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MONA OFFSHORE WIND PROJECT

Outline Construction Traffic Management Plan

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Image of an offshore wind farm

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Prepared by:

RPS

Prepared for:

Mona Offshore Wind Ltd.

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Glossary

Term	Meaning
Abnormal Indivisible Loads	Loads or vehicles that exceed maximum vehicle weight, axle weight or dimensions as set out in the Road Vehicles (Construction and Use) Regulations 1986 as amended.
Outline Construction Traffic Management Plan	A plan establishing vehicle routing and to ensure that vehicles can safely access the Mona Onshore Development Area during the construction phase.
Haul road	The haul road will provide vehicle access along the Mona Onshore Cable Corridor off the public highway and will be used where needed throughout the installation of the onshore export cables and Mona 400 kV Grid Connection Cable. The haul road will be 6 m wide (excluding passing places). The haul road will be made up of permeable gravel aggregate (on average 0.4 m in depth) with a geotextile or other type of protective matting, or plastic or metal plates or grating'
Local Highways Authority	A body responsible for the public highways in a particular area of England and Wales, as defined in the Highways Act 1980
Mobilisation period	Period before and after standard construction working hours for deliveries, arrival of construction workers etc

Acronyms

Acronym	Description
AIL	Abnormal Indivisible Load
CoCP	Code of Construction Practice
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
GPS	Global Positioning System
HA	Highway Authority
HAMP	Highway Access Management Plan
HGV	Heavy Goods Vehicles
LPA	Local Planning Authority
MHWS	Mean High Water Springs
PRoW	Public Rights of Way
TCC	Temporary Construction Compound

Units

Unit	Description
kV	Kilovolt
m	Metre
%	Percentage

1 OUTLINE CONSTRUCTION TRAFFIC MANAGEMENT PLAN

1.1 Overview

1.1.1.1 This Outline Construction Traffic Management Plan (CTMP) is provided as an annex to the Outline Code of Construction Practice (CoCP) (Document Reference J26), which is a requirement of the draft Development Consent Order (DCO) (Document Reference C1). It sets out the key traffic management and mitigation measures for traffic that will be implemented during the construction phase of the Mona Offshore Wind Project.

1.1.1.2 This Plan seeks to manage potential impacts that occur from the construction of the onshore elements of the Mona Offshore Wind Project. These elements occur landward of Mean High Water Springs (MHWS) and comprise:

- Mona Landfall
- Onshore Cable Corridor
- Onshore Substation
- 400kV Grid Connection Cable Corridor.

1.1.1.3 In addition to these elements, the Outline CTMP also considers the temporary construction compounds, storage areas, accesses and mitigation required to support the construction of the Mona Offshore Wind Project.

1.1.1.4 The relevant planning authority for the landfall and the western section of the Onshore Cable Corridor (i.e. west of Bodelwyddan) is Conwy County Borough Council; the relevant planning authority for the eastern section of the Onshore Cable Corridor, the Onshore Substation and the 400kV Grid Connection Cable Corridor is Denbighshire County Council.

1.2 Purpose of the Outline Construction Traffic Management Plan

1.2.1.1 The draft DCO (Document Reference C1) includes a requirement for the preparation of a final CoCP. The final CoCP will be supported by a series of management plans including a CTMP, which must be submitted to, and approved by the relevant planning authority prior to the commencement of onshore works.

1.2.1.2 The purpose of this Outline CTMP is to establish the principles and procedures that will be implemented by the Principal Contractor to minimise and manage the adverse impacts associated with the transport of materials, plant and staff required for construction of the Mona Offshore Wind Project. This Outline CTMP also presents the standards and procedures for managing the impact of Heavy Good Vehicles (HGV) movement during the construction period of the Mona Offshore Wind Project, including localised road improvements and traffic management necessary to facilitate the safe use of the existing local road network.

1.2.1.3 This is an outline document that is based on the design assessed in the Environmental Statement (see Volume 1, Chapter 3: Project description of the Environmental Statement (Document Reference F1.3)).

1.2.1.4 The Outline CTMP should be read in conjunction with the Outline CoCP (Document Reference J26). Additionally, Volume 3, Chapter 8 Traffic and transport of the Environmental Statement (Document Reference F3.8) includes contextual information.

1.2.1.5 Should the Mona Offshore Wind Project DCO be granted, this Outline CTMP will evolve and form the basis of a final CTMP or CTMPs which will be prepared in consultation with Conwy County Borough Council and Denbighshire County Council as the Local Highway Authorities, and North and Mid Wales Trunk Road Agent collectively referred to as the Highway Authorities (HAs), prior to submission to the relevant authorities for approval.

1.2.1.6 The measures set out in this Outline CTMP relate to all areas of onshore construction activity which have been identified in Volume 3, Chapter 8: Traffic and transport of the Environmental Statement (Document Reference F3.8) as potentially leading to adverse transport and traffic effects. This includes management measures relating to HGV movement and travel plan measures relating to construction staff movement. The Outline Highways Access Management Plan (HAMP) (Document Reference 26.16), which is an annex to the Outline CoCP (Document Reference J26), which is a requirement of the draft DCO (Document Reference C1), supports this Outline CTMP and the commitments presented therein.

1.3 Scope of this Outline CTMP

1.3.1 Scope

1.3.1.1 The scope of this Outline CTMP applies to the onshore site preparation works and construction activities of the Mona Offshore Wind Project located landward of MHWS. ~~Onshore site preparation~~The Plan does not apply to activities associated with offshore works ~~comprise the following activities (as set out in the draft DCO (Document Reference C1):~~(i.e. seaward of MHWS).

- ~~Site clearance~~
- ~~Demolition~~
- ~~Early planting of landscaping works~~
- ~~Archaeological investigations~~
- ~~Environmental surveys~~
- ~~Ecological mitigation~~
- ~~Investigations for the purpose of assessing ground conditions~~
- ~~Remedial work in respect of any contamination or other adverse ground conditions~~
- ~~The diversion and laying of utilities and services~~
- ~~Site security works~~
- ~~The erection of any temporary means of enclosure~~
- ~~The erection of temporary hard standing~~
- ~~The erection of welfare facilities~~
- ~~Creation of site accesses~~
- ~~The temporary display of site notices or advertisements.~~

~~1.3.1.2 This Outline CTMP also considers the traffic-related site preparation works listed in paragraph 1.3.2.7.~~

1.3.1.2 Onshore site preparation works will be undertaken prior to the commencement of construction. These works will be undertaken in line with the following sections of this Outline CTMP as certified through the DCO:

- Section 1.4: Management of HGV movements
- Section 1.6: Management of construction workforce movement
- Section 1.7: Site accesses
- Section 1.9: Management and mitigation.

1.3.1.3 .

~~1.3.1.3~~1.3.1.4 The final CTMP(s) will be agreed with the Highways Authorities prior to the commencement of onshore works construction commencing. For the purpose of the CTMP, the term 'construction' includes all related engineering, construction and restoration activities as authorised by the DCO within the Order Limits and are described in more detail below.

1.3.2 Construction activities

1.3.2.1 As set out in in Volume 1, Chapter 3: Project description of the Environmental Statement (Document Reference F1.3) a main construction compound will be required within the Mona Onshore Development Area, to support the construction of the onshore elements of the Mona Offshore Wind Project. This will operate as a central base for the onshore construction works and will house the central offices, welfare facilities, light vehicle parking, and stores, as well as acting as a staging post and secure storage for equipment and component deliveries.

1.3.2.2 Construction compounds of various sizes including Temporary Construction Compound (TCC) 1, TCC 2, TCC 3, TCC 4, TCC 5 (one of which will form the main construction compound) and the Onshore Substation construction compound will be required for laydown and storage of materials and plant, as well as space for small temporary offices, welfare facilities, security, parking and wheel washing facilities. These compounds will be smaller than the main construction compound and will be located within the Mona Onshore Development Area. The location of these compounds is shown in Volume 1, Chapter 3: Project description of the Environmental Statement (Document Reference F1.3).

1.3.2.3 Storage areas may also be required at various locations within the Mona Onshore Development Area. These will operate as areas where some limited additional storage may be required in addition to the temporary land within the temporary corridor.

1.3.2.4 Working areas will also be required where trenchless techniques are used to contain the drilling rig, equipment and the drill entry and exit pit. These compounds will be located within the Mona Onshore Development Area. However, most compounds for trenchless technique crossings will be located either side of the haul road and within the temporary construction corridor.

1.3.2.5 Construction compounds will be prepared by removing and storing soils and then constructing hardstanding areas using crushed stone or other suitable material. Security and fencing may be provided at work sites (further information on fencing is provided in the Outline construction fencing plan (Document Reference J26.5)). Security lighting will be required at the compounds. Task lighting may also be required during working hours in the winter months (see Outline artificial light emissions plan (Document Reference J26.10)).

1.3.2.6 The potential adverse effects resulting from the construction activities relating to traffic and transport are assessed in Volume 3, Chapter 8: Traffic and transport of the Environmental Statement (Document Reference F3.8) and comprise the following:

- Adverse effects on non-motorised user delay, severance, fear and intimidation due to HGV movements
- Adverse effects due to possible increased risk to road users as a result of the passage of construction vehicles along existing roads or at site accesses
- Adverse effects from the movement of abnormal indivisible loads (AILs) associated with the construction of the Onshore Substation.

~~1.3.2.7 This Outline CTMP considers site preparation works construction activities and site reinstatement including the following:~~

- ~~Management of HGV movements~~
- ~~AILs~~
- ~~Management of construction workforce movement~~
- ~~Site accesses~~
- ~~Highway crossings~~
- ~~Management of highway safety~~
- ~~Implementation and monitoring of the CTMP.~~

1.4 Management of HGV movements

1.4.1 Vehicle types

1.4.1.1 A variety of vehicle types will need to access the construction sites. These will include

- Low loaders to deliver
  - Plant
  - Construction machinery
  - Ducting and cables
  - Fencing, marker tiles, welfare facilities and temporary portable cabins
- HGVs delivering aggregate for surfacing of compounds and haul roads
- Tankers to deliver water for trenchless techniques and for welfare
- Delivery of components for the Onshore Substation.

1.4.2 Vehicle routeing

1.4.2.1 Construction HGV routes (excluding cable drum deliveries) are identified at Appendix A of this Outline CTMP.

1.4.2.2 Routes for cable drum deliveries are detailed in Section 1.5 and at Appendix B of this Outline CTMP.

1.4.2.3 Construction vehicles must accord with the following:

- Due to a carriageway narrowing of the B5381 Roman Road between the Penrefail crossroads (the A548) and Moelfre, no construction vehicles save for

cable drum deliveries and construction staff routeing between compounds will be permitted to arrive or depart using this section of the B5381 Roman Road

- Due to the geometries of Engine Hill between the A55 Junction 25 and the B5381 Glascoed Road (link 23), no construction HGVs will be permitted to arrive or depart using Engine Hill
- Due to the sensitivities along the A525 through St Asaph, no construction vehicles will be permitted to arrive or depart using the A525 through St Asaph
- Due to the geometries of the A547 Market Street/A548 Chapel Street signalised junction within Abergele, construction HGVs must:
  - Arrive to the A548 Chapel Street from the west via the A55 Junction 23 only and turn right onto the A548 Chapel Street. There are no left turns permitted onto the A548 Chapel Street from the east via the A55 Junction 24
  - Depart from the A548 Chapel Street to the east via the A55 Junction 24 only by turning right onto the A547 Market Street. There are no left turns permitted onto the A547 Market Street to the west via the A55 Junction 23.

1.4.2.4 The final CTMP(s) will include agreed methods of communication with the HAs to confirm that these routes remain appropriate and are agreed for use when construction is ready to commence.

1.4.2.5 All contractors will be required to comply with the agreed routeing plans and will ensure that all drivers are informed of the need to restrict HGV movements to those specified routes. In the event that complaints are received that vehicles are not following prescribed routes the Principal Contractor would be responsible for the implementation of measures to record vehicle routeing, for example applying spot-checks to ensure that the agreed routes are being adhered to.

1.4.2.6 If deemed necessary by the HAs, where routine HGV vehicle movements are generated, e.g. haul route aggregate, the supplier will be requested to maintain a log, the purpose of which is to demonstrate compliance with following prescribed access routes and delivery times.

1.4.2.7 If deemed necessary by the HAs, construction access routes will have temporary signs posted along the confirmed routes.

