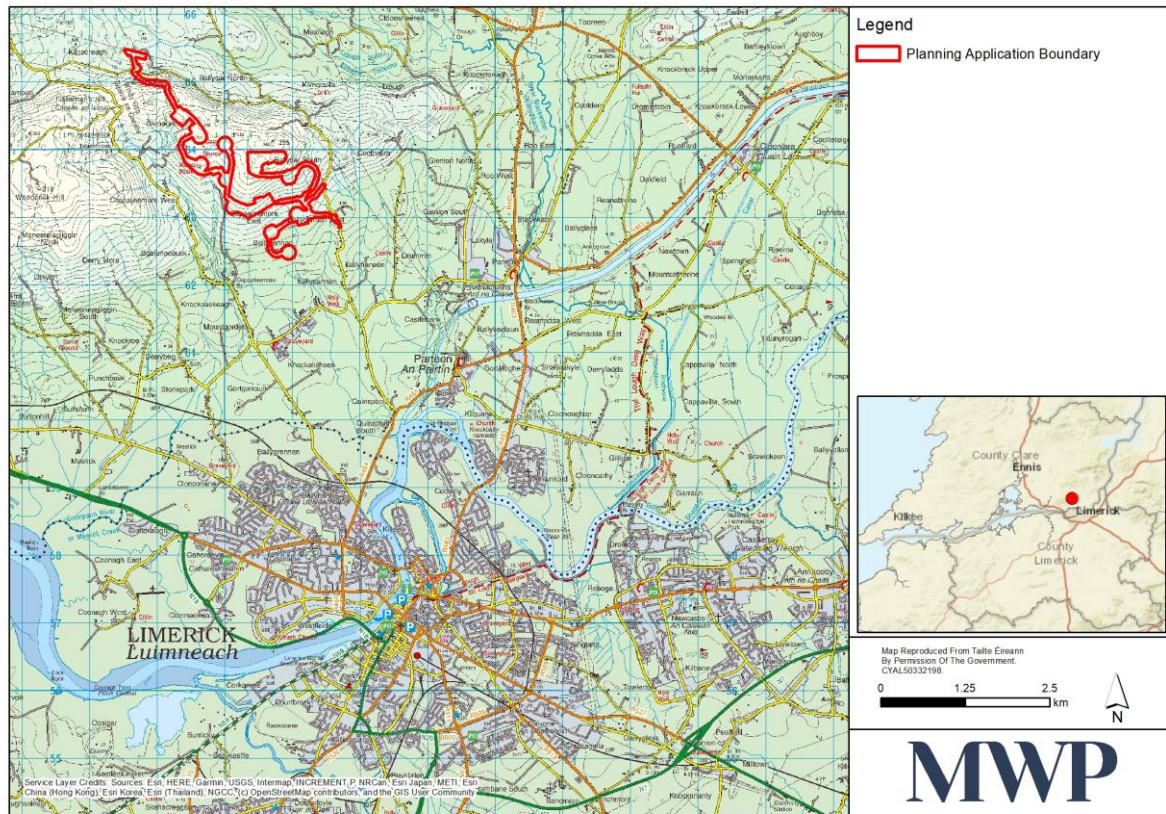


Figure 1-1: Site Location

## 2. Transport Management Principles

The two core principles for planning, developing and implementing transport management proposals are:

- To maximise the safety of the workforce and the travelling public.
- To keep traffic flowing as freely as possible and reduce the impact of the construction traffic and road works to a minimum.

For the purposes of the works to be carried out in order to ensure that there is minimal effect on the commercial and socio-economic life of the surrounding areas, the appointed contractor will have regard to the above principles. The appointed contractor shall endeavour to meet these objectives by proper planning of the project and by compliance the relevant procedures as outlined in **Section 5.2**. Against this background, and in the context of the construction of the wind farm and grid connection cable route, the appointed contractor shall properly plan and manage the project to ensure that:

- Works within the public road network do not result in a safety hazard to public road users or the workforce involved in the project.
- Any resulting increase in traffic delays and congestion are minimised.

The appointed contractor will liaise with An Garda Síochána and Clare County Council in the event of other planned construction schemes in the area. The appointed Contractor will recognise that other external factors such as severe weather events can affect traffic flow close to the development and will endeavour to minimise the effect of the works on traffic in the planning and programming of the works at construction stage.

### **3. Construction Works**

#### **3.1 Wind Farm**

The proposed development and associated infrastructure lie within the townlands of Glennagross, Cappateemore East, Ballycannan West, Ballycannan East, Ballycar South and Ballycar North.

Construction of the wind farm will result in an increase in traffic on the L7062, the local public access road between Parteen/Ballycannan and Ballycar. The site is bounded by forestry to the north and north-east and open greenfield space to the east and south. It is bounded to the southwest by a single lane local agricultural access road. The total planning boundary area is 104.7 hectares.

During the operational phase, the entrance to the proposed development will be from a junction off the L7062. This will be the only access point into the proposed site during the operational phase. The L7062 is a local access road of 80km/h speed limit consisting of a 2-lane carriageway. This road is approximately 6m wide at the stretch between the proposed entrance and the junction at Parteen, narrowing to 4.5m wide in local areas.

During the construction phase, there will be two distinct entrances. Entrance Point A to the north-east of the site is proposed as a temporary access to be used during the construction phase only. It is intended to source materials from the local quarry approximately 1 km north of this entrance point, thereby minimising the impact of additional construction traffic on the L-7062 and the residents on this road. This entrance will be reinstated to its original condition once the construction phase is completed.

Entrance Point B (permanent site entrance), located to the south-east of the site and accessible from the L7062, will be dedicated to turbine deliveries, materials other than those from the local quarry, and operations and maintenance vehicles. While entrance B will serve as a permanent access point, it will undergo modifications including scaling back, landscaping, and the installation of fencing and gating as the wind farm transitions into operational status. Please refer to **Figure 3-1** for site entrances.



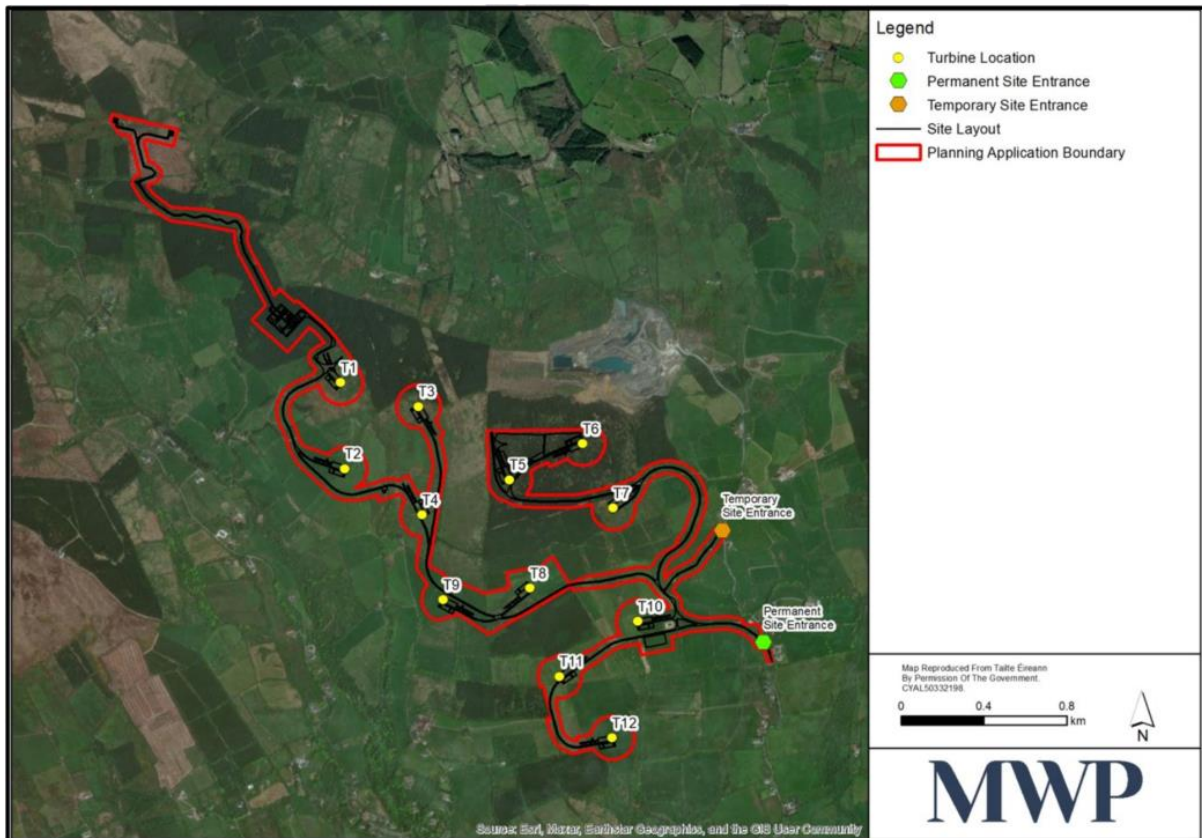


Figure 3-1: Site Entrance

### 3.1.1 Mitigation Measures

The construction phase of the wind farm will require the delivery of turbine components, concrete, steel and aggregate to the site via the public road network. The key timing periods when use of the public road network will be at its peak for residents is between 07.45am and 08.45am when school and commuter related traffic is at its peak. It is proposed to allow routine deliveries such as aggregate into the site between before 07.45am. The initial early morning delivery trucks will exit the wind farm site empty with the run of traffic but they will be prohibited from delivering again until 10am.

The disturbance of dirt on the local road network during wet weather and dust during dry weather is an area of identified concern where the primary mitigation measure for this impact will be in the form of a proprietary wheel wash facility to be installed on the exit of the wind farm site. In addition to this a road sweeper will operate on the L7062 on a full time basis for the duration of the project. A water bowser will be employed to spray the local roads with water during dry periods when there is a risk of dust disturbance.

Appropriate signage will be maintained for the duration of the project with clear signage at all junctions and distances to passing areas clearly indicated along the L7062 local road.

The mitigation measures can be summarised as below:

- Heavy Goods Vehicle (HGV) drivers will follow the designated haulage route, and timing restrictions as detailed;
- Advance warning will be given to the local residents and road users for specific times when large volumes of HGV traffic may occur;
- Signage relating to the proposed construction traffic will be installed at the entrance to the wind farm;
- Signage relating to the proposed construction traffic route and directions to the wind farm will be installed along the route to the wind farm;
- A maximum speed limit will be imposed for HGVs on the local road network during the construction phase;
- A well planned and executed delivery programme avoiding peak traffic on typical days will be ensured (i.e., local school start and finish times);
- A road sweeping vehicle will be provided as required to remove any mud that is deposited on the road network on the approach to the site; and
- Enforcement of existing regulatory markings and signage will be ensured.

### **3.1.2 Road Safety and Courtesy Protocol**

A road safety and courtesy protocol will be implemented for the duration of the wind farm construction. All companies delivering to site will have to sign up to this protocol as part of their supply contract. The protocol will consist of restricted delivery hours and speed limits along public roads and within the wind farm site. Fundamental to the protocol is courtesy for other road users. In this protocol, vehicles will always give way to oncoming residential traffic and will always slow down or stop as appropriate for pedestrians and cyclists.

### **3.1.3 Construction Phasing**

The phases of the development can be broadly summarised in terms of traffic management in three steps:

1. Access track/crane hardstand/substation construction;
2. Turbine base construction;
3. Turbine erection.

#### **3.1.3.1 Access Track/Crane Hardstand/Substation Construction**

All construction transport including deliveries of quarry and building materials, will use the L7062, the local road between Parteen/Ballycannon and Ballycar as the designated delivery road for the wind farm. During the construction of the access tracks, crane hardstands and substation buildings, a worst case scenario estimates that the maximum number of loads to be delivered to the wind farm work area will be approximately 14,010 loads of construction material as well as 120 loads for the turbine deliveries. Construction material includes loads of aggregate capping material, concrete, reinforcing steel, geo-textiles, electrical cabling, switchgear and general building materials. Much of the stone for the access track construction within the wind farm will be sourced from the borrow pit which will reduce the number of haulage deliveries required. It is proposed to source any imported capping aggregate from local quarries in the area.

Construction traffic will be limited to an appropriate speed limit to be set by the appointed contractor along local roads. As described in **Section 3.1.2** a construction traffic safety and courtesy protocol will be implemented to

manage the traffic for delivery of materials. A traffic coordinator will be employed full time during this construction period to implement speed limitations and construction traffic safety and courtesy protocol.

### 3.1.3.2 Turbine Base Construction

A wind turbine with a ground bearing concrete foundation will require a concrete pour of circa 900m<sup>3</sup> during its construction. This volume will require between 110 and 115 loads of concrete in one day to complete. There will be 12 of these pours within the wind farm. The pours will generally start early in the morning and be complete in early afternoon. Normal deliveries will be curtailed during concrete pours until the pour is completed. Concrete pours are weather dependant but are normally planned and scheduled in advance and written notice of each base pour will be hand posted to residents along the local access roads a day in advance. During pours a second escort vehicle will be utilised to maintain construction traffic safety and courtesy.

