

HARMONY SOLAR
EAST LIMERICK LTD.
East Limerick Substation
Development,
Hospital,
Co. Limerick
Outline Construction Traffic
Management Plan
(oCTMP)

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1.0 INTRODUCTION

1.1 General

- 1.1.1 This outline Construction Traffic Management Plan (oCTMP) has been prepared by MPA Consulting Engineers at the request of our client, Harmony Solar East Limerick Ltd, for a Proposed Substation Development at East Limerick, near Hospital in Co. Limerick.
- 1.1.2 The Proposed Substation Development forms part of a wider “Overall Project”, comprising of the following elements:
- A new 220kV substation development, Battery Energy Storage System (BESS) and associated grid infrastructure (hereafter referred to as the Proposed Substation Development), for which planning consent will be sought from An Coimisiún Pleanála (ACP) as a Strategic Infrastructure Development (SID) under Section 182A of the Planning and Development Act 2000 (as amended).
 - A solar farm and associated cable route (the Proposed Solar Farm Development), for which planning consent is sought from Limerick City and County Council under Section 34 of the Planning and Development Act 2000 (as amended).
- 1.1.3 This oCTMP is submitted to allow an initial assessment of potential construction traffic-related issues; however, it should be noted that full details of the construction programme and the source/routing of materials are not yet known. This report, therefore, sets out the best available information at this time.
- 1.1.4 Consequently, this report is presented as an ‘Outline’ version to identify and establish certain key principles concerning construction traffic movements. It is expected that conditions will be included in the permission, requiring submission and approval of a more detailed version prior to the commencement of works on site after the appointment of the Main Contractor.
- 1.1.5 The oCTMP has been informed by the Traffic & Transport Assessment work undertaken for the proposed Substation Development, details of which are included in the Traffic & Transport Assessment Report (251014-MPA-SS-X-X-XXX-RP-CE-0001 - TTA). This report details the number of construction traffic movements for deliveries and staff to and from the site.
- 1.1.6 The oCTMP has also been informed by a detailed assessment of the Proposed Substation Development access, which is also covered in the TTA and provides a detailed review of proposed access points and associated design requirements.
- 1.1.7 This plan will form part of the suite of management and control documents to be implemented during the construction period.

1.2 Scope

- 1.2.1 The plan outlines the management measures to ensure the safe and efficient movement of construction traffic and the minimisation of disruption to the local road network, landowners, and the general public during the construction phase.

- 1.2.2 This Plan will serve as the basis for the final CTMP, which the Main Contractor will be required to prepare once all programme, material quantity and material source information is known.

1.3 Structure of the Report

- 1.3.1 The remainder of this document is structured as follows:

- **Section 2** provides an overview of the Proposed Substation Development with details of the site access strategy for construction-related traffic.
- **Section 3** identifies the construction traffic generation and staff levels.
- **Section 4** identifies the measures to be introduced to manage construction traffic.
- **Section 5** identifies the communication, emergency procedures and enforcement of the plan.
- **Section 6** outlines the conclusions of this report.

2.0 PROJECT LOCATION AND ACCESS STRATEGY

2.1 Background

- 2.1.1 This oCTMP relates specifically to the Proposed Substation Development, however, information relating to the Overall Project and the related land parcels has been included for consideration in a cumulative construction context.

2.2 Proposed Substation Development

- 2.2.1 The Proposed Substation Development will consist of a 10-year planning permission for the construction of a 220kV Loop In Loop Out (LILO) substation and associated works within a site of 17.02 hectares which will include the following:

- Transmission System Operator (TSO) compound with an area of approximately 14,158m², containing a two-storey 220kV GIS substation building with a footprint of approximately 1,844m², a total floor area of 3,550.8m², and a height of 20.7m.
- Customer compound with an area of approximately 4,576m², containing a customer building with a footprint of approximately 346.2m², a total floor area of 311.8m² and a height of 7.62m.
- 220kV customer transformer positioned within bunded enclosures, with a height of 9.5m above finished ground level.
- 220kV electrical infrastructure including transformers, switchgear, gantries, insulators, conductors, protection and control equipment, and all associated electrical plant and apparatus.
- A Battery Energy Storage System located within a dedicated BESS compound and including:
 - 55 no. containerised battery storage module(s), each measuring 6.06m long, 2.44m wide and 2.9m high.
 - 28 no. containerised transformer and power conversion / conditioning unit(s), each measuring 6.06m long, 2.44m wide and 2.9m high.
 - Ancillary BESS infrastructure including inverters, transformers, switchgear, control equipment, thermal management systems, fire detection and suppression systems, acoustic screening, and associated electrical plant.
- Removal of 1 no. existing 25m high steel lattice tower, and the installation of 2 no. steel lattice towers of 26.5m high, foundations and associated insulators, hardware and conductor.
- 4no. lightning protection mast(s), with a height of 18m.
- 1 no. telecommunications mast, with a height of 37.52m.
- 140m of underground electrical cable and associated ducting, including joint bays, cable sealing end compounds, marker posts and associated infrastructure.
- Internal access tracks.
- A new access point from the L1509 public road.
- Removal of derelict farm building.
- Landscaping and biodiversity enhancement measures.