1.4.2.8 Based on the above vehicle routeing the peak daily construction vehicle movements generated by the Mona Offshore Wind Project along each highway link within the traffic and transport study area are presented in Table 1.1 below. The location of highway links referenced within Table 1.1 are identified at Appendix C of this Outline CTMP.

Table 1.1: Mona Offshore Wind Farm peak daily construction flows.

Link	Total Vehicles	Heavy Vehicles
Link 1: A55 between Junctions 27 and 27A	674	285
Link 2: A55 between Junctions 27 and 26	674	285
Link 3: A55 between Junctions 26 and 25	755	285
Link 4: A55 between Junctions 25 and 24A	784	285
Link 5: A55 between Junctions 24A and 24	784	285
Link 6: A55 between Junctions 24 and 23A	562	285
Link 7: A55 between Junctions 23A and 23	562	285

Link	Total Vehicles	Heavy Vehicles
Link 8: A547 through Llanddulas	326	115
Link 9a: A547 between Rhyd-Y-Foel and TCC 1	326	115
Link 9b: A547 between TCC 1 and Busnes Gogledd Cymru	273	48
Link 10: A547 between Parc Busnes Gogledd Cymru and A548 Chapel Street	273	48
Link 11: A547 between A548 Chapel Street and A55	320	48
Link 12: A548 Chapel Street between A547 and Lon Dirion	336	95
Link 13: A548 Chapel Street between Lon Dirion and Abergele Hospital	336	95
Link 14: A548 Chapel Street between Abergele Hospital and B5381 Roman Road	336	95
Link 15: B5381 Roman Road between A548 and Moelfre	50	0
Link 16: B5381 Roman Road between Moelfre and Capel Carmel	50	0
Link 17: B5381 Roman Road between Capel Carmel and Roberts D a O	50	0
Link 18a: B5381 Roman Road between Roberts D a O and TCC 4	50	0
Link 18b: B5381 Roman Road between TCC 4 and TCC 5	123	37
Link 18c: B5381 Roman Road between TCC 5 and Engine Hill	297	101
Link 19: B5381 Glascoed Road between Engine Hill and Ffordd William Morgan	261	101
Link 20: B5381 Glascoed Road between Ffordd William Morgan and National Grid Substation Access	233	123
Link 21: Ffordd William Morgan between A55 and Carlton Court	535	218
Link 22: Ffordd William Morgan between Carlton Court and B5381 Glascoed Road	535	218
Link 23: Engine Hill between A55 and B5381 Glascoed Road	173	0

1.4.3 Timing of HGV movements

1.4.3.1 Standard construction working hours will be identified. The core working hours will be 07.00 to 19.00 Monday to Saturday. Some trenchless techniques works may require 24 hour working depending on the nature and scale of the crossing.

1.4.3.2 There will also be up to one hour before and after for mobilisation (“mobilisation period”), i.e. 06:00 to 07:00 and 19:00 to 20:00 weekdays and Saturdays. Mobilisation does not include HGV movements into and out of sites, but suppliers using light vehicles can make use of the wider highway network outside these hours to travel to or from site. At all times, including mobilisation periods, no vehicles will be permitted to wait or queue on the public highway whilst seeking access to the Mona Offshore Wind Project, no vehicle will be permitted to load/unload on the public highway and all vehicles must turn off their engines whist stationary after turning off the public highway. In certain circumstances, specific works may have to be undertaken on a continuous working basis (midnight to midnight Monday to Sunday). This includes any emergency works that may be required that would not require any advanced notice to the Local Planning Authority (LPA).

1.4.3.3 Other activities that may require 24-hour operation will be: site security, oil filling of transformers at the Onshore Substation, some work at jointing pits, some trenchless techniques activities and possible remedial works in response to severe weather events. These will be agreed in consultation with the relevant planning authorities. However it should be noted that not all of these activities will involve HGV movements

or would generate only infrequent HGV movements e.g. site security, oil filling of transformers and so are of a different nature to the frequent HGV movements of primary consideration within this Outline CTMP.

1.4.3.4 No restrictions on HGV timings are necessary because HGVs would not directly pass any schools or directly pass any other sensitive locations that require any such timing restrictions.

1.4.4 Reducing the impact of HGV movements

1.4.4.1 Load sizes are typically maximised and thus vehicle usage is typically minimised by contractors in order to minimise transportation costs and this will be encouraged by the Principal Contractor. Site supervisors will be encouraged to re-use HGVs where possible, such as using vehicles which have delivered material to remove excavated material if this needs to be removed from a site. Where practical, local suppliers will be used to minimise the distance travelled by HGVs.

1.4.4.2 All HGVs transporting fine and loose material will be sheeted to avoid dust and the spillage of materials onto the highway. Dampening of surfaces, such as the haul road in locations where it is close to the public highway, will be undertaken in dry weather where the movement of vehicles or delivery of loads may cause immoderate dust.

1.4.4.3 Where there is a risk of mud from the construction works being transported onto the highway network by HGVs, wheel cleaning facilities will be provided at each egress location to ensure that HGVs do not deposit mud and dust onto the highway network.

1.5 Management of abnormal indivisible loads

1.5.1.1 It is expected that a number of AILs comprising large components such as transformers will be transported to the Mona Onshore Substation. In addition, smaller AILs will also need access for cable drum deliveries to several points along the Onshore Cable Corridor. Cable drums are expected to be delivered direct by the manufacturer for storage and then distributed to the relevant access along the Onshore Cable Corridor via specialised cable drum trailer for installation. For assessment purposes only, all cable drum movements have been considered as AILs. The AILs are expected to be components that exceed standard load weight and possibly exceed standard width and length.

1.5.1.2 Depending on the width, length or weight of the laden vehicle, different notice periods will be provided to HAs, bridge authorities and the police. These can vary between two and five days. The following activities would need to be undertaken in accordance with the Road Vehicles (Authorisation of Special Types) Order 2003 (STGO):

- Before the start of any journey, notify in accordance with Schedule 5 the chief office of police for each area in which the vehicle or vehicle-combination is to be used
- Ensure that the vehicle or vehicle-combination is used in accordance with the requirements of that Schedule
- Ensure that the vehicle or vehicle-combination is accompanied during the journey by one or more attendants employed in accordance with Schedule 6.

1.5.1.3 The number of AIL movements would be low. There would be in the order of approximately 240 cable drum deliveries over the 33 month construction period, equating to approximately one delivery on average per week over that period and there

would be up to four transformer deliveries. Cable drums would then be distributed from the main compound to the Onshore Cable Corridor.

1.5.1.4 Although the movement of cable drums have been classified as AILs, this is dependent upon the cable drum size, weight and their transportation arrangements and their movement may not in fact be an AIL. AIL cable drum deliveries will travel to the Onshore Cable Corridor via the A55 Junction 26, along Ffordd William Morgan onto the B5381 or via the A55 Junction 23, along the A547. An AIL routeing plan for cable drum deliveries is shown at Appendix B.

1.5.1.5 Each load would be present on the network for a short period of time and standard measures (including traffic management measures) would be applied in accordance with the notification set out in paragraph 1.5.1.2 above and the heavy haulage company's insurance requirements in terms of route, timing and method of delivering to minimise delays to other highway users. This includes prior notification given to the police who will notify the locality via local newspapers/radio etc so that other users have advance notification and can avoid or re-time their journeys so as to negate any impact.

1.5.1.6 Some AILs would be under escort, as directed by the local police authority or as voluntary provided by the haulage contractor, with those delivering transformers being under police escort. Escorts would not only control the AILs but would also interact with other road users to control, guide and protect them accordingly so as to safeguard their safe and expedient passage. This includes not just other vehicles but also non-motorised users and those who simply wish to watch/observe the movement of the AILs transporting the larger transformers from the roadside.

1.5.1.7 The timing of AIL deliveries will be discussed with the HAs to minimise delay for other road users and to minimise risk to highway users. The HAs and the Police will dictate the timing of AIL deliveries along the highway and this may be during night time periods.

1.6 Management of construction workforce movement

1.6.1 Construction workforce routeing

1.6.1.1 A construction staff movement plan is attached at Appendix D. Construction staff will be prohibited from travelling along the following sections of highway:

- The B5381 Roman Road between the Penrefail crossroads (the A548) and Moelfre save for travelling between compounds
- The A525 between the A55 junction 27, and Lower Denbigh Road through St Asaph
- The A525 between the A55 junction 27A, and Lower Denbigh Road through St Asaph

1.6.2 Construction workforce travel

1.6.2.1 The value in managing and reducing the impact of the movement of construction staff is recognised. The final CTMPs approved by the HAs prior to the commencement of works are to document measures that can be implemented that will encourage contractors to make use of sustainable transport modes where possible and where appropriate. These measures include:

- The control of parking on and around construction sites to avoid parking on verges or highways, to avoid vehicles idling and wating for access and to deter construction workers from driving to site unnecessarily
- Measures to increase vehicle occupancy such as incentives to car-share, information to facilitate car sharing and the provision of minibuses where this would allow construction workers to access sites without the need to come by car
- The provision of public transport information where appropriate if this were to assist construction workers access sites or travel by bus or train to locations where they could be picked up by minibus
- Measures to encourage walking and cycling where appropriate where these modes offer an opportunity for construction workers to access sites, including provision of temporary cycle parking at work sites
- Welfare facilities will be provided on work sites to reduce the need for construction workers to travel elsewhere during the course of the day
- The proposed full working hours (between 07.00 to 19.00 weekdays) seeks to avoid construction workers travelling during the highway network peak hours and thus reduces impacts on the local road network during network peak hours.

1.7 Site accesses

1.7.1 Design

1.7.1.1 Access locations are identified in the Outline HAMP (Document Reference J26.16). The final design of all site accesses will be agreed with Conwy County Borough Council and Denbighshire County Council prior to the start of construction at each work site.

1.7.1.2 Working areas will be designed to enable plant, materials and waste to be loaded/unloaded, areas will be designed where practicable to enable vehicles to enter and exit in forward gear. Contractors/suppliers will not be permitted to wait on or load/unload from the public highway unless under traffic management control during the formation of accesses.

1.7.1.3 Areas where construction staff are working will be designed to enable designated parking facilities for construction workers.

1.7.1.4 All site accesses will be provided with appropriate fencing to ensure that work sites are secure. All site accesses will be designed to eliminate the risk of vehicles queuing back onto the highway by providing sufficient length and width close to the adjacent highway, which is appropriate to the types of vehicles anticipated to use the access.

1.8 Off-site highway works

1.8.1.1 Off-site highway works will be undertaken at the B5381 Roman Road / A548 Penrefail crossroads junction and at the B5381 Glascoed Road / B5381 Roman Road priority junction to allow for the safe movement of construction HGV movements through these junctions. These works are set out within the Outline HAMP (Document Reference 26.16), which is an annex to the Outline CoCP (Document Reference J26), which is a requirement of the draft DCO (Document Reference C1).

1.9 Management and mitigation

1.9.1.1 Where there is a risk that vehicles will deposit mud and debris on the highway in the vicinity of construction site accesses, wheel cleaning facilities will be provided. The condition of the adjacent highway will be monitored and if mud or debris is found to be present, measures such as road sweeping will be put in place by the contractor to secure its removal with minimal delay.

1.9.1.2 Appropriate signage will be provided on the approach to construction site accesses to warn of turning and/or slow-moving vehicles. The design and siting of all signage will be agreed with the HAs prior to the start of work at each work site. Signage can also be placed at the exit of construction site access points to instruct construction traffic to follow the designated route.

1.9.1.3 Contact numbers will be on display for the general public to raise any concerns.

1.9.1.4 Once a construction site access is no longer required, the access will be removed and the highway returned to its original condition.

1.9.1.5 There may be a need to provide traffic management measures at some accesses and at some routes to the accesses. This may be required for various reasons and the type of traffic management measures to adopt will depend upon the location on the highway, the nature and level of traffic on the highway, what is served by the highway, and the alternative routes available. Some examples are set out below:

- Requisite visibility splays cannot be provided at an access and so traffic on the highway may be temporarily stopped to allow HGVs to exit an access safely or three-way portable signal control may be temporarily installed
- The highway geometries are too narrow to safely accommodate turning HGVs when exiting an access and so traffic on the highway may be temporarily stopped to allow HGVs to exit an access safely or three-way portable signal control may be temporarily installed
- The highway geometries are too narrow to accommodate HGVs passing an oncoming vehicle and so shuttle working may be temporarily installed
- The highway geometries are too narrow to accommodate simultaneous turning movements through junctions and so three-way portable signal control may be temporarily installed at T-junctions or four-way portable signal control temporarily installed at crossroads
- Where any offsite highway works are being undertaken.

