

Aglish Substation and Grid Connection

Site Access Report

February 2026

Site Access Report

Aglish Substation and Grid Connection

County Cork

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1 INTRODUCTION

Civil and Structural Engineering Advisors Ltd. is providing engineering consultancy services to Aglish Solar Farm Ltd. in relation to a solar farm, substation and grid connection with a total area of circa 165 hectares in the townlands of Aglish, Currahaly, Farnanes, Farran, Knockavullig, Knocknagoul, Knockshanawee, Loughleigh, Mahallagh, Nettleville Demesne, Rathonoane, Rooves Beg, Rooves More and Shandangan East in County Cork. The proposed solar farm is referred to as Aglish Solar Farm and a planning application for the development has been made (Cork County Council Reference 24/6157 / An Coimisiún Pleanála ACP-323402-25).

At the time of writing, the solar farm application is undetermined but is noted that, as part of the planning application, Cork County Council Roads Department were satisfied that temporary road impacts during the construction phase of the development would be acceptable and recommended that planning permission be granted subject to conditions.

This is a Site Access Report for the substation and grid connection which forms part of the solar farm.

The proposed development comprises:

1. A 110kV Air Insulated Switchgear (AIS) electricity substation with single-storey substation building, single-storey Independent Power Producer (IPP) control room building, High Voltage (HV) electrical equipment and associated infrastructure (to include transformer, lightning protection masts, back-up diesel generator, fire/blast wall, telecoms pole, perimeter security fencing, security lighting, water and drainage infrastructure, and temporary construction compound) to connect to and serve a solar farm;
2. Associated loop-in / loop out infrastructure to connect into an existing 110kV overhead transmission line (including underground 110kV cabling [lengths of ca.790 and 880m from proposed substation to interface towers, including HDD crossing of L2204 road], 2 No. new interface towers and decommissioning of ca. 75m of existing 110kV overhead line);
3. Construction and operational access from the public road L2204;
4. All ancillary site development, landscaping and earthworks. The development subject to this application forms part of grid connection and access arrangements which will facilitate the connection of the proposed Aglish Solar Farm (Cork County Council Reference 24/6157 / An Coimisiún Pleanála ACP-323402-25) to the national grid.

The purpose of this report is to consider the proposed development from an access and transportation perspective. The report is presented in the following sections to allow a detailed engineering appraisal of the local road network in relation to proposed construction and operational traffic:

- The proposed development.
- The site and its context in the local road network.
- Existing and anticipated traffic.
- Delivery routes and *Swept Path Analysis*.

- Vertical and horizontal road geometry.
- Pavement and roadside drainage.
- Site drainage including internal access bridges.
- Sightline appraisal at proposed entrances.
- Proposed mitigation measures.

2 THE PROPOSED DEVELOPMENT

General

The proposed development comprises:

1. A 110kV Air Insulated Switchgear (AIS) electricity substation with single-storey substation building, single-storey Independent Power Producer (IPP) control room building, High Voltage (HV) electrical equipment and associated infrastructure (to include transformer, lightning protection masts, back-up diesel generator, fire/blast wall, telecoms pole, perimeter security fencing, security lighting, water and drainage infrastructure, and temporary construction compound) to connect to and serve a solar farm;
2. Associated loop-in / loop out infrastructure to connect into an existing 110kV overhead transmission line (including underground 110kV cabling [lengths of ca.790 and 880m from proposed substation to interface towers, including HDD crossing of L2204 road], 2 No. new interface towers and decommissioning of ca. 75m of existing 110kV overhead line);
3. Construction and operational access from the public road L2204;
4. All ancillary site development, landscaping and earthworks. The development subject to this application forms part of grid connection and access arrangements which will facilitate the connection of the proposed Aglish Solar Farm (Cork County Council Reference 24/6157 / An Coimisiún Pleanála ACP-323402-25) to the national grid.

The operational lifetime of the solar farm is assumed to be 40 years. However, following the decommissioning of the solar farm, it is envisaged that the substation (and underground cable grid connection) will remain in situ as a valuable functioning and operational part of the electricity transmission network managed by the Transmission Systems Operator, EirGrid.

The layout of the proposed substation and cable grid connection is shown in Figure 2.1 on page 7 of this report

Substation

The substation will be based on EirGrid design specifications. The substation compound will consist of a two-storey AIS substation building, single-storey IPP Control Room building, HV electrical equipment and associated infrastructure including palisade fences and concrete post and rail fences. The installation of HV electrical equipment will include a transformer with associated equipment along with:

- Cable Sealing End (CSE);
- Surge Arrestor (SA);
- Earth Disconnect (DA, DB, DL, DT);
- Current /Voltage Transformer (CT/VT);
- House Transformer (HoT);

- Circuit Breaker (CB);
- Lightning Masts (LM);
- Back-Up Diesel Generator;
- Harmonic filters if required by EirGrid;
- Capacitor Bank if required by EirGrid;
- Fire/Blast Wall;
- Telecoms Pole;
- 110kV underground cable which will connect into the existing Inniscarra Macrooom overhead line via 2 no. new Interface Towers

The substation compound has a total area of 11,996m².

Earthworks will be undertaken so the compound is level, with a finish compound level of 123.2mOD.

Site Access

The site will be accessed for both the construction and operational phases by means of two entrances from the L2204. These entrances will be subject to some upgrades, including removal of existing roadside sod and stone ditch to provide new gate as presented under Cork County Council Reference 24/6157. The entrances will be suitably splayed and have been subject to sight line and autotrack analysis, with the latter including modelling of abnormal load delivery for the transformer. Operational sightlines will be maintained by trimming back hedgerows with all necessary land within ownership.

A 4.5 metre wide compacted access track will extend from the entrance to the substation compound. The design includes a temporary construction track to cater for deliveries, which will be decommissioned post the construction phase (and land reinstated), as well as an operational access track. The track will include a geotextile base and filter membrane and 200 mm of Clause 804 sub-base.

Connection to the National Grid

In order to connect to the transmission network, it is proposed to connect the 110kV substation into the national grid via a 'loop-in / loop-out' underground 110kV cable grid connection which will connect into the existing 110kV Inniscarra-Macrooom overhead transmission line.

Two new steel lattice interface towers of approximately 16m in height will form part of the existing overhead line and both towers will connect to the proposed 110kV substation via underground 110kV cables. The interface towers are approximately 75 metres apart, therefore the same length of the existing 110kV Inniscarra-Macrooom overhead line will need to be decommissioned. The underground cable is comprised of 3 no. power ducts, 2 no. telecom ducts and 1 no. earth continuity duct. The cables to each interface tower are ca.790 and 880m metres in length. The crossing of the L2204 will be by means of Horizontal Directional Drill (HDD).

This connection method will constitute a new node of the transmission network, connecting the proposed substation and associated solar farm generation to the national electricity grid. The construction method for the interface towers and decommissioning of 110kV overhead lines is set out in the Aglish Substation & Grid Connection Construction Methodology prepared by Aglish Solar Farm Limited.

All works will be carried out in accordance with international best practice and full compliance with health and safety requirements.

Temporary Construction Compound

As outlined in the submitted site layout plans, it is proposed to provide a temporary construction compound south of the proposed substation, accessed from the entrance from the L2204. The temporary compound will include the following facilities at a minimum:

- Adequate canteen space to allow for all workers during the peak period;
- Office space with lighting, heating and internet facilities;
- Toilets and adequate welfare facilities for construction staff in accordance with the relevant statutory Health & Welfare guidelines;
- Parking space for both light and heavy vehicles;
- Designated skips and temporary storage areas.

Surface Water Drainage and Water Services

Surface water drainage proposals for the development have been developed to mimic the natural drainage patterns of the site and thereby be in accordance with the best management practices of Sustainable Drainage Systems (SuDS) including those set out in the SuDS Manual (C753) published by CIRIA in 2015. Specifically, this includes the following:

- The compound construction is formed with permeable stone thus mimicking a soakaway scenario. ESB compound stone is single sized for the first 150mm for safety purposes. It then changes to a graded 6F2 material;
- The main areas to be drained include the roofs and the compound road. These equate to approximately 663m². The compound road will be drained via series of road gullies;
- Assuming even the most basic of infiltration rates down through the permeable compound stone, the existing greenfield situation is easily maintained.

The surface water generated in the hardstanding and bunded areas will discharge to the soakaway via a Class 1 Full Retention Oil Separator. The electrical transformer in the substation is oil filled equipment and, as such, is protected with impermeable bunds. Surface water generated in this bund will be pumped out by an oil sensitive pump ensuring that only non-contaminated water enters the site drainage network.

In relation to wastewater, a 5m³ foul holding tank is proposed as part of the operational development. These tanks are normally used in ESB substations. It will be emptied periodically, with the capacity in excess of modelled holding requirements.

It is proposed to provide the required potable water demand of the station with a bored well on site. The potable water demand within the site will be low as the proposed station is to be unmanned. To avoid issues like stagnation in the water supply line and problems resulting from this, there will be a continual water demand of 24 litres per week from automatically flushing WCs within the station.

Site Restoration and Landscaping

This will involve the reinstatement of all other excavated materials and associated landscaping works. It will include the replacement of topsoil in disturbed ground areas such as access tracks and the removal of the construction compound and other temporary work areas.

The submitted Landscape Mitigation Plan identifies that c.31 no. metres of existing hedgerow and 2 no. trees will be removed to facilitate access to the fields that include the proposed substation and grid connection. These removal works are included in the wider solar farm application which provides for removal of a total of 86 no. linear metres of hedgerow and 3 trees, which will be offset by 872 linear metres of new hedgerow planting, as well as the bolstering of an additional 22,296 linear metres, where necessary, to fill any gaps in existing hedgerows.

Other Planned Works

Cork County Council Reference 24/6157 (ACP-323402-25)

It is intended that the proposed 110kV substation and grid connection will service the Aglish Solar Farm, which is currently the subject of a first party planning appeal to An Coimisiún Pleanála. At the time of writing, the appeal is due for decision on the 5th March 2026.

The solar farm with a total area of circa 161 hectares. The solar farm will consist of solar panels on ground mounted frames, 23 no. single storey electrical inverter/transformer stations, 6 no. single storey spare parts containers, 3 no. Ring Main Units, 7 no. weather stations, underground electrical ducting and cabling within the development site, private lands and within the L62031, L6203, R619, L6207, L22012 and L2204 public roads to connect solar farm field parcels, security fencing, CCTV, access tracks, 4 no. stream/drain deck crossings, 6 no. horizontal directional drill crossings (under watercourses/drains/public road), temporary construction compounds, landscaping and all associated ancillary development and drainage works. Construction and operational access will be via 7 no. entrances from the L62031, L6203, L22012, L6398 and L2204 local roads. The operational lifespan of the solar farm will be 40 years and planning permission is requested for this duration.

The solar farm will contribute directly to a carbon dioxide emission reduction of 28,657 tonnes per annum or the equivalent of approximately 1,146,298 tonnes of CO₂ over the 40 year lifetime of the project.



Figure 2-1: Proposed Substation and Grid Connection

3 THE SITE AND CONTEXT

3.1 SITE LOCATION

The site is located in the townland of Aglish in County Cork at Latitude 51.876737 N and Longitude 8.756395 W. The site is approximately 24km west of Cork city. Figures 3.1 shows the location of the site. The Red Line Boundary for the development is provided in Figure 3.2. The site is accessed from the N22 Cork to Killarney Road at Farran Cross.