- Security gates, boundary fencing and all associated ancillary development, site works and services.

2.3 Project Location

2.3.1 The Proposed Substation Development is located in Parcel 4 within the townlands of Gotoon, Coolscart and Kilfrush to the south of Parcel 2. The land parcel contains the Proposed Substation Development and is located south-west of the village of Hospital.

2.3.2 The Overall Project, which includes the Proposed Solar Farm Development includes the following development parcels, which are described below and shown in **Figure 3.1**.

- Parcel 1 is the most northerly parcel is within the townlands of Ballyhaukish and Millfarm and is accessed via the L1507.
- Parcel 2 is within the townland of Coolscart, to the south of Parcel 1, and is accessed via the R516.
- Parcel 3 is located within the townland of Coolalough, to the east of Parcel 2. The parcel sits just outside the village of Hospital and is accessed via the R513.
- Parcel 5 is located within the townland of Newtown. This is the most south-westerly parcel and is accessed via the L1509.
- Parcel 6 is located within the townland of Ballycahill, to the east of Parcel 5, also accessed via the L1509
- Parcel 7 is located within the townland of Ballycahill, south-east of Parcel 6. The parcel is located to the north-west of the village of Knocklong and is accessed via the L51309.

Parcel 8 is located within the townlands of Kilfrush and Knocklong. The parcel is located to the east of Parcel 7, north-west of the village of Knocklong and is also accessed via the L51309.

