

MWP

Traffic Management Plan (TMP) **Carrownagowan 110kV Grid Connection**

FuturEnergy Carrownagowan DAC

November 2023

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MWP, Engineering and Environmental Consultants

Address: Reen Point, Blennerville, Tralee, Co. Kerry, V92 X2TK

www.mwp.ie



1. Introduction

FuturEnergy Carrownagowan DAC (the ‘Applicant’) is seeking planning consent from An Bord Pleanála (ABP) under section 182A of the Planning and Development Act 2000 for a grid connection to provide a connection to the national grid from the consented Carrownagowan Wind Farm in Co. Clare (hereafter referred to as the ‘Proposed Development’). The Proposed Development is an integral element of the overall Carrownagowan Wind Farm project.

This Traffic Management Plan (TMP) outlines the procedures to be implemented during the construction of the project for the Carrownagowan underground grid connection. In the event ABP decides to grant approval for the Proposed Development, the final TMP will address the requirements of any relevant planning conditions, including any additional mitigation measures which are conditioned by the ABP.

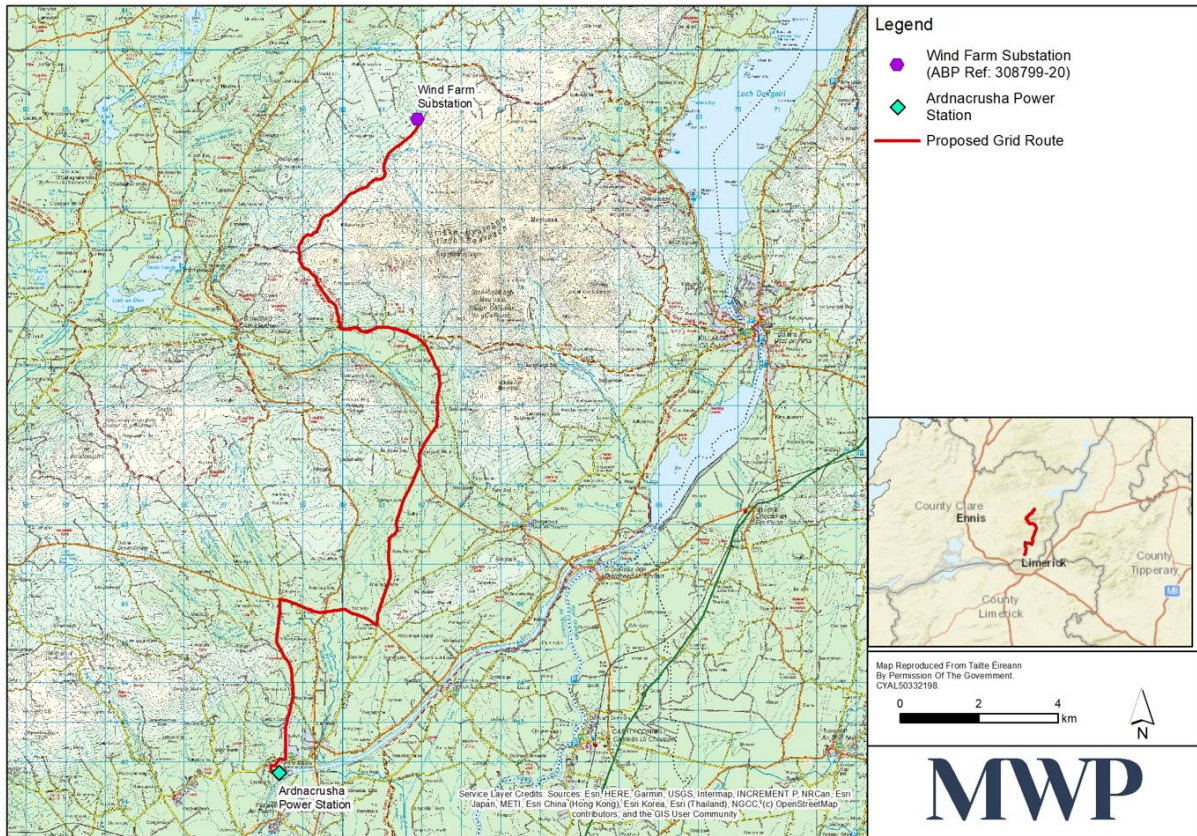


Figure 1-1 Site Location Map

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 with the relevant procedures as outlined in **Section 7** of this TMP. Against this background, and in the context of the construction of the Proposed Development, the appointed contractor shall properly plan and manage the project to ensure that:

- Works within the road network do not result in safety hazards to road users or the workforce involved in the Proposed Development.
- 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 project and will endeavour to minimise the effect of the works on traffic in the planning and programming of the works at construction stage.

3. Overview of Proposed Development

The Proposed Development comprises a 25km long 110kV underground cable connection from the permitted Carrownagowan Wind Farm substation to the existing ESB owned 110kV substation at Ardnacrusha, County Clare which will allow the electrical energy generated from the wind farm to be exported onto the national grid.

The individual turbines within the consented Carrownagowan Wind Farm will be connected electrically by underground cables to a new 110kV substation to be constructed within the wind farm site. The Carrownagowan Wind Farm substation will in turn be connected via an underground grid connection cable to the existing ESB owned 110kV substation at Ardnacrusha, County Clare which will allow the electrical energy generated from the wind farm to be exported onto the national grid.

4. Construction Works

4.1 Construction Programme

The active construction area will generally be only along a 100-200m stretch of any roadway at any one time. The construction works are estimated to take approximately 6-8 months and will overlap with the wind farm works. During the first 4 months the cable trenches will be constructed. The second 4 months will involve sequentially opening up all joint bays (these are pre-cast concrete chambers that will be required along the Proposed Development over its entire length) and pulling electrical cables pulled through ducts and then joining each cable together. There are 35 joint bays with 2-3 days' work involved at each joint bay location. Standard working hours (subject to planning consent and local authority stipulated conditions) for construction will be 8.00am to 8.00pm

Monday to Friday and 8.00am to 6.00pm on Saturday (if required), with no works on Sundays or Bank Holidays except in exceptional circumstances or in the event of an emergency. Any deviations to these times will be agreed in advance with Clare County Council. It is expected that the civil works for the Proposed Development will require at least 10 personnel to complete the works. The electrical works will require less heavy machinery but more skilled labour personnel, with typically 25 personnel to complete the works.

4.2 Description of Works

The installation of the Proposed Development along the public roads will involve 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 and service providers 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 sections. All plant operators and general operatives will be inducted and informed as to the location of any services.
- Prior to works commencing a pre-construction survey will be carried out photographing and noting any existing damage or defects to structures or 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 a detailed traffic management plan will be prepared 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 using an excavator machine. As stone fill is removed it is temporarily stockpiled adjacent to the trench (where it is safe to do so) 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 suitably 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 road in planned stages.
- The trench surface receives a temporary surface dressing of macadam. The grid connection route and associated road areas will receive a new permanent macadam finish or tar, spray and chip permanent surface dressing as agreed with Clare County Council.
- Joint bays are to be installed along the Proposed Development in the public road or along the grass margin of the public road. Once installed they are temporarily reinstated until they are opened again to allow for pulling cables through the ducts and jointing the cables afterwards. The joint bays will then be permanently backfilled and reinstated to the satisfaction of Clare County Council.
- Directional drilling will occur at seven (7) watercourse crossing points where there is insufficient cover on a bridge crossing to allow the grid connection route pass over the crossing in a standard trefoil formation. The launch and reception pits to be made in the public road or grass margin will be permanently backfilled and reinstated to the satisfaction of Clare County Council.

- 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 roads impacted by the Proposed Development, both pre and post construction. This will include a video survey of the road extent with any significant dilapidations further recorded by photography and local surveying as required.

4.3 Delivery Route for Materials

During the construction of the Proposed Development, 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. There are two quarry facilities in the areas which are capable of supplying these construction materials, McGraths quarry in Tulla and O’Connell Quarries in Ballycar, Ardnacrusha. The closest is McGraths in Tulla.

Heavy vehicles will typically arrive and depart at a uniform rate throughout the day. The Proposed Development site will operate for 12 hours per day during the construction period. However, hours of operation will be limited for HGV movements in order to allow for residents to avoid non-coinciding commuting during the morning and evening peak hours, in particular during local school start and finish times. Therefore the Proposed Development would permit heavy vehicle movements access for approximately 10 hours per day during the construction period. It is anticipated that a succession of 8m³ or 10m³ trucks will transport the material at a peak frequency of 3 trucks/hour.

The scale of the Proposed Development will require deliveries to access various locations where the Proposed Development is to be constructed along the public roads. It is envisaged that deliveries will use the R465 and R466 Regional roads to access the northern section of the cable route and use the R465 and R471 Regional roads to access the southern section.

4.4 Construction Traffic

Construction traffic shall access and egress the works via the delivery route as outlined above. A summary of the approximate number of truck deliveries to the Proposed Development site is outlined in Table below.