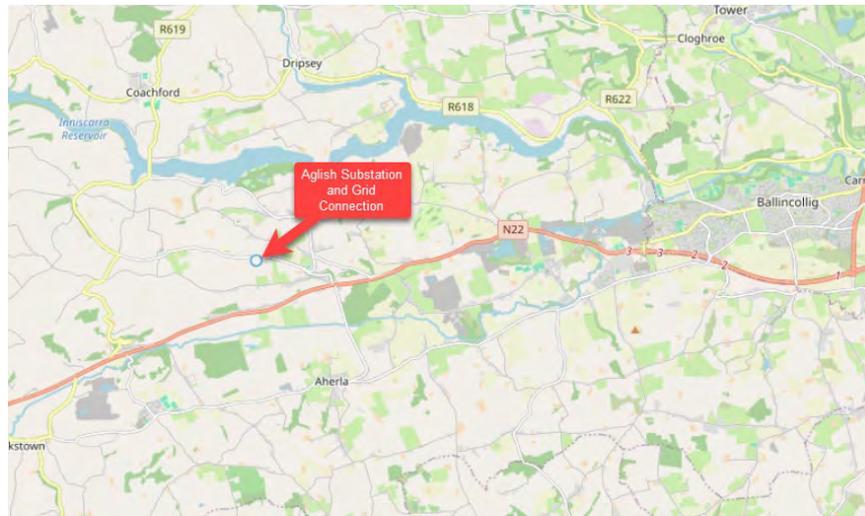


Figure 3-1: Site Location



Figure 3-2: Aglish Substation and Grid Connection RLB

3.2 ROAD NETWORK IN THE VICINITY OF THE SITE

The site is well served by the national and local road network. The substation site is located 1.2km north of the N22 Cork to Killarney National Primary Road. The L2204 local road connects the proposed entrance

locations directly to the N22 at Farran Cross. By way of context, Figure 3.3 shows the road network in the vicinity of the substation site in relation to the proposed solar farm development. The road geometry, pavement condition and drainage of the local roads are considered in Sections 6 and 7 of this report.



Figure 3-3: Road Network in the Vicinity of the Site in the Context of the Proposed Solar Farm Development (Cork County Council Reference 24/6157 / An Coimisiún Pleanála ACP-323402-25)

3.3 PROPOSED SITE ENTRANCES

Two site entrances are proposed. Both are existing field entrances. The entrances are:

- Site Entrance 1 is an existing entrance on the L2204 local road. This provide access to the interface towers and underground cabling on the north side of the L2204;
- Site Entrance 2 is an existing entrance on the L2204 local road. This provide access to the substation and underground cabling on the south side of the L2204.

It is noted that planning permission has been sought for these entrances in the planning application for Aglish Solar Farm where they are referred to as Site Entrances 5 and 6. At the time of writing, the solar farm application is undetermined but is noted that, as part of the planning application, Cork County Council Roads Department were satisfied that temporary road impacts during the construction phase of the development would be acceptable and recommended that planning permission be granted subject to conditions. The conditions are provided in Appendix B for ease of reference.

The locations of the proposed site entrances are provided in Figure 3.4 and images of the site entrances are provided in Figures 3.5 and 3.6. Videos of the site entrances are available for downloading at the link provided in the footnote¹.

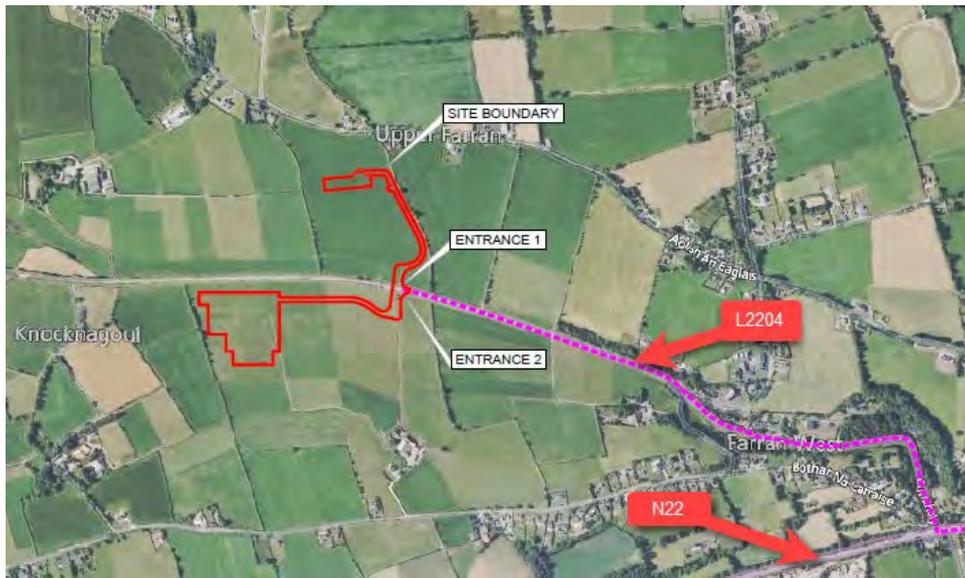


Figure 3-4: Site Entrance Locations



Figure 3-5: Site Entrance 1

¹ Videos of proposed entrances are available here: <https://ln5.sync.com/dl/a4abed490/9ihem7f6-w6vf6j9c-9ikecc8y-5ahjytku>

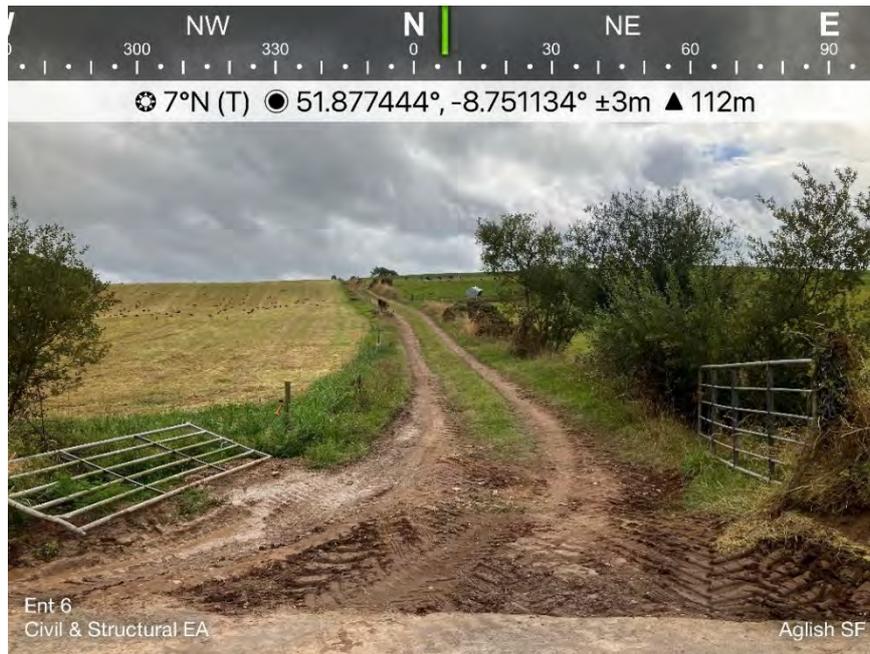


Figure 3-6: Site Entrance 2

3.4 TOPOGRAPHY AND LAND USE

The land use in the area of the proposed solar farm is agricultural. The topography in the area is characterised by the Lee Valley. There are no significant inclines nor other topographical features impacting on the current road geometry which is free of steep gradients and hairpin bends.

3.5 DISCUSSIONS WITH CORK COUNTY COUNCIL AREA ENGINEERS

The access proposals developed for both the Aglish Solar Farm and substation take in to account the points raised by Cork County Council Area Engineers at meetings for permitted solar farms at various other locations in County Cork. These include:

- A Pavement Condition Survey (PCS) of the proposed access roads shall be undertaken on the commencement of the project and it shall be repeated at the conclusion of the project. Any damage to the road surface and drainage identified in the final PCS shall be made good to the satisfaction of the Council at the conclusion of the project;
- Site traffic shall be organised to avoid peak traffic times and school times;
- All construction site (and operational solar farm site) surface water run-off shall be intercepted and dealt with on site through filtration soakaways and other methods. Drainage shall be provided across the proposed site entrances to ensure there is no surface run-off from the proposed entrances on to the public road;
- Sight line requirements at proposed entrances shall be 70m minimum for local roads.

4 TRAFFIC

4.1 ANTICIPATED TRAFFIC

Pending planning permission, it is proposed that the solar farm, substation and grid connection will be constructed at the same time. Hence, the data presented here for traffic associated with the development allows for this. The construction of Aglish Solar Farm and substation and associated works is expected to take c. 24 months in total. A detailed breakdown of the principal construction phase activities and their associated construction vehicle (HGV) trips is provided in Table 4.2. This information was also submitted to Cork County Council for the solar farm planning application.

Over the 24-month period, the average number of HGV vehicles is 10 per day with an hourly average of 1. A 5.5-day week is assumed as per normal construction projects. The peak number of HGV trips is 22 per day with a hourly average of 3. This peak activity is associated with civil engineering works in months 1 to 9 and solar farm set-up and installation works in months 7 to 19. Vehicle trips reduce substantially in the final months of the programme. Measures to mitigate the temporary construction traffic on the local road network is described in Section 9. On completion of the works and commissioning of the solar farm and substation, it will be an unmanned facility which will be remotely monitored. Operational and maintenance activities in relation to the solar farm will generate occasional vehicle trips, estimated at 2 – 4 van or tractor/trailer type vehicles per month. For clarity, both the solar farm and the substation construction traffic are separately accounted for in Table 4.2 before they are combined into the cumulative traffic for the development. Accounted for separately, substation and grid connection works are scheduled to occur in the first 16 months of the programme and the peak number of HGV trips per day for this part of the development works is 13.

4.2 TRAFFIC ASSOCIATED WITH EXISTING LAND USE

The land parcels forming the proposed solar farm and substation site currently comprise of working farms. The estimated existing traffic associated with agricultural activity at the site is detailed in Table 4.2. This information was derived from several farm traffic surveys undertaken for recent solar farm projects. The table shows return trips to the farms over a 52-week period. The total number of return trips in this period amounts to 270 per annum, or 23 per month (averaged over the 12-month period). Once construction of the development commences, vehicle trips associated with this agricultural activity will cease. After a temporary increase in traffic numbers during the construction phase, the absence of agricultural vehicles from the local road network will result in a reduction of traffic on the network. The monthly average return trips are expected to drop from the current 23 return trips to a maximum of 4 trips per month during the solar farm's operational phase.

Table 4-1: Traffic Associated with Existing Agricultural Use

Activity	Vehicle Type	Number of Trips
Ploughing	4-wheel drive tractor and plough	38
Cultivating	4-wheel drive tractor, trailer and attachments	58
Harvesting	4-wheel drive tractor, trailer and attachments	76
Extraction	4-wheel drive tractor, 20 tonne twin axle trucks and loading shovels	76
Spraying	4-wheel drive tractor with spraying attachment	22
	Total	270

Table 4-2: Construction Programme and Construction Vehicle Trips

Estimated HGV Construction Programme & Vehicle Numbers		Construction Programme (Months)																								
Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
Substation Construction	Enabling Works	271	271	271	271																					
	Civil Works			20	20	20	20	20	20																	
	Electrical Works									20	20	20	15	10	5											
Grid Connection Construction	Civil and Electrical Works												192	192	192	192										
Substation Electrical Commissioning	Pre-commissioning (Light Goods Vehicles)																									
	ESB Commissioning (Light Goods Vehicles)																									
Solar Farm Construction	Solar Farm Site Set Up & Installation						441.5	523.9	238.7	269.5	79.85	79.85	79.85	277.4	98.56	98.56	288.2	288.2	279.8	24.17	24.17	4.203	35.72	148		
Solar Farm Electrical Commissioning	Electrical Commissioning (Light Goods Vehicles)																									
	Close Out (Light Goods Vehicles)																									
	Estimated Vehicles Per Month	271	271	291	291	20	20	461.5	543.9	258.7	289.5	99.85	99.85	286.9	479.4	295.6	290.6	288.2	288.2	279.8	24.17	24.17	4.203	35.72	148	
	Estimated Vehicles Per Week	67.75	67.75	72.75	72.75	5	5	115.4	136	64.67	72.38	24.96	24.96	71.71	119.8	73.89	72.64	72.05	72.05	69.95	6.042	6.042	1.051	8.931	37	
	Estimated Vehicles Per Day (5.5 days)	12	12	13	13	1	1	21	25	12	13	5	5	13	22	13	13	13	13	13	1	1	0	2	7	
	Peak Daily Vehicles	22																								
	Peak Hourly Vehicles	2.75																								
	Average Daily Vehicles	10																								
	Average Hourly Vehicles	1																								

The information provided in this chapter and Table 4.1 above concerns construction vehicles such as 4-axle gravel delivery lorries, articulated HGV's for plant and materials deliveries etc. These vehicles have the most impact on the network given their general dimensions and axle loads. The development site is large comprising several discrete land parcels. This construction traffic will be distributed across the land parcels and will not be concentrated in one specific local area or one local road. These traffic volumes will be spread across the site and the applicant will work closely with Cork County Council to ensure there is minimum local disruption experienced in the community.