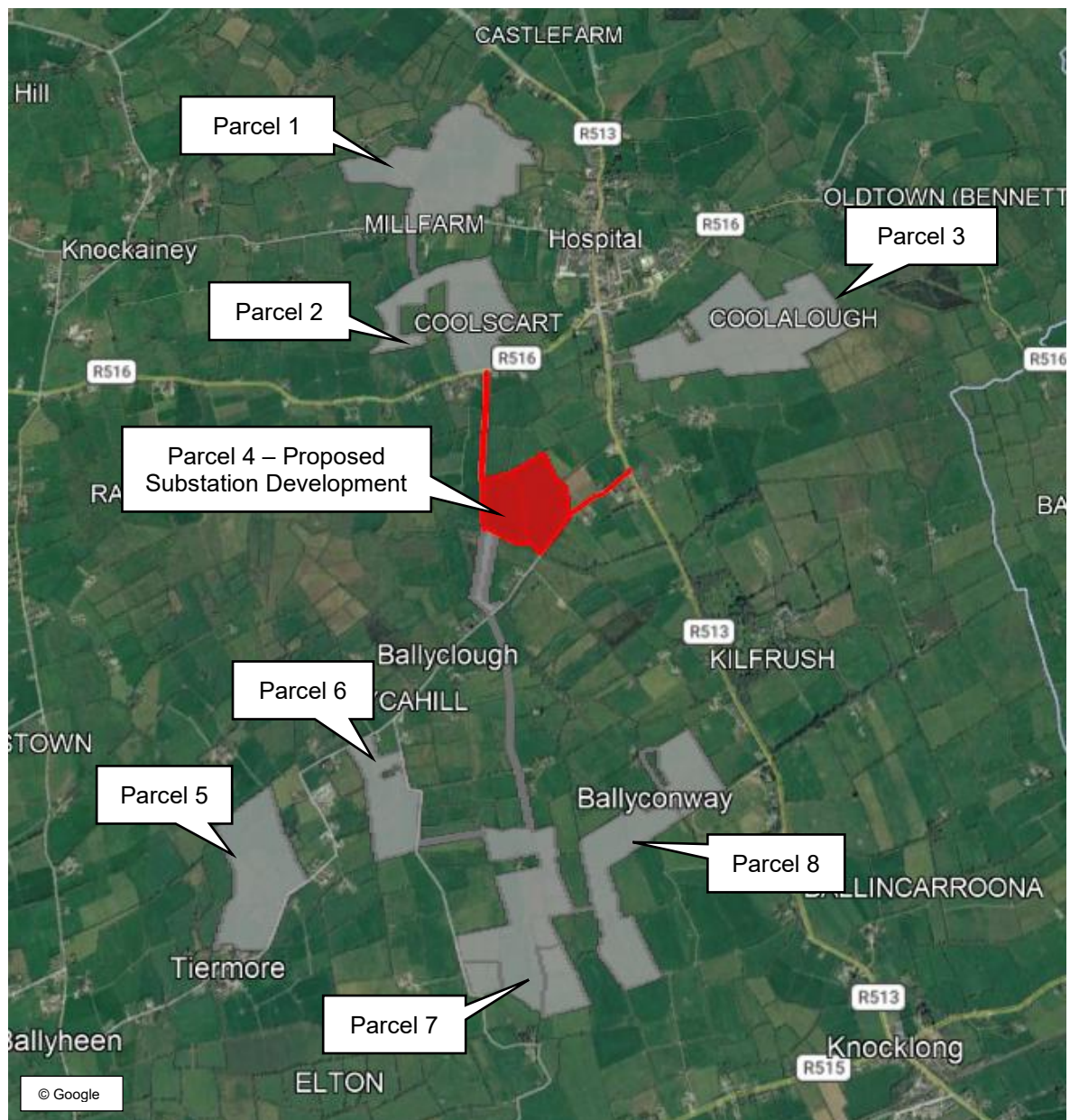


FIGURE 2.1 – PROPOSED DEVELOPMENT PARCELS

2.4 Phasing

2.4.1 The Proposed Substation Development works will be phased as follows:

- Initial site set up for site accesses, access tracks and compounds
- Foundations and yard slabs
- Construction of substation building / control room buildings
- Installation of Transformer, inverters etc
- Installation of electrical plant, switchgear & LV cabling
- Comms, CCTV, security fencing and gates
- MV cable connections

2.4.2 The proposed BESS will be phased as follows:

- Initial site set up for site accesses, access tracks and compounds
- Foundations and yard slabs
- Construction of control room buildings
- Installation of Battery Modules, inverters etc
- Installation of electrical plant, switchgear & LV cabling
- Comms, CCTV, security fencing and gates
- MV cable connections

2.4.3 Although not part of this application, information relating to the solar farm works sequencing has been included for cumulative consideration.

2.4.4 The Proposed Solar Farm Development works will follow the following sequence:

- Initial site set up for site accesses, access tracks and compounds
- Foundation and frame construction
- Panel installation
- Electrical skids and LV cabling
- Comms, CCTV & Fencing
- MV cable connections

2.4.5 Each task above will be carried out by individual crews who will move from parcel to parcel as each is finished. On this basis, it is anticipated that up to six parcels will be under construction at any one time.

2.5 Construction Access Strategy

Site Access Points

2.5.1 The access for the Proposed Substation Development will be taken from the L1509 existing public road. This access point has been subject to a detailed assessment as part of the TTA, which reviewed sightlines, visibility splays, geometry, surfacing, and constraints, including overhead services and adjacent features. The access location is shown in **Figure 2.2** overleaf and included in Drawing No. 251014-MPA-SS-X-X-DR-CE-1200, an extract of which is shown in **Figure 2.3**.



FIGURE 2.2: PARCEL NO. 4 ACCESS FROM L1509



FIGURE 2.3: SUBSTATION ACCESS ASSESSMENT EXTRACT

2.5.2 Additionally, a second temporary access from the R516 to the north has been assessed as a contingency route for the transformer delivery if required, as shown in **Figure 2.4** overleaf.



FIGURE 2.4: TEMPORARY ACCESS FROM R516

2.6 Access Routes

2.6.1 At the time of the planning application, the developer is unsure of the preferred access route from the Motorway network, as this will be determined by the port of entry for overseas materials (Dublin, Cork, Foynes or Limerick). Therefore, two access routes are considered as shown in **Figure 2.5** and summarised below:

- To the north from Junction 29 of the M7 via the N24 and R513; and
- To the south from either Junctions 12 and 13 of the M8 near Mitchelstown via the R513.