### 3.1.3.3 Turbine Erection

#### Turbine Delivery Route

The components for the 12 no. turbines will be delivered by cargo ships to Foynes Port in County Limerick. The components for each turbine will be delivered in separated loads, some of which are abnormal in terms of their width and length. The components will be transported from Foynes Port to the site along National, Regional and Local Road network.

Pre and post-construction surveys will be carried out to ensure the structural integrity of the selected haulage route. Repairs will be carried out on the public road network, as necessary, during the construction phase, to ensure that the condition does not deteriorate below a standard that could affect the use of the road. Following completion of construction, the condition of the public road network will be of at least the same standard as it was prior to commencement of construction.

A permit for moving abnormal loads to the proposed development will be sought from An Garda Síochána and the applicable local authorities on the haulage route with a transportation plan for the time of deliveries established at construction stage.

The route from Foynes Port to Limerick City is via the N69, through the roundabout at the N18 interchange, north along the N18 via the Limerick Tunnel to Junction 3, through Clonmacken Roundabout and along the Clonmacken Road to the Ennis Road. The route is shown in **Figure 3-2**.

The Limerick Tunnel has a height clearance of 4.65m and will accommodate the upper tower sections. However, it may not be high enough for the bottom tower sections or the nacelles for the turbine envisaged for the proposed development. In this instance, the route will continue along the N69 to Shannon Bridge on the R527, and the R445 to join up with the Clonmacken Road.

Previously during the Cloncreen Wind Farm project, V136 turbine blades were transported through the Limerick Tunnel, therefore it is proven that the Tunnel is a suitable delivery route for this type of blade. However, at detailed stage the shape of the tunnel's vertical profile will be assessed to confirm the viability of this route.

The proposed route to deliver wind turbine component from the port at Foynes Co. Limerick to the proposed Ballycar wind farm site is shown in **Figure 3-2**.

Blade deliveries will use the Limerick tunnel to avoid entering the centre of Limerick city. Oversized loads such as tower components which have a loaded height greater than 4.65m will travel along the Dock Road crossing the river Shannon at Shannon Bridge. These components will then travel along Condell Road to Clonmacken Roundabout where they will rejoin the blade delivery route to the Ballycar site.

The delivery of turbine components normally takes place overnight due to the oversize nature of some of the components such as tower sections and blades. Some deliveries are done under a permit system from An Garda Síochána and are fully escorted for the entire delivery. The deliveries will proceed along the local access roads at speeds less than 25km/h but such that they will not cause any undue delay to any encountered resident.

Turbine erection is entirely weather dependent with the scheduling of component delivery being entirely subject to wind conditions. Advance notice of delivery to residents is difficult in this circumstance but component delivery is a highly controlled low impact activity of very short duration to any residential property it passes.

Two options were assessed in terms of transporting turbine blades through Limerick City. Option 1 assessed the route starting from Clonmacken Roundabout via the new Coonagh to Knockalisheen Distributor Road, where works have temporarily ceased, however are due to recommence in Spring 2024. This route is considered suitable for deliveries.

Option 2 assessed the route from Clonmacken Roundabout and travelling through the Clonmacken Road, Northern Ring Road, Cratloe Road and Kileely Road. This route is considered suitable but would require temporary removal of street furniture and light poles at several junctions.

The junction of the L-3056 / R464 at Parteen requires temporary road widening through third party land to the southeast of the junction.

The local roads leading to the wind farm from the R464 junction will not require road widening to facilitate delivery of blades as a blade lifter trailer will be utilised.

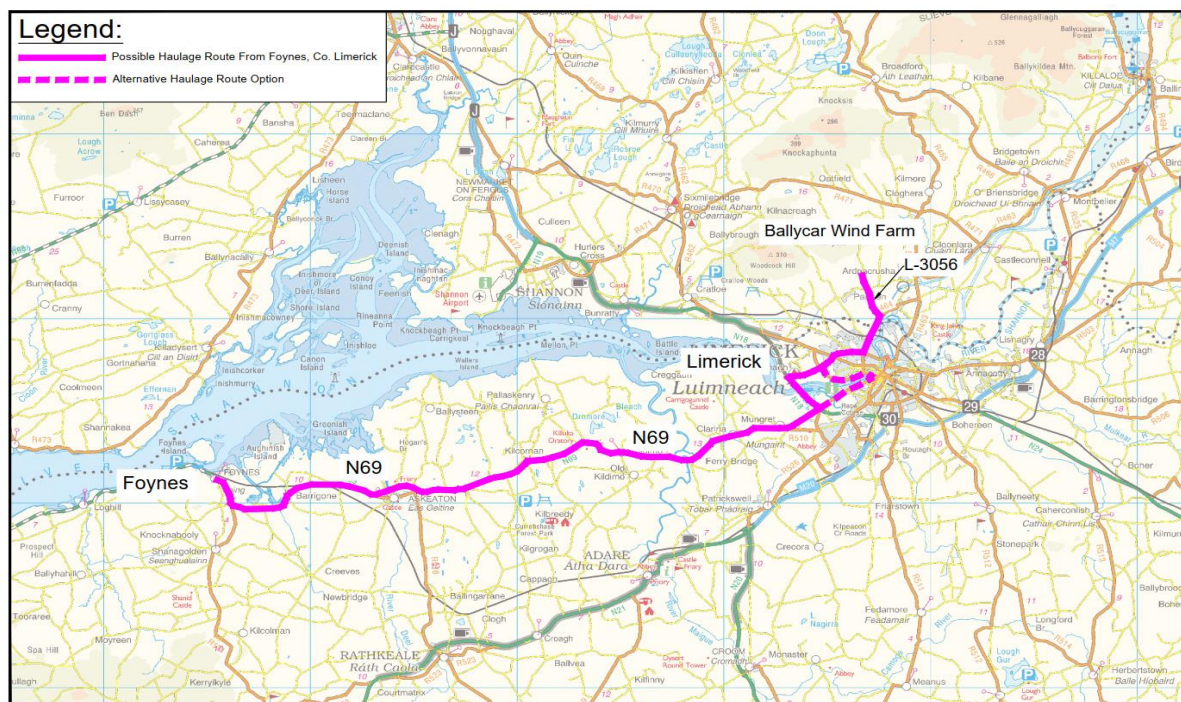


Figure 3-2: Proposed TDR From Foynes Port to Ballycar Wind Farm

### 3.1.4 Schedule of Wind Farm Construction Works/Construction Schedule

The proposed duration of the wind farm works will be of the order of 18 months. The construction work will be phased as outlined in **Table 3-1**. A number of these phases will however run concurrently as follows:

- As the internal site access tracks are constructed up to each turbine, hardstand areas for the crane, turbine foundations will be prepared.
- Once the tracks are completed, the trenching and laying of underground cables adjacent to the tracks will begin.
- Construction of the site substation compound and substation buildings will commence so that they will be ready to export power as turbines are commissioned.

**Table 3-1: Typical Development Phasing**

Phase	Activity
Phase 1	Clearfelling (to be complete ahead of construction site mobilisation)
Phase 2	Prepare site, pre-construction activities, site entrance temporary compound
Phase 3	Access Track Construction + Drainage plan implementation
Phase 4	Hard standing construction for turbines
Phase 5	Turbine foundation construction
Phase 6	Trenching and ducting (underground electrical collection system)
Phase 7	Substation construction
Phase 8	Permanent meteorological mast erection
Phase 9	Turbine delivery
Phase 10	Turbine erection
Phase 11	Wind Farm Commissioning

## 3.2 Underground Grid Connection and Substation

In addition to the proposed development as described, there is a proposed underground connection between T1 and the proposed 110kV substation which will be located northwest of T1. The underground connection from T1 is routed along existing forestry tracks and through conifer forestry to the north west of the wind farm site and connects to the proposed 110kV substation as shown below in **Figure 3-3**. From the proposed 110kV substation, an underground cable is routed in a north west direction where it connects to the existing 110 kV overhead line. The proposed 110kV grid route is approximately 1.5km in length. 1.0km of the 110kV grid route is proposed within

existing forestry tracks. The remaining 0.5km is routed through conifer forestry. It also crosses a 3m wide local road. A new unbound stone access track will be constructed over the 110kV grid route on private lands to allow access for future maintenance.

At the local public road crossing, cable trenching works may require a temporary road closure. Should this be the case, a road closure application shall be required. Cable trenching works at this location are expected to take 1-2 days to complete. All works will be planned and undertaken in full consultation with Clare County Council, in particular the Roads Department/Roads Engineer for the area.

The goal of a traffic management plan is to provide a safe working environment for cable workers and efficient passage of traffic and other road users through the cable works site. The procedures to be implemented by the appointed contractor will include the provision of facilities for the safe passage of pedestrian and vehicular traffic and measures to separate them from the construction work.

The appointed contractor will ensure traffic management controls are in accordance with Chapter 8 of the *Traffic Signs Manual 2019* and the *Temporary Traffic Management Design Guidance, Third Edition 2019*.

This outline traffic management plan is for planning purposes only and a final traffic management plan will be produced at construction stage by the appointed contractor.

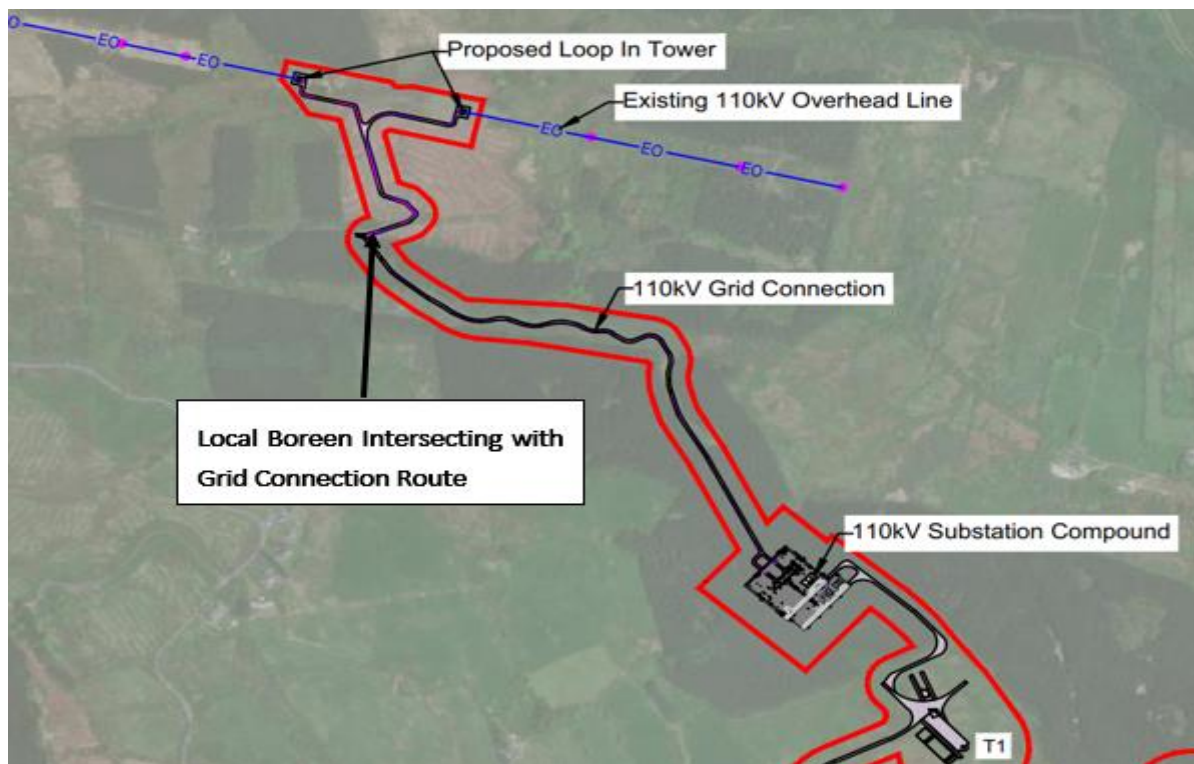


Figure 3-3: Substation and Grid Connection

### **3.2.1 Substation and Grid Connection Construction Programme**

The active construction area along the grid connection route will generally be only along a 100-200m stretch at any one time. The works for the grid connection route are estimated to take approximately 12 months. During the first 5 months the cable trenches will be constructed. The second 5 months will involve sequentially opening up all joint bays (these are pre-cast concrete chambers that will be required along the grid connection route over its entire length) and pulling electrical cables through ducts and then joining each cable together. There is anticipated to be 4 joint bays with 2-3 days' work involved at each. Typically, construction will occur within the hours 07.00am – 7.00pm, Monday to Friday and 07.00am to 2.00pm on Saturdays.