Traffic associated with site staff driving their own cars to site is dealt with separately to HGV traffic. Staff will access the site using light vehicles (cars/mini-buses), and car parking facilities will be available on site to ensure that traffic flows on the local road network in the vicinity will not be impeded during construction. Car-pooling for staff will be encouraged for the duration of the project.

In relation to construction worker traffic, the volumes are modest given the large development site and associated road network. The peak number of construction workers is anticipated to be 180 for the solar farm, substation and grid connection. It should also be noted that the construction phase will be temporary in nature and will be undertaken in accordance with a detailed traffic management plan to be agreed with Cork County Council and An Garda Siochana. This traffic management plan will include advance signage in accordance with Chapter 8 of the *Traffic Signs Manual*, use of appropriate delivery routes, phasing of site traffic to minimise interference with school runs and the like and be designed, implemented and certified by traffic management professionals in line with current regulations.

A Construction Management Plan (*Aglish Substation and Grid Connection - Construction Methodology*) is provided with the application documents. Pending planning approval, this CMP will be developed further by construction contractors at detailed design stage in consultation with the Cork County Council to ensure construction stage traffic is managed appropriately and with limited local impact.

5 DELIVERY ROUTE AND SWEEP PATH ANALYSIS

5.1 PROPOSED DELIVERY ROUTE FOR SUBSTATION CONSTRUCTION

It is proposed that the substation and grid connection development site be accessed via the N22 Cork to Killarney National Primary Route and the L2204 local road. The entrances to the development site are 1.5km from the N22 at Farran Cross. Figure 5.1 shows the proposed delivery route to the solar farm site. A *Swept Path Analysis* of the proposed routes showed no difficulties for the largest delivery vehicle proposed for the construction stage of the development. Appendix A of this report includes a detailed suite of drawings showing the *Swept Path Analysis* of the delivery routes. It is noted that the delivery routes presented here are proposed routes to site which reflect the technical reviews completed for the project to date. Further to any grant of permission, the final delivery routes shall be subject to agreement with Cork County Council.

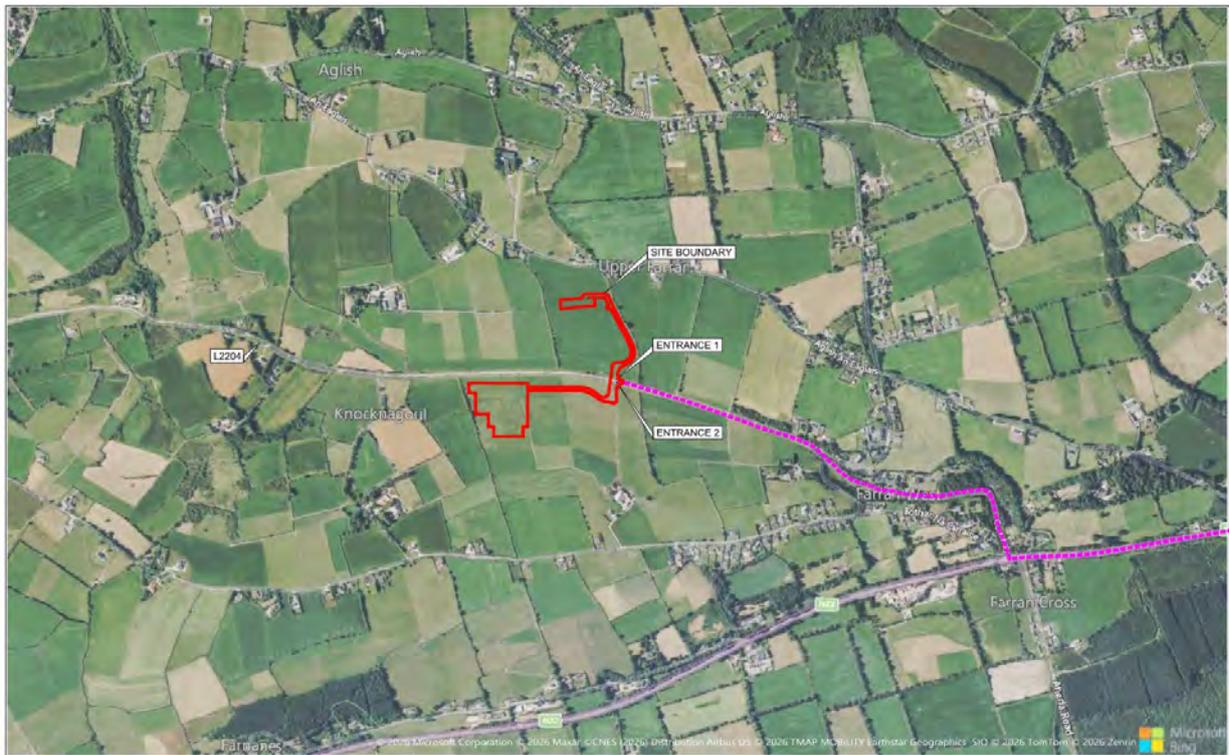
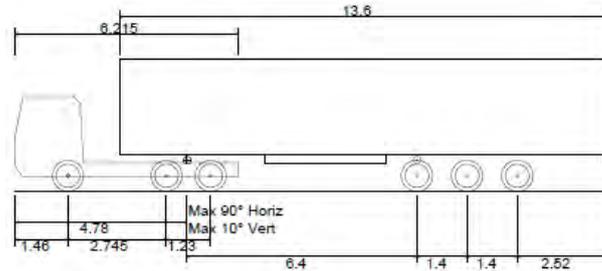


Figure 5-1: Proposed Delivery Route to Site (Large Scale Detail Drawings in Appendix A)

5.2 VEHICLE TYPES FOR SWEEP PATH ANALYSIS

As described in Section 5.1 above, a *Swept Path Analysis* of the delivery routes and site entrances has been conducted using specialist software (AutoTrack by AutoDesk). *Swept Path Analysis* is helpful to identify areas on vehicle routes where trailers overfly pavement edges when turning movements are being conducted. Such areas require consideration to ensure there are no obstacles present to obstruct vehicle movements. Temporary removal of roadside features such as utility poles and boundary fences is sometimes required to facilitate vehicle movements.

The *Swept Path Analysis* of the delivery routes and site entrances is based on the largest vehicles likely to require access to the site during the construction phase of the proposed development. In this case, there are two analysis vehicles. The first is a 40ft articulated lorry for general deliveries as shown in Figure 5.2. The exact dimensions and axle locations of the vehicle are taken from the Road Safety Authority’s publication “Guidelines on Maximum Weights and Dimensions of Mechanically Propelled Vehicles and Trailers including Manoeuvrability” (current version dated March 2020).



Articulated Vehicle with Twin Steered Tractor	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.691m
Min Body Ground Clearance	0.426m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.987m

Figure 5-2: Swept Path Analysis Vehicle - 40t Articulated Vehicle

In this instance, there will be abnormal load deliveries to the substation site (Site Entrance 2 only), and the analysis has also been undertaken for a second vehicle type which is shown in Figure 5.3. It is noted that the exact arrangement of axles and other characteristics of the abnormal load vehicle will be confirmed at construction stage. However, the vehicle shown in Figure 5.3 is a typical transformer delivery vehicle for the type proposed for Aglish substation.

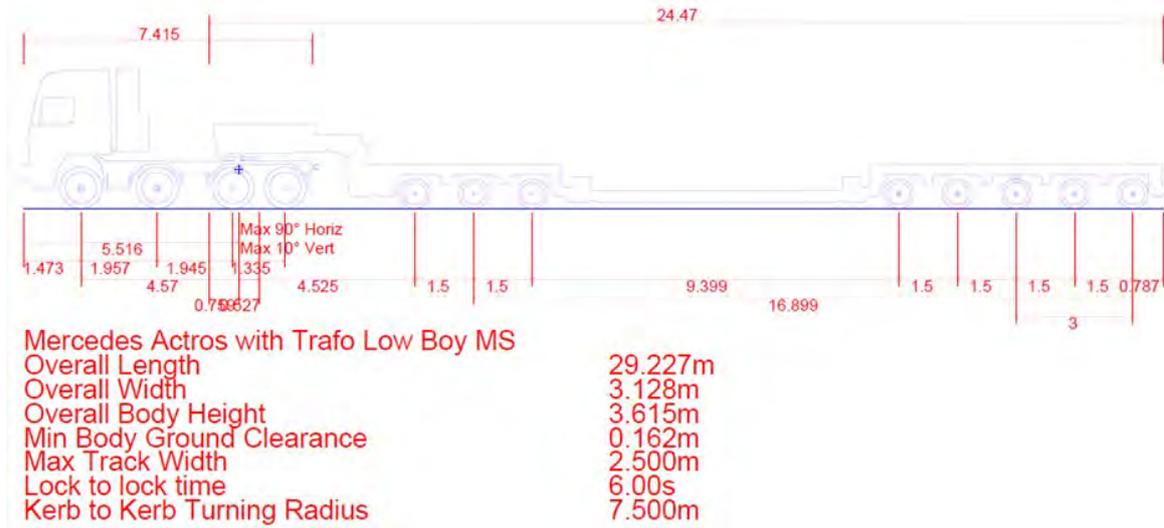


Figure 5-3: Swept Path Analysis Vehicle Type - Abnormal Load Vehicle

The Applicant is familiar with the requirements for Exceptional Abnormal Loads (EAL) introduced in 2024 and has specialist bridge engineers on its team to undertake structural assessments and the like. All the construction traffic for the solar farm will be *permitted vehicles* not requiring Abnormal Load Permits. For the abnormal load movements proposed for the substation construction phase, the Applicant will comply fully with requirements in relation to the permitting and management of Exceptional Abnormal Loads at construction stage.

5.3 SWEPT PATH ANALYSIS – SITE ENTRANCE 1 – L2204

The Swept Path Analysis of Site Entrance 5 is provided in Figure 5.4. This is an existing entrance. The analysis shows that the typical delivery vehicle can access and egress the site without the need for any works to the L2204. Sight lines are discussed in Section 8 of this report.



Figure 5-4: Swept Path Analysis Site Entrance 1 (larger scale drawing in Appendix 1)

5.4 SWEEP PATH ANALYSIS – SITE ENTRANCE 2 – L2204

The Swept Path Analysis of Site Entrance 6 is provided in Figure 5.5. This is an existing entrance. The analysis shows that the typical delivery vehicle and the abnormal load vehicle can access and egress the site without the need for any works to the L2204. Sight lines are discussed in Section 8 of this report.



Figure 5-5: Swept Path Analysis Site Entrance 2 (larger scale version in Appendix 1)

6 VERTICAL AND HORIZONTAL ROAD GEOMETRY

6.1 VERTICAL GEOMETRY

It is proposed that guidance documents from the wind farm industry and the forestry industry provide a basis for the vertical geometry review for access specifically for construction vehicles to the proposed solar farm and substation development. These guidance documents are:

- Vestas Transportation Guidelines V52.
- COFORD Forest Road Manual – Guidance for the Design, Construction and Maintenance of Forest Roads.

These documents allow access routes to be appraised in terms of the ability of delivery vehicles to access and egress construction sites for energy projects with regard to vertical geometry. The maximum gradients permitted in these guidance documents are:

- Vestas Transportation Guidelines V52 – 14%.
- Forest Roads Manual – Maximum Engineered Track Gradient – 16.7%.

For precautionary purposes, the lower figure of 14% will be used to assess the vertical geometry in relation to the proposed development.

There are no locations on the proposed delivery routes where the gradient exceeds 14%. The road gradients on the proposed route are shallow. The local road level at entrances 1 and 2 is 113mOD. The road level at the N22 / L2204 junction at Farran is 53mOD. The average gradient from the junction to the site entrances is 4%. A review of the vertical geometry for crests and dips that could cause difficulties for long wheelbase delivery vehicles was undertaken and no significant crests nor dips in the existing alignment were found.