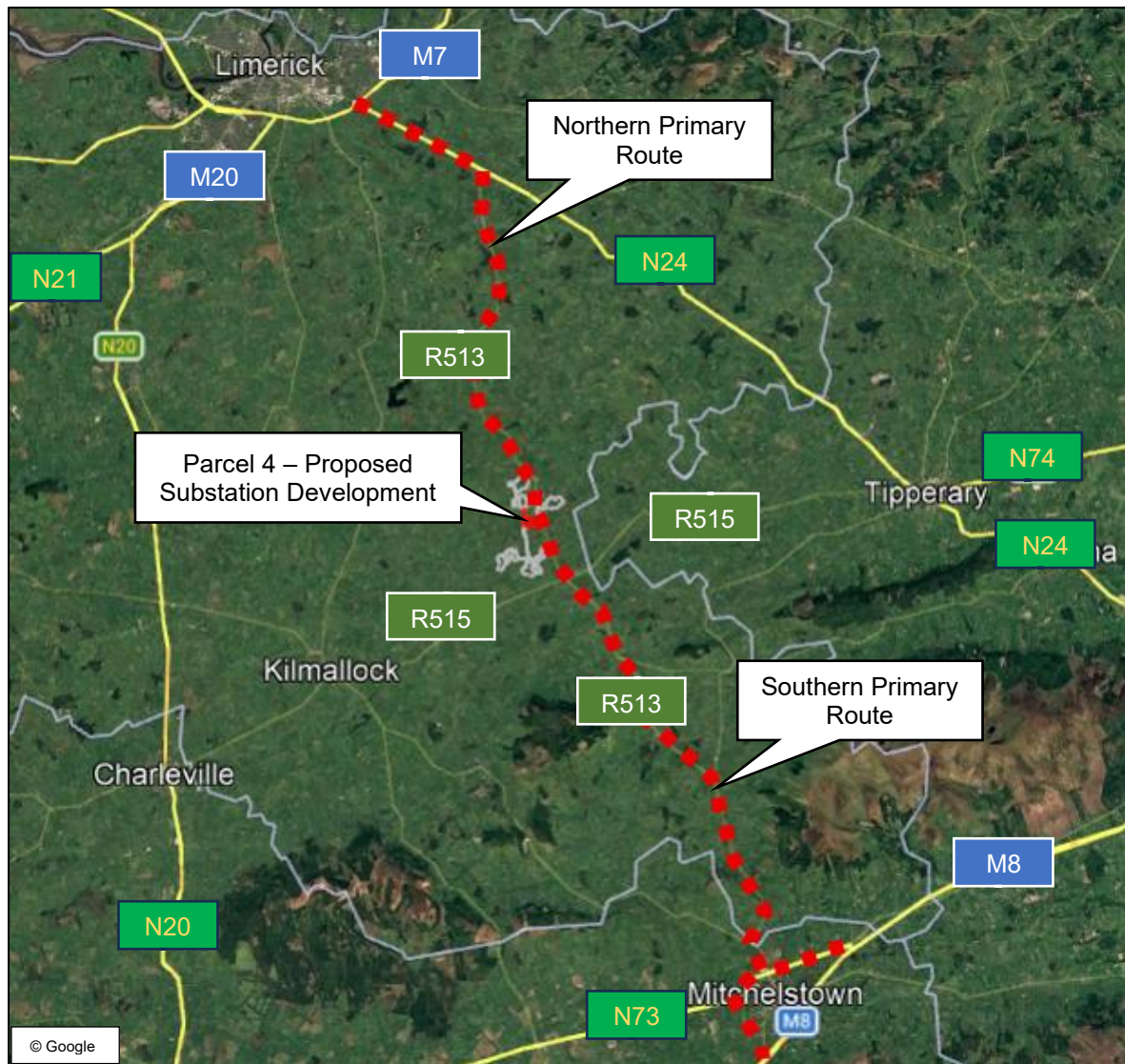


FIGURE 2.5: PRIMARY ACCESS ROUTES

2.6.2 Closer to the development sites, the R513 will operate as the Primary Route to the National Road Network. Within the vicinity of the sites, other Regional and Local roads will form the Secondary Routes to the individual parcels as summarised below and shown in **Figure 2.5**:

- The L1509;
- The R516;
- The L1507 (Millfarm); and
- The L51309.



FIGURE 2.6: PRIMARY AND SECONDARY CONSTRUCTION ACCESS ROUTES

2.6.3 In addition to the public roads, an internal haul route, as shown in **Figure 2.6**, will be constructed to connect Parcel 7 to Parcel 8.

2.6.4 For the purposes of this assessment, the development parcels have been grouped based on their respective access route:

- Parcel 4 – Proposed Substation Development – Accessed via the L1509
- Parcel 1 – Accessed via the L1507
- Parcel 2 – Accessed via the R516
- Parcel 3 – Accessed via the R513
- Parcels 5 & 6 – Accessed via the L1509
- Parcels 7 & 8 – Accessed via the L51309

Access Route Improvements

- 2.6.5 To facilitate safe access for HGVs, a range of temporary and/or permanent improvement works may be required. These may include:
- Regrading and surfacing of site entrance
 - Removal or trimming of boundary vegetation and trees
 - Setback of stone walls to improve sightlines
 - Localised widening and strengthening of verges
 - Construction of temporary overrun areas or bell mouths
- 2.6.6 Localised road widening works are proposed on the L1509, the extent of these works are shown on MPA Drawings 251014-MPA-SS-X-X-XXX-DR-CE-1201 and 251014-MPA-SS-X-X-XXX-DR-CE-1202.
- 2.6.7 All works will be designed in accordance with the relevant Limerick City & County Council & TII standards and in consultation with Limerick City & County Council where public road interfaces are involved.

Construction Signage

- 2.6.8 Temporary construction signage will be erected in advance of the works. This will include:
- Advance warning signs on local approach roads
 - Directional signage for construction vehicles
 - Site entrance signs including contact details
- 2.6.9 Signage will be installed in accordance with Chapter 8 of the Traffic Signs Manual and subject to the approval of Limerick City & County Council.

2.7 Access for Construction Personnel

- 2.7.1 During the construction works, construction personnel will access the site using the prescribed Primary and Secondary Access Routes to access the various sites.

2.8 Construction Site Layout

- 2.8.1 The contractors' compounds will be located in each parcel or connected parcels of the site. It will contain welfare facilities, sign in / sign out facilities, Construction Management Team (CMT) offices, kitchen facilities, toilets, storage / workshop areas for the contractors and sub-contractors, together with parking for the construction personnel as discussed above.
- 2.8.2 Construction compounds are shown in **Figure 2.7** overleaf.



FIGURE 2.7 – EXTRACT OF JBA SUBSTATION COMPOUND LOCATION

- 2.8.3 Security and sign in / sign out facilities will be located at each site entrance, thereby helping to control access to the construction site.