Table 4-1 lists the vehicles and equipment required during the construction phase. **Table 4-2** outlines the anticipated vehicle movements per day during the construction phase.

Table 4-1 List of Vehicles Required for Works

Equipment/vehicles	Traffic Generated
HDD 3 Tonne Drilling Rig	1
Duct Reel Trailer	1
Vans	4
Track machines varying sizes	2
Flatback trucks	2
Road sweeping unit	1
Dumpers	2
Mini – digger	1
Employees cars/vans	25
Total	39

Table 4-2 Vehicle Movements per day

Vehicle	Traffic Generated
Flatback trucks	2
Employee cars	13
Vans	4
Concrete truck	1
Materials delivery truck	1
Waste removal trucks	10
Total	31

5. Existing Road Network

The road network for Proposed Development is shown in **Figure 5-1**.

5.1 Motorway Network

The general area surrounding the wind farm site is not served by any Motorways.

5.2 National Primary Road Network

The general area surrounding the Proposed Development site is not served by any National Primary roads.

5.3 National Secondary Road Network

The general area surrounding the Proposed Development site is not served by any National Secondary roads.

5.4 Regional Road Network

The following regional roads are located close to the Proposed Development site:

- R466
- R471
- R465
- R483

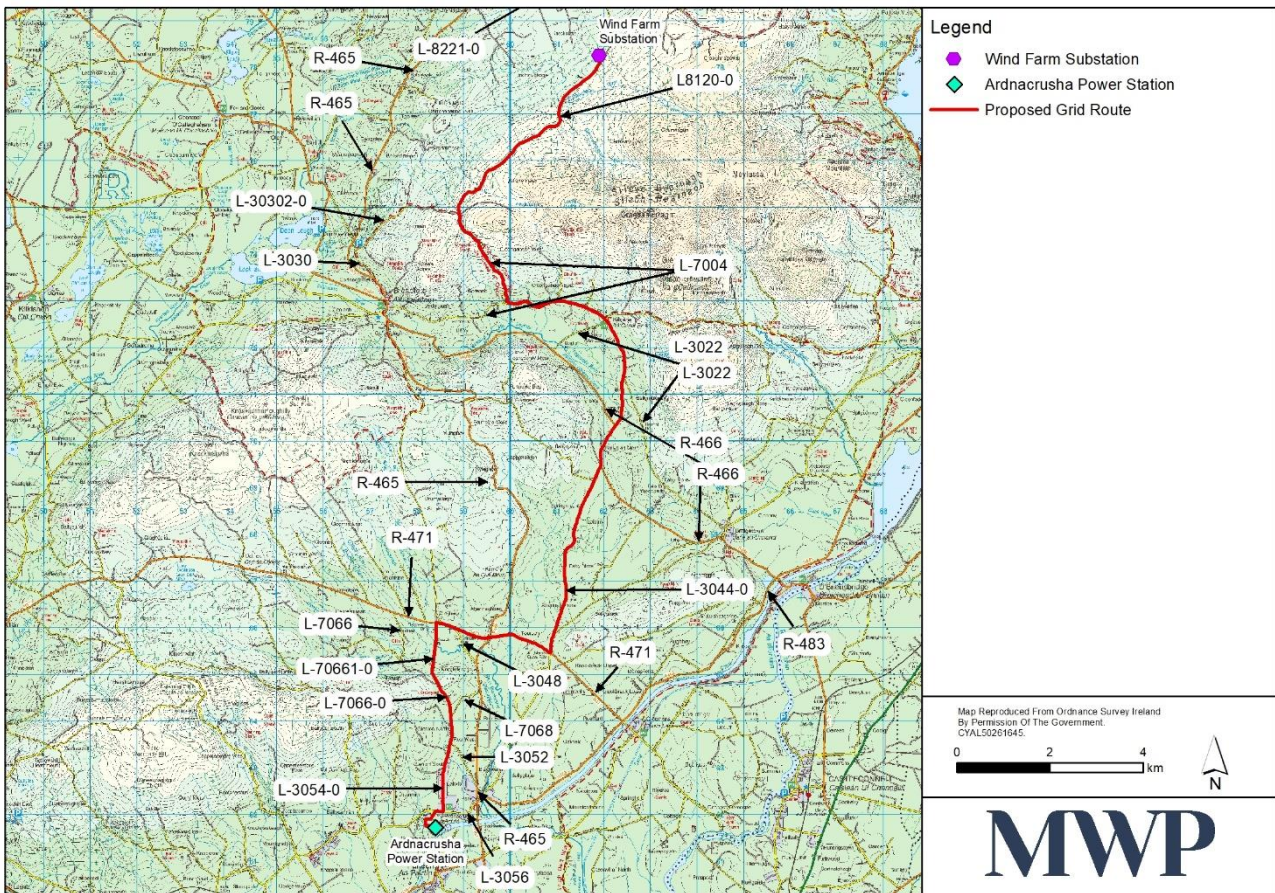
5.5 Local Road Network

The following local roads are located close to/within the Proposed Development site:

- L-8221-0
- L-8218-0
- L-3030

- L-30302-0
- L-7004
- L-3022
- L-3044-0
- L-7066
- L-70661-0
- L-7066-0
- L-3054-0
- L-3048
- L-7068
- L-3052
- L-3056

Figure 5-1 Road Network Map



6. Duties and Responsibilities

The following parties will be kept informed by the appointed contractor of developments in relation to traffic management:

- Appointed Contractor
- An Garda Síochána
- Road Engineers for Local Authority (Clare County Council)
- Emergency Services

6.1 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. 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.

6.2 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.

6.3 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 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.

6.4 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.

7. Traffic Management and Control Procedures

7.1 General

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

7.2 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.

7.3 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.

7.4 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. All forms of media will be utilised to communicate and convey traffic disruption and mitigation measures including diversions and stop-go systems as part of the TMP. This would include local and/or national printed media, radio, project website and letter drops. Local community WhatsApp groups have also been requested off the back of the community engagement process completed as part of this project development process which would give up to date feedback and updates on the intended road closure dates, diversions and progress. Dedicated project community Liaison Officers will also be available to call or request visits throughout the duration of the project to field questions or alert the project team to any concerns.

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.

7.5 Emergency Crew

- The appointed contractor's emergency contact telephone number shall be displayed at the appointed contractor's site office and shall 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 shall 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 shall 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.

7.6 Signage

- All sign faces are to be retro-reflective material to Class Ref 2 of EN 12899. The colours, chromaticity and luminance factors shall be as specified in Specification TS4.
- Signage shall 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.

7.7 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. A road condition log will be maintained throughout the construction phase to track and check road conditions.

7.8 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 shall be emphasised to all construction staff.
- There must 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.

7.9 Road Crossings

Where the Proposed Development is planned to cross the public road, the appointed contractor will decide on the best method for controlling traffic. The ducting shall cross the road in two phases. Phase one will construct the trench as far as the centre line of the carriageway and then have the road and trench temporarily reinstated.

Once the work has been completed on the closed lane, the area is inspected and traffic management procedures will switch to the opposite lane for phase two. An "All Stop" system, in accordance with Section 0.5.2.6 of the Temporary Traffic Management Design Guidance, Third Edition 2019 will be used to control traffic and to allow the works commence on the other lane. Once the work has been fully complete, the trench and road can be temporarily reinstated.

7.10 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.

The following sections outline the single lane and full road closures identified to facilitate the construction of the Proposed Development.

7.10.1 Single Lane Closures

Single lane closures will be implemented as the construction of the cable trench progresses along the cable route. It is envisaged that 100 - 200m of the cable route will be constructed each day and therefore single lane closures will move with the works. The single lane closure will be controlled by way of either a stop-go system, a priority yield system or by temporary traffic lights. The appointed contractor will ensure that procedures and works for single lane closures are in accordance with Section 0.5.2 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 is envisaged, pending confirmation at construction stage, that the following roads will have single lane closures during the construction of the cable route with approximate lengths shown:

Regional Roads in County Clare

- R466: The L-3022 / R466 junction at Ballyquin Beg to the R466 / L-3044 junction at Springmount (900 metres)
- R471: R471/L-70661 junction to the R471/L-3048 Junction (400 m).

Local Roads in County Clare

- L-3056-0: The L-3054 / L-3056 junction at Lakyle to the Ardnacrushna Power Station at Castlebank (200 metres).

7.10.2 Full 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. Road closures are to be planned on a rolling basis so when works on a section of the grid connection cable route are complete then roads will re-open. This will ensure roads are not closed for longer than necessary. 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 adhere to requirements set out in Chapter 8 of the Traffic Signs Manual 2019.