6.2 HORIZONTAL GEOMETRY

For the horizontal geometry review, the same guidance documents as those listed in Section 6.1 form the basis of the review and they are supplemented by the Swept Path Analysis described in Section 5 of this report.

The horizontal geometry design parameters from the guidance documents are:

- Vestas Transportation Guidelines V52: Minimum Inner Bend Radius: 3m, Minimum Outer Bend Radius 27.5m.
- Forest Roads Manual: Desirable Minimum Radius for Curves: 20m; Absolute Minimum Bend Radius at Hairpins: 12m.

The existing horizontal geometry of the proposed route was found to be adequate in accordance with these parameters. The Swept Path Analysis of the proposed delivery route showed that no works are required to the local road network to facilitate the passage of a 40ft articulated lorry, or the proposed abnormal load vehicle, to and from the site (see Section 5).

6.3 PAVEMENT WIDTH

Pavement widths measured throughout the solar farm and substation site (the L6203 (solar farm field Parcels 1 and 2), the L22012 (field parcel 3), the L6398 (field parcel 4) and the L2204 (substation and solar farm field parcels 5 and 6) and the R619, were typically in the range 4.0m to 6.0m. The maximum width of mechanically propelled vehicle permitted on the public road network is 2.7m. The maximum width of a vehicle together with its load is 2.9m (Figure 6.1). Further information with regard to road widths and provision of passing bays can be found in Section 9.

MAXIMUM WIDTH		
THESE DIMENSIONS DO NOT APPLY TO A LAND IMPLEMENT OR VEHICLE FOR GRASS CUTTING, HEDGE-TRIMMING OR FORESTRY OPERATIONS WHILE USED IN THE DAY TIME, OR A LAND IMPLEMENT USED DURING LIGHTING UP HOURS FROM JULY TO AUGUST INCLUSIVE, PROVIDED THAT THE VEHICLE COMPLIES WITH THE ROAD TRAFFIC (LIGHTING OF VEHICLES) REGULATIONS 1963 (S.I. NO. 189 OF 1963).		
DESCRIPTION	WIDTH (X)	IMAGE
AGRICULTURAL TRAILER / PIECE OF INTERCHANGEABLE TOWED EQUIPMENT	2.55m [*]	<p>The diagram shows a top-down view of a vehicle with a rectangular body and a steering wheel on the right side. A horizontal double-headed arrow below the vehicle indicates its maximum width, labeled with the letter 'X'.</p>
CONDITIONED VEHICLE	2.6m	
LARGE TRACTOR	2.75m	
PASSENGER VEHICLE WITH SEATING CAPACITY FOR MORE THAN EIGHT PASSENGERS	2.55m	
REFRIDGERATED VEHICLE, TRAILER OR SEMI-TRAILER	2.55m (For vehicles first registered or trailers first licensed on or before 31 st Dec 1997 the limit was 2.6m but this expired on 31 st Dec 2006)	
RIGID TRUCK, TRACTOR UNIT OF AN ARTICULATED VEHICLE, TRAILER OR A SEMI-TRAILER	2.55m (Provided that the vehicle's DGWW exceeds 3.5 tonnes)	
VEHICLE OR TRAILER	2.5m	
VEHICLE TOGETHER WITH ITS LOAD (Apart from loose agricultural produce which is not in bales or crates)	2.9m	

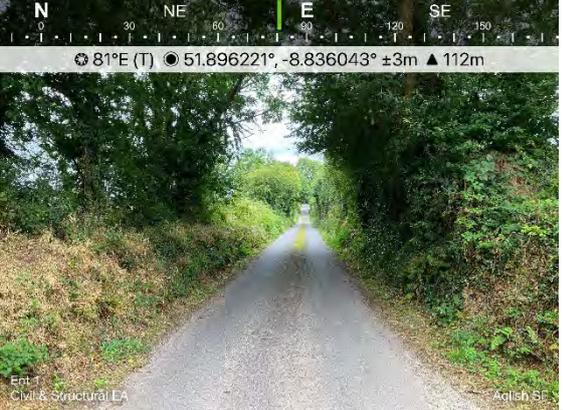
Figure 6-1: Excerpt from Road Safety Authority’s publication “Guidelines on Maximum Weights and Dimensions of Mechanically Propelled Vehicles and Trailers including Manoeuvrability” (current version dated March 2020)

7 PAVEMENT AND ROADSIDE DRAINAGE

7.1 DELIVERY ROUTE INSPECTION

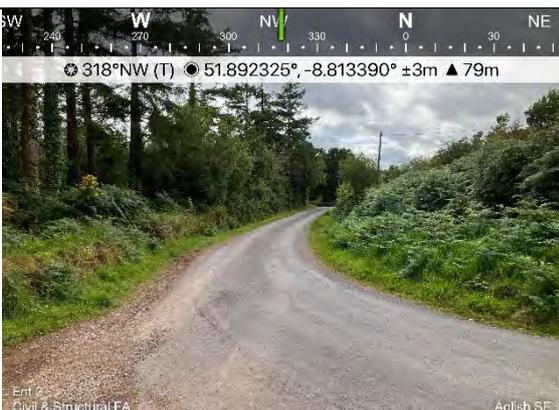
The delivery route was inspected in August 2024. The direction of the inspection of the delivery route was generally North from the N22 at Farrans Cross. Pavement conditions and widths were noted as well as roadside drainage and utility plant. Images of the proposed delivery route to the site are provided in Table 7.1. The locations of the images are provided in Figure 7.2. Note that the pavement survey described below includes all of the roads in the vicinity of both the substation and solar farm site. Image numbers 14 to 17 show the L2204 at the proposed substation entrances. The location co-ordinates of each image are also given on the image in the table below. Dashcam footage is available for download².

Table 7-1: Delivery Route Inspection

No.	Description	Image
1	L62031 Pavement condition moderate Width <5m	 <p>Picture 1: IMG_6158</p>
2	L62031 – Ent 1 solar farm Pavement condition moderate Width <5m	 <p>Picture 2: IMG_6159</p>

²

<https://www.dropbox.com/scl/fo/nsjko7njmrw5n3uqngi0t/AOleA3rQEMVqDOWOMt7lc4s?rlkey=1j0ih8ao7oa8k1sxi7c0vu28w&st=lwwkra6u&dl=0>

No.	Description	Image
3	L62031 Pavement condition moderate Width <5m	 <p>Picture 3: IMG_6160</p>
4	L6203 Pavement condition good Width ~5m	 <p>Picture 4: IMG_6161</p>
5	L6203 Pavement condition good Width ~5m	 <p>Picture 5: IMG_6162</p>
6	L6203 Ent 2 Pavement condition good Width ~5m	

No.	Description	Image
7	L22012 Pavement condition moderate Width <5m	<p>Picture 6: IMG_6164</p>  <p>182°S (T) ● 51.883631°, -8.832646° ±4m ▲ 112m</p> <p>Ent 3 Civil & Structural EA</p> <p>Aglish SF</p>
8	L22012 Ent 3 solar farm Pavement condition moderate Width <5m	<p>Picture 7: IMG_6165</p>  <p>252°W (T) ● 51.883610°, -8.832589° ±3m ▲ 109m</p> <p>Ent 3 Civil & Structural EA</p> <p>Aglish SF</p>
9	L22012 Pavement condition moderate Width <5m	<p>Picture 8: IMG_6166</p>  <p>14°N (T) ● 51.883597°, -8.832350° ±4m ▲ 115m</p> <p>Ent 3 Civil & Structural EA</p> <p>Aglish SF</p>
		<p>Picture 9: IMG_6167</p>

No.	Description	Image
10	L22012 Ent 3 solar farm Pavement condition moderate Width <5m	 <p>Ent 3 Civil & Structural EA</p> <p style="text-align: right;">Aglish SF</p>
Picture 10: IMG_6168		
11	L6398 Pavement condition good Width >5m OH utilities LHS	 <p>Ent 4 Civil & Structural EA</p> <p style="text-align: right;">Aglish SF</p>
Picture 11: IMG_6169		
12	L6398 Pavement condition good Width >5m	 <p>Ent 4 Civil & Structural EA</p> <p style="text-align: right;">Aglish SF</p>
Picture 12: IMG_6170		
13	L6398 – Ent 4 solar farm Pavement condition good Width >5m OH utilities LHS	 <p>Ent 4 Civil & Structural EA</p> <p style="text-align: right;">Aglish SF</p>

No.	Description	Image
14	L2204 Pavement condition good Width ~6m Substation entrance 1 on LHS. Substation entrance 2 on RHS.	<p data-bbox="786 253 983 275">Picture 13: IMG_6171</p>  <p data-bbox="786 663 871 696">Ent 5 and 6 Civil & Structural EA</p> <p data-bbox="1278 674 1350 696">Aglish SF</p>
15	L2204 Pavement condition good Width ~6m	<p data-bbox="786 705 983 728">Picture 14: IMG_6172</p>  <p data-bbox="786 1115 871 1149">Ent 5 and 6 Civil & Structural EA</p> <p data-bbox="1278 1126 1350 1149">Aglish SF</p>
16	L2204 – Substation entrance 1 Pavement condition good Width ~6m	<p data-bbox="786 1158 983 1180">Picture 15: IMG_6173</p>  <p data-bbox="786 1568 871 1601">Ent 5 Civil & Structural EA</p> <p data-bbox="1278 1579 1350 1601">Aglish SF</p>
		<p data-bbox="786 1610 983 1632">Picture 16: IMG_6174</p>

No.	Description	Image
17	L2204 – Substation entrance 2 Pavement condition good Width ~6m	 <p>Ent 8 Civil & Structural EA</p> <p>Aglish SF</p>
Picture 17: IMG_6175		
18	L22012 – solar farm Ent 7 Pavement condition moderate Width ~4m	 <p>Ent 7 Civil & Structural EA</p> <p>Aglish SF</p>
Picture 18: IMG_6176		
19	L22012 – Ent 7 Pavement condition moderate Width ~4m	 <p>Ent 7 Civil & Structural EA</p> <p>Aglish SF</p>
Picture 19: IMG_6178		
20	L22012 – solar farm Ent 7 Pavement condition moderate Width ~4m	 <p>Ent 7 Civil & Structural EA</p> <p>Aglish SF</p>

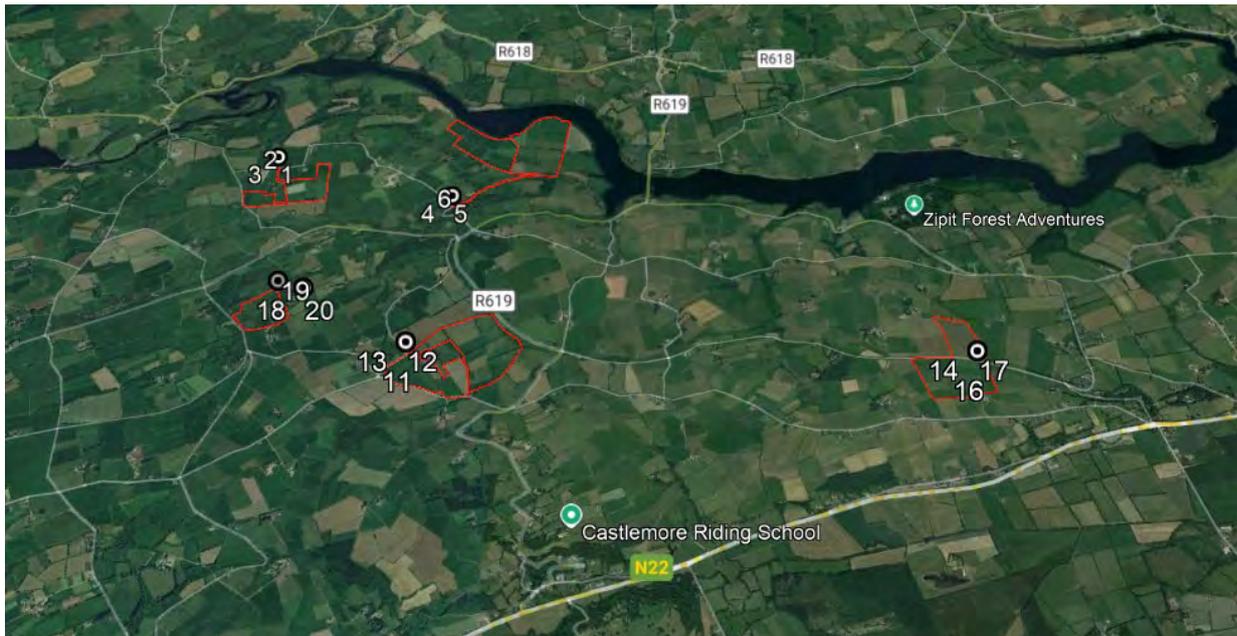


Figure 7-1: Delivery Route Image Locations for the Solar Farm, Substation and Grid Connection

7.2 PAVEMENT CONDITION AND ROADSIDE DRAINAGE

Pavement condition was found to be moderate to good throughout the inspection. Patch repairs are occasionally present. Drainage was typically *over-the-edge* with no particular evidence of ponding areas. Overhead cables are present on part of the delivery route. Pavement width is adequate throughout and all routes are currently used by agricultural vehicles and large commercial vehicles without constraints.