2.9 Construction Personnel

- 2.9.1 It is envisaged that there will be approximately 14 construction personnel on site daily during the initial site establishment and ground works phase for the Proposed Substation Development. This is expected to increase to approximately 35 construction personnel daily during peak construction activity for the development.
- 2.9.2 On occasions, this may further increase, depending on the individual activities taking place on any particular day.
- 2.9.3 Full details will be provided in the final version of the CTMP, once known.

2.10 Construction Parking

- 2.10.1 Construction personnel parking will not be permitted on any public or private road.
- 2.10.2 Construction car parking will be fully contained within each of the various site compounds. The details will be confirmed prior to construction at the relevant site.

- 2.10.3 Parking for construction personnel and site visitors will be provided in line with expected personnel levels i.e. approximately 30 spaces (50 no. personnel at peak, based on an occupancy of 2 persons per vehicle) for construction staff and 5 no. visitor spaces also included.
- 2.10.4 The quantum of parking available will be kept under review by site management throughout the construction phases and adjusted as required to allow for all planned staff and to have capacity for busy periods on site. Further details will be provided in the final version of the CTMP.

2.11 Construction Programme

- 2.11.1 It is not possible to provide a definitive construction programme at this application stage; it is however expected that the works will take up to 18 months to complete. The construction programme will be dependent on several factors such as detailed design, the appointed contractor's preference, lead times of specified materials etc. which themselves could be influenced by any planning conditions imposed on the subsequent consent.
- 2.11.2 A detailed construction programme will form part of the final CTMP, which will be prepared by the main contractor and issued prior to commencement of construction.
- 2.11.3 Information relating to the Proposed Solar Farm construction programme is included for cumulative consideration as part of the Overall Project.
- 2.11.4 The preliminary programme of 18 months is expected to break down as follows:
- Parcel 4: Proposed Substation Development – 18 months
 - Parcel 1: Solar Farm – 6 months
 - Parcel 2: Solar Farm – 6 months
 - Parcel 3: Solar Farm – 6 months
 - Parcels 5 & 6: Solar Farm – 6 Months
 - Parcels 7 & 8: Solar Farm – 6 Months
- 2.11.5 The proposed Solar Farm Development forms a separate application to Limerick City and County Council but has been included in this assessment to provide a complete assessment of traffic impact from the development.
- 2.11.6 The overall construction programme illustrating the different parcels and elements of the Overall Project and how the peaks in construction trips (shown red below) in each will be distributed over the programme of the works is shown in **Figure 2.8** overleaf.

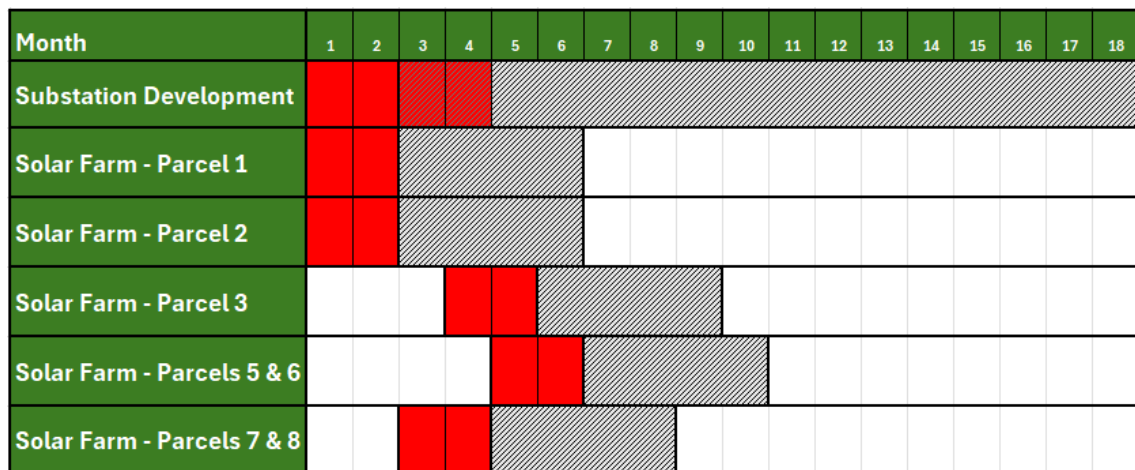


FIGURE 2.8: PRELIMINARY CONSTRUCTION SCHEDULE WITH INDICATIVE PEAKS

2.11.7 A detailed construction programme will form part of the final CTMP which will be issued prior to commencement of construction. The main contractor will prepare the final CTMP.

3.0 CONSTRUCTION TRAFFIC GENERATION

3.1 General

- 3.1.1 Details of construction traffic volumes based on the planning stage designs are set out in the Traffic & Transport Assessment Report (251014-MPA-SS-X-X-XXX-RP-CE-0001 - TTA). Further detailed design work, programming and measurement of quantities will be required between the grant of planning permission and commencement of construction. These factors potentially have an influence on the number of deliveries to the site and the number of waste removals from the site.
- 3.1.2 Following detailed design and further assessment of construction traffic volumes these may be updated as part of the final CTMP which will be issued prior to the commencement of construction. The Main Contractor will be required to prepare the final CTMP.
- 3.1.3 All construction traffic will access the development site via routes detailed in **Figure 2.4** and **Figure 2.5**.