It is envisaged, pending confirmation at construction stage, that the following roads will have full road closures during construction of the grid connection cable route with approximate lengths shown:

Proposed Regional Road Closure in County Clare

- R471: R465 / R471 Junction to the R471 / L-3048 junction at Cloghera (800 metres)
- R471: R471 / R465 Junction to the R471 / L-3044 junction at Tooreen (1.4 kilometres)

Proposed Local Road Closures in County Clare

- L-30302-0: The L-3030 / L-30302 junction at Violethill to the L-30302 / L-7004 junction at Cloongaheen West (5.0 kilometres)
- L-7004-17: The R465 / L-7004 junction at Broadford to the L-7004 / L-3022 junction at Kilbane (5.0 kilometres)
- L-3022-8: The L-3022 / L-7004 junction at Kilbane to the L-3022 / R466 junction at Ballyquin Beg (2.4 kilometres)
- L-3044-0: The R466 / L-3044 junction at Springmount to the L-3044 / R471 junction at Harols Cross Roads (4.2 kilometres)
- L-70661-0: The R471 / L-70661 junction at Cloghera to the L-70661 / L-7066 junction at Trough (1.3 kilometres)
- L-7066-0: The L-70661 / L-7066 junction at Trough to the L-7066 / L-7068 junction at Roo West (700 metres)
- L-3054-0 (1st Section): The L-7068 / L-3054 junction to the L-3054 / L-3052 Junction at Roo West (600 metres)
- L-3054-0 (2nd Section): The L-3054 / L-3052 Junction at Roo West to the L-3054 / L-3056 junction at Lakyle (1.5 kilometres).

7.11 Traffic Diversions

Diversions will be implemented to provide an alternative route for road closures during construction. Road closures will be sequenced in order to prevent unnecessary delays to the public and allow the appointed contractor to achieve their construction timeline. Information and directional signage will be provided to inform the public of road closures and direct them along diversion routes. Local access will be maintained for residents where possible.

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 require an inspection prior to diverting traffic. These will need to be inspected again closer to the time of the works to ensure no hazards have occurred since the traffic management plan was developed.

It is envisaged, pending confirmation at construction stage, that the following roads will provide a diversion for the proposed road closures where approximate diversion lengths are shown.

See Drawings **05641-DR-250** to **05641-DR-258** for map of below proposed traffic diversions.

- L-30302-0: Diversion to be made via the L-3030 Local road, the R465 Regional road and the L-7004 Local road in County Clare (4.2 kilometres)
- L-7004-17: Diversion to be made via the R465 Regional road, the R466 Regional road and the L-3022 Local road in County Clare (5.8 kilometres)
- L-3022-8: Diversion to be made via the L-3022 Local road and the R466 Regional road in County Clare (3.4 kilometres)
- L-3044-0: Diversion to be made via the R466 Regional road, the R463 Regional road and the R471 Regional road in County Clare (11.7 kilometres). Diversion to be made for north bound travel, via the R471 Regional road, the R464 Regional Road and the R466 Regional Road (16.8 kilometres).
- R471-148: Diversion to be made via the R465 Regional road, the R463 Regional Road and the L-3046 Local road in County Clare (7.2 kilometres). Diversion for east bound travel via the R465 Regional Road, the R466 Regional Road, the R463 Regional Road and the R471 Regional Road (27.8 kilometers).
- R471-148: Diversion to be made via the R465 Regional road and the L-3048 Local road in County Clare (1.5 kilometres). Diversion for west bound travel via the R471 Regional road, the L-3046 Local Road, the R463 Regional Road, the R465 Regional Road and the L-3048 Local Road (8.8 kilometers).
- L-70661-0: Diversion to be made via the R471 Regional road, the L-7070 Local road and the L-70662 Local Road in County Clare (3.0 kilometres). Diversion for east bound travel via the R471 Regional Road, the R465 Regional Road, the L-7068 Local Road and the L-7066 Local Road (4.0 kilometers).
- L-7066-0: Diversion to be made via the R471 Regional road, the R465 Regional and the L-7068 Local road in County Clare (4.2 kilometres)
- L-3054-0 (1st Section): Diversion to be made via the L-7068 Local road, the R465 Regional road and the L-3052 Local road in County Clare (4.0 kilometres)

- L-3054-0 (2nd Section): Diversion to be made via the L-3052 Local road, the R465 Regional road, and the L-3056 Local road in County Clare (2.3 kilometres).

7.12 Joint Bays

It may be necessary that joint bays on the Proposed Development are required to be left open overnight for pulling cables through the ducts and jointing the cables together. Joint bays will be individually assessed to determine what type of traffic management system will be required at each location. Safety barriers or fencing will be erected around each open joint bay with either a priority yield or temporary traffic light system utilised to safely navigate vehicles around.

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*.

7.13 Access

7.13.1 Access for Residents

- The appointed contractor shall make provision for safe access at all times to private residences in proximity to the construction works.
- Steel plates or stone will be made available to allow access to residential properties. This will be done in co-operation / communication with local residents in the area and in conjunction with local roads authority engagement and conditions.
- The appointed contractor will inform local residents of the programme of works in their area and local access will be catered for where possible.

7.13.2 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.

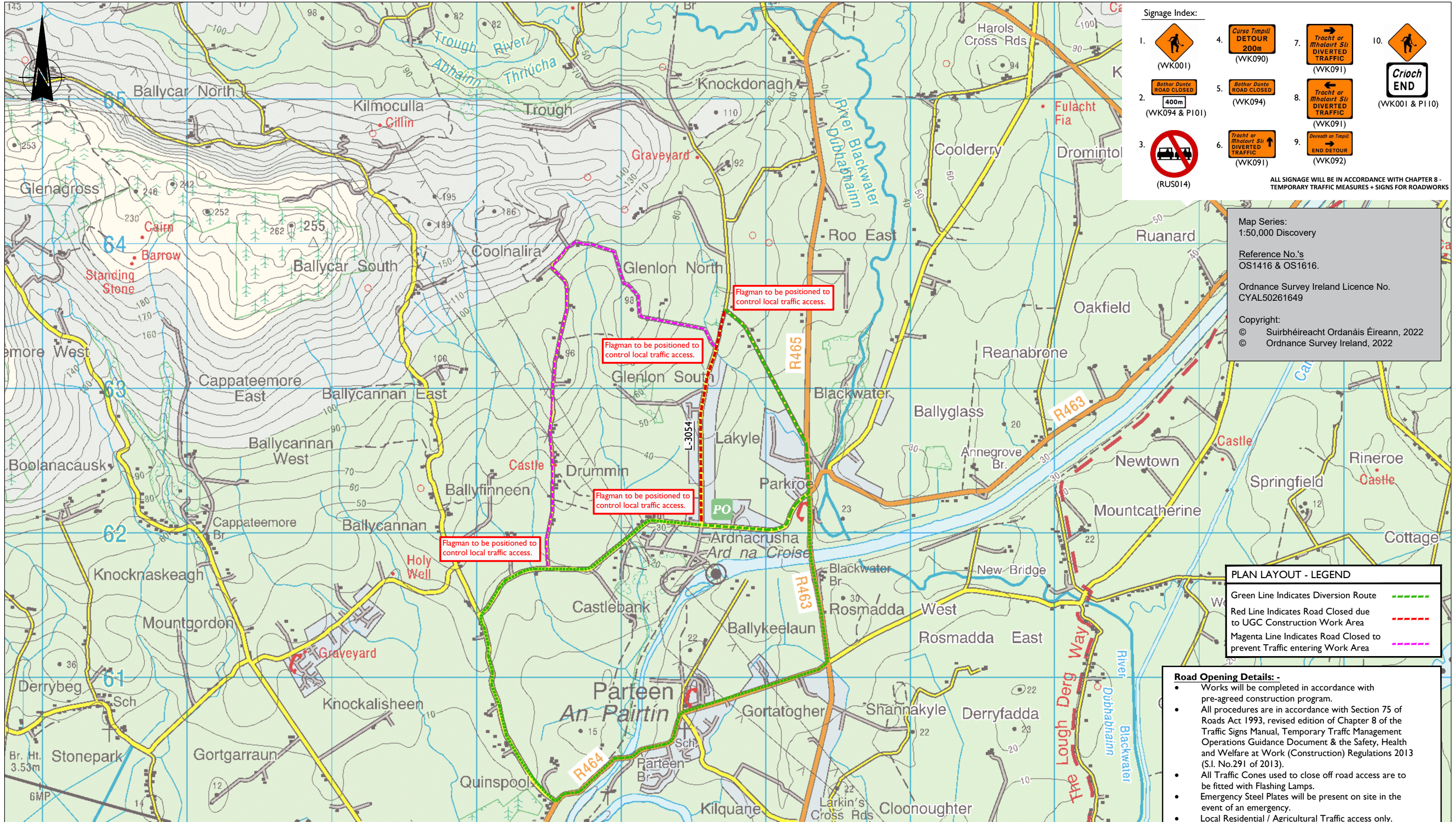
7.14 Personnel Traffic

All traffic arising from personnel (appointed contractors, sub-appointed contractors, site operatives etc.) will park their vehicles at an agreed material storage locations off the public road; for example, farm yards of pre-agreed land owners or stakeholders. Carpooling to site locations can then be carried out where necessary.

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.

7.15 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.



Signage Index:

1.	4.	7.	10.
2.	5.	8.	
3.	6.	9.	