Works along public roads will be from 9.00 a.m. to 5.00 p.m. Monday to Friday and 9.00 a.m. to 2.00 p.m. on Saturdays.

Any deviations to these times will be agreed in advance with Clare County Council. It is expected that the civil works for the grid connection route will require at least 10 personnel to complete the works. The electrical works will require less heavy machinery but more labour personnel.

### **3.2.2 Description of Works for Construction of Substation**

The proposed substation will be designed and constructed to meet all the required EirGrid standards. An area will be levelled and built to the required level with stone fill material, capped by high quality compacted stone. Two control buildings will be constructed using traditional techniques for constructing small buildings (i.e. concrete block walls, timber and slate tile roof). Foundations will be built for all of the proposed electrical infrastructure. All the electrical equipment will be installed to EirGrid requirements. Perimeter fencing will be constructed around the substation compound for security and safety purposes.

This substation will connect via underground cable circuits to accommodate a grid connection via the Ennis - Ardnacrusha 110kV overhead line (OHL). The proposed 110kV substation will be made up of 1 No. Control building, 1 No. IPP MV Switch room, Transformer compound and Busbar compound.

The control building works will consist of foundation works, block work, roofing, low voltage electrical fit out, cladding and building finishing works. The transformer, gantry and structural steelwork will be installed in the transformer compound. Two cable sealing ends will be installed to incorporate the radial underground circuits in and out of the station. The busbar compound structural steelwork will be erected with lightning masts also installed. Substation electrical equipment will be installed once the control building and compound is complete. Fencing will be erected around the compound for security/protection. Permanent access tracks will also be installed to allow trafficking in and out of the proposed substation compound, access track to loop in interface mast structures and internal access track for compound use.

### **3.2.3 Description of Works for Construction of Grid Connection Cable Route**

The proposed grid connection cable will be carried within a single cable trench as shown on TLI Drawing **No. 05923-DR-101**. The installation of the grid connection involves the following process.

- Prior to works commencing the area where excavations are planned will be surveyed and all existing services will be confirmed. All relevant bodies i.e., ESB Networks, EirGrid, Gas Networks Ireland, Eir, Clare County Council, etc. will be contacted and drawings for all existing services sought. A road opening licence will be obtained where required from Clare County Council for the relevant road section. All plant operators and general operatives will be inducted and informed as to the location of any services.

- Prior to works commencing a dilapidation survey will be carried out photographing and noting any existing damage or defects to road surfaces. A copy of this survey will be submitted to Clare County Council prior to works commencing.
- Prior to works commencing the route will be inspected and marked out on the ground. Standard good practice preparatory measures are then put in place along the extent of the route. This will include any required warning notices, temporary barriers, etc.
- Prior to works commencing this traffic management plan will be updated by the appointed contractor and agreed with Clare County Council.
- During construction works, the trench will be excavated down through the existing stone in the road/topsoil using an excavator machine (or down through soil in the sections). As stone fill/topsoil is removed it is temporarily stockpiled adjacent to the trench for re-use in backfilling. In some instances, some soil or unsuitable material may be encountered in the trench and this is removed from site and brought to an appropriate licensed facility for disposal.
- The trench is then prepared to receive concrete bedding and surround for the ducts. The ducts are surrounded by concrete with adequate cover over the duct.
- Once the concrete is set, appropriate imported stone material is placed over the concrete surround and filled back up to the top of trench. Suitable warning tapes will also be installed in the trench. Once the trench is filled, the trenching and ducting process will move along the route in planned stages.
- Where the route is within the public road, the trench surface receives a temporary surface dressing of either spray and chip or macadam. Once the overall scheme is completed, the relevant area of the grid connection route and associated road will receive a new permanent macadam finish as agreed with Clare County Council. A new unbound stone access track will be constructed over the route which is not within the public road.
- Joint bays are to be installed where required along the grid connection route.
- The as-built location of the ducting will be surveyed using a total station / GPS. Marker posts will be installed along the grid connection route to also denote the location of ducting on the ground.
- A condition survey will be carried out on the public road impacted by the grid connection route, both pre and post construction.

## 4. Existing Road Network

A summary of works for the wind farm, substation and grid connection cable route on the public road for each type of road networks is described below.

### 4.1 Motorway Network, National and Regional Roads

There are no Motorways directly affected by the wind farm substation and grid connection cable route works. The turbine delivery route will include the N18 and N69 roads as well as regional roads including R510, R527 and R464. Refer to **Appendix 2C** of the proposed development **EIAR** for the **Turbine Delivery Assessment**.

There will be some temporary widening works required for Turbine Delivery as follows:



- The junction of the L-3056 / R464 at Parteen requires temporary road widening through third party land to the southeast of the junction.

A road safety and courtesy protocol will be in place for all road users for the duration of construction. All companies delivering to site will sign up to this protocol as part of their supply contract. Courtesy for other road users is fundamental to the protocol. HGV traffic will give way to oncoming local traffic where possible. Vehicles will always slow down or stop, as appropriate, for pedestrians and cyclists along the proposed haulage routes.

## 4.2 Local Road Network

Construction of the proposed development will result in an increase in traffic on the L7062 and L3056, the local access road between Parteen/Ballycannon and Ballycar. Refer to **Figure 4-1** below.

As discussed in **Section 3-2**, the proposed 110kV grid route crosses a 3m wide local road to north west of the wind farm. During the period where grid works cross this, road, (approximately 1-2 days), diversions will be set put in place, except for local access. Apart from local access, there is minimal traffic on this road. There will be diversions in place for road users other than local access users.

The local roads (L7062, L3056) leading to the wind farm from the R464 junction will not require road widening to facilitate delivery of blades as a blade lifter trailer will be utilised.

A road safety and courtesy protocol will be in place for all road users for the duration of construction. All companies delivering to site will sign up to this protocol as part of their supply contract. Courtesy for other road users is fundamental to the protocol. HGV traffic will give way to oncoming local traffic where possible. Vehicles will always slow down or stop, as appropriate, for pedestrians and cyclists along the proposed haulage routes.

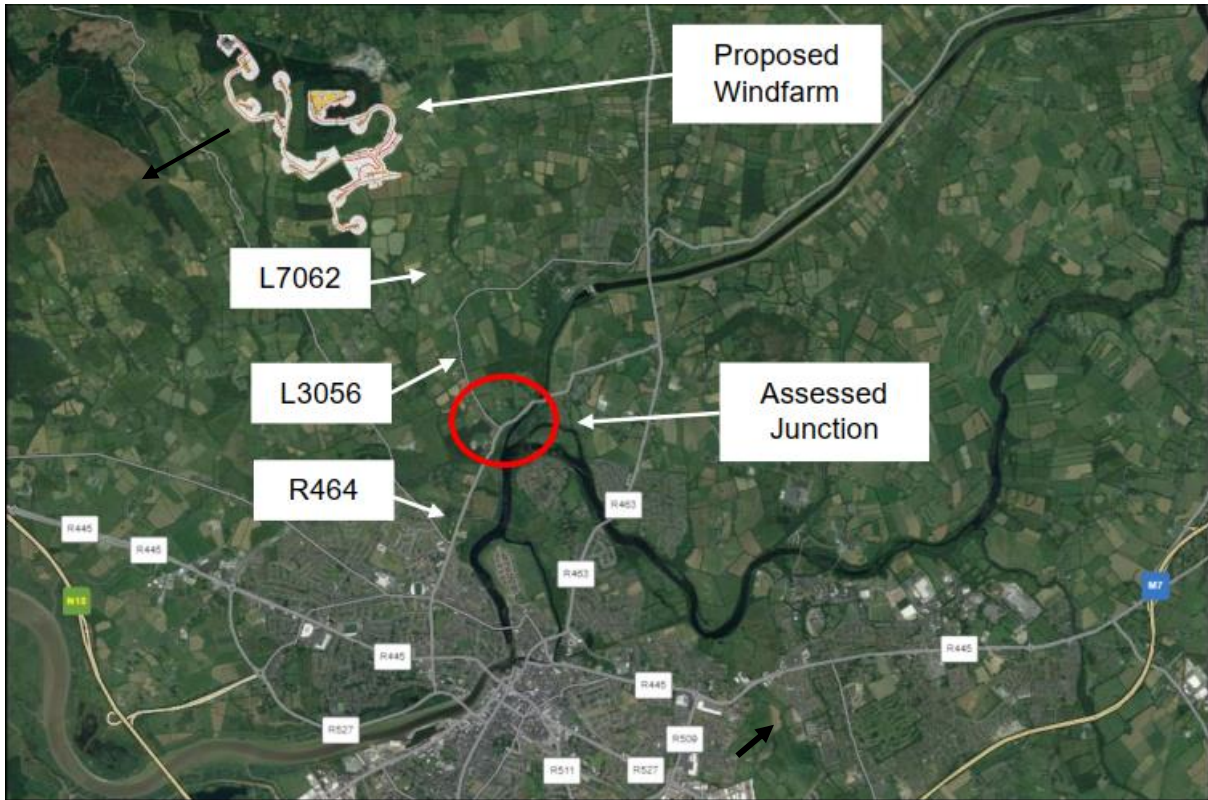


Figure 4-1: Road Network Map

## 5. Outline Traffic Management Plan

### 5.1 Duties and Responsibilities

The following parties will have an input into traffic management and will be kept informed by the appointed contractor of developments in relation to traffic management.

- Appointed Contractor;
- Project Supervisor Construction Stage (PSCS);
- Project Supervisor Design Process (PSDP);
- An Garda Síochána;
- Road Engineers for Local Authority (Clare County Council);
- Emergency Services.

#### 5.1.1 Appointed Contractor

The appointed contractor shall consult with An Garda Síochána, the emergency services and all other relevant parties listed above during the preparation of any traffic management proposals. The appointed contractor will

co-ordinate the implementation of the developed traffic management proposals. Where any issues arise with the traffic management plan, they shall consult with the relevant parties to revise or modify the traffic management plan to each parties satisfaction.

### **5.1.2 An Garda Síochána**

An Garda Síochána shall have final authority with regard to day-to-day traffic control. The appointed contractor will comply with all directions, instructions and requirements of An Garda Síochána.

### **5.1.3 Road Engineers for Local Authority**

Road Engineers for Clare County Council are primarily engaged in the maintenance and management of the road network and its services in the area of the wind farm and grid connection cable route. In respect of all works on, under, and above the road network, they are empowered as officers of the Road Authority to issue directions to undertakers of all works in relation to timing, the manner in which works are carried out, reinstatement and satisfactory completion. The appointed contractor will ensure to work with the Roads Department of Clare County Council at all times.

### **5.1.4 Emergency Services**

In relation to accidents occurring on or caused by the works, the appointed contractor will provide all necessary assistance to deal with any emergency to An Garda Síochána, Ambulance and Fire Brigade services. The appointed contractor will consult with the emergency services providers regarding the traffic proposals for work in public areas/on public roads.

In the event that emergency services need to travel past the works area where a road closure is not active, the existing traffic management system, be it stop/go or traffic lights, may need to be cancelled and priority given to the emergency vehicle.

Where a road closure is active, the emergency services will have been notified of suitable diversions. If the emergency is located along the works area, the appointed contractor will allow the emergency services to pass the works area by removing machinery from the road in an orderly fashion and allowing the emergency services pass under the supervision of the team leader. In the event of a road crossing, steel road plates will be available at the works area to span the trench in the event of an emergency.

## **5.2 Traffic Management Procedures**

### **5.2.1 Traffic Control Tools**

The appointed contractor will use a range of traffic control tools, including temporary road closures, temporary traffic lights, stop/go boards, two way radios, safety barriers, cones, signage etc. Each crew on site will have personnel on site trained in Signing Lighting and Guarding/Health and Safety at Road Works. Communication/Instruction of the Traffic Management Plan will come from the Project Manager and communicated to site personnel with the relevant training.

### **5.2.2 Road Closures**

When a road closure is necessary to carry out works, the appointed contractor will seek a Temporary Closing of Roads Order. The appointed contractor will advise Clare County Council of the following:

- Name of the road to be closed.
- Location of closing points.
- Date and period of closure required.
- Reasons for closure.
- Details of alternative routes.
- Details of method of traffic management and maintenance of alternative routes, including sign posting and traffic control plans.

### **5.2.3 Traffic Diversions**

Where traffic diversions are necessary due to temporary road closures associated with the wind farm and grid connection works, the appointed contractor will advise Clare County Council of the following details:

- Location of proposed diversion.
- Reasons for specific traffic diversion.
- Duration of proposed diversion.
- Plan of diversion routes.
- Details for management and control of proposed method of diversion route traffic, including sign posting layouts and locations.
- Details of proposed system of diversion route maintenance and repair, including existing carriageway and street furniture etc.
- Details of proposed system of public communications and public liaison.