3.2 Scheduling of Deliveries

- 3.2.1 The Main Contractor will appoint a Construction Traffic Manager (CTM) who will schedule all deliveries to the site. This will be carried out to prevent clashes in delivery times with other surrounding sites and prevent congestion on the local road network.
- 3.2.2 Deliveries will be scheduled during working hours but outside of peak times and school drop off and collection times in order to minimise impacts on the locality.
- 3.2.3 Further details will be provided in the final version of the CTMP, once known.

3.3 Travel Options for Construction Personnel

- 3.3.1 Given the number and rural location of the sites, it is envisaged that construction personnel will travel to and from the site by private car/van / minibus with little opportunity for walking, cycling and public transport. However, the main contractor will promote car / van sharing to mitigate the lack of sustainable travel options.

3.4 Construction Traffic Generation

Heavy Goods Vehicle (HGV) Movements

- 3.4.1 As set out in the Traffic and Transport Assessment, peak construction activity associated with the Proposed Substation Development could generate up to approximately 52 two-way HGV movements (50 trips for peak BESS and 2 for average substation trips) per day (i.e. 26 arrivals and 26 departures). These peak periods would be short-term and associated with specific construction activities such as earthworks and material deliveries.
- 3.4.2 On a typical working day, HGV movements are expected to be substantially lower, averaging approximately 7 two-way movements per day for the Proposed Substation Development, and 21 two-

way movements per day for the Proposed Solar Farm Development across the construction programme. These movements would be distributed throughout the day and, where practicable, managed to avoid local peak traffic periods.

Cars and Vans

- 3.4.3 Construction workforce and associated light vehicle movements for the Proposed Substation Development are expected to generate 93 two-way car and van trips per day during peak construction periods, equating to around 46 arrivals and departures at the start and end of the working day. These movements include both staff commuting and incidental trips (e.g. for materials, supervision and site logistics).
- 3.4.4 The Proposed Solar Farm Development is anticipated to generate approximately 111 two-way car and van trips per day during peak construction periods, equating to around 55 arrivals and departures at the start and end of the working day.
- 3.4.5 On a typical working day, light vehicle movements for the Proposed Substation Development are expected to average approximately 56 two-way trips per day or less, reflecting lower workforce levels and reduced activity outside peak construction periods.
- 3.4.6 Similarly, light vehicle movements for the Proposed Solar Farm Development are expected to average approximately 25 two-way trips per day or less, reflecting lower workforce levels and reduced activity outside peak construction periods
- 3.4.7 Measures such as car sharing, crew transport (e.g. minibuses) and the coordination of site activities will be implemented, where practicable, to reduce the number of individual vehicle trips and minimise impacts on the surrounding road network.

4.0 CONSTRUCTION TRAFFIC MANAGEMENT PLAN

4.1 General

- 4.1.1 To construct the proposed development, it is important that construction traffic and traffic on the existing road network are managed to maximise construction efficiency and safety while minimising risk, inconvenience, and nuisance to the public. This will be achieved through careful management, programming and co-ordination of all works and traffic accessing the site.
- 4.1.2 The Main Contractor will be required to appoint a Construction Traffic Manager (CTM). The CTM will be required to coordinate and schedule all deliveries to the site to ensure that two-way HGV movements do not occur in opposing directions on the same secondary access routes, ensure that roadways are kept clear of mud and debris, advise haulage contractors on routes, and adhere to good traffic management principles.

4.2 Hours of Working

- 4.2.1 The site working hours are expected to be 07:00 to 19:00 on weekdays and 08:00 to 14:00 on Saturday. No works will be undertaken on Sundays or Bank Holidays, without the consent of Limerick City & County Council.
- 4.2.2 To maintain these working hours, the Main Contractor, and their sub-contractors may require a period of up to half an hour before and after normal working hours for preparation and close down activities. This period will not include the operation of plant or machinery, nor will it include import or export of materials to or from the site.
- 4.2.3 In exceptional circumstances, for safety and operational reasons, it may be necessary to work outside of these hours. Should this be required, the hours and duration of work will be subject to consultation with Limerick City & County Council and kept to a minimum.
- 4.2.4 In certain circumstances, it may be necessary to arrange deliveries outside of the normal site working hours. This will be agreed in advance with Limerick City & County Council.

4.3 Access and Egress

- 4.3.1 Refer to Section 2 for details.
- 4.3.2 All construction traffic associated with the development will access the various sites using either the Primary and Secondary Routes as identified in **Figure 2.5** and **Figure 2.6**.

4.4 Proposed HGV Routes

- 4.4.1 Refer to Section 2.6 and to **Figure 2.5** and **Figure 2.6**.