ALL SIGNAGE WILL BE IN ACCORDANCE WITH CHAPTER 8 - TEMPORARY TRAFFIC MEASURES + SIGNS FOR ROADWORKS

Map Series:
1:50,000 Discovery

Reference No.'s
OS1416 & OS1616.

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PLAN LAYOUT - LEGEND

- Green Line Indicates Diversion Route
- Red Line Indicates Road Closed due to UGC Construction Work Area
- Magenta Line Indicates Road Closed to prevent Traffic entering Work Area

Road Opening Details: -

- Works will be completed in accordance with pre-agreed construction program.
- All procedures are in accordance with Section 75 of Roads Act 1993, revised edition of Chapter 8 of the Traffic Signs Manual, Temporary Traffic Management Operations Guidance Document & the Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No.291 of 2013).
- All Traffic Cones used to close off road access are to be fitted with Flashing Lamps.
- Emergency Steel Plates will be present on site in the event of an emergency.
- Local Residential / Agricultural Traffic access only.
- Level 2(i) Roads Single Carriageways (80 km/h) guidance applies.

Road Closure 'A' of L-3054 - Temp Traffic Management Plan - 'UG Grid Construction'
Scale: - 1:25,000

tli GROUP

Head Office
Beenreigh,
Abbeydorney,
Tralee, Co. Kerry
Ireland
Tel: 00353 66 7135710

CLIENT

FuturEnergy Ireland

PROJECT

**Carrownagowan Wind Farm
110kV Grid Connection**

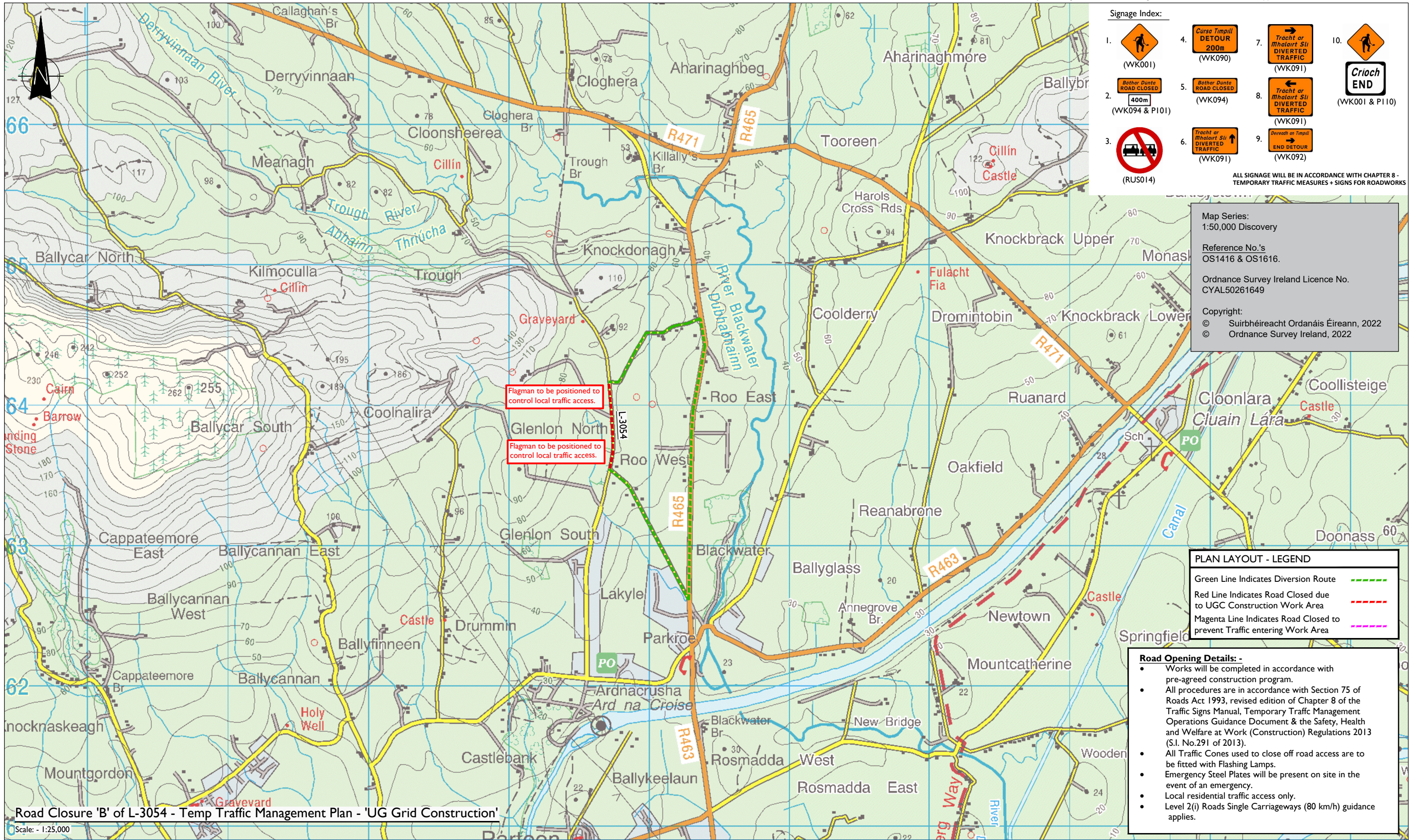
PROJECT NUMBER: 05-641
SHEET NUMBER: 05641-DR-250

SHEET TITLE

Overall Site Location Map -Temporary Traffic Management -Road Closure 'A' of L-3054

DRAWING STATUS: **FOR PLANNING APPLICATION NOT FOR CONSTRUCTION**

ISSUE/REVISION		
I/R	DATE	DESCRIPTION
P1	25.11.22	Issued for Planning



Signage Index:

1. (WK001)	4. (WK090)	7. (WK091)	10. (WK001 & P110)
2. (WK094 & P101)	5. (WK094)	8. (WK091)	
3. (RUS014)	6. (WK091)	9. (WK092)	

ALL SIGNAGE WILL BE IN ACCORDANCE WITH CHAPTER 8 - TEMPORARY TRAFFIC MEASURES + SIGNS FOR ROADWORKS

Map Series:
1:50,000 Discovery

Reference No.'s
OS1416 & OS1616.

Ordnance Survey Ireland Licence No.
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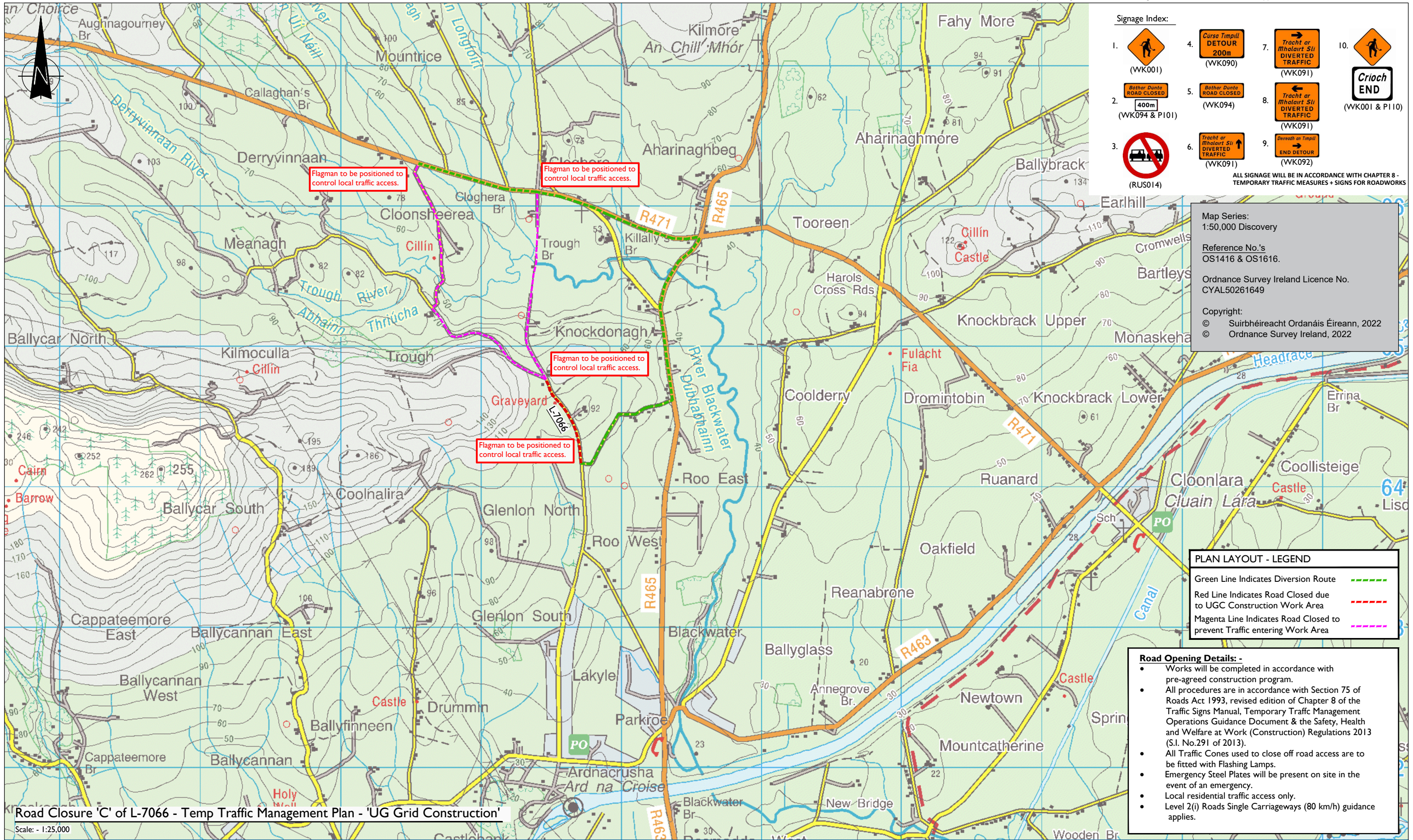
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PLAN LAYOUT - LEGEND