Alternative routes where traffic is to be diverted on will be inspected prior to diverting traffic.

### **5.2.4 Lane Width Restrictions**

Where lane width restrictions are necessary due to the construction of the grid connection cable route, the appointed contractor will advise Clare County Council of the following details:

- Reasons for lane width restrictions.
- Details of restricted width of traffic lane.
- Details of associated signage and warnings to motorists and pedestrians, including road markings.
- Details of proposed system of public communications and public liaison.
- Temporary footpaths.

### **5.2.5 Public Notices**

Public notices in respect of road closures or other traffic management tools are the responsibility of the Roads Authority (Clare County Council) who will undertake to publish such notices.

### **5.2.6 Communications**

The developer is committed to providing a high level of communication to the general public and business community regarding the extent and duration of the project. The appointed contractor will co-operate with the employer in this regard.

The employer / appointed contractor will advise to the public:

- Commencement and duration periods for the works.
- Current and proposed road closures or other traffic management tools.
- Alternative routes.
- Provision for access / egress.

In the event of potential conflicts arising from construction activities, such conflicts shall be resolved, if possible, in consultation with Clare County Council, the appointed contractor and where necessary An Garda Síochána.

## **5.3 Traffic Management and Control Procedures**

### **5.3.1 General**

- Excavation, backfilling and reinstatement of trenches in the public road will be completed within the shortest possible time frame.
- The planning of road closures and traffic diversions will ensure that reinstatement of the trenches and joint bays are completed and all temporary traffic measures (lane and road closures/diversions) are removed in progressive stages.

### **5.3.2 Access to Commercial/Business Properties**

- The appointed contractor shall make provision for safe access to commercial and business premises for employees, customers, the general public and for deliveries.

### **5.3.3 Pedestrian Safety**

- The appointed contractor shall ensure that throughout the course of the works its operations do not put pedestrians at any risk.
- Where the construction work necessitates the restriction or partial closure of a pedestrian walkway where they may exist, the appointed contractor shall provide adequate safety barriers, signposts, lighting and temporary surfacing (if applicable) to ensure safe passage for pedestrians.

- Where the construction work necessitates the closure of a pedestrian walkway, the appointed contractor shall provide a safe and reasonable alternative. The appointed contractor shall provide adequate safety barriers, signposts, and lighting (if applicable) to direct pedestrians and ensure their safe passage.
- With respect to pedestrians, the appointed contractor shall refer to and observe the requirements of the updated version of the Traffic Signs Manual 2019 titled “Temporary Traffic Measures and Signs for Roadworks”.

#### **5.3.4 Signage**

- All sign faces will be retro-reflective material to Class Ref 2 of EN 12899. The colours, chromaticity and luminance factors will be as specified in Specification TS4.
- Signage will be inspected at least twice daily by the appointed contractor so as to ensure that it is in place, secure and appropriately fitted with warning lights as required.

#### **5.3.5 Cleanliness of Roads**

- The appointed contractor will provide sufficient resources on site, including road sweeping equipment, to ensure the cleanliness of the adjacent road network.

#### **5.3.6 Operator Training**

- The appointed contractor will provide training to operatives in the traffic control systems being used on site. The importance of transport management, the safety of motorists, pedestrians and site staff will be emphasised to all construction staff.
- There will be at least one competent person with a valid Construction Skills Registration Card on site at all times when work is being carried out on roads.

#### **5.3.7 Emergency Crew**

- The appointed contractor's emergency contact telephone number will be displayed at the appointed contractor's site office and will be notified to the Local Authority Roads Engineer, Utility companies and the Emergency Services Providers. This telephone will be manned by the appointed contractor's Project Manager or by an authorised deputy capable of making decisions in an emergency situation.
- The appointed contractor will set up an emergency crew, led by an experienced foreman or an engineer, for dealing with emergencies arising as a result of the works on roads outside of normal working hours. The emergency crew will be available to respond to an event seven days a week.
- The appointed contractor will issue the emergency crew with contact details for the emergency services and the utility companies, in the event that they are required.

## 5.4 Traffic Management Plan for Works

It is envisaged that one road closure will be implemented along the underground grid connection route in the public roadway. This is to ensure the cable route can be constructed safely to protect construction workers and members of the public.

The appointed contractor will apply to Clare County Council for a Road Opening Licence prior to works commencing and follow the relevant procedures as outlined in **Section 5.2** of this document.

### 5.4.1 Single Lane Closures

There will be no single lane closures anticipated during the construction phase.

The grid route crosses a single lane local road and therefore a full temporary road closure is required as per **Section 5.4.2**.

### 5.4.2 Road Closures

Roads closures will be implemented where there is insufficient space on the existing public roadway to implement a single lane closure. A road closure will be controlled by way of diversions but local access will be accommodated on the route where possible with all residents on the route informed of the programme for a road closure. The appointed contractor will ensure that procedures and works for closures are in accordance with Section 0.5.2.9 of the *Temporary Traffic Management Design Guidance, Third Edition 2019*. Temporary traffic management and roadwork signs will be to Chapter 8 of the *Traffic Signs Manual 2019*.

It will be envisaged, pending confirmation at construction stage, that the following road will have a 1 to 2 day road closure during construction of the grid connection cable route.

- Local road, north west of wind farm where underground cable route crosses, refer to **Figure 3-3**.

### 5.4.3 Diversions

Diversions will be implemented to provide an alternative route for the proposed road closure during construction. Information and directional signage will be provided to inform the public of the road closure and direct them along diversion routes. Local access will be maintained for residents where possible. The appointed contractor will ensure that procedures and works for diversions are in accordance with Section 0.5.2.9 of the *Temporary Traffic Management Design Guidance, Third Edition 2019*. Temporary traffic management and roadwork signs will be to Chapter 8 of the *Traffic Signs Manual 2019*.

It will be envisaged, pending confirmation at construction stage, that temporary diversions will be put in place for road users looking to access the local road, north west of wind farm where the underground cable route crosses, refer to **Figure 1-5**.

### 5.4.4 Road Crossings

The grid route crosses a single lane road and therefore a full temporary road closure is required as per **Section 5.4.2**. Works at the crossing are anticipated to last 1-2 days. During the period where trench works are ongoing,

the road will be closed and diversions put in place as per **Section 5.4.3**. The trench will be temporarily reinstated at the end of each working day to allow road reopening.

Once the work has been fully complete, the trench and road can be temporarily reinstated and the road will fully reopen.

#### **5.4.5 Joint Bays**

It may be necessary that joint bays on the grid connection cable route are required to be left open overnight for pulling cables through the ducts and jointing the cables together. All 4 joint bays are off the public roads and therefore temporary traffic management is not necessary.

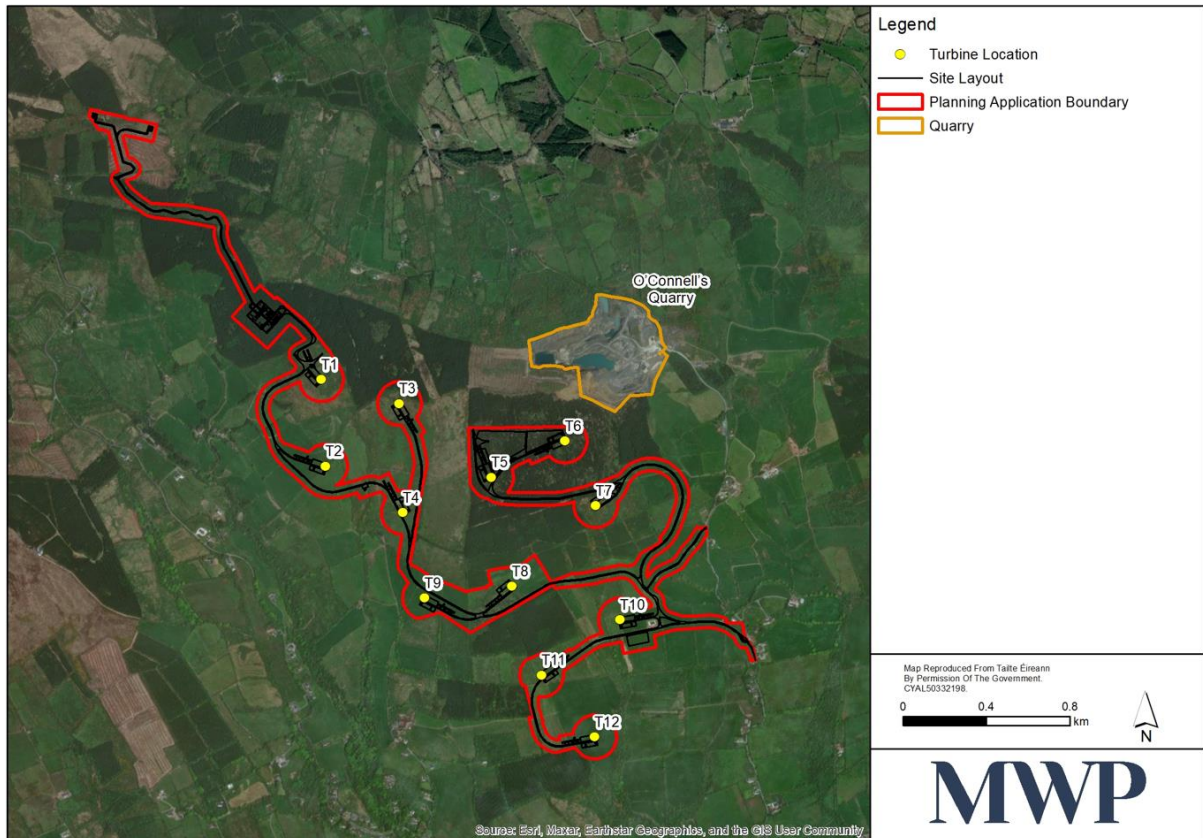
#### **5.4.6 Personnel Traffic**

All traffic arising from personnel (appointed contractors, sub-appointed contractors, site operatives etc.) will park their vehicles at the appointed contractors main site compound within the wind farm site. This will be done so as to prevent traffic disruption to construction and to local residents by prohibiting personal vehicles being parked along the local road network.

## **6. Delivery Route for Materials**

The majority of material required for the construction of the wind farm tracks, crane hardstands and substation compound will come from stone aggregate extracted from the proposed on-site borrow pit. Material to be delivered to site will mainly consist of limestone capping material for tracks and hardstands, and concrete for the construction of the 12 no. turbine bases and substation infrastructure. There are three quarries that are likely to supply these construction materials, the closest of which is O'Connell Quarries in Ballycar, Ardnacrusha. This is the most likely source to be used. The location of O'Connell quarry is shown in **Figure 6-1**. It is anticipated that a succession of 20T and/or 8m<sup>3</sup> trucks will transport the material at a peak frequency of 8 to 12 trucks/hour. Peaks in construction traffic are typically associated with the pouring of turbine foundations. Specialist vehicles will be used for the delivery of the wind turbine components and substation transformers.





**Figure 6-1: Location of O’Connell Quarries relative to the proposed development**

During the construction of the grid connection route, deliveries of quarry and building materials to site will be made. All deliveries are expected to be on flatbed trucks (whether 40ft or smaller depending on size of deliveries) or concrete wagons. Materials such as aggregates and concrete will be sourced locally. Heavy vehicles would typically arrive and depart at a uniform rate throughout the day. The grid connection route construction will operate between the hours specified in **Section 3.2.1**.

The primary entrance to the proposed development will be from a junction off the public local road L7062. There will be two distinct entrances: one to accommodate construction traffic bringing in materials from the nearby quarry, and another for turbine deliveries, materials sourced from alternative quarries, as well as operations and maintenance vehicles. Entrance Point A (temporary site entrance), located in the north-eastern area of the site, is intended as a temporary access point solely for use during the construction phase. Its purpose is to facilitate the delivery of construction materials from a local quarry situated approximately 1 km to the north. Entrance Point B (permanent site entrance), located to the south-east of the site and accessible from the L7062, will be dedicated to turbine deliveries, materials other than those from the local quarry, and operations and maintenance vehicles. The vast majority of construction deliveries for the wind farm site will access the site from the R464 via the L3056 which leads north approximately 2.5km to the local access road L7062. Refer to **Figure 6-2** below.