4.5 Traffic Management Principles

4.5.1 To minimise the impact of HGV movements on the existing road network the following construction traffic management principles will be observed:

- To minimise the impact that the construction works will have on local residents and surrounding environment, the Main Contractor will be required to appoint a Construction Traffic Manager (CTM)
- A Designated Community Liaison Officer (DCLO) will also be appointed to be a direct contact point for the local communities. Details of the DCLO will be provided to Limerick City & County Council prior to construction.
- The CTM will be required to schedule all deliveries to the site and to communicate with delivery drivers to ensure that disruption on the local road network is minimised and that no two-way HGV movements occur in opposing directions on the same secondary access route.
- The CTM will be responsible for ensuring all delivery vehicles to and from the site are managed efficiently and reduce nuisance or unnecessary disruption to the operation of the existing road network.
- The CTM role will also include advising haulage contractors and their drivers of the route to follow when approaching the site, providing advice on local width and weight restrictions.
- The CTM will ensure traffic management principles and any agreed mitigation are implemented and that the public road is kept clear of mud and debris through ensuring that loads are suitably sheeted and secured and undertaking regular road cleaning as necessary.
- To assist the CTM, a Banks person will be stationed at the various site access gates to directly control HGV movements as they arrive and depart the site. The role will include ensuring loads are appropriately sheeted, ensuring vehicles have passed through the wheel wash, and mud is not deposited on the public road, ensuring drivers follow any informal vehicle routings within the site, addressing any immediate issues raised by the public and supervising turning movements in and out of the site.
- The DCLO will be appointed as a point of contact with local residents and Limerick City & County Council.
- The DCLO will be required to implement a Communications Plan, outlining an effective communication strategy for engagement with the community and ensuring that residents and businesses in the locality are consulted and informed with regards to construction traffic impact related to the development.

4.5.2 The final Construction Traffic Management Plan will be incorporated as part of the overall Health and Safety policy for the site.

4.6 Signage

4.6.1 Traffic management signage will be erected by the Main Contractor in accordance with the final CTMP, and as agreed with Limerick City & County Council.

- 4.6.2 Signage will include construction site entrance warning signs and HGV routing signage. All signage shall be provided in accordance with the Department of Transport's Traffic Signs Manual, Chapter 8 – Temporary Traffic Measures and Signs for Roadworks.

4.7 Site Fencing and Access

- 4.7.1 Fencing, secured to a minimum height of two (2) metres, will be provided along the construction site boundary to prohibit unauthorised access where there are not sufficient existing boundary fences.
- 4.7.2 The fencing will be checked daily and maintained as necessary. It will be the responsibility of the Site Manager to open and lock the construction site access gates each day and to ensure the site is not left open and unattended at any time.
- 4.7.3 Access to the construction site will only be to authorised persons.

4.8 Construction Traffic Speed Limits

- 4.8.1 Adherence to posted speed limits will be emphasised to all staff / suppliers and contractors during induction training.
- 4.8.2 Construction vehicle and HGV drivers will be advised to adhere to a 30km/h speed limit on local roads including the L1509.
- 4.8.3 Site posted speed limits along the construction access routes will be 10km/h.

4.9 Wheel Washing Facilities

- 4.9.1 A wheel wash facility will be provided, if necessary, such as during excavation works.
- 4.9.2 During these works, all HGVs will be inspected prior to leaving site and washed down at the site wheel washing facility as required. The wheel washing facility will assist in reducing the displacement of materials onto the local road network.
- 4.9.3 The wheel wash facility will be located adjacent to the site entrance and will be manned full time to register all vehicles entering and departing the site and to monitor use of the wheel wash. This will ensure that vehicle wheels are as clean as possible before returning to the public roads.

4.10 Road Cleaning

- 4.10.1 The CTM will ensure traffic management principles and the mitigation measures are implemented and that the public road is kept clear of mud and debris through ensuring that loads are suitably sheeted and secured and undertaking regular street cleaning as necessary.

4.11 Road Condition

- 4.11.1 The CTM will ensure that the transportation contractor shall take all reasonable measures while transporting any material likely to cause fugitive losses from the vehicle during transportation to / from the site.

- 4.11.2 The Main Contractor will carry out a pavement condition survey of the local roads one month prior to the start of works.
- 4.11.3 Throughout the course of the project delivery, on-going visual inspections and monitoring of the primary haulage routes will be carried out to ensure damage caused by construction traffic is recorded and Limerick City and County Council is notified. Arrangements will be made to repair any such damage to an appropriate standard and in a timely manner.
- 4.11.4 Upon completion of the Development, the pavement condition survey, carried out at the preconstruction phase, will be repeated and a comparison of the pre and post construction surveys carried out. Where such comparative assessments identify a section of road as having been damaged or as having deteriorated as a clear result of construction traffic, the road will be repaired to the satisfaction of Limerick City & County Council.

4.12 Road Closures

- 4.12.1 Temporary or partial road closures may be required to facilitate the Proposed Substation Development, and the normal application procedures will be applied, and this will be coordinated with Limerick City & County Council and the relevant road authorities.
- 4.12.2 There may also be a need for partial road closures for utility connections, however, where possible, a stop-and-go system will be deployed over a full road closure.