Green Line Indicates Diversion Route	
Red Line Indicates Road Closed due to UGC Construction Work Area	
Magenta Line Indicates Road Closed to prevent Traffic entering Work Area	

- Road Opening Details: -**
- Works will be completed in accordance with pre-agreed construction program.
 - All procedures are in accordance with Section 75 of Roads Act 1993, revised edition of Chapter 8 of the Traffic Signs Manual, Temporary Traffic Management Operations Guidance Document & the Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No.291 of 2013).
 - All Traffic Cones used to close off road access are to be fitted with Flashing Lamps.
 - Emergency Steel Plates will be present on site in the event of an emergency.
 - Local residential traffic access only.
 - Level 2(i) Roads Single Carriageways (80 km/h) guidance applies.

Road Closure 'B' of L-3054 - Temp Traffic Management Plan - 'UG Grid Construction'
Scale: - 1:25,000



Signage Index:

1. (WK001)	4. (WK090)	7. (WK091)	10. (WK001 & P110)
2. (WK094 & P101)	5. (WK094)	8. (WK091)	
3. (RUS014)	6. (WK091)	9. (WK092)	

ALL SIGNAGE WILL BE IN ACCORDANCE WITH CHAPTER 8 - TEMPORARY TRAFFIC MEASURES + SIGNS FOR ROADWORKS

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PLAN LAYOUT - LEGEND

- Green Line Indicates Diversion Route
- Red Line Indicates Road Closed due to UGC Construction Work Area
- Magenta Line Indicates Road Closed to prevent Traffic entering Work Area

Road Opening Details: -

- Works will be completed in accordance with pre-agreed construction program.
- All procedures are in accordance with Section 75 of Roads Act 1993, revised edition of Chapter 8 of the Traffic Signs Manual, Temporary Traffic Management Operations Guidance Document & the Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No.291 of 2013).
- All Traffic Cones used to close off road access are to be fitted with Flashing Lamps.
- Emergency Steel Plates will be present on site in the event of an emergency.
- Local residential traffic access only.
- Level 2(i) Roads Single Carriageways (80 km/h) guidance applies.

Road Closure 'C' of L-7066 - Temp Traffic Management Plan - 'UG Grid Construction'
Scale: - 1:25,000

tli GROUP

Head Office
Beenreigh,
Abbeydorney,
Tralee, Co. Kerry
Ireland
Tel: 00353 66 7135710

CLIENT

FuturaEnergy Ireland

PROJECT

**Carrownagowan Wind Farm
110kV Grid Connection**

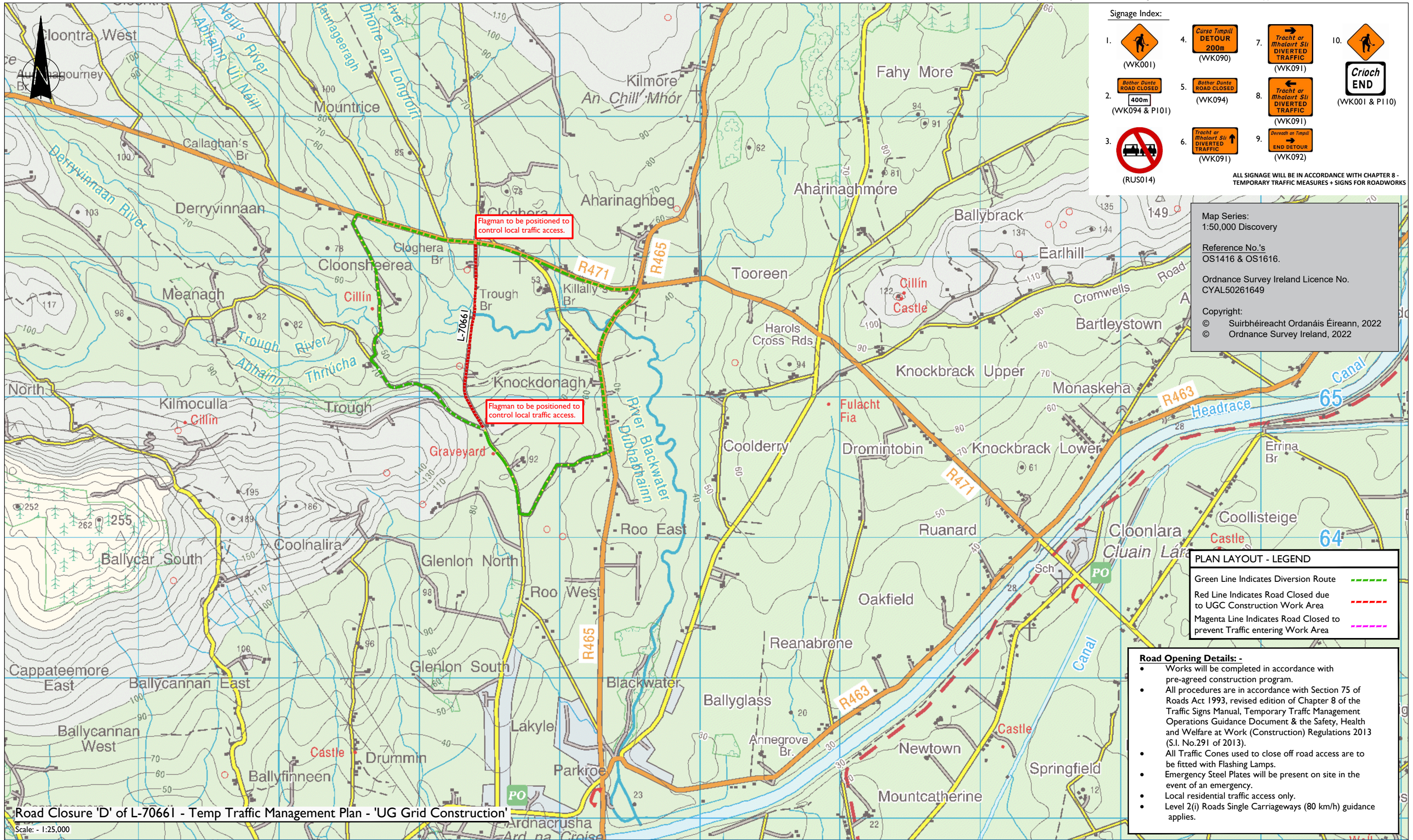
PROJECT NUMBER: 05-641
SHEET NUMBER: 05641-DR-252

SHEET TITLE

Overall Site Location Map -Temporary Traffic Management -Road Closure 'C' of L-7066

DRAWING STATUS: **FOR PLANNING APPLICATION NOT FOR CONSTRUCTION**

ISSUE/REVISION	
I/R	DESCRIPTION
P1	25.11.22 Issued for Planning
I/R	DATE DESCRIPTION



Head Office
Beenreigh,
Abbeydorney,
Tralee, Co. Kerry
Ireland
Tel: 00353 66 7135710