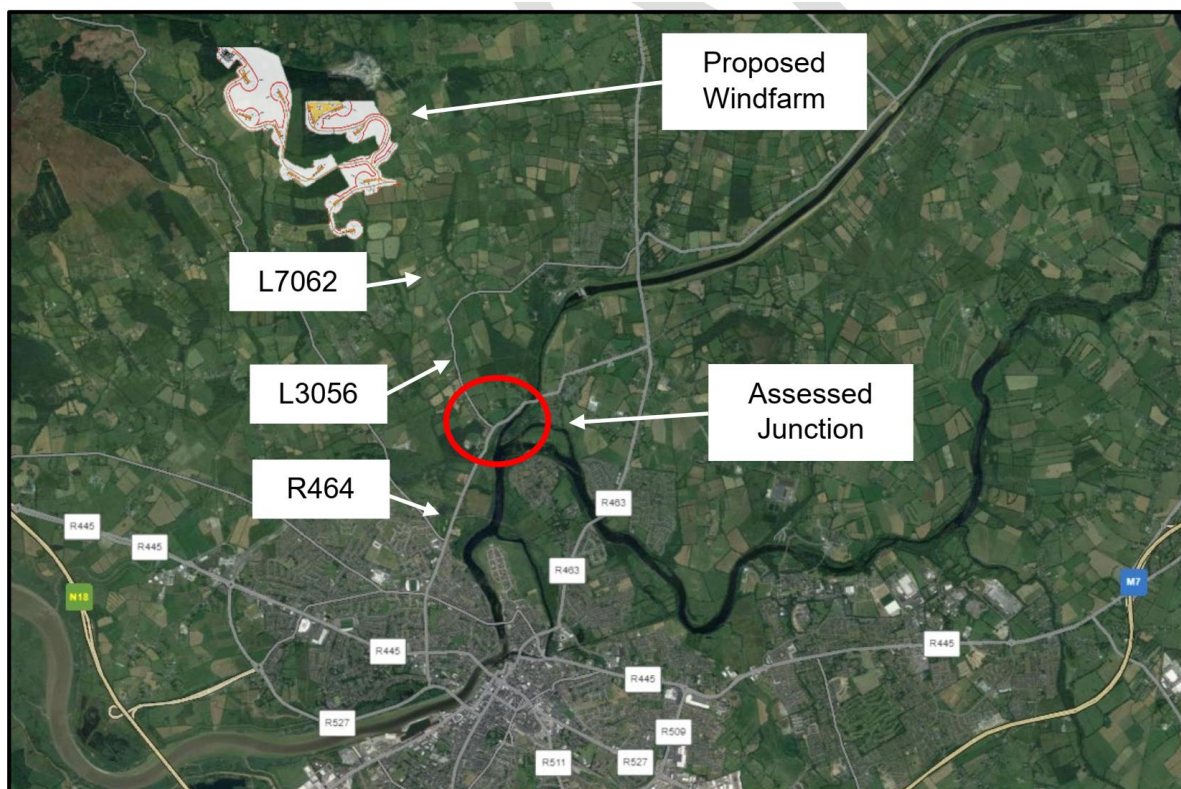


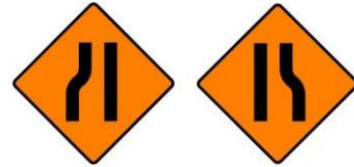
Figure 6-2: Overview of the road network in the vicinity of the development (Source: Google Earth)

## **Appendix 1**

### **Sample Schedule of Signs**



WK 001 - Roadworks Ahead / End



WK 032 / 033 - Road Narrows on Left / Right



WK 052 / 053 - Site Access on Left / Right



WK 091 - Diverted Traffic



WK 061 - Flagman Ahead



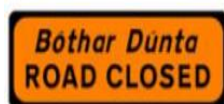
WK 060 - Temporary Traffic Signals



WK 090 - Detour



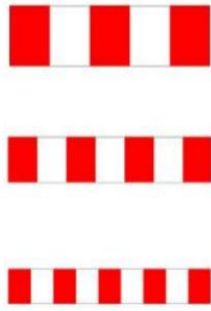
WK 092 - End of Detour



WK 094 - Road Closed



WK 095 - Stop Here on Red



W 183 / 184 / 185 - Barrier Boards



RUS 060 / 061- Stop and Go



RUS 001 - Keep Left



RUS 002 - Keep Right



RUS 014 - No Overtaking / End



WK 071 - Uneven Surface



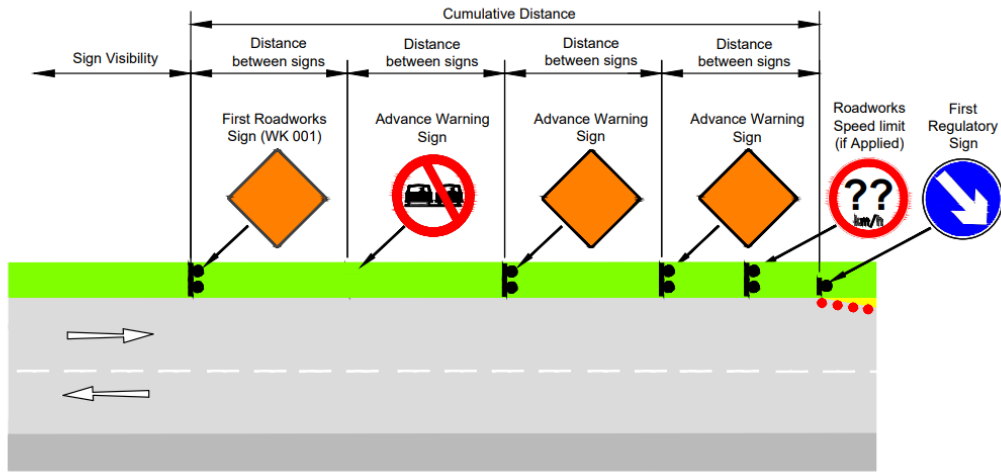
WK 073 - Loose Chippings



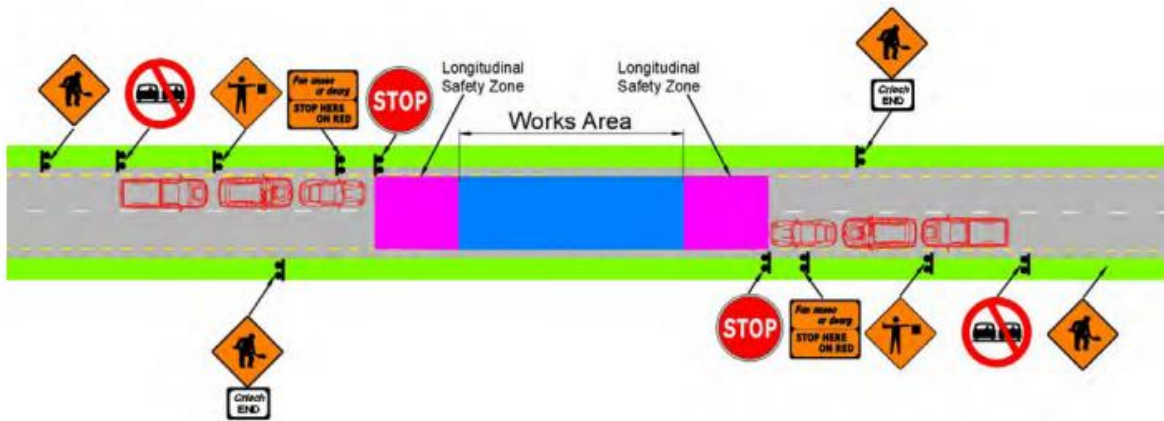
WK 052 - Site Access

## **Appendix 2**

### **Sample Traffic Management Drawings and Check Sheets**

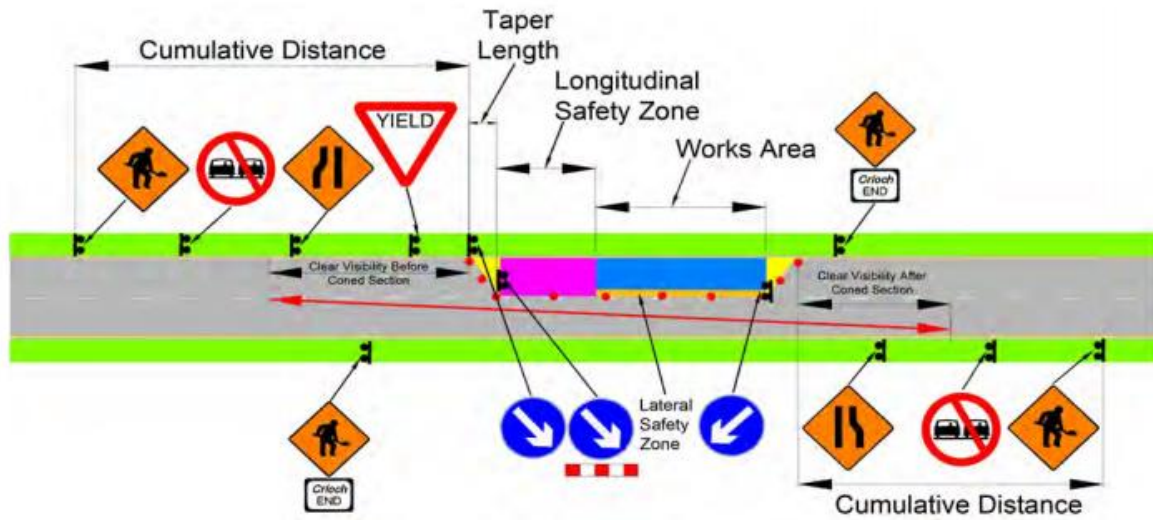


Required Locations for Advance Warning Signs to Roadworks



Level	Longitudinal Safety Zone (m)
2(i)	45
2(ii)	60

Example Layout of an "All Stop" Traffic Operation



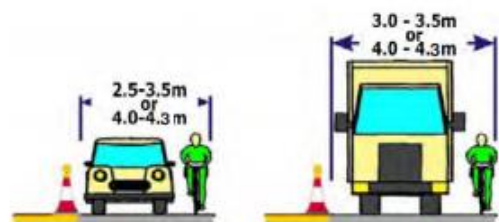
Roadworks Type	Speed (km/h)	No. Adv. Warning Signs	Cumulative Distance (m)	Sign Visibility (m)	Longitudinal Safety Zone (m)	Lateral Safety Zone (m)	Max Cone / Lamp Spacing (m)
Level 2 (i) A	80	4	480	90	45	1.2	12 / 24
Level 2 (i) B	80	3	360	90	45	1.2	12 / 24
Level 2 (ii) A	100	4	800	120	60	1.2	12 / 24
Level 2 (ii) B	100	3	600	120	60	1.2	12 / 24

**Summary Criteria**

Speed (km/h)	Coned Area Length	Max Traffic Flow (3 min count)	Clear Visibility Before and After Coned Area (m)
80	80m maximum	40 vehicles	80
100			100

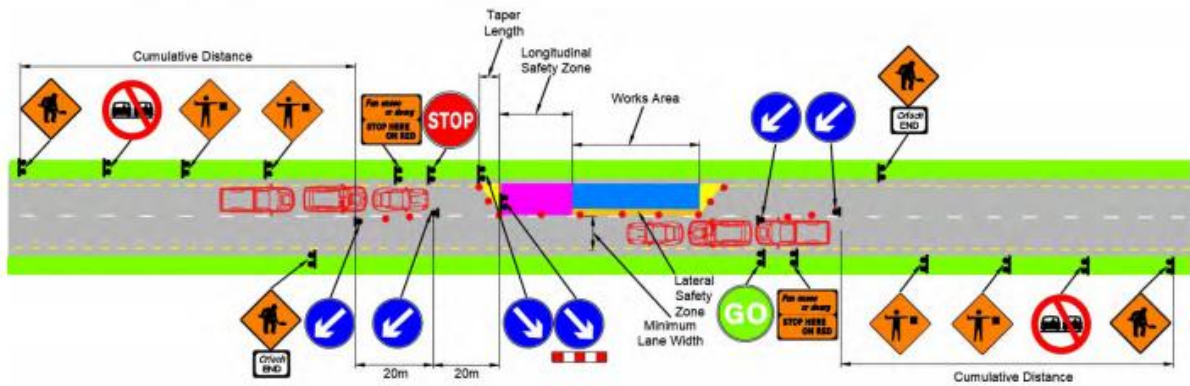
**Lane Widths**

Cars only	≥ 2.5m
HGVs present	≥ 3.0m
Preferred width	3.3m
Preferred (with cyclists)	4.0 - 4.3m



**Example Layout of a Priority Yield Operation**





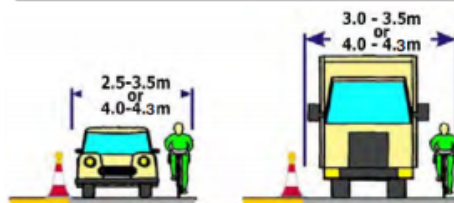
Roadworks Type	Speed (km/h)	No. Signs	Cumulative Distance (m)	Sign Visibility (m)	Longitudinal Safety Zone (m)	Lateral Safety Zone (m)	Max Cone / Lamp Spacing (m)
Level 2 (i) A	80	4	480	90	45	1.2	12 / 24
Level 2 (i) B	80	3	360	90	45	1.2	12 / 24
Level 2 (ii) A	100	4	800	120	60	1.2	12 / 24
Level 2 (ii) B	100	3	600	120	60	1.2	12 / 24