4.13 Additional Mitigation Measures

- 4.13.1 To reduce the impact of construction works on the surrounding area, the following measures will be introduced and retained through the course of the construction works:
- Use of water suppressants – During dry weather, all on-site access tracks and material stockpiles will be watered at suitable intervals to reduce the likelihood of dust clouds forming and escaping from the site. This will reduce the overall impact of the works on any neighbouring uses; and
 - No vehicles idling – Where possible, on-site vehicles will be encouraged to turn off their engines when parked, waiting to unload or when not in use. This will reduce the noise impact on the surrounding area and will result in lower vehicle emissions.
 - As much as possible, excavated material will be reused on site for the construction of general landscaping.
 - Access track construction and other site activities that require a large number of deliveries will be planned to avoid peak traffic times.
 - Any excess materials to be removed from site will be planned so as to minimise traffic impact.
 - There is a requirement for the import of materials for access tracks, drains and parking areas. As much as possible, materials such as stone and concrete will be sourced locally, from a number of quarries operating in the area. These deliveries will be spread out throughout the day and will be planned on an as needed basis.

- All HGV's hauling to the site will come from quarries with weigh bridges and the legal weight limits will not be exceeded.
- During the various phases of construction, parking will be provided on site to accommodate the construction generated vehicle movements, thereby ensuring that there is not an overspill of parked vehicles onto the surrounding local road network.
- Workers will arrive on site in the minimal number of vehicles possible.
- The new site entrances will be formed at commencement of the project and will be kept clear at all times so that free movement of vehicles is possible and so that proper viewing of the road from both sides is possible when entering and leaving the site. The new site accesses/egresses will provide a safe exit and entrance route, and this area will be maintained throughout the project.
- Traffic Management Plans including signage and advanced warning will be prepared for the various phases of construction.

4.14 Abnormal Loads

- 4.14.1 It is envisaged that 1 no. abnormally large or heavy load will be required during the construction process of the Proposed Substation Development, this will be required for the Transformer delivery to the substation site along the R513 and the L1509 to the south, with a secondary temporary access route from the R516 to the north also assessed as a contingency route.
- 4.14.2 A Swept Path Assessment has been carried out along this route to show that the vehicle movements for the transformer delivery can be accommodated by the L1509, and the R516.
- 4.14.3 Temporary or partial road closures may be required to facilitate this, and the normal application procedures will be applied, and this will be coordinated with Limerick City & County Council and the relevant road authorities.

5.0 IMPLEMENTATION

5.1 Communication

- 5.1.1 The Main Contractor shall communicate with Limerick City & County Council and emergency services throughout the construction phase.
- 5.1.2 The Main Contractor shall ensure that all submissions required under the Planning Permission are provided to Limerick City & County Council and any other body required under the Planning Permission.
- 5.1.3 The Main Contractor, CTM and the DCLO shall liaise with the other construction projects in the area to avoid conflicts with deliveries, road closures or similar.
- 5.1.4 The Main Contractor, CTM and the DCLO will also liaise with Limerick City & County Council and community representatives about community events that may be impacted by the proposed traffic management measures.
- 5.1.5 The CTM and DCLO's contact details will be provided to Limerick City & County Council and will be available at the site entrance.

5.2 Emergency Procedures

- 5.2.1 The Main Contractor shall be required to appoint a safety officer for the site and comply with all relevant Safety and Health Legislation, including the provision of first aiders.
- 5.2.2 The Main Contractor shall provide necessary contact information for responsible personnel to the local authority and emergency services.

5.3 Enforcement

- 5.3.1 All personnel working on site shall be required to adhere to the Final CTMP. An information session on the responsibilities of contractors, as set out in the Final CTMP, shall be included in the site induction programme.

6.0 CONCLUSION

6.1 General

- 6.1.1 This outline Construction Traffic Management Plan (oCTMP) sets out the basis for mitigating the impacts of the construction related traffic from the proposed East Limerick Substation Development, near Hospital, Co. Limerick. This is part of a wider Overall Project with a Proposed Solar Farm Development, which has been considered in the wider cumulative scenario. There are sufficient vehicle routing and delivery scheduling options available to mitigate the traffic impacts of the construction phase of the Overall Project.
- 6.1.2 The Main Contractor will be required to prepare the final CTMP, at which point greater detail will be available on the programme for works, methods of construction, volumes of construction materials and likely traffic movements associated with the construction. The final CTMP will also demonstrate compliance with any conditions set out in the Planning Permission.
- 6.1.3 The CTM will be required to coordinate and schedule all deliveries to the site to ensure that two-way HGV movements do not occur in opposing directions on the same secondary access routes, ensure that roadways are kept clear of mud and debris, advise haulage contractors on routes, and adhere to good traffic management principles, as well as any future agreed mitigation measures.
- 6.1.4 The client will appoint a Designated Community Liaison Officer (DCLO) as a point of contact with local residents and Limerick City & County Council. The DCLO will also implement a Communication Plan with the community to minimise disruption to residents and businesses in the locality.