1.9.1.6 Where traffic on the highway is stopped, this could be via temporary portable signals or via manually operated stop/go signs.

1.9.1.7 Shuttle working is where one direction of travel receives priority over the other. This could be via temporary portable signals or via give way signs.

1.9.1.8 Some example layouts of these traffic management measures and features are shown on Figure 1.1 to Figure 1.6. These examples are extracted from The Traffic Signs Manual, Chapter 8, Part 1, Traffic Safety Measures and Signs for Road Works and Temporary Situations (Department for Transport/Welsh Government/Transport Scotland/Department for Infrastructure, 2009). The extracts are generic in nature and they are not designed to be specific to any particular location or circumstance but designed to be implemented in accordance with the advice contained within the document.

1.9.1.9 The Health and Safety at Work, etc. Act 1974 and the Health and Safety at Work (NI) Order 1978 require all clients, employers and employees to establish and maintain safe systems of work. Traffic authorities, statutory undertakers and contractors must give due attention to the detailed traffic management arrangements at road works sites and incident locations in order to ensure the safety of the public and of their own employees at these obstructions. It is essential for the safety of all concerned that uniform and consistent procedures should be adopted. Chapter 8 is intended to provide a standard of good practice for the signing and marking of obstructions as well as for the temporary traffic control necessitated by such obstructions of the highway. The standard described is a minimum, which should always be achieved. At difficult sites, i.e. sites where the on-site risk assessment has shown that the level of risk is above normal, further signs and other equipment will be necessary.

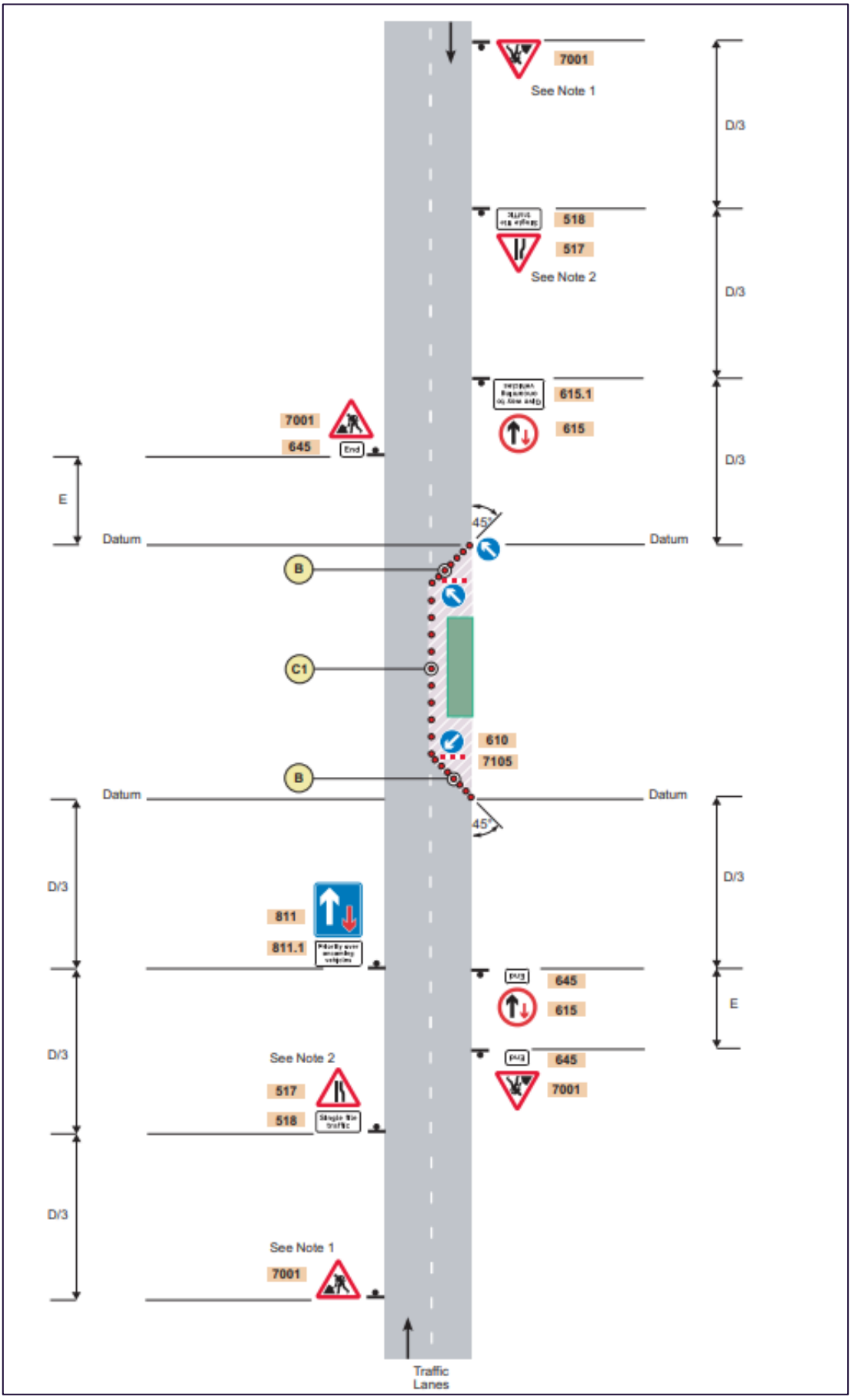


Figure 1.1: Priority signs on a two-lane single carriageway road.

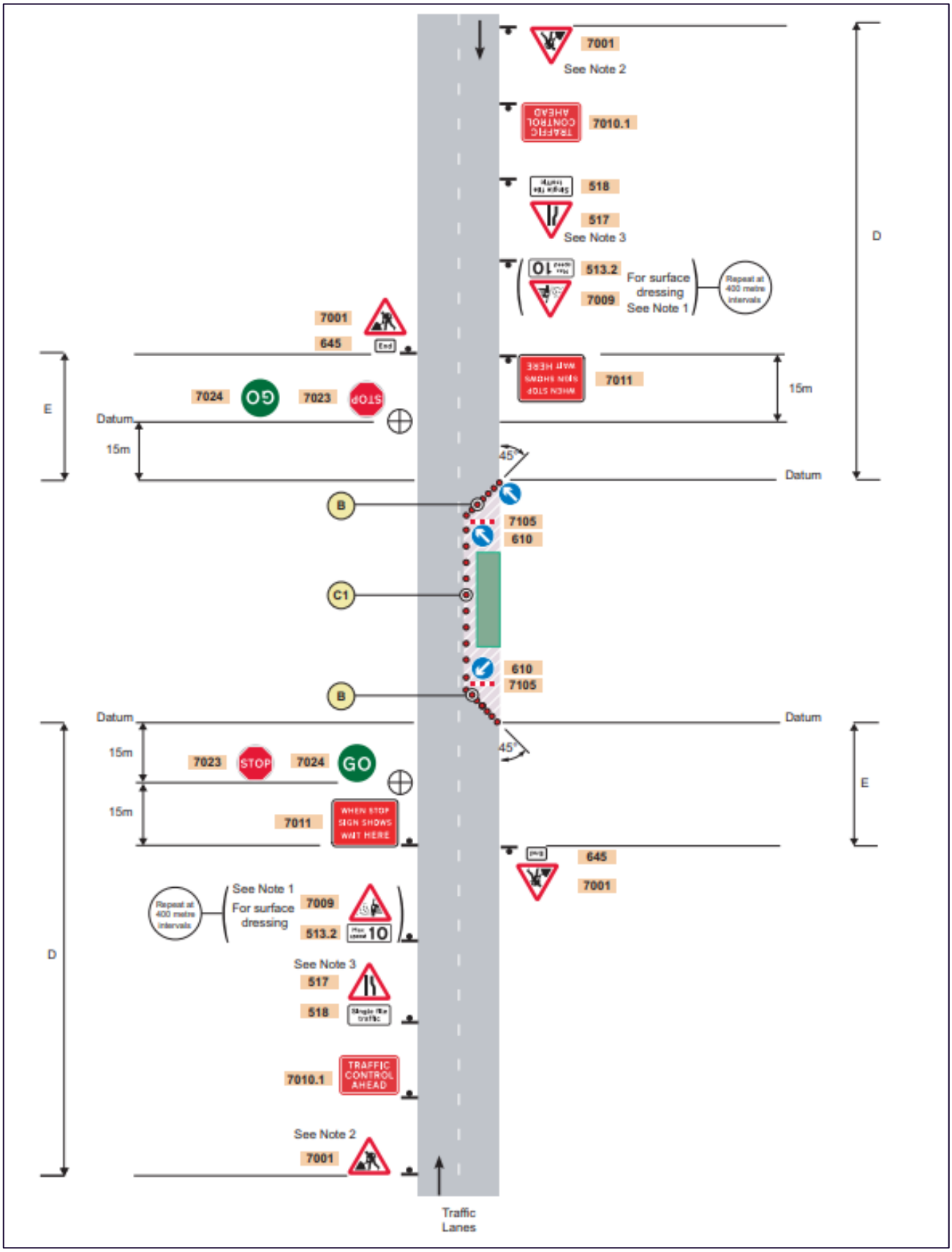


Figure 1.2: Stop/go signs on a two-lane single carriageway road.

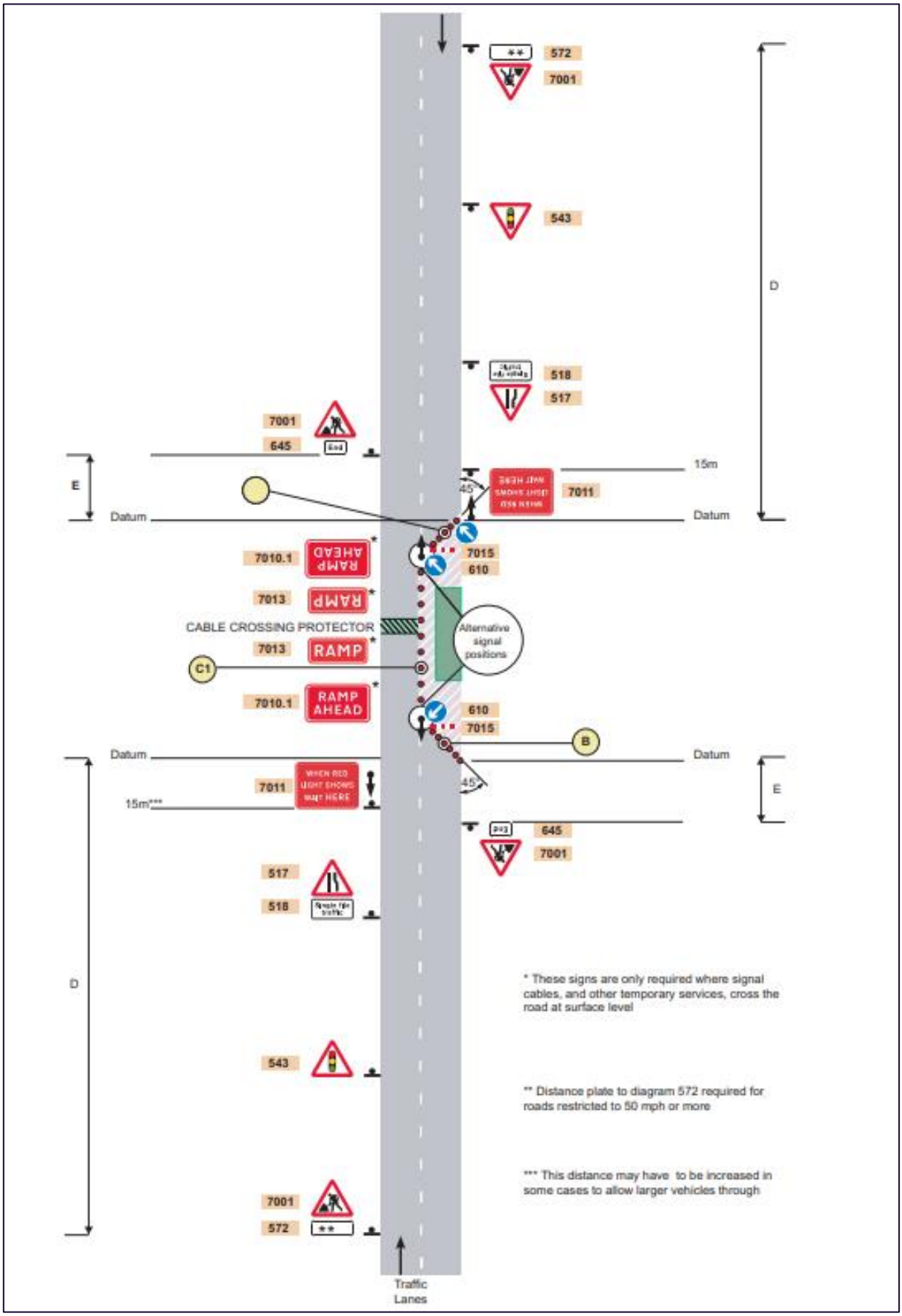


Figure 1.3: Portable traffic signals on a two-lane single carriageway road.