8 SIGHT LINE APPRAISAL AT SITE ENTRANCES

8.1 VISIBILITY STANDARDS

Transport Infrastructure Ireland's document DN-GEO-03060 Geometric Design of Junctions (Priority Junctions, Direct Accesses, Roundabouts, Grade Separated and Compact Grade Separated Junctions) provides the visibility standards required for junctions and accesses. The basic design parameters are shown in Figure 8.1 and include the 'X Distance' which is the distance back along the minor road / direct access from which the full visibility is measured, the 'Y Distance' which is the distance that the driver on the minor road / access road must be able to see clearly to the left and to the right on the nearer edge of the major road carriageway and the 'Z Distance' which is the unobstructed visibility distance that drivers approaching the junction from the minor road / direct access must have to allow him/her to slow down safely and stop.

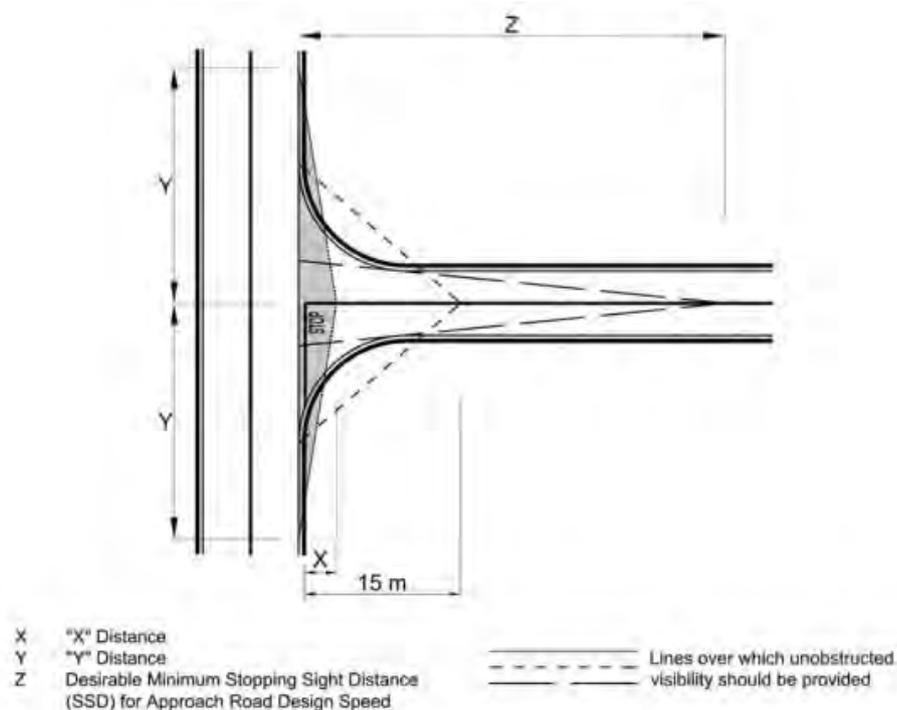


Figure 8-1: Visibility Standards (TII Document DN-GEO-03060)

An 'X Distance' of 2.4m and a 'Y-Distance' of 90m have been adopted as the desirable visibility standard for the proposed site entrances on local roads. The 'Z Distance' is the Stopping Sight Distance and relates to the design speed of the minor road. In the case of direct accesses a 'Z-Distance' of 35m is proposed and this is based on a conservative design speed within the site of 30km/h (Table 5.7 of DN-GEO-03060 refers).

The visibility requirement for drivers emerging from a minor road or direct access is to a high object (1.05m) on the major road. It is best practice (and mandatory for National Roads) that the full 'Y Distance' be achieved to this 1.05 metre height. The purpose of having a high object in the visibility standards is to ensure that vertical geometries of the road junctions are considered in the visibility analysis. An appraisal of the sight lines at the proposed site entrances has been undertaken. Detailed drawings are provided in Appendix A and the analysis results are presented below. As previously noted, Cork County Council Roads Department were satisfied as part of the solar farm planning application that visibility sightlines were acceptable.

8.2 SITE ENTRANCE 1 (L2204)

The Sight Line Analysis of Site Entrance 1 is provided in Figure 8.2. It is an existing entrance. The 90m sightlines are available at the proposed location. Detailed drawings are provided in the Appendix to this report. The vertical geometry of the public road is essentially flat at the entrance location and the visibility to the 1.05m high object is achieved over the full 'Y-Distance' of 90m in both directions. The 'Z-Distance' of 35m is also achieved within the site boundary.



Figure 8-2: Sight Lines (90m) at Entrance 1 on the L2204 (larger scale version of the drawing in Appendix A)

8.3 SITE ENTRANCE 2 (L2204)

The Sight Line Analysis of Site Entrance 2 is provided in Figure 8.3. It is an existing entrance. The 90m sightlines are available at the proposed location. Detailed drawings are provided in the Appendix to this report. The vertical geometry of the public road is essentially flat at the entrance location and the visibility to the 1.05m high object is achieved over the full 'Y-Distance' of 90m in both directions. The 'Z-Distance' of 35m is also achieved within the site boundary.



Figure 8-3: Sight Lines (90m) at Entrance 2 on the L2204 (larger scale version of the drawing in Appendix A)

9 MITIGATION

Pending planning permission, it is proposed that the solar farm, substation and grid connection will be constructed at the same time. Hence, the mitigation measures in relation to construction stage traffic proposed here considers the entire development (i.e. the solar farm and the substation and grid connection). As described in Section 4 of this document, the temporary construction phase will see the highest traffic volumes associated with the proposed development. Construction traffic volumes are likely to have the most impact on the L6203 (Field Parcels 1 and 2), the L22012 (Field Parcel 3), the L6398 (Field Parcel 4) and the L2204 (Field Parcels 5 and 6). In order to minimise the impact of this temporary period on existing road users and to secure against any impacts on the surface condition of the roads, the following mitigation is proposed during the temporary construction phase. These mitigation measures should be read in conjunction with the Construction Management Plan submitted with this planning application.

9.1 STOP / GO SYSTEM

It is proposed to provide a temporary manual controlled STOP/GO system, which will briefly stop through traffic flow on local roads, while construction vehicles are accessing and egressing the proposed site entrances. The final layout and sequencing arrangements of the Stop/Go system will be agreed with Cork County Council Area Engineers' Office in advance of commencing construction. Having regard to the low background local traffic observed during this assessment, the modest volumes of construction vehicles set out in Section 4 and the use of the manual controlled STOP/GO system during access /egress of construction traffic only; delays to vehicles waiting at the STOP/GO discs will be of minimal duration.

9.2 ROAD SIGNAGE

It is proposed to provide advance warning signage of the construction site access along the L62031, L6203, L2202, L6398 and L2204 local roads at 50m, 100m and 150m distances in both directions. In addition, there will be advance warning signage to alert road users of the temporary Stop/Go system. All warning signage will be in accordance with Chapter 8 "Temporary Traffic Measures and Signs for Roadworks" from the Department of Transport, Tourism and Sports Traffic Signs Manual. Preliminary traffic management drawings are provided in Appendix A.

9.3 BOOKING SYSTEM

To streamline and manage the arrival/departure of construction vehicles over a working day, a delivery booking and scheduling system will be implemented. On a weekly basis the site manager will evaluate the daily profile of truck movements proposed for the upcoming week and schedule them to spread out over the day to prevent any potential overlap. Sufficient time will be given between truck movements to allow for any delays in arrival times or when loading/unloading takes longer than expected. Prior to departure of a delivery truck from the site, the site manager will review the delivery schedule for that day, and if there is any risk of conflict with another scheduled delivery arrival, the departing vehicle will be held on site until that vehicle arrives.

9.4 PAVEMENT CONDITION INDEX SURVEY

Prior to the commencement of works, a detailed Pavement Condition Index Survey will be carried out in accordance with ASTM Standard D8433³ (or alternative standard to be agreed in advance with Cork County Council). This Pavement Condition Index Survey will be repeated on completion of the works to ascertain if there has been deterioration (beyond normal wear and tear) of the pavement in the works period. Any deterioration which has occurred as a result of works traffic will be addressed by the developer through a programme of remedial works. These remedial measures are subject to Cork County Council's approval and will be agreed with the Council in advance of construction.

9.5 DRAINAGE AT PROPOSED SITE ENTRANCES

No surface water from the proposed site entrances will be allowed to drain onto the local roads. This will be achieved by the provision of a linear drainage system, within the site lands, which will run parallel to the public road at the site entrances. This drainage system will be designed to intercept any site surface water at site entrances and direct such surface water to soakaways located within the site lands. The linear drainage system will be a heavy duty system with D400 rating to EN 1433 complete with 450 diameter precast concrete drainage pipes in surround concrete to ensure it is of sufficient robustness for site traffic.

9.6 PROVISION FOR HGV'S ARRIVING AT CLOSED SITE GATES

Site gates shall be set back a sufficient distance to allow HGV's leave the public road and wait for site gates to be opened. This measure is proposed to preclude local delays to traffic which may otherwise occur if a HGV is waiting for gates to be opened.

9.7 EDGE STRENGTHENING WORKS AT SITE ENTRANCES

Edge strengthening works to pavement at site entrances shall be undertaken for a distance of 15m each side of site gates on the public roads to prevent premature edge failure of pavement edges at site entrances.

9.8 CORK COUNTY COUNCIL- ENGINEER'S RECOMMENDED CONDITIONS

As noted earlier, as part of the planning application, Cork County Council Road Department were satisfied that temporary road impacts during the construction phase of the development would be acceptable and recommended that planning permission be granted subject to conditions. Appendix B provides the conditions proposed by the Engineers of Cork County Council which are accepted in full by the Applicant.

9.9 REVIEW OF PRECEDENT

The preparation of this report has considered established precedent for solar farm developments in Counties Cork, Wexford and Carlow. The following key points were raised at Request for Further Information stages for various solar farm development proposals. The response to these items in the context of the proposed development is set out in the right hand column below.