**Summary Criteria**

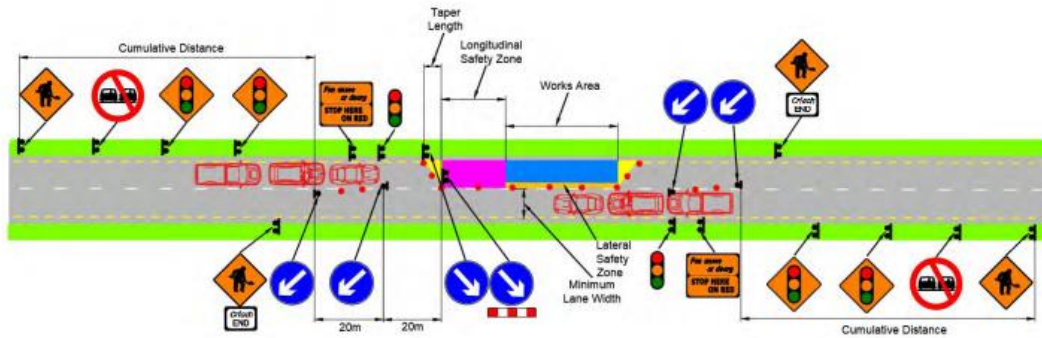
Shuttle Length	Maximum Traffic / 3 mins	Notes
500m	45	Shall be 2 operators, 2 discs when $\geq 200m$
400m	50	
300m	55	
200m	60	May be 1 operator with remote discs. Operator must be $\leq 100m$ from each disc and have clear view of each
100m	70	
20m	25	May be 1 operator, 1 disc

**Lane Widths**

Cars only	$\geq 2.5m$
HGVs present	$\geq 3.0m$
Preferred width	3.3m
Preferred (with cyclists)	4.0 - 4.3m



**Example Layout of a Stop and Go Operation**



Roadworks Type	Speed (km/h)	No. Adv. Warning Signs	Cumulative Distance (m)	Sign Visibility (m)	Longitudinal Safety Zone (m)	Lateral Safety Zone (m)	Max Cone / Lamp Spacing (m)
Level 2 (i) A	80	4	480	90	45	1.2	12 / 24
Level 2 (i) B	80	3	360	90	45	1.2	12 / 24
Level 2 (ii) A	100	4	800	120	60	1.2	12 / 24
Level 2 (ii) B	100	3	600	120	60	1.2	12 / 24

**Signal Checks**

- Batteries
- Bulb / LEDs operating
- Signals communicating with each other
- Housing is in good condition

**Signal Sequence**

- Red - time is set by Operative
- Green - time is set by Operative
- Amber - 3 seconds

**Signal Heights**

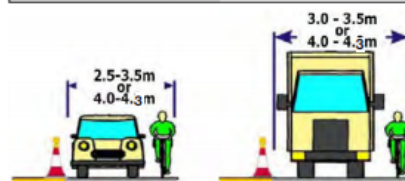


**Summary Criteria**

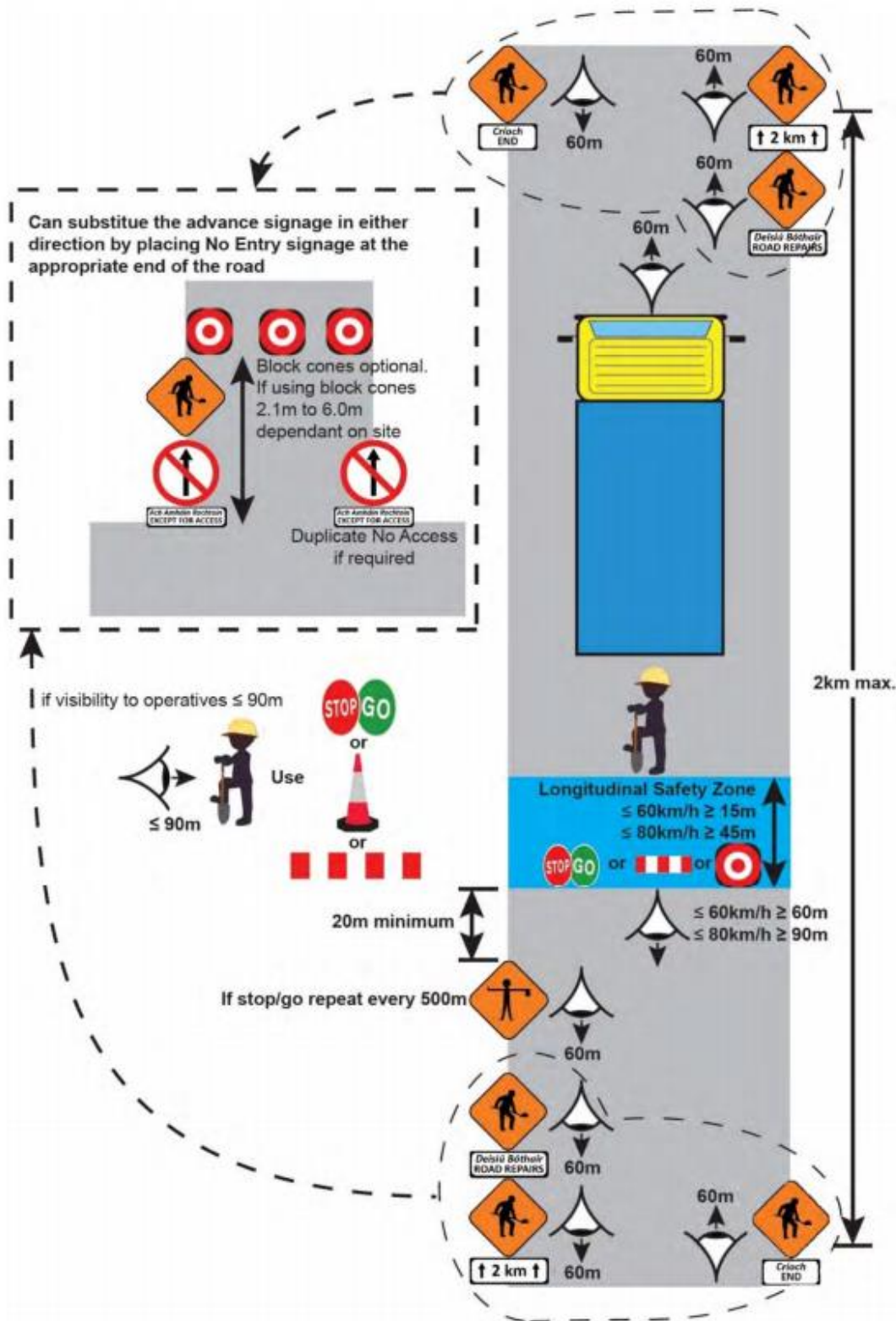
Max Speed Limit (km/h)	Max Coned Area Length (m)	Max Traffic Flow
60	500	No Restrictions

**Lane Widths**

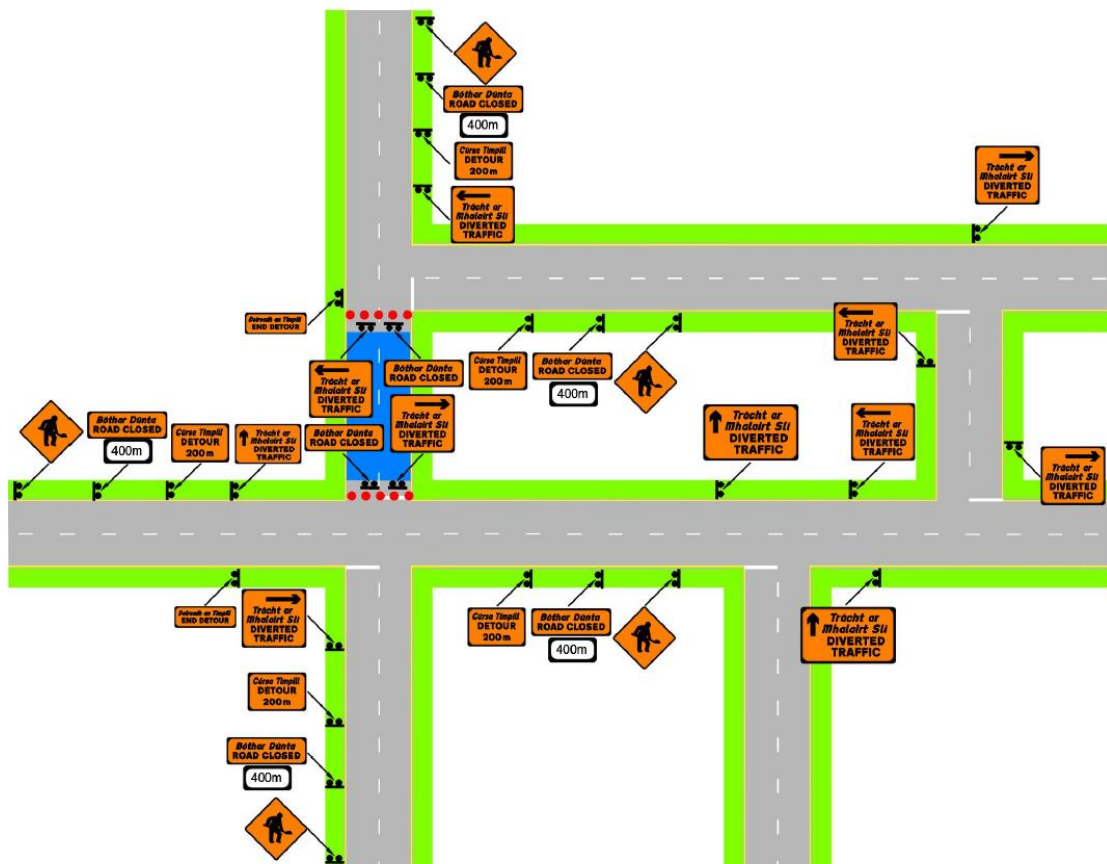
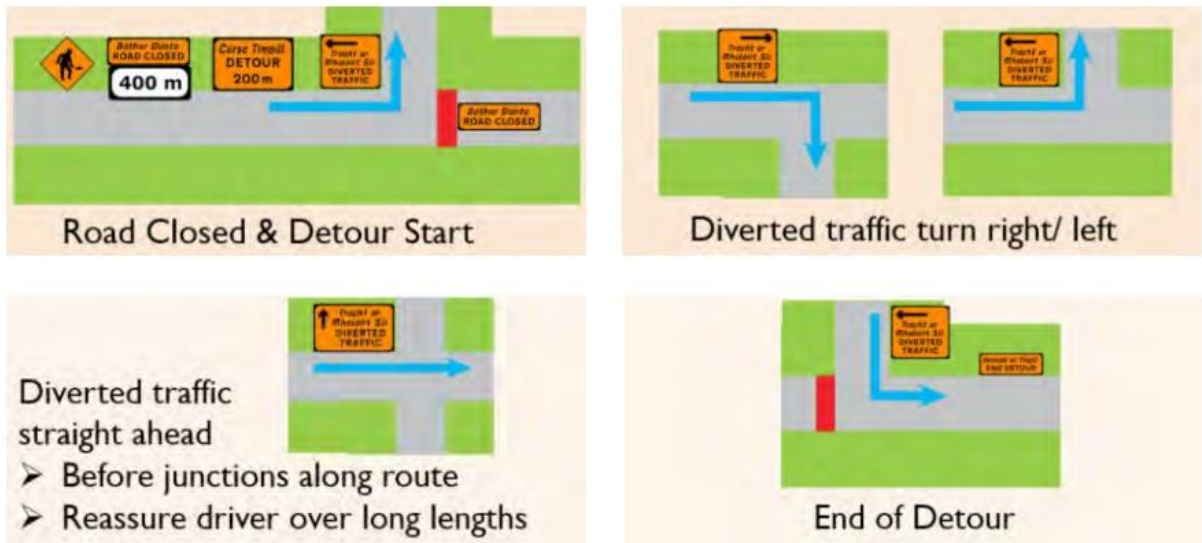
Cars only	≥ 2.5m
HGVs present	≥ 3.0m
Preferred width	3.3m
Preferred (with cyclists)	4.0 - 4.3m



**Example Layout for a Temporary Traffic Signals Operation**



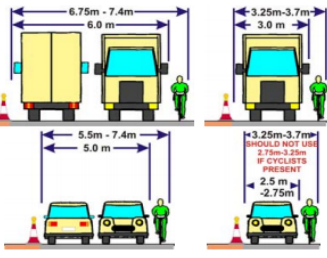
Example of a Road Opening Works Operation



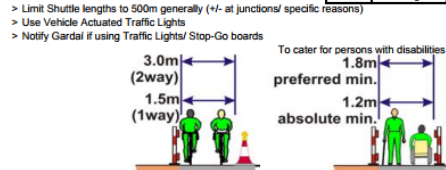
Example of a Road Detour and Signage Operation