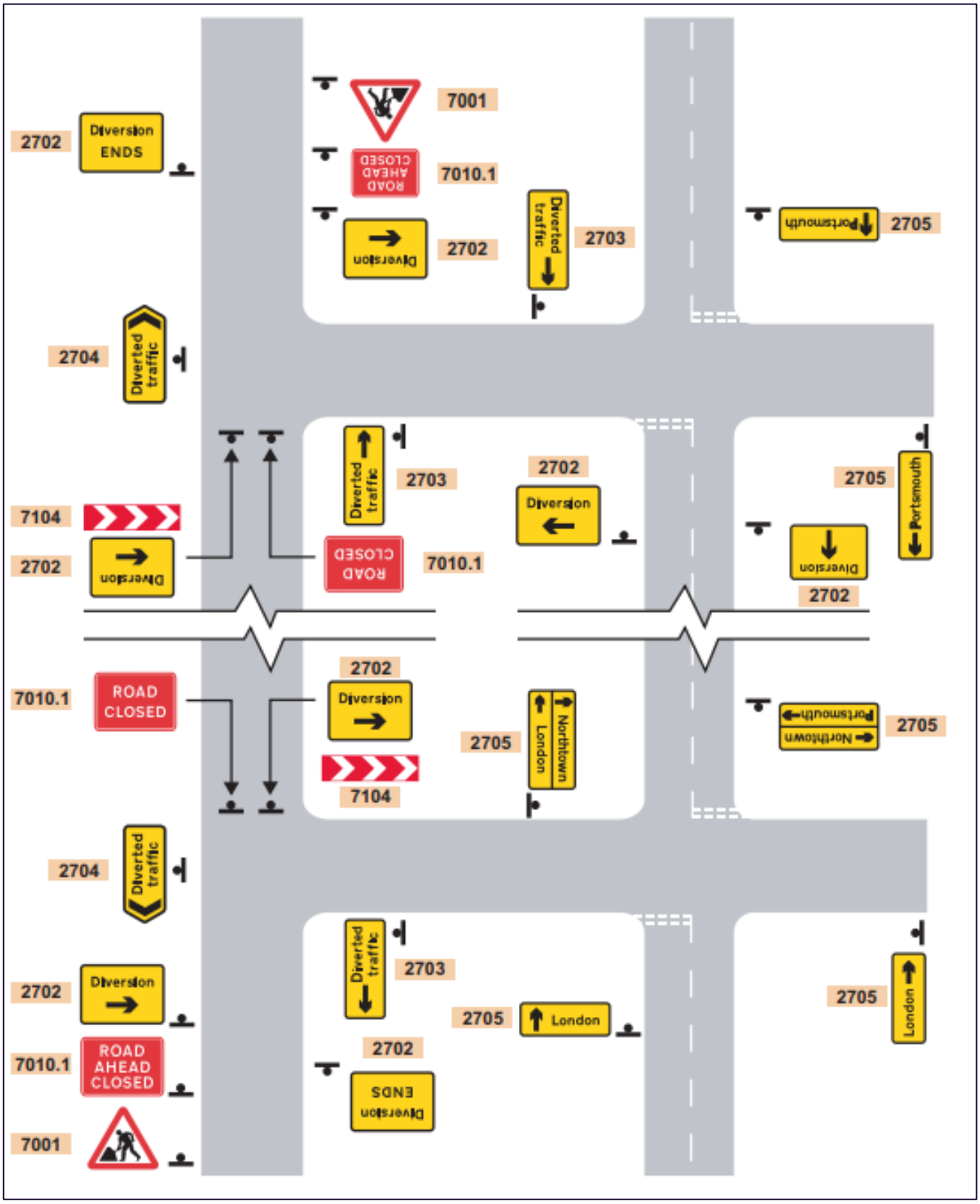


Figure 1.4: Layout of signs for road works on single carriageway roads with diversions.

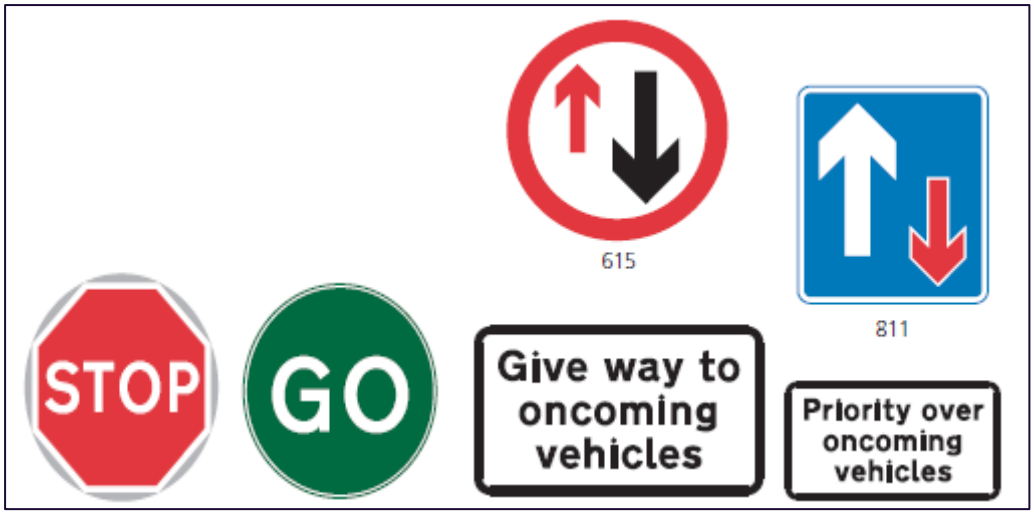


Figure 1.5: Manually operated stop/go signs and priority signs.

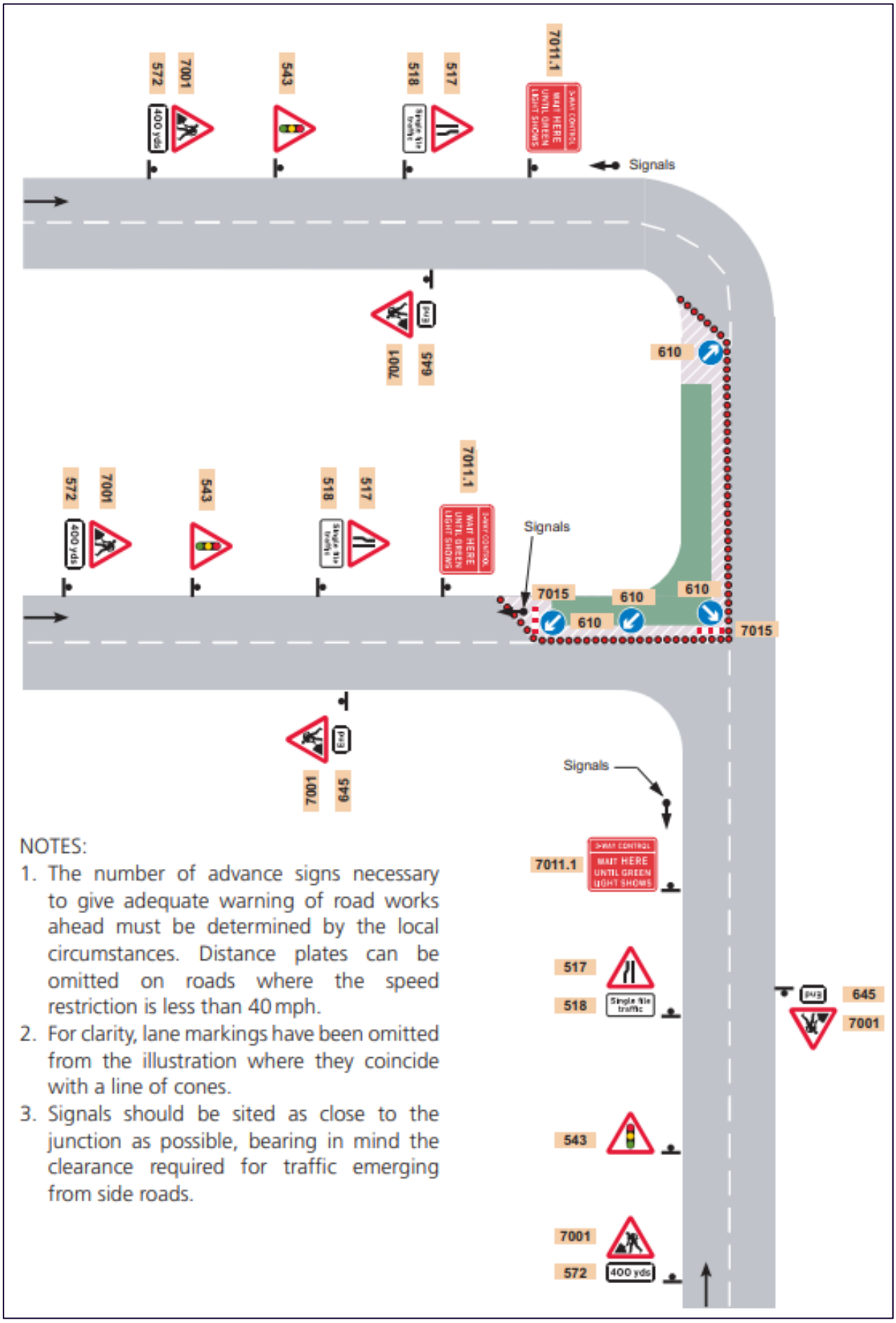


Figure 1.6: Roadworks at a T-junction – traffic control by means of portable traffic signals.

1.9.1.10 An example layout of the potable temporary signals proposed to be used at TCC 1 and TCC 5 accesses is presented by Figure 1.7 below, this layout includes the signage associated with temporary portable signals at a priority junction.