³ ASTM D8433 Standard Practice for Roads and Aglising Lots Pavement Condition Index Surveys

Item Raised	Project Response
Identification of routes for underground ducts / cabling in public roads.	The proposed cable routes are identified in the submitted site layout plans, presented at a scale of 1:500. The application includes a construction methodology by Aglish Solar Farm Limited which outlines and explains the construction techniques and methodologies for the electricity cable connections of the proposed Aglish Solar Farm. This is supplemented by detailed cross-sections on the installations in public roads , including build-up and reinstatement treatments. The works will be completed to best practice standards, with road surfaces reinstated to existing or better condition. The submitted plans confirm that all works related to opening, backfilling and reinstatement of trenches will be as per the Department of Transport Guidelines for Managing Openings in Public Roads.
Demonstrate that HGVs will not park on the public road in the event of site gates not been open.	Site gates shall be set back a sufficient distance to allow HGV's leave the public road and wait for site gates to be opened. In practice, parking on the road will not occur, as deliveries will be sequenced to arrive when the site is open only and personnel are on hand to receive same. As outlined in the submitted Construction Management Plan, all HGV deliveries will be proactively managed on site to ensure there are no localised road impacts. All associated procedures will be agreed as part of the final CMP.
Prevent 'edge break' on the public roads at access points.	As confirmed in Section 9.7 above, edge strengthening works to pavement at site entrances shall be undertaken for a distance of 15m each side of site gates on the public roads to prevent premature edge failure of pavement edges at site entrances. All specifications will be agreed with Cork County Council.
Demonstrate that sight lines are achieved at all entrances	The application includes sightline drawings confirm achievable sightlines, which will not be inhibited by obstacles in the sightline triangle. Operational sightlines will be maintained by means of trimming back hedgerows.
Confirm drainage arrangements at entrances to ensure there is no surface runoff to public roads.	As confirmed in Section 9.5 above, no surface water from the proposed site entrances will be allowed to drain onto the local roads. This will be achieved by the provision of a linear drainage system, within the site lands, which will run parallel to the public road at the site entrances.
Requirement for Traffic Management Plan, including access / egress plan for construction works to ensure all workers are not leaving the site at the same time.	A Preliminary Traffic Management Plan will be developed and audited at pre-construction stage and be submitted to Cork County Council for agreement/signoff.
Backfilling of pits in public road areas and confirmation of approach to management of excavated material in the public road.	All works related to opening, backfilling and reinstatement of trenches will be as per the Department of Transport Guidelines for Managing Openings in Public Roads. The submitted Construction Methodology for the Aglish Solar Farm confirms that excavated material will be incorporated as backfill and that

Item Raised	Project Response
	<p>existing road build-ups will be confirmed with Cork County Council to ensure reinstatement is agreed.</p> <p>No large areas for stockpiling excavated material will be required. As per commitments in the construction methodology, any surplus material will be transported off site and disposed of at a fully authorised soil recovery site. The volumes will be low and any impact on local traffic will be negligible.</p>
Confirm requirements for road closures, including any detour plans.	There are no intentions or requirements to close any roads as part of the temporary construction phase. All localised traffic management measures will be discussed and agreed with Cork County Council as part of the final CEMP

10 SUMMARY AND CONCLUSION

An engineering appraisal of the local road network for the proposed solar farm, substation and grid connection at Aglish, Currahaly, Farnanes, Farran, Knockavullig, Knocknagoul, Knockshanawee, Loughleigh, Mahallagh, Nettleville Demesne, Rathonoane, Rooves Beg, Rooves More and Shandangan East in County Cork has been undertaken. The proposed solar farm is referred to as Aglish Solar Farm and a planning application for the development has been made (Cork County Council Reference 24/6157 / An Coimisiún Pleanála ACP-323402-25). At the time of writing, the solar farm application is undetermined.

The site is well served by the local and national road network. The local topography comprises gentle gradients and there are no severe inclines present that adversely affect road geometry. Discussions with Cork County Area Engineers from previous permitted solar farm projects have provided recommendations which help frame the access route proposals. Continuing liaison with Cork County Council Area Engineers will be required at all stages of the project to ensure local issues are considered as the project plans develop. As part of the planning application for the solar farm, Cork County Council Road Department were satisfied that temporary road impacts during the construction phase of the development would be acceptable and recommended that planning permission be granted subject to conditions. These conditions (Appendix B) are accepted in full by the Applicant

Pending planning permission, it is proposed that the solar farm, substation and grid connection will be constructed at the same time. Hence, the data presented in this report for traffic associated with the development considers the entire development (i.e. the solar farm and the substation and grid connection). The construction of Aglish Solar Farm and substation and associated works is expected to take c. 24 months in total. Over the 24-month period, the average number of HGV vehicles is 10 per day with an hourly average of 1. A 5.5-day week is assumed as per normal construction projects. The peak number of HGV trips is 22 per day with a hourly average of 3. This peak activity is associated with civil engineering works in months 1 to 9 and solar farm set-up and installation works in months 7 to 19. Vehicle trips reduce substantially in the final months of the programme. Measures to mitigate the temporary construction traffic on the local road network is described in Section 9. On completion of the works and commissioning of the solar farm and substation, it will be an unmanned facility which will be remotely monitored. Operational and maintenance activities in relation to the solar farm will generate occasional vehicle trips, estimated at 2 – 4 van or tractor/trailer type vehicles per month. For clarity, both the solar farm and the substation construction traffic are separately accounted for in the data before they are combined into the cumulative traffic for the development. Accounted for separately, substation and grid connection works are scheduled to occur in the first 16 months of the programme and the peak number of HGV trips per day for this part of the development works is 13.

A Swept Path Analyses of the delivery routes proposed to the site entrances shows that no works are required to the local road network to facilitate the passage of a 40ft articulated vehicle (to both site entrances) or an abnormal load delivery vehicle (to site entrance 2) along the local road to the site entrances to the substation and grid connection.

The average gradients on the local road delivery routes are shallow and will not be problematic for delivery vehicles. A review of the horizontal alignment of the delivery routes coupled with the Swept Path Analyses described above shows that there are no issues of concern for the passage of delivery vehicles around horizontal road bends.

In line with past solar farm development applications, an 'X Distance' of 2.4m and a 'Y-Distance' of 90m for local roads have been adopted as the visibility standard for the proposed site entrances. This is achieved at the proposed site entrances.

A suite of mitigation measures is proposed for the construction phase of the development as part of this site access appraisal. These include separate access routes for northern and southern entrances, a temporary

Stop/Go system, temporary road signage, a booking system for construction deliveries and a pavement condition survey. At the proposed site entrances, new drainage works will mitigate the potential for surface water flowing onto the adjacent public roads. The conditions provided by Cork County Council in relation to engineering matters (Appendix B) are also accepted in full by the Applicant.

When the existing conditions are taken into account with construction phase mitigation and a net reduction in traffic volumes over the project lifetime, it is proposed that the substation and grid connection at Aglish in County Cork does not pose any significant residual risks and on this basis, should be granted planning permission.

APPENDIX A

DRAWINGS



PROPOSED SITE PLAN
(Scale 1 : 5,000)

Client

Aglish Solar Farm Ltd.

General Notes

No.	Date	By	Amendment / Issue	App
D01	Jan.26	DC	DRAFT ISSUE FOR DISCUSSION	KR

CSEA
CIVIL AND STRUCTURAL
ENGINEERING ADVISORS LTD.

Drawn	DC
Checked	KR
Approved	KR
Date	Jan. 2026
Scale	Half @ A3
Shown	@ A1
Job No.	

Project	Aglish SID
Title	Proposed Site Plan
	(Sheet 1 of 1)

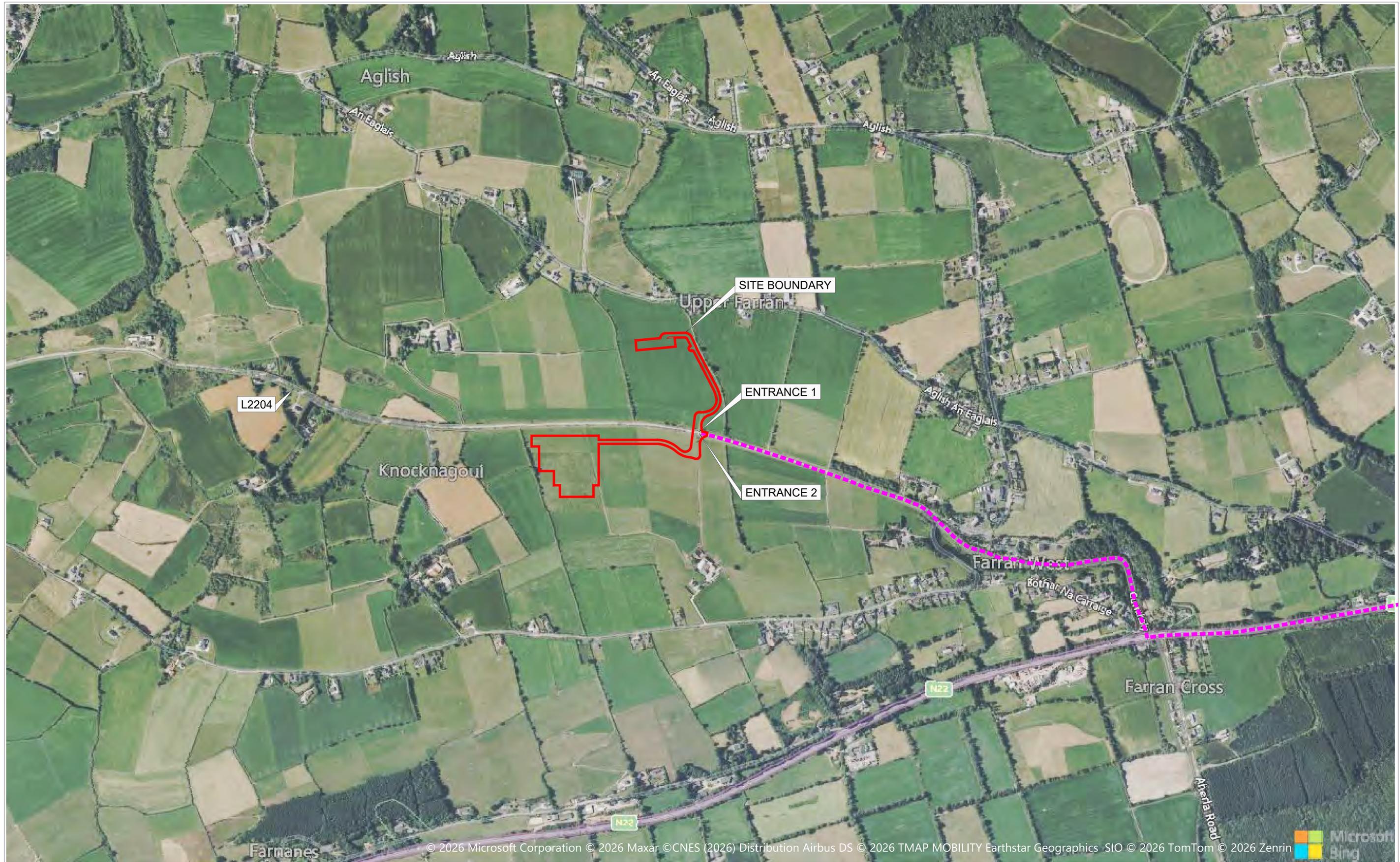
File Ref.	2024-07-10.dwg	Drg. No.	01	Rev.	D01
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PROPOSED DELIVERY ROUTE

(Scale 1 : 50,000)

Client Aglish Solar Farm Ltd.	General Notes	<table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>D01</td> <td>Jan.26</td> <td></td> <td>DRAFT ISSUE FOR DISCUSSION</td> <td>KR</td> <td></td> </tr> <tr> <td>No.</td> <td>Date</td> <td></td> <td>Amendment / Issue</td> <td>App</td> <td></td> </tr> </table>							D01	Jan.26		DRAFT ISSUE FOR DISCUSSION	KR		No.	Date		Amendment / Issue	App			Drawn DC	Project Aglish SID
D01	Jan.26		DRAFT ISSUE FOR DISCUSSION	KR																			
No.	Date		Amendment / Issue	App																			
Checked KR	Approved KR																						
		Date Jan. 2026	Title Proposed Delivery Route For Solar Farm Construction 1 : 50,000 (Sheet 1 of 1)																				
		Scale Half @ A3																					
		Shown @ A1																					
		Job No.	File Ref. 2024-07-11.dwg	Dwg. No. 01	Rev. D01																		