**PLANNED WORKS TRAFFIC MANAGEMENT DESIGN SHEETS**  
**TRAFFIC MANAGEMENT LAYOUT PARAMETER DESIGN SHEET**

STEP 1: SELECT TRAFFIC MANAGEMENT TYPE	When:
Road Closure	1) Adequate Safety Zone + Lane Width cannot be achieved, or 2) Alternative Safe Method of Work cannot be implemented, or 3) Semi Static Operation for Minor Roads not applicable, or 4) Convoy Working cannot be implemented
24/7 detour	Where RESIDUAL risks on Road Works Section are greater than on the Detour even when active works are not taking place
Working hours detour	Where RESIDUAL risks on Road Works Section are greater than on the Detour when works are active AND where the RESIDUAL risks on Road Works Section are less than on the Detour when works are not active
Two-Way	Abs. Min. 5.0m (Cars and light vehicles only) Minimum 6.0m Maximum Combined lane width should not exceed 7.4m
Lane/ Shuttle	Abs. Min. 2.5m Minimum 3.0m Maximum 3.7m Cyclists DO NOT USE lane width between 2.75m and 3.25m
Marshal Convoy	Shuttle with mainly light vehicles and alternatives not suitable Select Where: 1) Adequate Safety Zone + Lane Width cannot be achieved 2) Alternative Safe Method of Work cannot be implemented 3) Semi Static Operations for Minor Roads not applicable
Semi-Static Management	> On Minor Roads use for Surface Dressing > For moving single vehicle operations
Roadworks Speedlimit	Refer to Section 4.3
Cautionary Speed Plate	See Section 4.3
All Stop	short duration (<10 min typically) and 300 veh/hr or less



STEP 2: SHUTTLE OPTION	Method	Max Speed Limit (km/h)	Length of Works (m)	Traffic Flow (veh/hr)	Notes
Give and Take See 4.5.1	Priority	50	50	400	Visibility
		100	80	850	Speed 50 km/h 60 km/h 80 km/h 100 km/h
Stop/Go	1 Sign	100	20	500	1 Person/ 1 Sign
	1 Person	100	100	1400	1 Person/ Auto Signs
	1 Person	100	200	1250	1 Person/ Auto Signs
	2 Person	100	300	1050	2 Person/ 2 Signs
	2 Person	100	400	950	2 Person/ 2 Signs
	2 Person	100	500	850	2 Person/ 2 Signs
Traffic Lights		100	500	n/a	Vehicle Actuated



VULNERABLE ROAD USERS	
Footway Desirable minimum width	1.8m
Vulnerable users' minimum width	1.2m
Minimum width at obstacle	1.0m
Minimum width at bus stop	3.0m
Minimum width at shop front	3.5m
Cycle track desirable minimum width	1.5m
Cycle track absolute minimum width	1.3m
Combined minimum width	3.0m
Desirable minimum clearance height	2.5m
Absolute minimum clearance height	2.3m

STEP 3: SELECT PARAMETERS	Type of Road	Type of Works	Advance Sign Distance (D) (m)	Min. Number Of Advance Signs	Min. clear visibility of Signs (m)	Min. size of signs (mm)	Min. height of cones (mm)	Long. Safety Zone (L) (m)	Side. Safety Zone (S) (m)	Long. Cone Space	Long. Lamp Space	Hard Shoulder Taper Multiply Factor	2 WAY Lane Taper Multiply Factor	2 WAY Lane Taper Cone Spacing	Lane Taper Lamp Spacing	Lane Lead-in cone tapers Recommended lengths	Width of hazard (including safety zone)			
																	1m	2m	3m	4m
Single carriageway road, 30km/h	All works	50	1 (rwa) 1 (tm)	50	600	750	5	0.5	6	12	5	10	3	6	Length of taper (T) in (m) Minimum no. of Cones	10 5	20 8	30 12	40 15	
	Single Vehicle	25	1 (rwa)	50	600	750	5	0.5	6	12	5	5	3	6	Length of taper (T) in (m) Minimum no. of Cones	5 3	10 5	15 7	20 8	
Single carriageway, 31km/h to 60km/h	All Works	75	1 (rwa) 2 (tm)	50	600	750	25	0.5	6	12	10	15	3	6	Length of taper (T) in (m) Minimum no. of Cones	15 7	30 12	45 17	60 22	
	Single Vehicle	50	1 (rwa) 1 (tm)	50	600	750	5	0.5	6	12	5	5	3	6	Length of taper (T) in (m) Minimum no. of Cones	5 3	10 5	15 7	20 8	
Single Carriageway 61 to 100 km/h	All Works	800	1 (rwa) 1 (no) 2 (tm)	120	600* 750*	750	60	1.2	12	12	30	55	3	6	Length of taper (T) in (m) Minimum no. of Cones	55 20	110 38	165 57	220 75	
	Single Vehicle	600	1 (rwa) 1 (no) 1 (tm)	120	600* 750*	750	45	1.2	12	12	20	40	3	6	Length of taper (T) in (m) Minimum no. of Cones	40 15	80 28	120 42	160 55	

\* Use 600mm signs where Vehicles Per Day < 5,000. Use 750mm signs where Vehicles Per Day > 5,000. Tapers at Shuttles to be at 45 degrees with 1m cone spacings.

**PLANNED WORKS TRAFFIC MANAGEMENT DESIGN SHEETS**

SITE SPECIFIC SHEET \_\_\_\_\_ OF \_\_\_\_\_

**HEALTH, SAFETY AND RISK ASSESSMENT MASTER SHEET**

Works Name: \_\_\_\_\_

TDRAM - \_\_\_\_\_

Job Location		Works	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10	Period 11	Period 12
PSDP (CMO)														
PSCS (CMO)														
Job Code														
Budget Holder														
Budget														
Total No. Work Days														
Tot. No. Person Days														
Work Days > 30 or Person Days > 500 then Notify HSA														

**Physical Data**

Brief Description of Works:	
Road Classification	
Road ID (incl. Seg)	
Road Width	
Works Length	
Roadside Development:	

**Traffic Data**

AADT	
% HCV	
Speed Limit	
Operating Speed	

**Traffic Management Items**

Accident History	
Pedestrians	
Schools	
Shops	
Cyclists	
Equestrian/Rail Crossing	
Vulnerable Road Users	
Bus Route/School Route	

**Particular Risk Items**

Burial	<input type="checkbox"/>	Underground works	<input type="checkbox"/>
Fall from height	<input type="checkbox"/>	Diving	<input type="checkbox"/>
Chemical/Biological	<input type="checkbox"/>	Compressed air	<input type="checkbox"/>
Radiation	<input type="checkbox"/>	Explosives	<input type="checkbox"/>
HV Power Lines	<input type="checkbox"/>	Heavy components	<input type="checkbox"/>
Drowning	<input type="checkbox"/>	Other	<input type="checkbox"/>

**Identified Items (For Map Reference see overleaf)**

Map Ref.	Item	Hazard	Risk			Control	Residual Risk		
			Hi	Med	Lw		Hi	Med	Lw

Design Prepared By: \_\_\_\_\_

**PLANNED WORKS TRAFFIC MANAGEMENT DESIGN SHEETS**  
**TRAFFIC MANAGEMENT DESIGN CIVIL WORKS SHEET**

SITE SPECIFIC SHEET \_\_\_\_\_ OF \_\_\_\_\_

Works Name: \_\_\_\_\_

TDC -

Traffic Management Selection		Notes	Layout Parameters		Inspections
Road Closure: 24/7 - Working Hours			Advance Distance		Monday
Detour			Number of Advance Signs		Tuesday
Two Way			Min. Advance Sign Visibility		Wednesday
Shuttle: Give & Take			Size of Signs		Thursday
Priority			Height of Cones		Friday
Stop/Go			Taper Length		Saturday
Traffic Lights			Sideways Safety Zone		Sunday
Marshall			Longways Safety Zone		
Convoy			Lane Width/ Carriageway Width		
Semi-Static Roadworks			Longitudinal Cone/ Lamp Spacing		
Roadworks Speedlimit			Taper Cone/ Lamp Spacing		<b>Consultation</b>
Cautionary Speed Plate			Maximum Length of Shuttle		Buses/School Buses <input type="checkbox"/> Milk Lorries <input type="checkbox"/>
All Stop			Repeater Sign Distances		Local Residents <input type="checkbox"/> Emergency Services <input type="checkbox"/>
					Gardaí for Roadworks Speedlimit <input type="checkbox"/> For Positive TM <input type="checkbox"/>

Sign Ref	Sign	Quantity	Supplement/ Additional Info	No.	Sign Ref	Sign	Quantity	Supplement/ Additional Info	No.	Sign Ref	Sign	Quantity	Supplement/ Additional Info	No.									
WK 001			km/h m		WK 071			km/h		WK 070			m										
RUS 014					RUS 001					WK 050													
RUS 039-044			Specify Speed Both Sides		RUS 002					WK 051													
WK 032			m		W 062L					WK 052													
WK 033			m		W 062R					WK 053													
WK 034			m		W183 W184 W185					WK 074													
WK 060			m		RUS 060/061			IS-444/445/446/447/448/449/450/451/452/453/454/455/456/457/458/459/460/461/462/463/464/465/466/467/468/469/470/471/472/473/474/475/476/477/478/479/480/481/482/483/484/485/486/487/488/489/490/491/492/493/494/495/496/497/498/499/500/501/502/503/504/505/506/507/508/509/510/511/512/513/514/515/516/517/518/519/520/521/522/523/524/525/526/527/528/529/530/531/532/533/534/535/536/537/538/539/540/541/542/543/544/545/546/547/548/549/550/551/552/553/554/555/556/557/558/559/560/561/562/563/564/565/566/567/568/569/570/571/572/573/574/575/576/577/578/579/580/581/582/583/584/585/586/587/588/589/590/591/592/593/594/595/596/597/598/599/600/601/602/603/604/605/606/607/608/609/610/611/612/613/614/615/616/617/618/619/620/621/622/623/624/625/626/627/628/629/630/631/632/633/634/635/636/637/638/639/640/641/642/643/644/645/646/647/648/649/650/651/652/653/654/655/656/657/658/659/660/661/662/663/664/665/666/667/668/669/670/671/672/673/674/675/676/677/678/679/680/681/682/683/684/685/686/687/688/689/690/691/692/693/694/695/696/697/698/699/700/701/702/703/704/705/706/707/708/709/710/711/712/713/714/715/716/717/718/719/720/721/722/723/724/725/726/727/728/729/730/731/732/733/734/735/736/737/738/739/740/741/742/743/744/745/746/747/748/749/750/751/752/753/754/755/756/757/758/759/760/761/762/763/764/765/766/767/768/769/770/771/772/773/774/775/776/777/778/779/780/781/782/783/784/785/786/787/788/789/790/791/792/793/794/795/796/797/798/799/800/801/802/803/804/805/806/807/808/809/810/811/812/813/814/815/816/817/818/819/820/821/822/823/824/825/826/827/828/829/830/831/832/833/834/835/836/837/838/839/840/841/842/843/844/845/846/847/848/849/850/851/852/853/854/855/856/857/858/859/860/861/862/863/864/865/866/867/868/869/870/871/872/873/874/875/876/877/878/879/880/881/882/883/884/885/886/887/888/889/890/891/892/893/894/895/896/897/898/899/900/901/902/903/904/905/906/907/908/909/910/911/912/913/914/915/916/917/918/919/920/921/922/923/924/925/926/927/928/929/930/931/932/933/934/935/936/937/938/939/940/941/942/943/944/945/946/947/948/949/950/951/952/953/954/955/956/957/958/959/960/961/962/963/964/965/966/967/968/969/970/971/972/973/974/975/976/977/978/979/980/981/982/983/984/985/986/987/988/989/990/991/992/993/994/995/996/997/998/999/1000		IS-444/445/446/447/448/449/450/451/452/453/454/455/456/457/458/459/460/461/462/463/464/465/466/467/468/469/470/471/472/473/474/475/476/477/478/479/480/481/482/483/484/485/486/487/488/489/490/491/492/493/494/495/496/497/498/499/500/501/502/503/504/505/506/507/508/509/510/511/512/513/514/515/516/517/518/519/520/521/522/523/524/525/526/527/528/529/530/531/532/533/534/535/536/537/538/539/540/541/542/543/544/545/546/547/548/549/550/551/552/553/554/555/556/557/558/559/560/561/562/563/564/565/566/567/568/569/570/571/572/573/574/575/576/577/578/579/580/581/582/583/584/585/586/587/588/589/590/591/592/593/594/595/596/597/598/599/600/601/602/603/604/605/606/607/608/609/610/611/612/613/614/615/616/617/618/619/620/621/622/623/624/625/626/627/628/629/630/631/632/633/634/635/636/637/638/639/640/641/642/643/644/645/646/647/648/649/650/651/652/653/654/655/656/657/658/659/660/661/662/663/664/665/666/667/668/669/670/671/672/673/674/675/676/677/678/679/680/681/682/683/684/685/686/687/688/689/690/691/692/693/694/695/696/697/698/699/700/701/702/703/704/705/706/707/708/709/710/711/712/713/714/715/716/717/718/719/720/721/722/723/724/725/726/727/728/729/730/731/732/733/734/735/736/737/738/739/740/741/742/743/744/745/746/747/748/749/750/751/752/753/754/755/756/757/758/759/760/761/762/763/764/765/766/767/768/769/770/771/772/773/774/775/776/777/778/779/780/781/782/783/784/785/786/787/788/789/790/791/792/793/794/795/796/797/798/799/800/801/802/803/804/805/806/807/808/809/810/811/812/813/814/815/816/817/818/819/820/821/822/823/824/825/826/827/828/829/830/831/832/833/834/835/836/837/838/839/840/841/842/843/844/845/846/847/848/849/850/851/852/853/854/855/856/857/858/859/860/861/862/863/864/865/866/867/868/869/870/871/872/873/874/875/876/877/878/879/880/881/882/883/884/885/886/887/888/889/890/891/892/893/894/895/896/897/898/899/900/901/902/903/904/905/906/907/908/909/910/911/912/913/914/915/916/917/918/919/920/921/922/923/924/925/926/927/928/929/930/931/932/933/934/935/936/937/938/939/940/941/942/943/944/945/946/947/948/949/950/951/952/953/954/955/956/957/958/959/960/961/962/963/964/965/966/967/968/969/970/971/972/973/974/975/976/977/978/979/980/981/982/983/984/985/986/987/988/989/990/991/992/993/994/995/996/997/998/999/1000		WK 061			TL			WK 080			RR		
WK 062			m		WK 095					WK 081			RUS 026										
WK 094					WK 090					PB													
										PF													