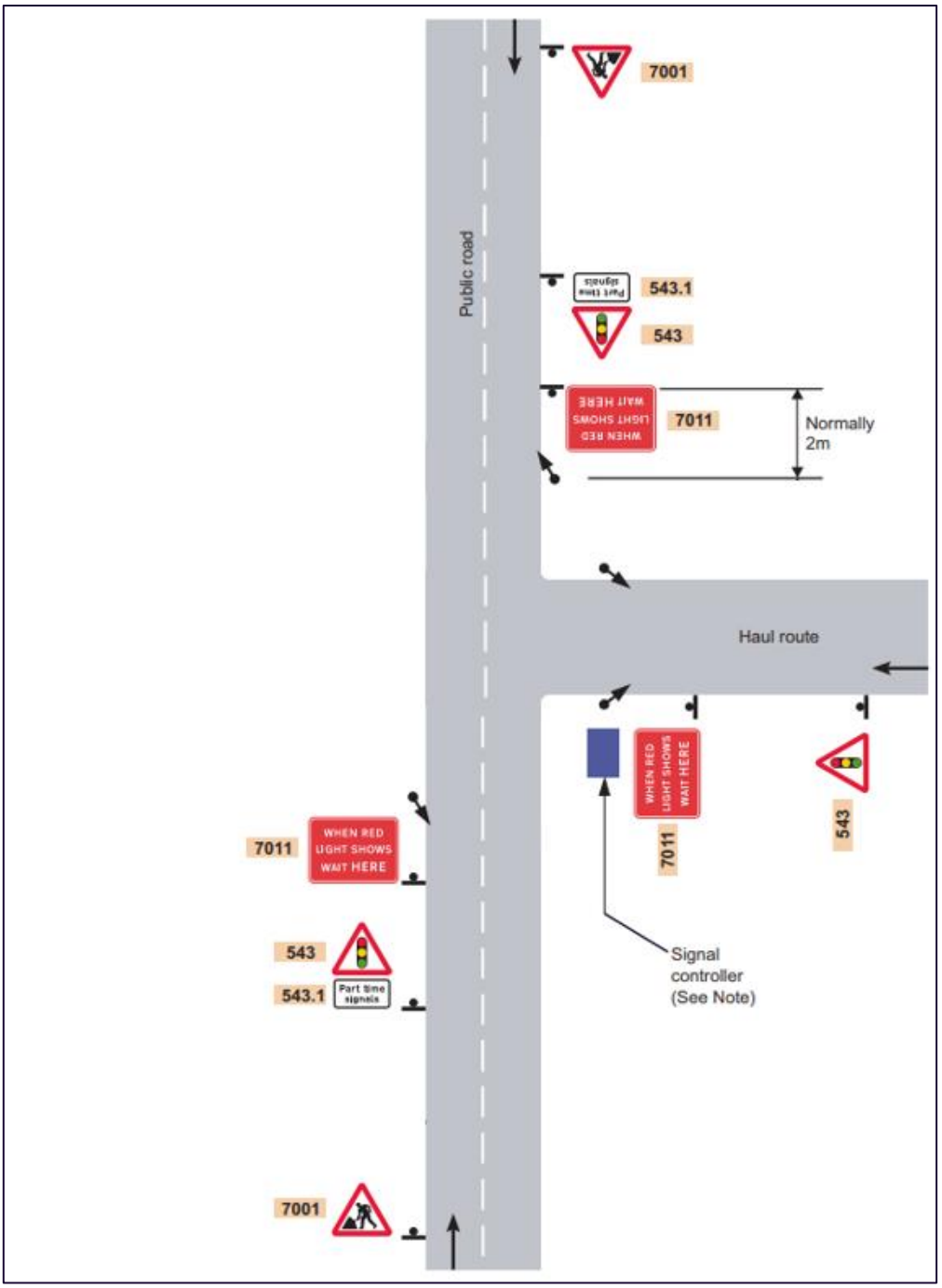


Figure 1.7: Roadworks at T-junction – traffic control by means of three-way portable signals.

1.10 Highway crossings

1.10.1 Onshore cable corridor highway crossing locations and operation

1.10.1.1 It is envisaged that all crossings of the public highway will be undertaken using trenchless techniques. The details of trenchless techniques are set out within Volume 1, Chapter 3: Project description of the Environmental Statement (Document Reference F1.3). The locations of crossings are also shown in Volume 5, Annex 5.4

Onshore crossing schedule of the Environmental Statement (Document Reference F5.5.4).

1.10.1.2 This method of cable laying means that there is no disturbance (i.e. no shuttle working nor road closures) to other users of the road with the exception of material delivery and arrival/departure of construction staff.

1.10.1.3 There will be some locations whereby the haul road crosses the highway and where traffic management will be required or where works are required to expose existing utilities. The traffic management methods to be used will depend on the location of the highway crossing, the nature and level of traffic on the highway link being crossed, what is served by the highway link and the alternative routes available. Methods may include temporary shuttle working crossings, or temporary closure.

1.10.1.4 Indicative priority, stop/go and signalled shuttle working arrangements are shown in Figure 1.1 to Figure 1.3. On lightly trafficked links, shuttle working can operate on a priority basis or be managed manually without the need for traffic signals. On busier links it is expected that temporary signals will be used.

1.10.2 Agreement, management and advance notification

1.10.2.1 Where traffic management measures are required, these will be agreed in advance with the HAs.

1.10.2.2 Any temporary road closures/introduction of one-way roads and any diversions will be advertised in advance and alternative routes indicated through signage (example shown in Figure 1.4).

1.10.2.3 Measures will be put in place to ensure that no unauthorised access is gained to the Onshore Cable Corridor from the highway at crossing points and that the adjacent works sites are secure.

1.10.2.4 Any works within the highway will be reinstated to a standard commensurate to prior to the commencement of the works and agreed with the HAs.

1.10.3 Haul road and its crossings with the highway

1.10.3.1 A haul road will be constructed along the majority of the Onshore Cable Corridor to provide for HGV access to undertake trenching works and install the cables, with gaps only at some trenchless technique locations and road crossings. The haul road will enable vehicles to move along the Onshore Cable Corridor and relieve the need for construction traffic to rely on longer sections of the local road network during construction. Vehicle movements should be via the construction haul road where possible to minimise adverse impacts on the local road network.

1.10.3.2 The haul road would operate with a low speed limit to ensure the safety of workforce and plant operatives in the vicinity. Where the haul road crosses existing highway links, traffic management would be used to ensure that safe crossing by highway traffic and haul road vehicles. An example layout is set out in Figure 1.8, extracted from The Traffic Signs Manual, Chapter 8, Part 1, Traffic Safety Measures and Signs for Road Works and Temporary Situations (Department for Transport/Highways Agency, 2009) The precise layout for each will be confirmed by the Principal Contractor based upon each locations specific requirements.

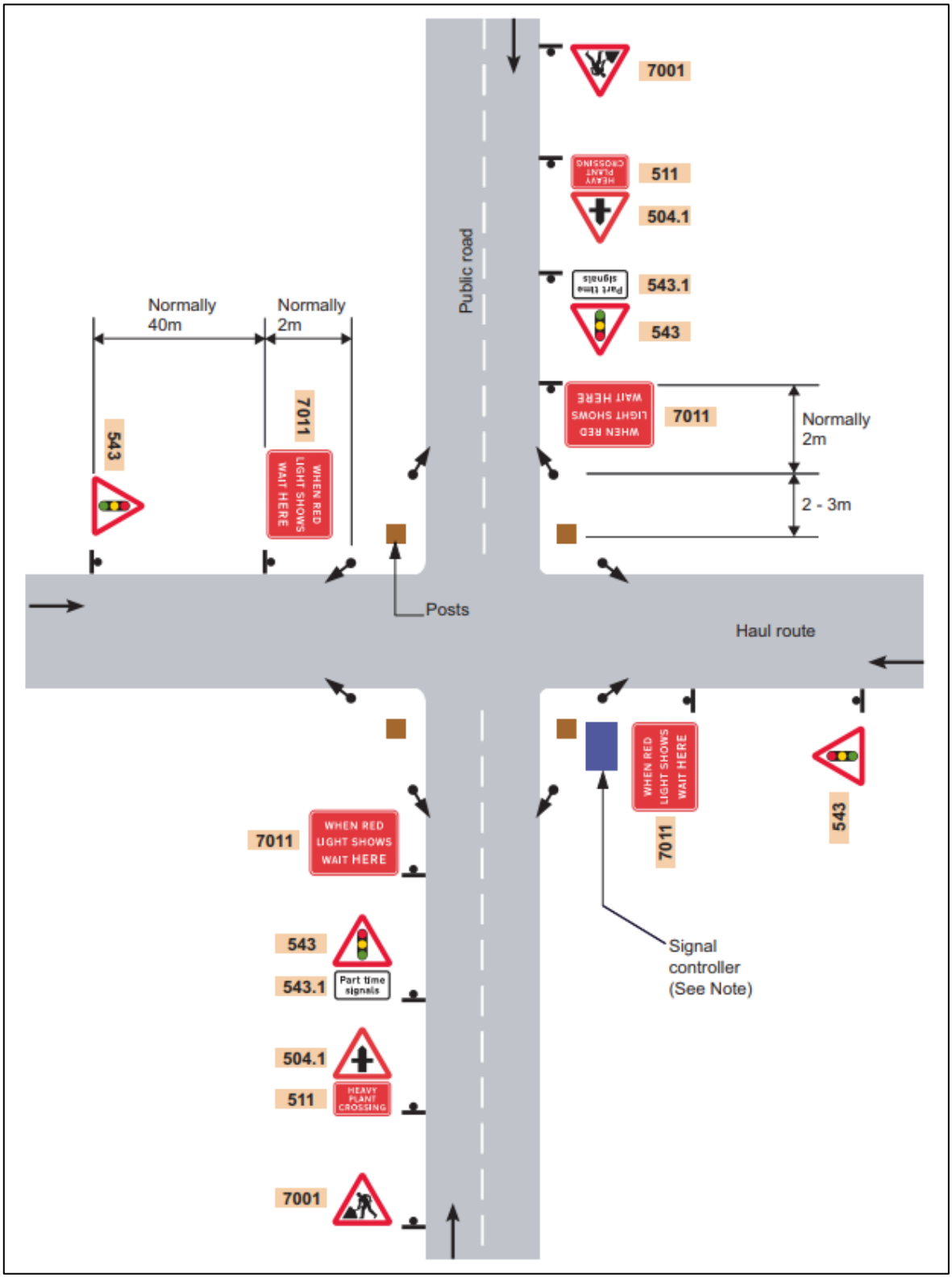


Figure 1.8: Haul route crossing.

1.10.4 Public rights of way

1.10.4.1 Several Public Rights of Way (PRoW) and areas of land with informal public access will potentially be affected by the construction of the Mona Offshore Wind Project. Prior to the stopping up or localised diversion of a PRoW, measures will be agreed in accordance with those established in the Outline Public Rights of Management Strategy (Document Reference J26.17), to manage the interface between the works

and PRoW with the relevant PRoW officers at Conwy County Borough Council and Denbighshire County Council.

1.11 Management of highway safety

1.11.1 Existing accident record

1.11.1.1 Within Volume 3, Chapter 8: Traffic and transport of the Environmental Statement (Document Reference F3.8), an analysis of existing Personal Injury Accident data has been undertaken using a two-stage process. Initially, any clusters were identified plus the injury accident rate of identified links was calculated and if 25% higher than the national average injury accident rate further analysis was undertaken. The further analysis looked at those clusters, severity, and any consistent contributory factors. No issues in relation to the existing highway layout or geometries were discovered to be the cause of the incidents.

1.11.2 Monitoring and mitigation for Mona Offshore Wind Project

1.11.2.1 HGV injury accidents and near misses associated with the Mona Offshore Wind Project construction vehicles will be monitored to identify whether there are any safety deficiencies in the highway network due to the increased level of HGV traffic associated with the construction works.

1.11.2.2 If localised mitigation measures are required, these will be agreed with the HAs and incorporated into the final CTMP(s).

1.11.3 Highway condition

1.11.3.1 Video surveys will be undertaken of those local roads where it is considered that the passage of construction HGVs may cause deterioration of highways. These roads will be agreed with the HAs as part of the final CTMP. The schedule of highways to be surveyed will be agreed with the HAs prior to any construction activities taking place.

1.11.3.2 Once construction activities have ceased in a given location the video survey of the associated highway links will be repeated to identify any significant changes in highway condition. The results will be discussed with the HAs and where it is agreed that damage has resulted from the passage of HGVs associated with construction work a financial contribution will be discussed with the HAs to cover the cost of repairing that damage that is agreed to have resulted from vehicle movements associated with the Mona Offshore Wind Project.

1.12 Implementation and monitoring of the CTMP

1.12.1 Implementation of the final CTMP(s)

1.12.1.1 The final CTMP(s) will be agreed with the relevant LPAs and HAs before the commencement of works on site, and developed in consultation with the appointed construction contractor teams. All contractors will be required to comply with the measures in the CTMP as a condition of their contract.

1.12.2 Compliance and monitoring

1.12.2.1 Compliance with all the monitoring plans, including the final CTMP(s) will be monitored and a responsibility of the Principal Contractor. The Principal Contractor will be

responsible for ensuring that all contractors are aware of the requirements of the final CTMP(s) and of the monitoring obligations. The Principal Contractor will be appointed before the start of onshore construction work and the Principal Contractor role will continue throughout the onshore construction period. The Principal Contractor will be the central point of contact for all monitoring processes during the construction phase and will be responsible for liaising closely with the relevant LPAs and HAs throughout the works.

1.12.2.2 The Principal Contractor will be responsible for implementing a system whereby construction HGVs associated with the Mona Offshore Wind project are identifiable from other traffic on the highway network and include Global Positioning System (GPS) tracking to enable their routes to be monitored where necessary.

1.12.2.3 Where possible, data will be collected from construction HGVs that are fitted with monitoring devices such GPS tracking to record their routes, timing and speeds which will be available to aid any compliance investigations.

1.12.2.4 The registration numbers for all construction HGVs accessing compounds would be recorded. The use of data from tracking devices and recording registration numbers will assist with the enforcement of the CTMP(s).