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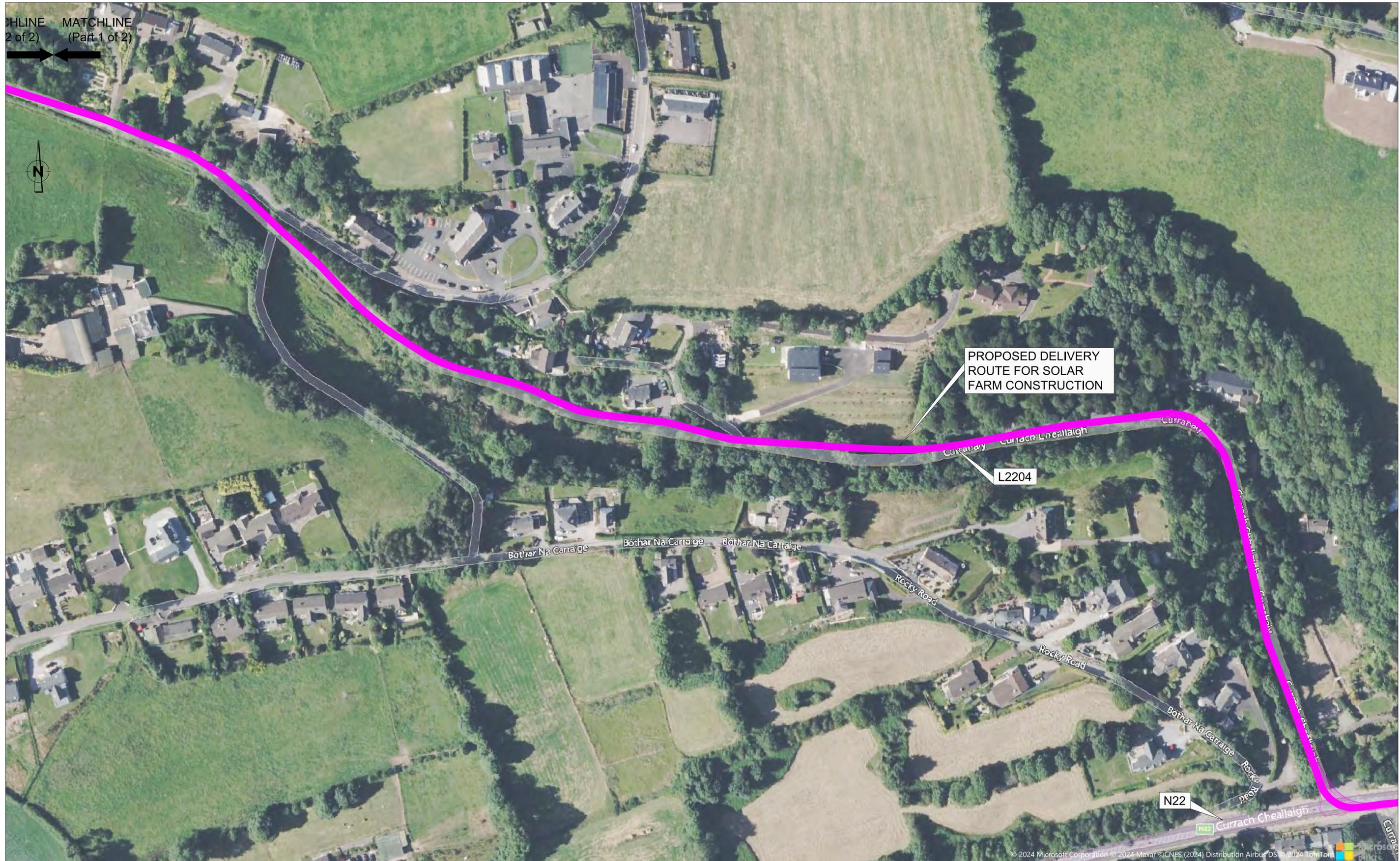
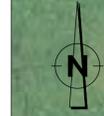
PROPOSED DELIVERY ROUTE
(Scale 1 : 5,000)

Client	Aglish Solar Farm Ltd.										
General Notes	<p>— SITE BOUNDARY</p> <table border="1"> <tr> <td>No.</td> <td>Date</td> <td>By</td> <td>App</td> <td>Amendment / Issue</td> </tr> <tr> <td>D01</td> <td>Jan.26</td> <td>DC</td> <td>KR</td> <td>DRAFT ISSUE FOR DISCUSSION</td> </tr> </table>	No.	Date	By	App	Amendment / Issue	D01	Jan.26	DC	KR	DRAFT ISSUE FOR DISCUSSION
No.	Date	By	App	Amendment / Issue							
D01	Jan.26	DC	KR	DRAFT ISSUE FOR DISCUSSION							

Drawn	DC	Project	Aglish SID
Checked	KR	Title	Proposed Delivery Route For Solar Farm Construction 1 : 5,000 (Sheet 1 of 1)
Approved	KR	Scale	Half @ A3 Shown @ A1
Date	Jan. 2026	Job No.	2024-07-11.dwg
File Ref.	2024-07-11.dwg	Drg. No.	02
Rev.			D01



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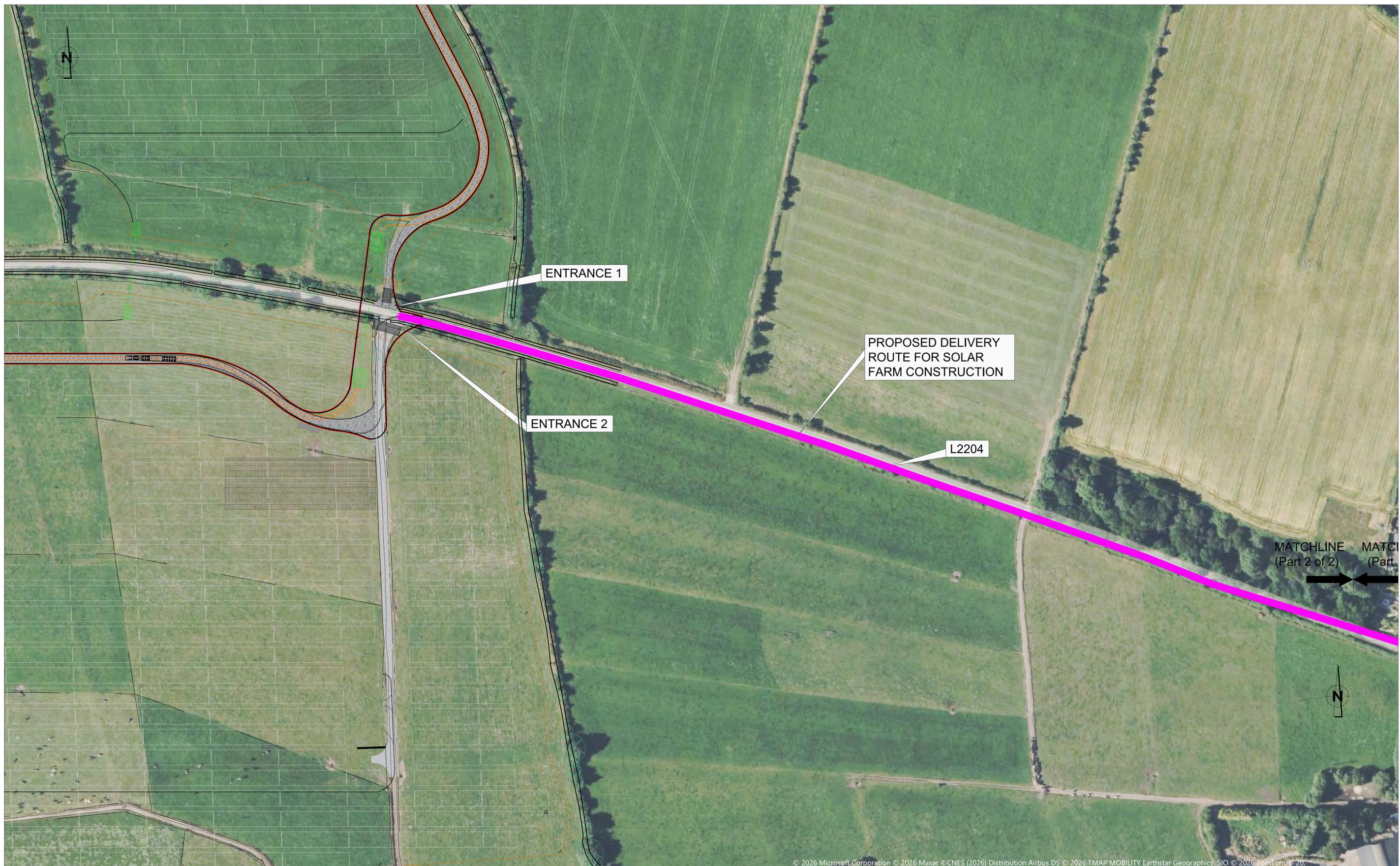
PROPOSED DELIVERY ROUTE FROM N22 WITH SWEEP PATH ANALYSIS LINES SHOWN ON ROUTE (Part 1 of 2)
(Scale 1: 1,000)

Client	General Notes
Aglish Solar Farm Ltd.	
KEY PLAN	

No.	Date	By	Amendment / Issue	App
D01	Jan. 26	DC	DRAFT ISSUE FOR DISCUSSION	KR

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Drawn DC	Project	Aglish Solar Farm
Checked KR		
Approved KR		
Date Jan. 2026	Title	Proposed Delivery Route From N22 For Solar Farm Construction 1 : 1,000 - Part 1 (Sheet 1 of 2)
Scale Half @ A3		
Shown @ A1		
Job No.	File Ref.	Dwg. No.
	2024-07-12.dwg	01
		Rev. D01



PROPOSED DELIVERY ROUTE FROM N22 WITH SWEEP PATH ANALYSIS LINES SHOWN ON ROUTE (Part 2 of 2)
(Scale 1 : 1,000)

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Client

Aglish Solar Farm Ltd.