Design Prepared By: \_\_\_\_\_

PLANNED WORKS TRAFFIC MANAGEMENT SITE INSPECTION SHEET			
<b>PROJECT NAME:</b>		<b>Phase:</b>	
<b>Date:</b>		<b>Time:</b>	1). 2).
<b>1) TRAFFIC MANAGEMENT SET-UP/ MODIFICATION, INSPECTIONS</b>			
<b>1-1) Installation Checks</b>			
Does the Traffic Management conform to the Design Layout and Parameters?			
Have all hazards been addressed in the Traffic Management Plan?			
Has allowance been made for the delivery and removal of materials?			
Have Gardaí been informed of any Traffic Lights/ Stop-Go Boards in use?			
Have Gardaí been Informed of Roadworks Speed Limits being Introduced?			
<b>2) TRAFFIC MANAGEMENT OPERATION INSPECTIONS</b>			
<b>2-1) Operation Checks</b>			<b>1 2</b>
Are Safety Zones being kept clear of operatives, plant and materials?			
Are all the signs in good condition/ are all cones in good condition with sleeves?			
Are sign vision lines free from bends, hills/dips in the road, parked vehicles, hedges etc?			
Will the site be safe at night or in wind, fog, snow or rain? (delete as appropriate)			
Are all misleading permanent signs and road markings covered?			
Is the carriageway/footway being kept clear of mud and surplus equipment?			
Are materials/ plant that are left on verges or lay-bys being properly guarded and lit?			
<b>2-2) Traffic Checks</b>			
Is there safe access to adjacent premises?			
Does Signing and Guarding meet the (changing) conditions?			
Are traffic control arrangements working at the optimum level to reduce traffic delays?			
If present, are the needs of cyclists or horse riders incorporated into the layout?			
<b>2-3) Pedestrian and Vulnerable Road User Checks</b>			
Have the needs of pedestrians and vulnerable road users been addressed in the layout?			
If pedestrian route blocked, has a suitable alternative route been provided?			
Are pedestrian routes clearly evident/ Indicated?			
If a footway in the road is to be used, are ramps to the kerb provided?			
Are pedestrian hazards sufficiently GUARDED at night?			
<b>3) TRAFFIC MANAGEMENT CESSATION INSPECTIONS</b>			
<b>3-1) Works Complete Checks</b>			
Have all signs, cones, barriers, and lamps been removed?			
Have any covered permanent signs been restored?			
Have Gardaí been informed that Speedlimits/ Traffic Signals/ Stop-Go removed?			
<b>4) EXCEPTIONS REPORT</b>			
(Append attachments as necessary)			
<b>Check Completed By:</b>			



<b>SAFE SYSTEM OF WORK PLAN (SSWP)</b> <b>WORKING ON ROADS</b>		Plan No. <input type="text"/>																						
Job Details	Resources Required	Emergency Details																						
Employer Name: _____ Responsible Person/Supervisor: _____ Number of Workers: _____ Specific Location: _____ Description of Works: _____ _____ Start Date: _____ NOTE: A new SSWP must be completed when the task or the environment changes.	Worker Skills: _____ _____ Plant/Equipment: _____ _____ Hazardous Materials: _____ _____	Contact Names & Tel No. 1. _____ 2. _____ 3. _____ First Aider: _____ _____ Location of First Aid Box: _____ _____ <b>WORK PERMITS REQUIRED</b> Hot <input type="checkbox"/> Electricity <input type="checkbox"/> Excavation <input type="checkbox"/> Confined Space <input type="checkbox"/> Other <input type="checkbox"/> Method Statement Yes <input type="checkbox"/> No <input type="checkbox"/>																						
<b>Before Works Starts the following MUST be in place</b> Tick the <input checked="" type="checkbox"/> circle when confirmed																								
<table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Supervision <input type="checkbox"/></td> <td>Safe Pass <input type="checkbox"/></td> <td>Plan/Eq. Cert. <input type="checkbox"/></td> <td>CSCS <input type="checkbox"/></td> <td>Communications/Induction <input type="checkbox"/></td> <td>WC &amp; Washing <input type="checkbox"/></td> <td>Canteen <input type="checkbox"/></td> <td>Drying/Changing <input type="checkbox"/></td> <td>Drinking Water <input type="checkbox"/></td> <td>First Aid <input type="checkbox"/></td> <td>PPE <input type="checkbox"/></td> </tr> </table>														Supervision <input type="checkbox"/>	Safe Pass <input type="checkbox"/>	Plan/Eq. Cert. <input type="checkbox"/>	CSCS <input type="checkbox"/>	Communications/Induction <input type="checkbox"/>	WC & Washing <input type="checkbox"/>	Canteen <input type="checkbox"/>	Drying/Changing <input type="checkbox"/>	Drinking Water <input type="checkbox"/>	First Aid <input type="checkbox"/>	PPE <input type="checkbox"/>
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<b>SELECT HAZARD OR ACTIVITY</b> <b>SELECT CONTROL</b> All controls identified below must be in place before work starts Tick the <input checked="" type="checkbox"/> box to identify controls required;      Tick the <input checked="" type="checkbox"/> circle when control is in place.																								
<b>PART 2</b>	<input type="checkbox"/> Live Traffic	<input type="checkbox"/> Liability/Guardrail	<input type="checkbox"/> Diversion	<input type="checkbox"/> Road Signage	<input type="checkbox"/> Flagman/Stop-Go Man	<input type="checkbox"/> Traffic Management Plan	<input type="checkbox"/> Traffic Speed Control	<input type="checkbox"/> Vehicle Crash Barriers	<input type="checkbox"/> Crash Cushion Lorry	<input type="checkbox"/> Site/Private Parking	<input type="checkbox"/> Erecting Traffic Control Signs													
	<input type="checkbox"/> Working Close to the Public	<input type="checkbox"/> Liability	<input type="checkbox"/> Fencing/Hoarding	<input type="checkbox"/> Barriers	<input type="checkbox"/> Pedestrian Routes	<input type="checkbox"/> Security	<input type="checkbox"/> Traffic Control	<input type="checkbox"/> Flagman/Stop-Go Man	<input type="checkbox"/> Vehicle Plant Controller	<input type="checkbox"/> Surveying	<input type="checkbox"/> Examination & Inspection													
	<input type="checkbox"/> Lifting Operations	<input type="checkbox"/> Selection/Suitability	<input type="checkbox"/> Plan Lift/SWL	<input type="checkbox"/> Lorry Cranes/Sensors/Guards	<input type="checkbox"/> Slings/Signaller	<input type="checkbox"/> Check Lifting Gear	<input type="checkbox"/> Exclusion Zone	<input type="checkbox"/> Examination & Inspection	<input type="checkbox"/> Lighting	<input type="checkbox"/> Dust/Air/ Cleaning/ Removal	<input type="checkbox"/> Pedestrian Controller													
	<input type="checkbox"/> Plant and Equipment	<input type="checkbox"/> Selection/Suitability	<input type="checkbox"/> Vibration Controls/Service/Duration	<input type="checkbox"/> Reverse Warning Devices	<input type="checkbox"/> Locking Attachments	<input type="checkbox"/> Roll Over Protection/No Passengers	<input type="checkbox"/> Seat Belts	<input type="checkbox"/> PTO Guard & Access Steps	<input type="checkbox"/> Hedge Cutting/Guarding/Signage	<input type="checkbox"/> Safe Parking	<input type="checkbox"/> Traffic Speed Control													
		<input type="checkbox"/> Pedestrian Route	<input type="checkbox"/> Road Planer/ Potholes/Fall Controls	<input type="checkbox"/> Kerbing Machines/ Potholes/Fall Controls	<input type="checkbox"/> Dumpers/Aerials/ Visual Devices	<input type="checkbox"/> Rock Breaker/ Cab Protection	<input type="checkbox"/> 360 Excavator/ Check Valves	<input type="checkbox"/> 180 Excavator/ Visual Aids/ Set Up	<input type="checkbox"/> Vehicle Recovery	<input type="checkbox"/> Proximity to Public	<input type="checkbox"/> ATV/ Training/ PPE													
		<input type="checkbox"/> Exclusion Zone	<input type="checkbox"/> No Tipping - OH Lines	<input type="checkbox"/> Strimming	<input type="checkbox"/> Bollards/Mats/ Training/ Servicing	<input type="checkbox"/> Hot Compressed Air Lance	<input type="checkbox"/> Slings/ Signaller	<input type="checkbox"/> Safe Driving	<input type="checkbox"/> Compound/ Plant Security	<input type="checkbox"/> Nuclear Battery/ Self/ Supervisor Training	<input type="checkbox"/> Examination & Inspection													
		<input type="checkbox"/> Hand Tools	<input type="checkbox"/> Selection/Suitability	<input type="checkbox"/> Voltage	<input type="checkbox"/> Cable Check/ Protection	<input type="checkbox"/> Guards	<input type="checkbox"/> Generators Outside	<input type="checkbox"/> Compressor & Wheel Checks	<input type="checkbox"/> Jack Hammer/ Vibration Controls	<input type="checkbox"/> Dust Suppression	<input type="checkbox"/> Chain Saw/ Training/ PPE/ Maintenance	<input type="checkbox"/> Con Saw/ Abrasive/ Wheels												

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**PART 2**

HAZARD OR ACTIVITY	CONTROL									
	Tick the <input type="checkbox"/> box to identify controls required; Tick the <input checked="" type="checkbox"/> circle when control is in place.									
Excavation										
Falls and Falling Objects										
Sewers/Culverts/Mains/Services										
Working Close to Water										
Substances										
Asbestos Cement Water Pipes										
Other Items										
Health										
<b>PPE</b>										

**PART 3**

Hazards, activities and controls on this SSWP identified by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Controls put in place by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

I have been made aware of the hazards & controls for this activity. Signed by Team:

**NOTE:** This list of Hazards and Controls is not exhaustive and is in no particular order.

**IF IT'S NOT SAFE DON'T DO IT AND INFORM SITE MANAGEMENT**

### Site Specific Record for Standard Traffic Management Plan

Job Name/ID:  Location:   
 Date:  SLG Cardholder:

**Step 1: Record Road Details**

Visibility:   $\geq 25m$    $\geq 35m$    $\geq 50m$    $\geq 90m$    $\geq 120m$    $\geq 160m$

Width: value (m)  Speed: value (km/h)

Urban:  Rural:  3 min traffic count: value (no.)

Road Type:  N  R  L

**Step 2: Record Work Site Details**

Time needed: value (hh:mm)

Unobstructed width left open: value (m)

Works length: value (m)

**Step 3: Record Traffic Management Selection**

Diversion  Semi-Static  2-way  All Stop  Stop-Go  Traffic Signal  
 Marshall  Priority  Give & Take  Convoy

If using standard plan, ID reference:

**Step 4: Record Traffic Management Devices Implemented**

Warn → Inform → Direct → End

Warn		Inform		Direct		End	
no.	tick	no.	no.	no.	no.	no.	no.
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		

Are all required cones (lamps & beacons) in place (& operating)  Yes  No

If using traffic signals/Stop-Go have Gardai been notified  Yes  No