1.12.2.5 Establishing this central point of contact will help to ensure that all works in a given location at a given time will be the responsibility of a single individual to ensure clarity of responsibility and to facilitate effective communication.

1.12.2.6 Monitoring activities and responsibilities will be agreed with the relevant Local Planning Authorities and HAs. The final CTMP(s) will include contact details of those responsible for the final CTMP(s) and a clear schedule of monitoring activities and timescales.

1.12.3 Monitoring records

1.12.3.1 The final CTMP(s) will be a live document which will be updated when necessary. The Principal Contractor will be responsible for monitoring, the result of this monitoring will be fed back to be included into the final CTMP(s).

1.12.3.2 Any auditing or corrective action will also be monitored. This will ensure that the construction activities are being undertaken in accordance with the CTMP.

1.12.3.3 The procedure for addressing breaches and ensuring corrective action is undertaken is below;

- A log will be used to record details of any traffic and transport related incident and or non-compliance with the final CTMP(s)
- A log will also be used to record any inadequacy as a result of monitoring, inspection, surveillance and complaint
- The log will also record any actions taken, any action required will be allocated to the appropriate person, along with a timescale for the action to be undertaken.

1.12.3.4 Records of the above will be retained as the responsibility of the Principal Contractor throughout the entirety of the construction period. These will be maintained either in hard copy or electronically so these can be accessed at any time.

1.12.4 Enforcement and corrective measures

1.12.4.1 If the Principal Contractor is made aware of a potential breach of the CTMP(s) (except where otherwise agreed with the relevant LPA or in the event of an emergency), the

Principal Contractor will be required to investigate the circumstances and create a report for the HAs. The HAs will then review the information, request further clarification (if required) and confirm to the Principal Contractor if a material breach has occurred.

1.12.4.2 If the breach is found to be material the following three stage process will be followed;

- Stage one – The HAs confirms a breach and requests that the Principal Contractor considers the data and concerns. The HAs and the Principal Contractor would then agree the extent of the breach of the final CTMP(s) and agree any action to be taken. This is likely to be a Principal Contractor warning at this stage
- Stage two – If a further material breach is identified, the Principal Contractor would be given another warning and will be required to produce a plan to outline how the issue would be rectified and any additional mitigation measures to be implemented
- Stage three – Should further breaches take place the Principal Contractor would be required to remove the relevant party from site and the contractor / supplier would receive a formal warning. Any continued breaches by individuals of the contractor / supplier may be treated with formal dispute procedures of the contract.

1.13 Interaction between Mona Offshore Wind Project and Awel y Môr offshore wind farm and Bodelwyddan electricity substation extension

1.13.1.1 The recently consented Awel y Môr Offshore Wind Farm and the extension to the National Grid Bodelwyddan Substation will utilise Ffordd William Morgan, which routes between the A55 Junction 26 and the B5381 Glascoed Road. It is possible that the construction period for these projects could overlap and the maximum design scenario in terms of potential overlapping vehicle impact is considered within Volume 3, Chapter 8: Traffic and transport of the Environmental Statement (Document Reference F3.8).

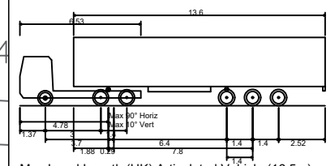
1.13.1.2 The management of these interactions will be discussed and agreed with the HAs. This will be included within the final CTMP(s).

1.14 References

Department for Transport/Welsh Government/Transport Scotland/Department for Infrastructure (2009) Traffic Signs Manual Chapter 8, Traffic Safety Measures and Signs for Road Works and Temporary Situations Part 1: Design. Available at https://assets.publishing.service.gov.uk/media/5a74adeaed915d7ab83b5ab2/traffic-signs-manual-chapter-08-part-01.pdf. Accessed December 2023.

Appendix A. HGV access route plan

LEGEND



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
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Scale@ 378.9mm x 214.9 mm:

Scale 1:500

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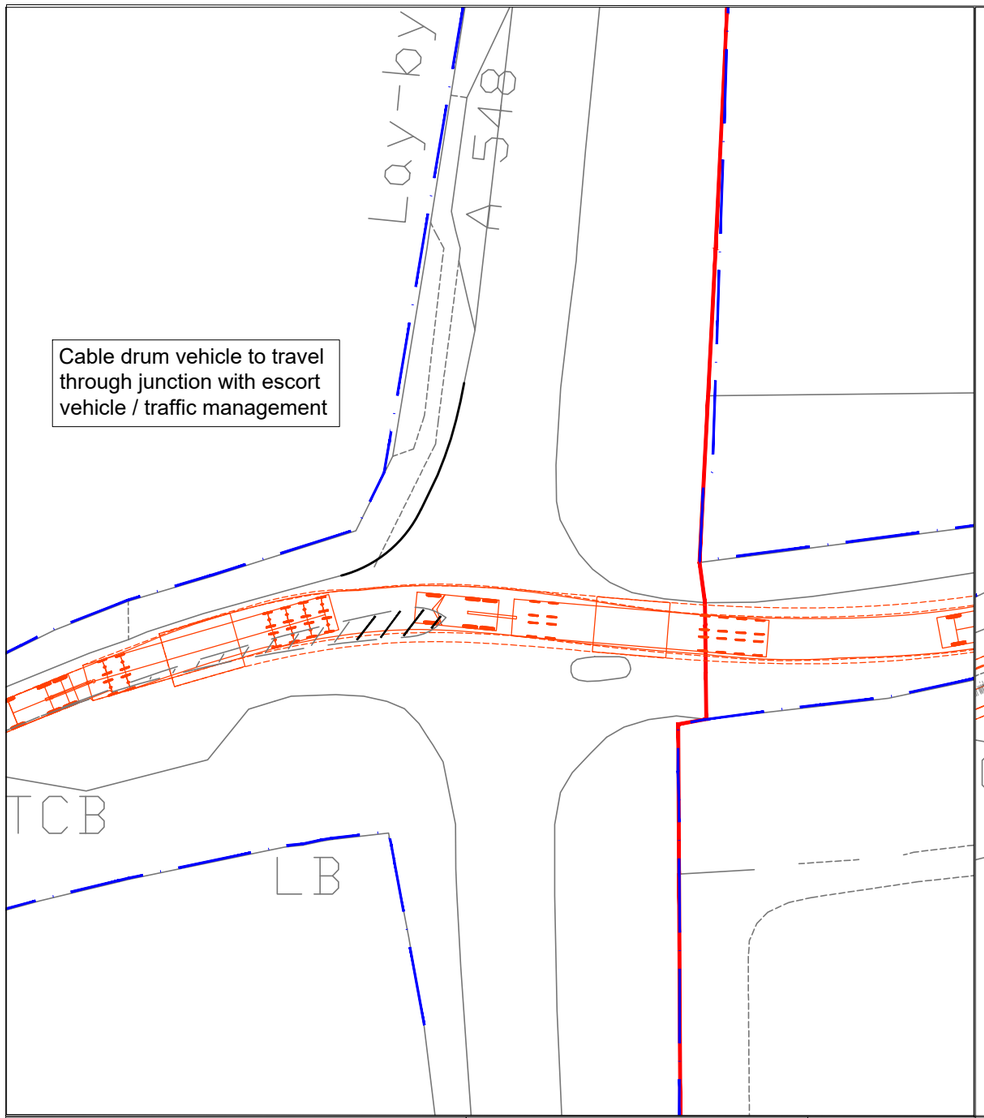
Project Name:
MONA OFFSHORE WIND PROJECT

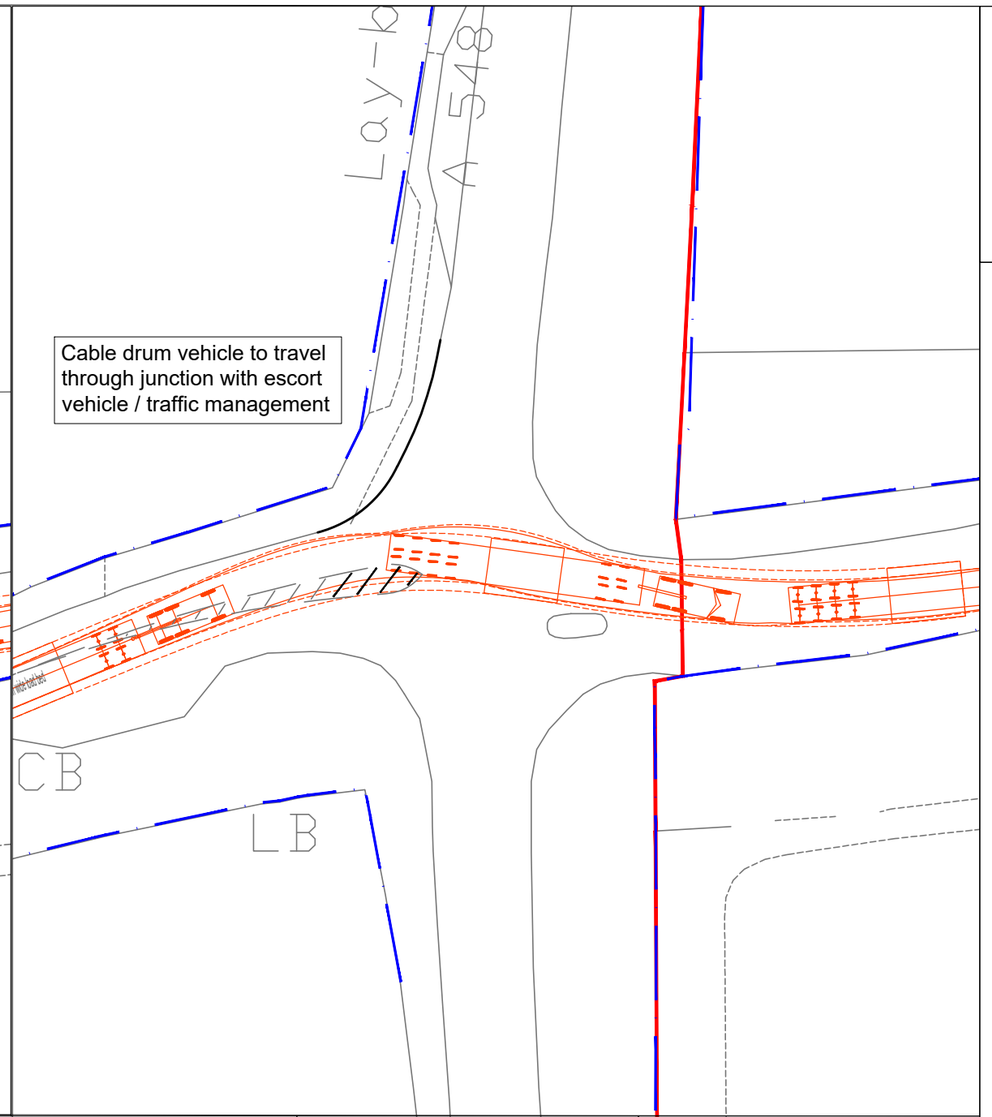
Drawing Title:
A547 / A548 SIGNALISED JUNCTION
- SWEPT PATH ANALYSIS

Drawing Number:
JNY11256-23

VER	DATE	DETAILS	BY	CHECK
01	21/12/23	FINAL	DI	DA

Appendix B. Cable drum vehicle access route plan





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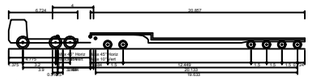

Articulated heavy load mover 4.5m wide load bed

Overall Length	28.816m
Overall Width	4.500m
Overall Body Height	2.818m
Min Body Ground Clearance	0.567m
Max Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	18.862m

Extent of public highway

Red line boundary

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
Datum: . Projection: .