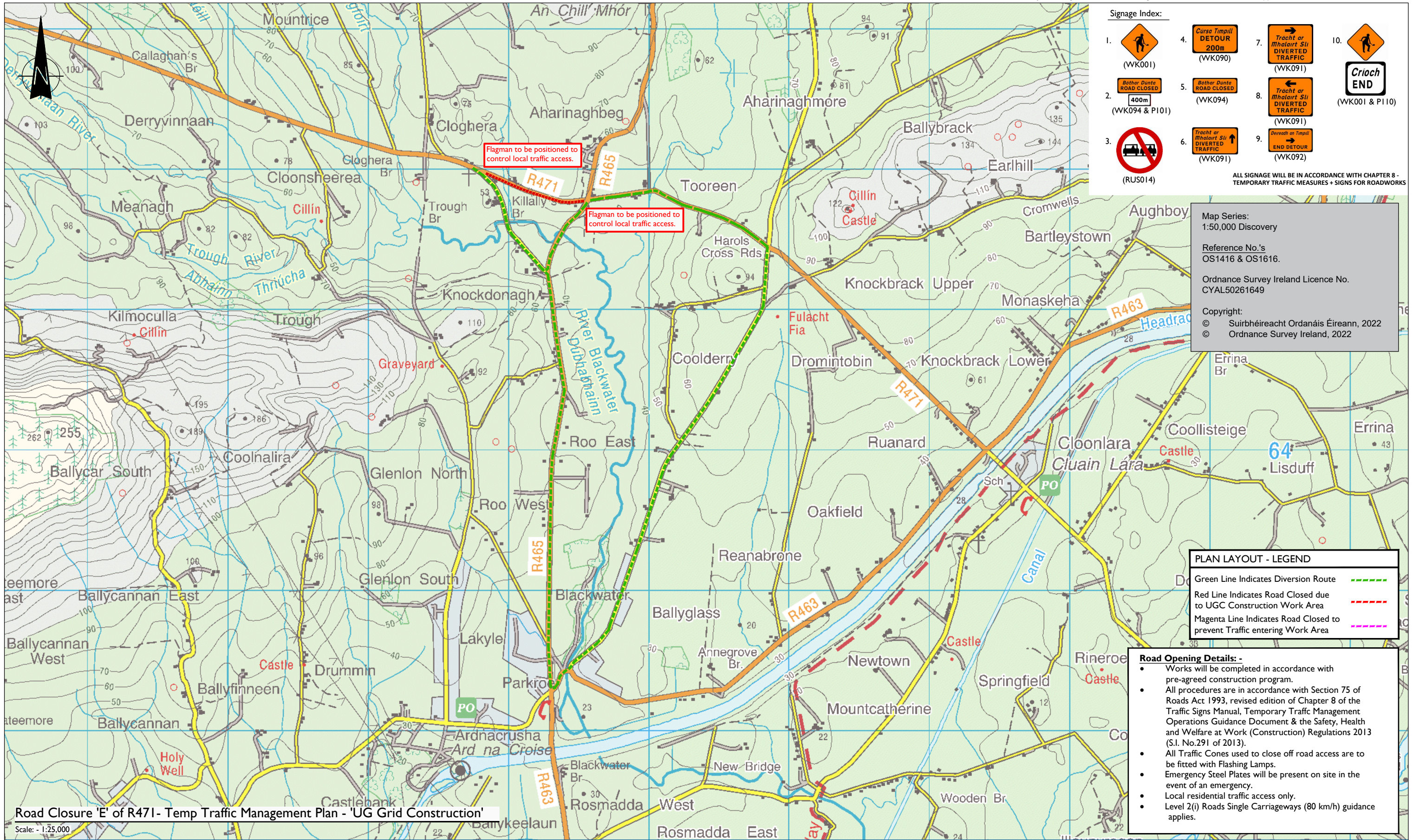
CLIENT
Carrownagowan Wind Farm
110kV Grid Connection

PROJECT NUMBER: 05-641
SHEET NUMBER: 05641-DR-253

SHEET TITLE
Overall Site Location Map -Temporary Traffic Management -Road Closure of L-70661

DRAWING STATUS
For Planning **FOR PLANNING APPLICATION NOT FOR CONSTRUCTION**

ISSUE/REVISION		
I/R	DATE	DESCRIPTION
P1	25.11.22	Issued for Planning



Signage Index:

1. (WK001)	4. (WK090)	7. (WK091)	10. (WK001 & P110)
2. (WK094 & P101)	5. (WK094)	8. (WK091)	
3. (RUS014)	6. (WK091)	9. (WK092)	

ALL SIGNAGE WILL BE IN ACCORDANCE WITH CHAPTER 8 - TEMPORARY TRAFFIC MEASURES + SIGNS FOR ROADWORKS

Map Series:
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Reference No.'s
OS1416 & OS1616.

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PLAN LAYOUT - LEGEND

Green Line Indicates Diversion Route	
Red Line Indicates Road Closed due to UGC Construction Work Area	
Magenta Line Indicates Road Closed to prevent Traffic entering Work Area	

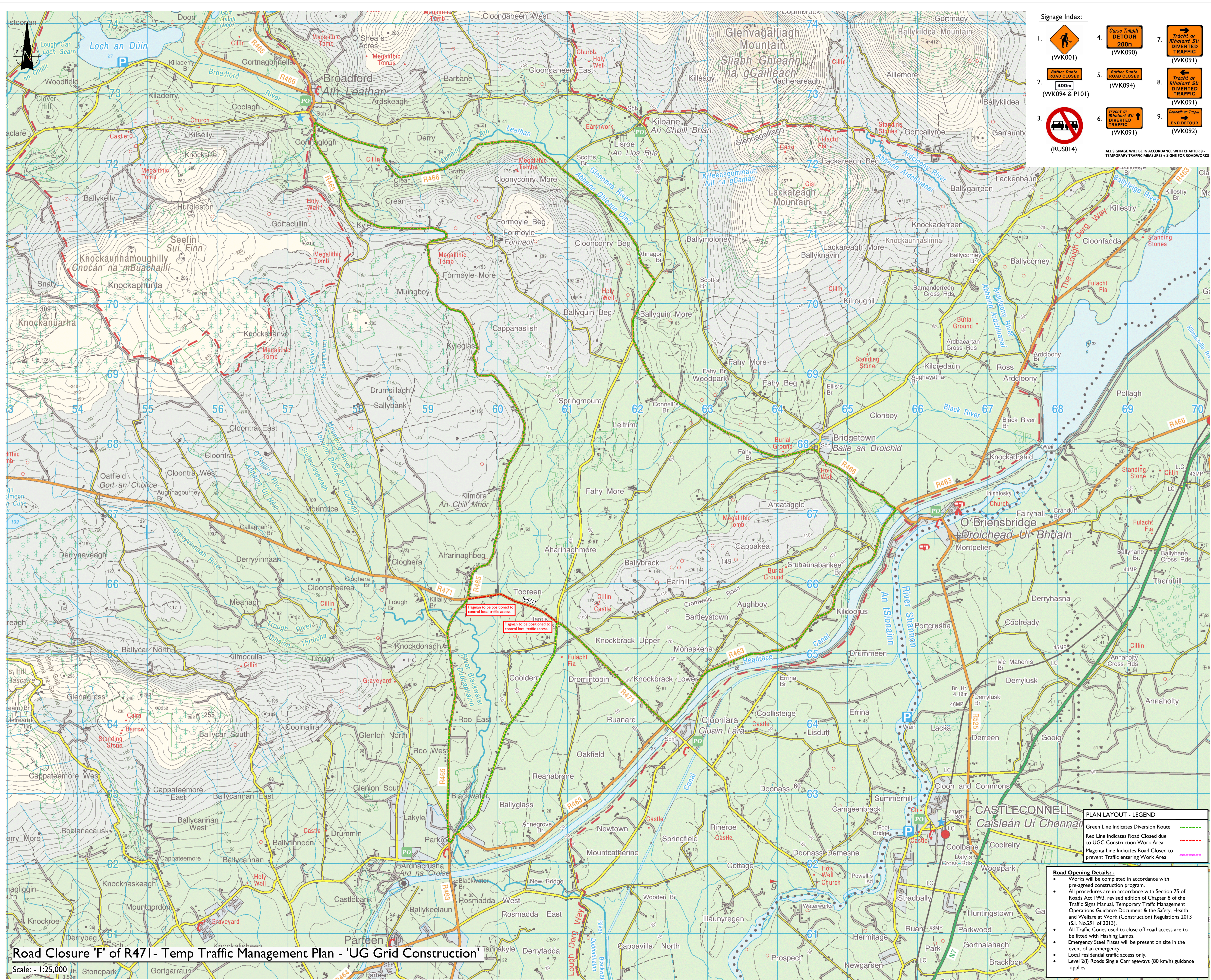
- Road Opening Details: -**
- Works will be completed in accordance with pre-agreed construction program.
 - All procedures are in accordance with Section 75 of Roads Act 1993, revised edition of Chapter 8 of the Traffic Signs Manual, Temporary Traffic Management Operations Guidance Document & the Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No.291 of 2013).
 - All Traffic Cones used to close off road access are to be fitted with Flashing Lamps.
 - Emergency Steel Plates will be present on site in the event of an emergency.
 - Local residential traffic access only.
 - Level 2(i) Roads Single Carriageways (80 km/h) guidance applies.