KEY PLAN

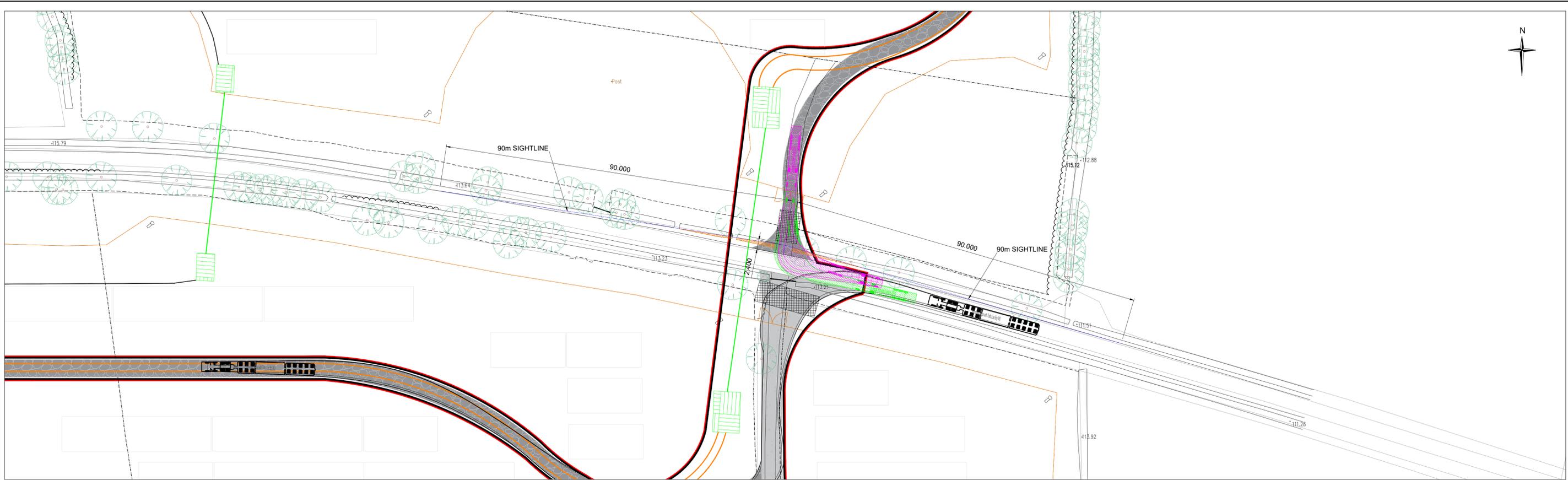


General Notes

No.	Date	By	App	Amendment / Issue
D01	Jan.26	DC	KR	DRAFT ISSUE FOR DISCUSSION

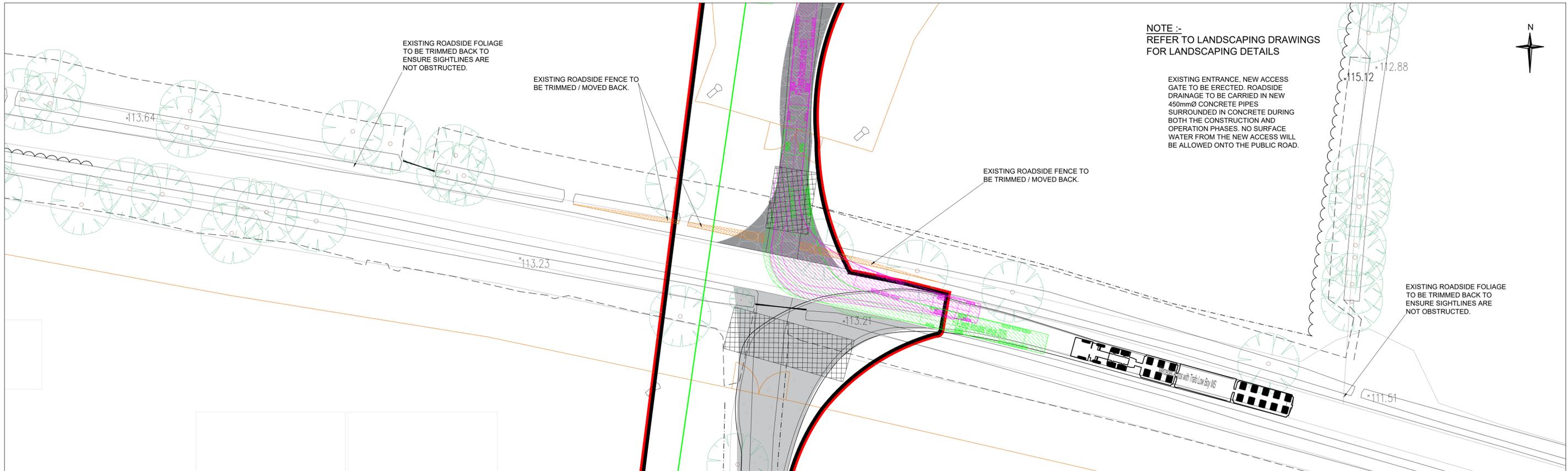
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Drawn	DC	Project	Aglish SID	
Checked	KR			
Approved	KR			
Date	Jan. 2026	Title	Proposed Delivery Route From R626 For Solar Farm Construction 1 : 1,000 - Part 2 (Sheet 2 of 2)	
Scale	Half @ A3 Shown @ A1			
Job No.		File Ref.	2024-07-12.dwg	Drg. No. 02
				Rev. D01



PROPOSED SITE ACCESS 1 - SIGHTLINES

(Scale 1: 500)



PROPOSED SITE ACCESS 1 - ENTRANCE

(Scale 1: 250)

Client

Aglish Solar Farm Ltd.

General Notes

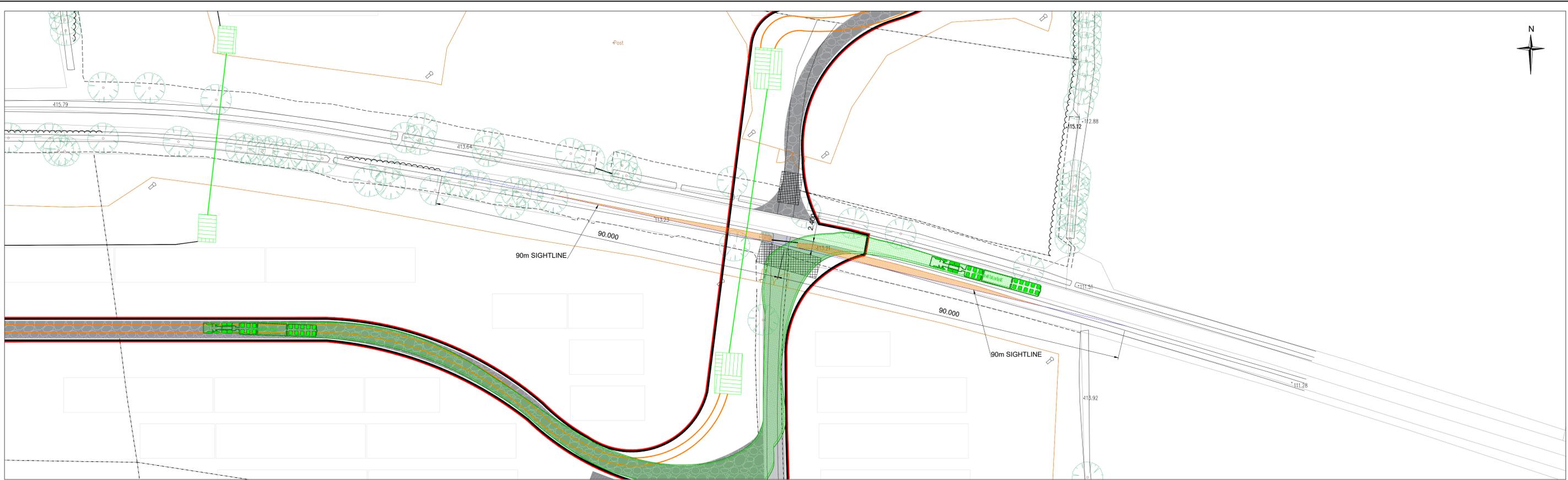
No.	Date	By	Amendment / Issue	App
D01	Jan. 26	DC	DRAFT ISSUE FOR DISCUSSION	KR

CSEA
CIVIL AND STRUCTURAL
ENGINEERING ADVISORS LTD.

Drawn	DC
Checked	KR
Approved	KR
Date	Jan. 2026
Scale	Half @ A3
Shown	@ A1

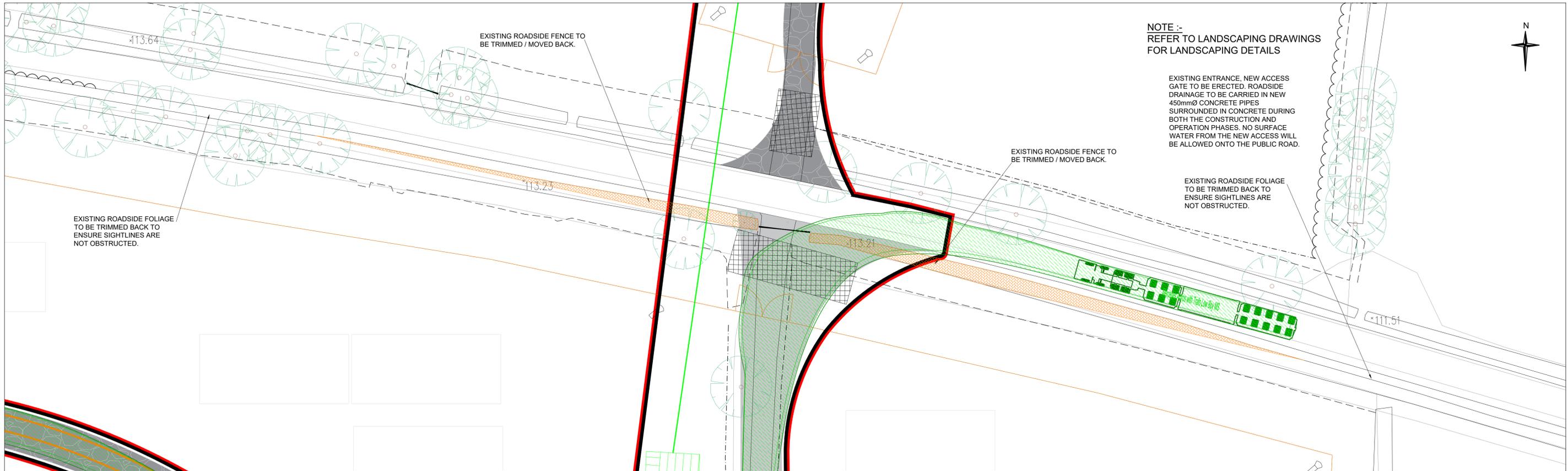
Project	Aglish SID
Title	Proposed Site Entrance 1

Job No.	File Ref.	Drg. No.	Rev.
	2024-07-13.dwg	01	D01



PROPOSED SITE ACCESS 2 - SIGHTLINES

(Scale 1: 500)



PROPOSED SITE ACCESS 2 - ENTRANCE

(Scale 1: 250)

Client

Aglish Solar Farm Ltd.

General Notes

No.	Date	By	Amendment / Issue	App
D01	Jan.26	DC	DRAFT ISSUE FOR DISCUSSION	KR

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Drawn DC
Checked KR
Approved KR
Date Jan. 2026
Scale Half @ A3
Shown @ A1

Project **Aglish SID**
Title Proposed Site Entrance 2

Job No. File Ref. 2024-07-13.dwg Drg. No. 02 Rev. D01

APPENDIX B

CORK COUNTY COUNCIL – ENGINEER’S RECOMMENDED CONDITIONS

ENGINEERING REPORT
FURTHER INFORMATION

APPLICATION NO.	24/06157
APPLICANT	Aglish Solar Farm Limited
DESCRIPTION	A 10 year Permission is sought for a solar farm with a total area of circa 161 hectares. The solar farm will consist of solar panels on ground mounted frames, 23 no. single storey electrical inverter/transformer stations, 6 no. single storey spare parts containers, 3 no. Ring Main Units, 7 no. weather stations, underground electrical ducting and cabling within the development site, private lands and within the L62031, L6203, R619, L6207, L22012 and L2204 public roads to connect solar farm field parcels, security fencing, CCTV, access tracks, 4 no. stream/drain deck crossings, 6 no. horizontal directional drill crossings (under watercourse/drains/public road), temporary construction compounds, landscaping and all associated ancillary development and drainage works. Construction and operational access will be via 7 no. entrances from L62031, L6203, L22012, L6398 and L2204 local roads. The operational lifespan of the solar farm will be 40 years and planning permission is requested for this duration.
LOCATION	Aglish, Currahaly, Farnanes, Farran, Knockavullig Knocknagoul, Knockshanawee, Loughleigh Mahallagh, Nettleville Demesne, Rathonoane Rooves Beg, Rooves More, Shandangan East, Co. Cork
DECISION DUE DATE	24/07/2025

Assessment

I wish to review the conditions I had attached on my previous report and I now recommend conditions as follows

Conclusion

Grant

Conditions/Reasons

No.	Condition	Reason
1	The cable route shall be constructed in accordance with the requirements of the 'Interim Guidance to Roads Authorities regarding the proposed placement of Medium or High Voltage	In the interests of orderly development.

ENGINEERING REPORT
FURTHER INFORMATION

	electricity Assets including ducts, cables and associated infrastructure under public roads'.	
2	Prior to development the applicant shall carry out a survey of all the public roads and bridges directly affected by the development. The list of road shall be agreed in writing with the Roads Authority. The survey will include PSCI Rating and video. A copy of the survey shall be submitted to the Roads Authority before construction works commence	In the interests of orderly development
3	A full video survey of the existing water table network shall be carried out on public roads subject to cabling. This survey shall be submitted to the Roads Authority before development commences. All water tables shall be fully reinstated after the works are complete	In order to protect the surface water drainage network
4	The applicant shall record all surface water culverts exposed during the cabling excavation works. This record will be notified to the Roads Authority on a weekly basis while excavation is in progress. All such culverts exposed shall be replaced by a pipe across the full road width. A photograph of each completed culvert shall be submitted to the Roads Authority upon completion.	To protect the road surface water drainage network
5	The applicant shall be carry out any hedgcutting works or pothole filling on traffic diversion routes as required by the Roads Authority.	In the interests of road safety
6	Before commencing any development, or, at the discretion of the Planning Authority, within such further period or periods of time as it may nominate in writing the developer shall provide, to the satisfaction of the Planning Authority, security in the amount of €500000 for the provision and satisfactory completion of the maintenance of any temporary road surface, reinstatement of road surface water table network and road surface	To ensure that these parts of the development are constructed and completed to a satisfactory standard.

ENGINEERING REPORT
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	required by Condition No. NO.1, 3 & 9	
7	The minimum depth of cover to any cable in the public road or verge shall be 950mm	In the interests of road safety
8	The applicant shall locate any proposed joint boxes on the R-619 off the carriageway in accordance with the Interim Guidance to Road Authorities regarding the proposed placement of MEdium or High Voltage electricity assets including ducts, cables and associated infrastructure under public roads	In the interests of road safety
9	All public road affected by the cable route shall be fully regulated and resurfaced across their full width. The applicant shall maintain any temporary surfaces that are open to traffic in a safe manner or as directed by the road authority.	In the interests of road safety



James Dwyer

04/07/2025