Scale@ 378.9mm x 214.9 mm:

Scale 1:500

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EnBW bp rps
Partners in UK offshore wind

Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
PENREFAIL CROSSROADS
CABLE DRUM VEHICLE

Drawing Number:
JNY11256-06

VER	DATE	DETAILS	BY	CHECK
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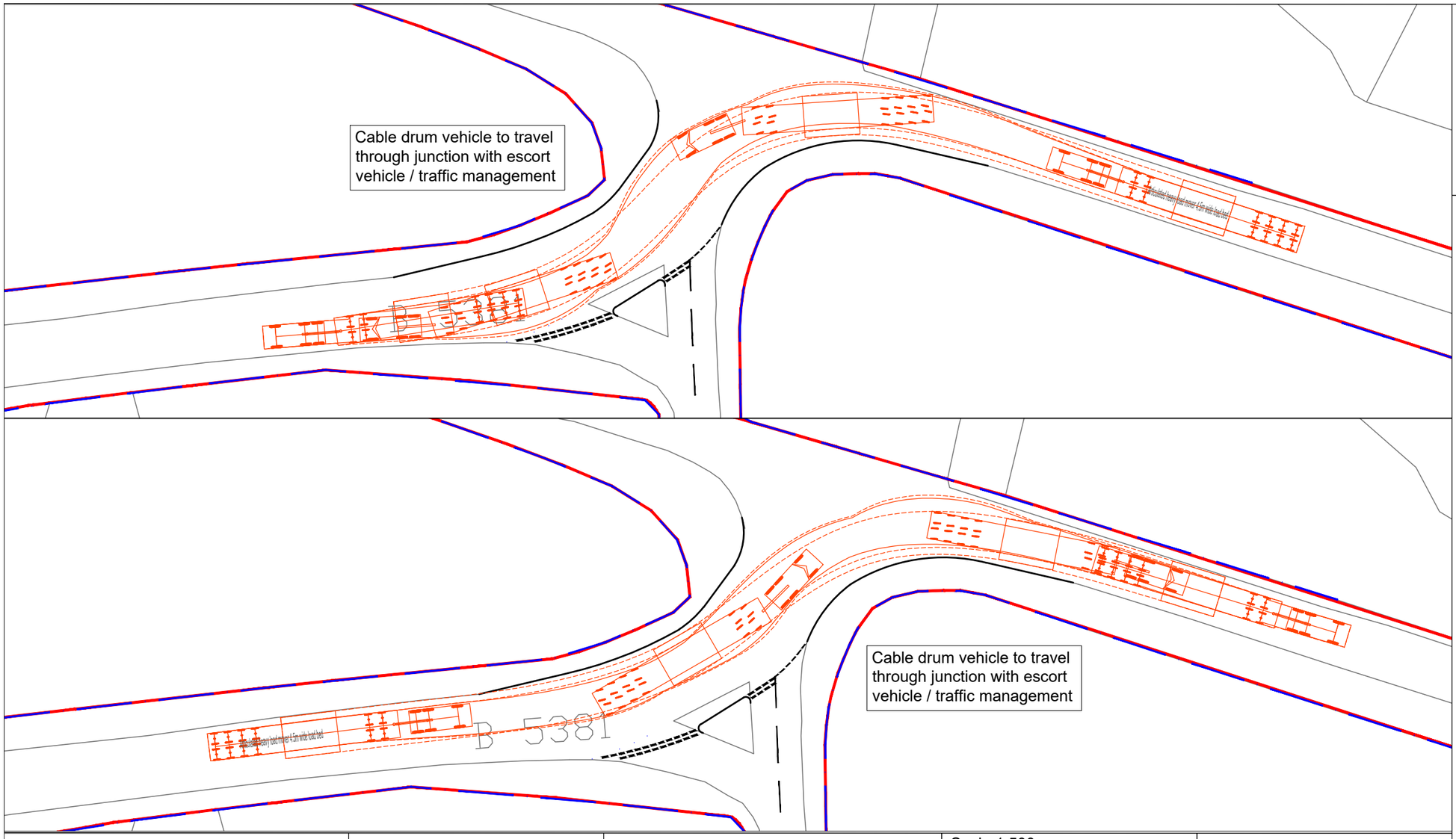

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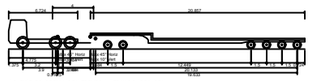

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Max Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	18.862m

Extent of public highway

Red line boundary

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS World Hillshade: Esri, USGS	Data Sources: RPS / bp / EnBwW	Geodetic Information: Datum: . Projection: . Scale@ 378.9mm x 214.9 mm:	Scale 1:500 0 10 20	EnBW bp Partners in UK offshore wind rps

Project Name:	Drawing Title:	Drawing Number:
MONA OFFSHORE WIND PROJECT	B5381 JUNCTION CABLE DRUM VEHICLE	JNY11256-08.1

VER	DATE	DETAILS	BY	CHECK
01	20/12/23	FINAL	AJ	DA

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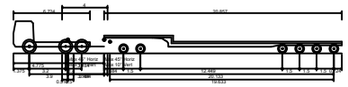

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Max Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	18.862m

Extent of public highway

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
Datum: . Projection: .

Scale@ 378.9mm x 214.9 mm:

Scale 1:500

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Partners in UK offshore wind

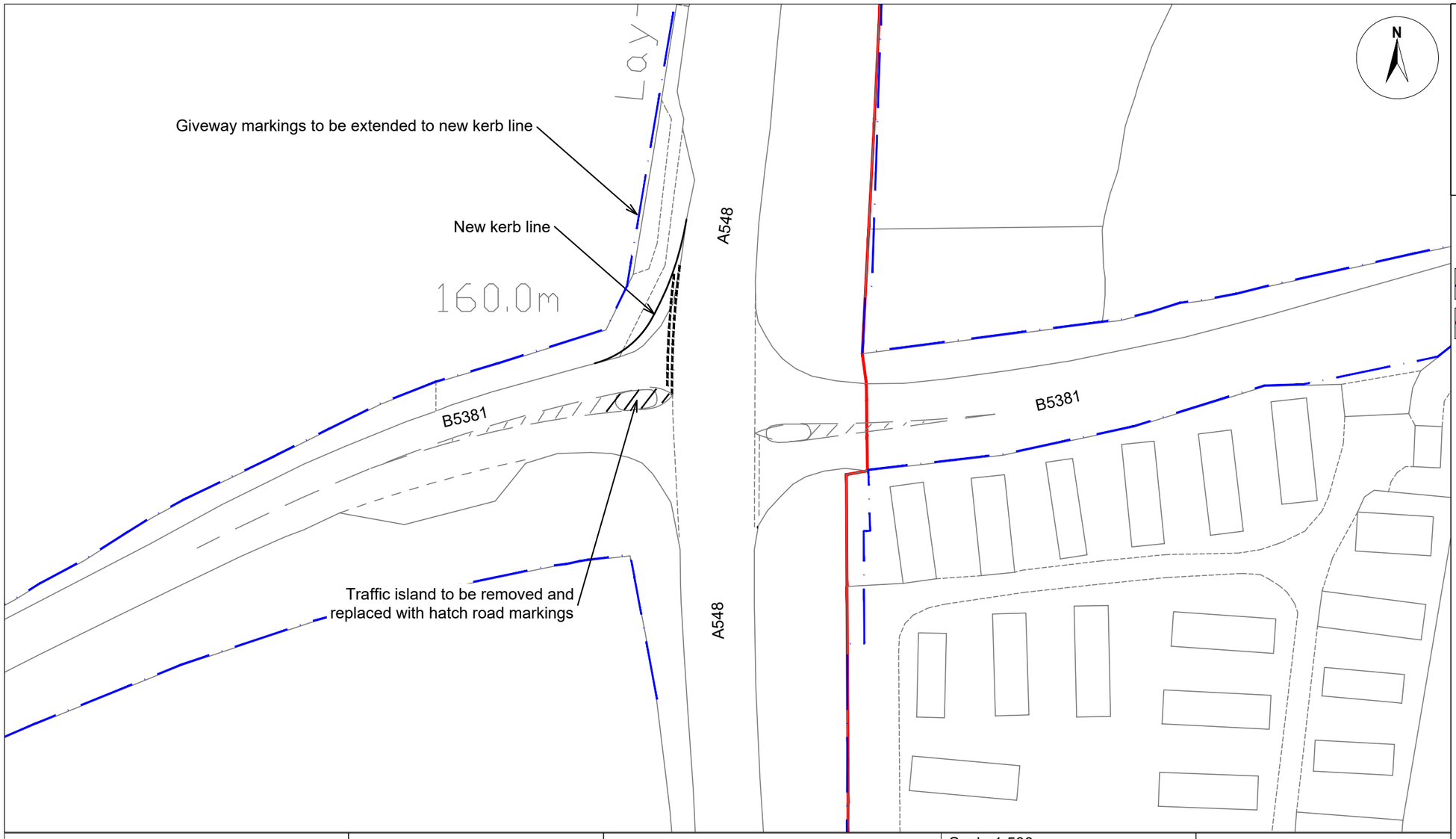
Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
B5381 GLASCOED ROAD ROUNDABOUT
CABLE DRUM VEHICLE

Drawing Number:
JNY11256-09

VER	DATE	DETAILS	BY	CHECK
01	01/12/23	FINAL	DI	DA

Appendix C. Traffic and transport study area and highway network overview



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Project Name:	Drawing Title:	Drawing Number:
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VER	DATE	DETAILS	BY	CHECK
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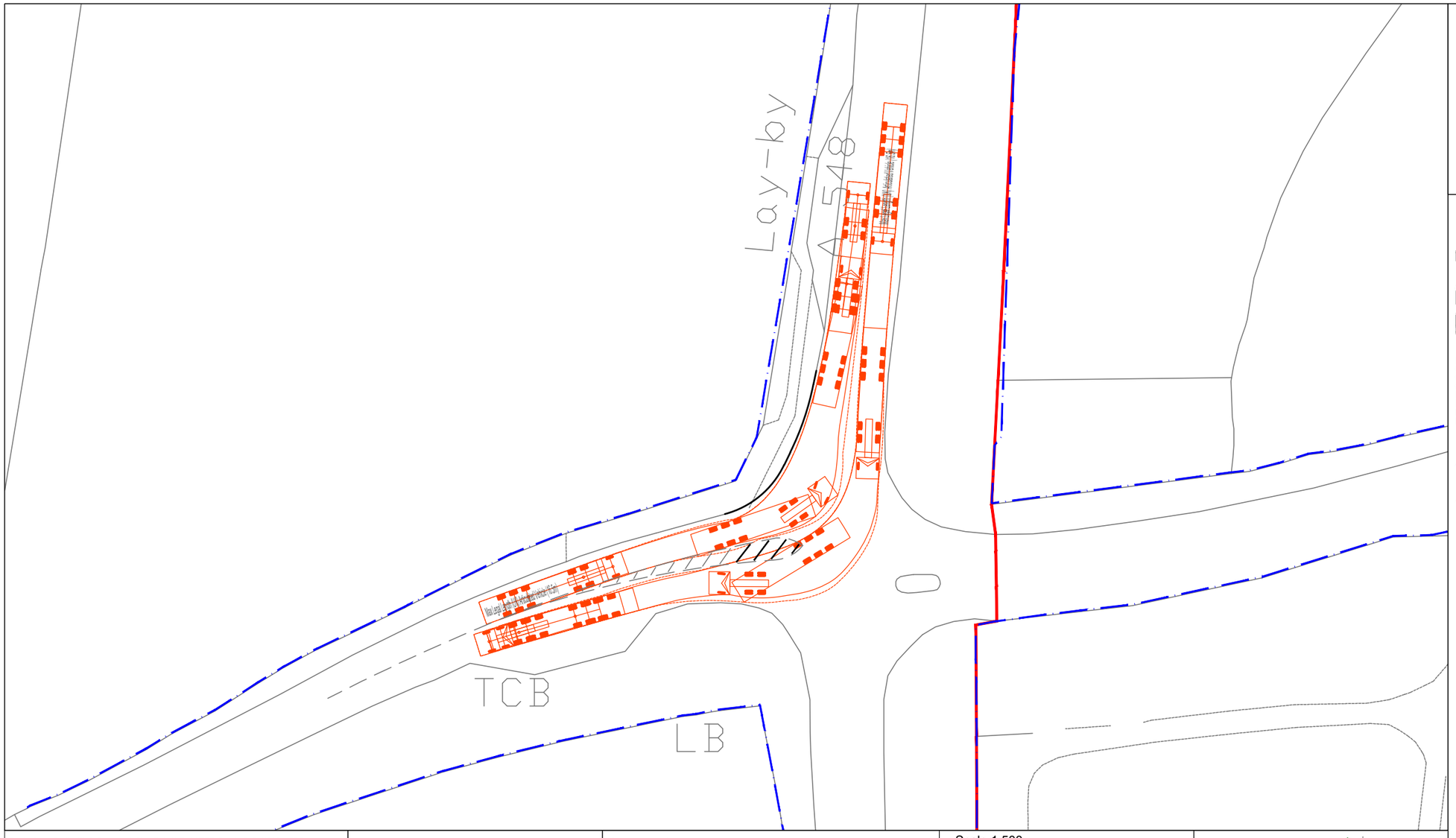

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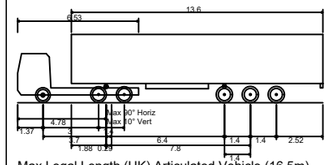

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Kerb to Kerb Turning Radius	6.530m

Extent of public highway

Red line boundary

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
Datum: . Projection: .