Road Closure 'E' of R471 - Temp Traffic Management Plan - 'UG Grid Construction'

Scale: - 1:25,000

<p>Head Office Beenreigh, Abbeydorney, Tralee, Co. Kerry Ireland Tel: 00353 66 7135710</p>	CLIENT	PROJECT	SHEET TITLE	ISSUE/REVISION								
		Carrownagowan Wind Farm 110kV Grid Connection	Overall Site Location Map -Temporary Traffic Management -Road Closure 'E' of R-471	<table border="1"> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td>P1</td> <td>25.11.22</td> <td>Issued for Planning</td> </tr> <tr> <td>I/R</td> <td>DATE</td> <td>DESCRIPTION</td> </tr> </table>				P1	25.11.22	Issued for Planning	I/R	DATE
P1	25.11.22	Issued for Planning										
I/R	DATE	DESCRIPTION										
	PROJECT NUMBER	SHEET NUMBER	DRAWING STATUS									
	05-641	05641-DR-254	For Planning									

FOR PLANNING APPLICATION
NOT FOR CONSTRUCTION



Signage Index:

1. (WK001)	4. (WK090)	7. (WK091)
2. (WK094 & P101)	5. (WK094)	8. (WK091)
3. (RUS014)	6. (WK091)	9. (WK092)

ALL SIGNAGE WILL BE IN ACCORDANCE WITH CHAPTER 8 - TEMPORARY TRAFFIC MEASURES - SIGNS FOR ROADWORKS

Head Office
Benrigh,
Abbeydorney,
Tralee, Co. Kerry,
Ireland
Tel: 00353 66 7135710

Regional Office
Basepoint Business Centre
Stourley Road, Basingstoke,
Hampshire,
RG24 8UP, UK
Tel: 00 44 1256406664

PROJECT
Carrownagowan Wind Farm
110kV Grid Connection

CLIENT
FuturaEnergy

CONSULTANTS
Malachy Walsh and Partners
Consulting Engineers

NOTES:

LEGEND:

FOR PLANNING APPLICATION
NOT FOR CONSTRUCTION

ISSUE/REVISION

NO.	DATE	DESCRIPTION
P1	xxxx	Issued for Planning
I/R	DATE	DESCRIPTION

PROJECT NUMBER
05-771

SHEET TITLE
Overall Site Location Map -Temporary
Traffic Management -Road Closure 'F'
of R-471

SHEET NUMBER
05641-DR-255

PLAN LAYOUT - LEGEND

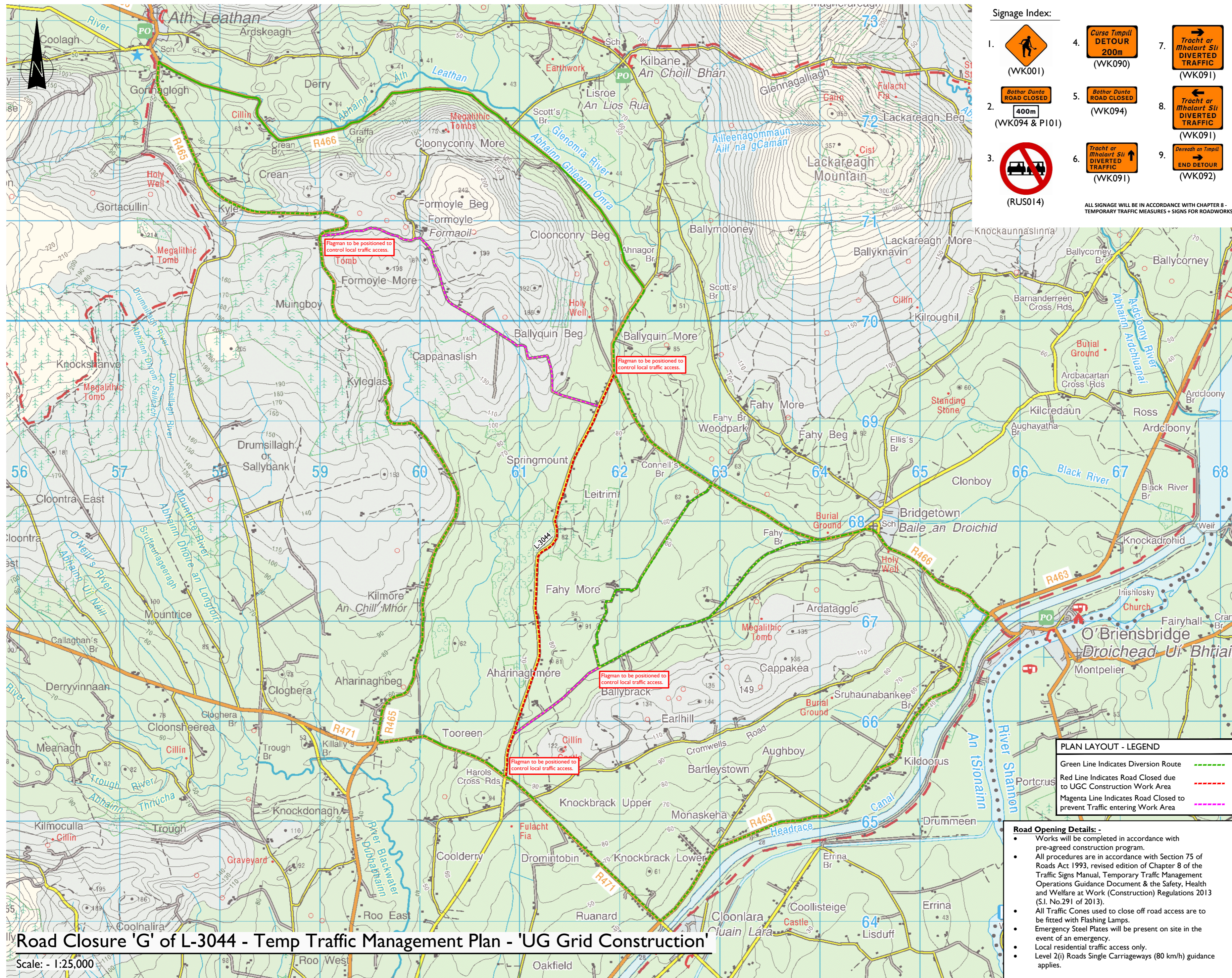
- Green Line Indicates Diversion Route
- Red Line Indicates Road Closed due to UGC Construction Work Area
- Magenta Line Indicates Road Closed to prevent Traffic entering Work Area
- Yellow Line Indicates Road Closed due to UGC Construction Work Area

Road Opening Details:

- Works will be completed in accordance with pre-agreed construction program.
- All procedures are in accordance with Section 75 of Roads Act 1993, revised edition of Chapter 8 of the Traffic Signs Manual, Temporary Traffic Management Operations Guidance Document & the Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No.291 of 2013).
- All Traffic Cones used to close off road access are to be fitted with Flashing Lamps.
- Emergency Steel Plates will be present on site in the event of an emergency.
- Local residential traffic access only.
- Level 2(i) Roads Single Carriageways (80 km/h) guidance applies.

Road Closure 'F' of R471 - Temp Traffic Management Plan - 'UG Grid Construction'

Scale: - 1:25,000



Head Office
 Beenreigh, Abbeydorney,
 Tralee, Co. Kerry, Ireland
 Tel: 00353 66 7135710

PROJECT
 Carrowagowan Wind Farm
 110kV Grid Connection

CLIENT
 FuturEnergy Ireland

CONSULTANTS
 Malachy Walsh and Partners
 Consulting Engineers

NOTES:

- This drawing is to be read in conjunction with relevant engineering drawings, specifications and reports
- Dimensions are in millimeters, unless noted otherwise
- Drawings are not to be scaled use figured dimensions only

LEGEND:

FOR PLANNING APPLICATION NOT FOR CONSTRUCTION

ISSUE/REVISION

P1	xxxxx	Issued for Planning
I/R	DATE	DESCRIPTION

PROJECT NUMBER

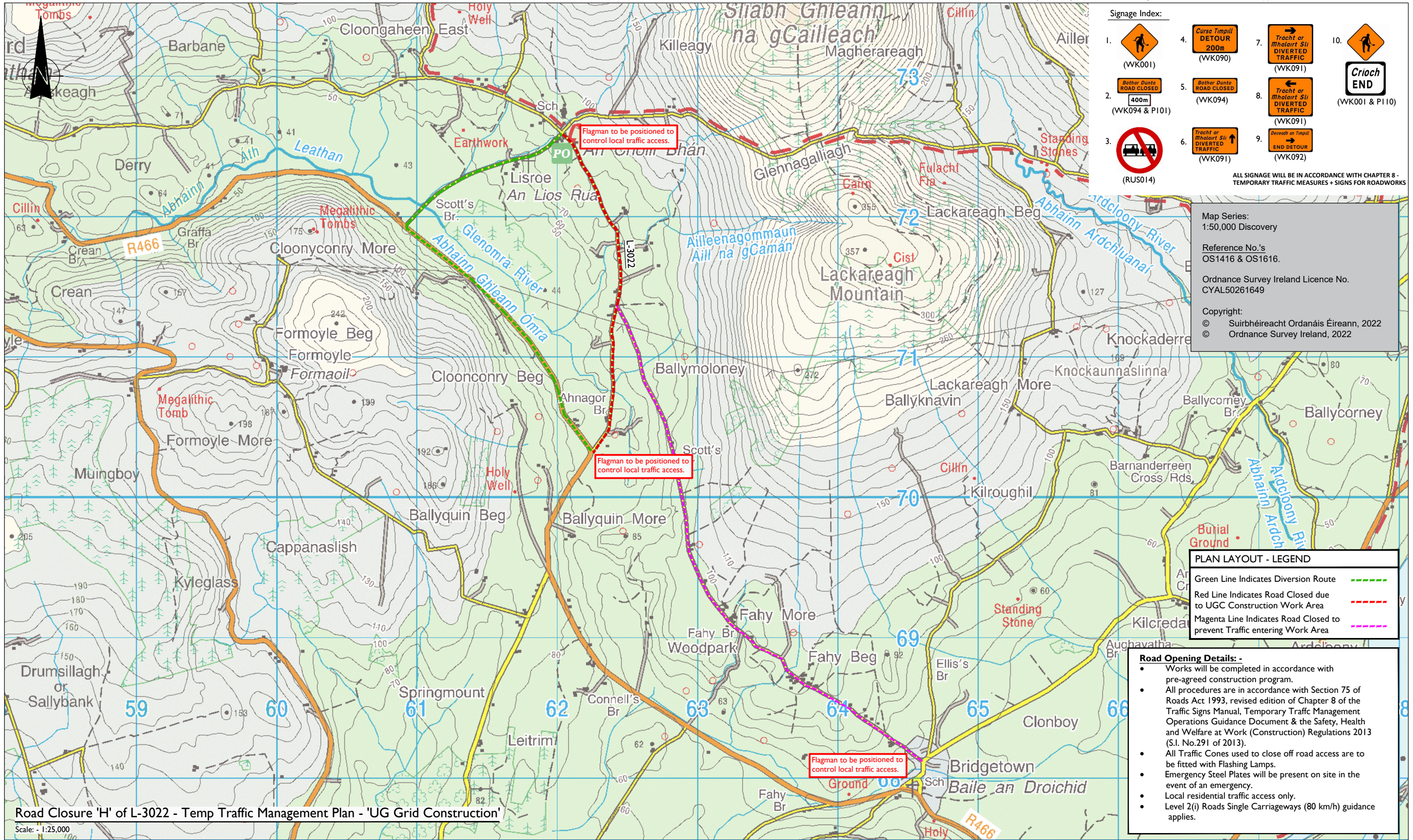
05-850

SHEET TITLE

Overall Site Location Map -
 Temporary Traffic Management -
 Road Closure 'G' of L-3044

SHEET NUMBER

05641-DR-256



Signage Index:

1. (WK001)	4. (WK090)	7. (WK091)	10. (WK001 & P110)
2. (WK094 & P101)	5. (WK094)	8. (WK091)	
3. (RUS014)	6. (WK091)	9. (WK092)	

ALL SIGNAGE WILL BE IN ACCORDANCE WITH CHAPTER 8 - TEMPORARY TRAFFIC MEASURES + SIGNS FOR ROADWORKS

Map Series:
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Reference No.'s
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PLAN LAYOUT - LEGEND

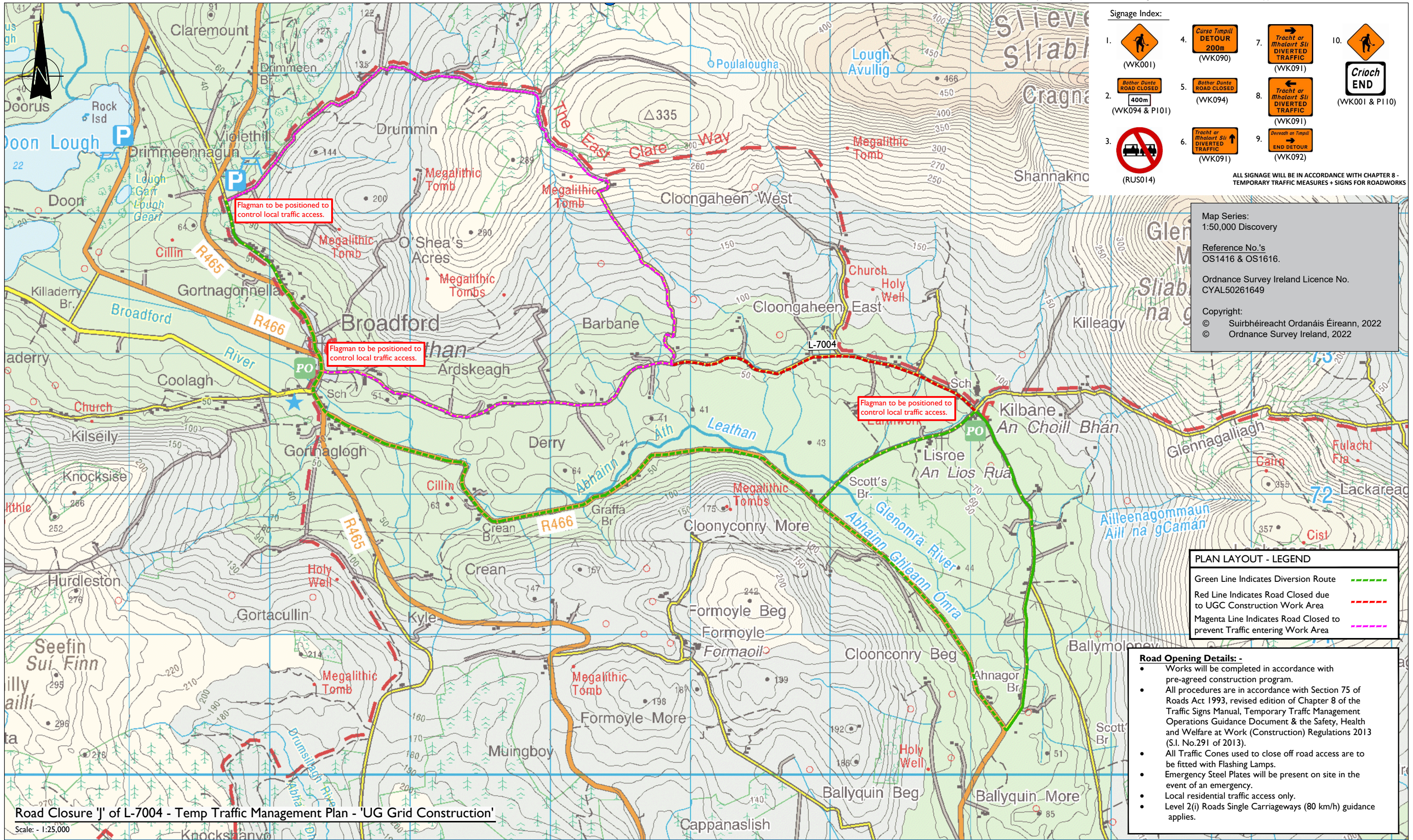
Green Line Indicates Diversion Route	
Red Line Indicates Road Closed due to UGC Construction Work Area	
Magenta Line Indicates Road Closed to prevent Traffic entering Work Area	

- Road Opening Details: -**
- Works will be completed in accordance with pre-agreed construction program.
 - All procedures are in accordance with Section 75 of Roads Act 1993, revised edition of Chapter 8 of the Traffic Signs Manual, Temporary Traffic Management Operations Guidance Document & the Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No.291 of 2013).
 - All Traffic Cones used to close off road access are to be fitted with Flashing Lamps.
 - Emergency Steel Plates will be present on site in the event of an emergency.
 - Local residential traffic access only.
 - Level 2(i) Roads Single Carriageways (80 km/h) guidance applies.

Road Closure 'H' of L-3022 - Temp Traffic Management Plan - 'UG Grid Construction'

Scale: - 1:25,000

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		Carrownagowan Wind Farm 110kV Grid Connection	Overall Site Location Map -Temporary Traffic Management -Road Closure 'H' of L-3022	<table border="1"> <tr> <td>P1</td> <td>25.11.22</td> <td>Issued for Planning</td> </tr> <tr> <td>I/R</td> <td>DATE</td> <td>DESCRIPTION</td> </tr> </table>	P1	25.11.22	Issued for Planning	I/R	DATE
P1	25.11.22	Issued for Planning							
I/R	DATE	DESCRIPTION							
	PROJECT NUMBER	SHEET NUMBER	DRAWING STATUS						
	05-641	05641-DR-257	For Planning FOR PLANNING APPLICATION NOT FOR CONSTRUCTION						



Road Closure 'J' of L-7004 - Temp Traffic Management Plan - 'UG Grid Construction'

Scale: - 1:25,000



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 Abbeydorney,
 Tralee, Co. Kerry
 Ireland
 Tel: 00353 66 7135710



CLIENT
 PROJECT
 Carrownagowan Wind Farm
 110kV Grid Connection

PROJECT NUMBER
 05-641

SHEET NUMBER
 05641-DR-258

SHEET TITLE
 Overall Site Location Map -Temporary Traffic
 Management -Road Closure 'J' of L-7004

DRAWING STATUS
 For Planning **FOR PLANNING APPLICATION
 NOT FOR CONSTRUCTION**

ISSUE/REVISION		
I/R	DATE	DESCRIPTION
P1	25.11.22	Issued for Planning