Scale@ 378.9mm x 214.9 mm:

Scale 1:500

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EnBW bp RPS
Partners in UK offshore wind

Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
PENREFAIL CROSSROADS
MAXIMUM LEGAL LENGTH ARTICULATED HGV

Drawing Number:
JNY11256-05

VER	DATE	DETAILS	BY	CHECK
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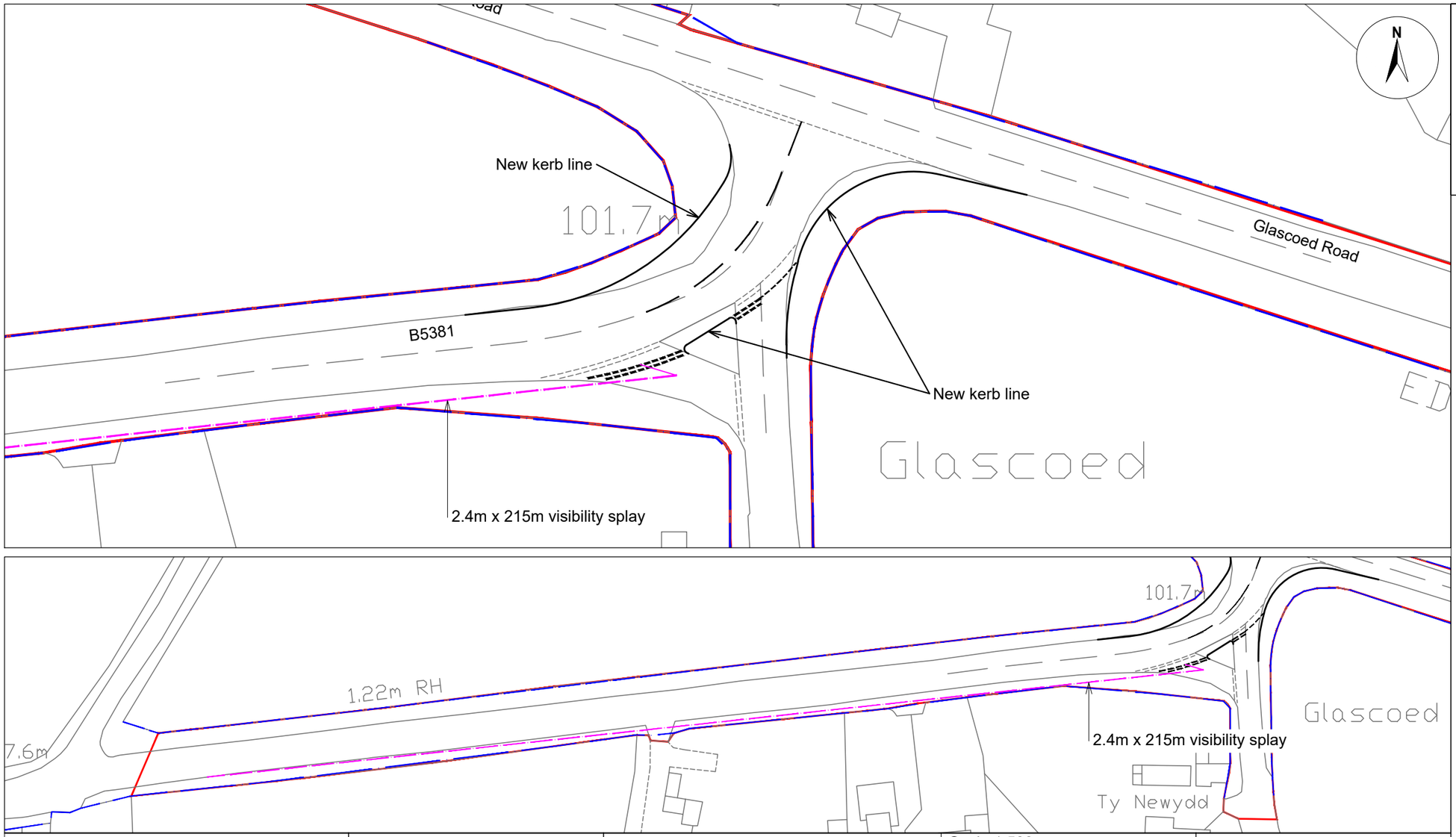

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Project Name:	Drawing Title:	Drawing Number:
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VER	DATE	DETAILS	BY	CHECK
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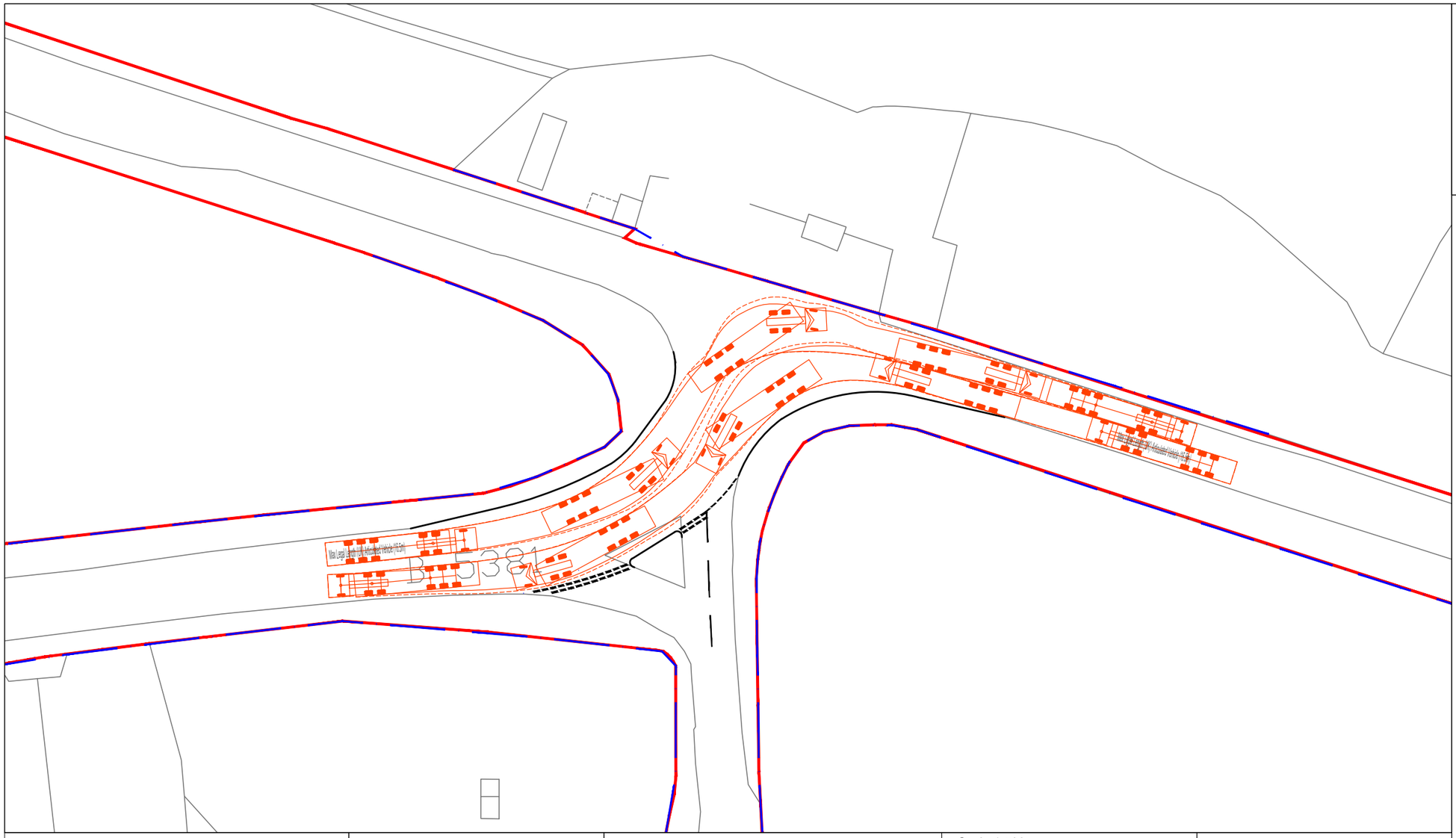

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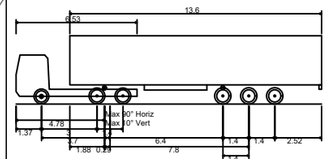

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Kerb to Kerb Turning Radius	6.530m

Extent of public highway

Red line boundary

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
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Scale@ 378.9mm x 214.9 mm:

Scale 1:500

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EnBW bp rps
Partners in UK offshore wind

Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
B5381 JUNCTION
MAXIMUM LEGAL LENGTH ARTICULATED HGV

Drawing Number:
JNY11256-07

VER	DATE	DETAILS	BY	CHECK
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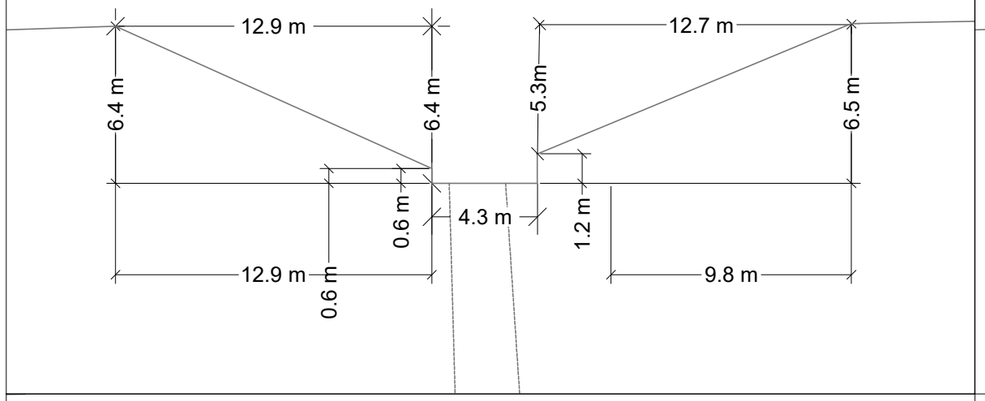
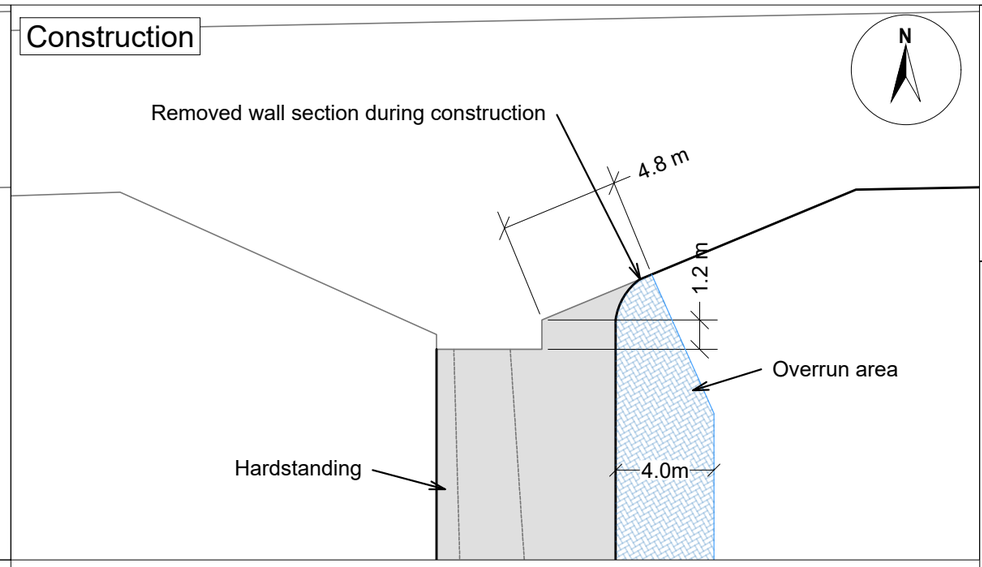
Appendix D. Staff access movements plan

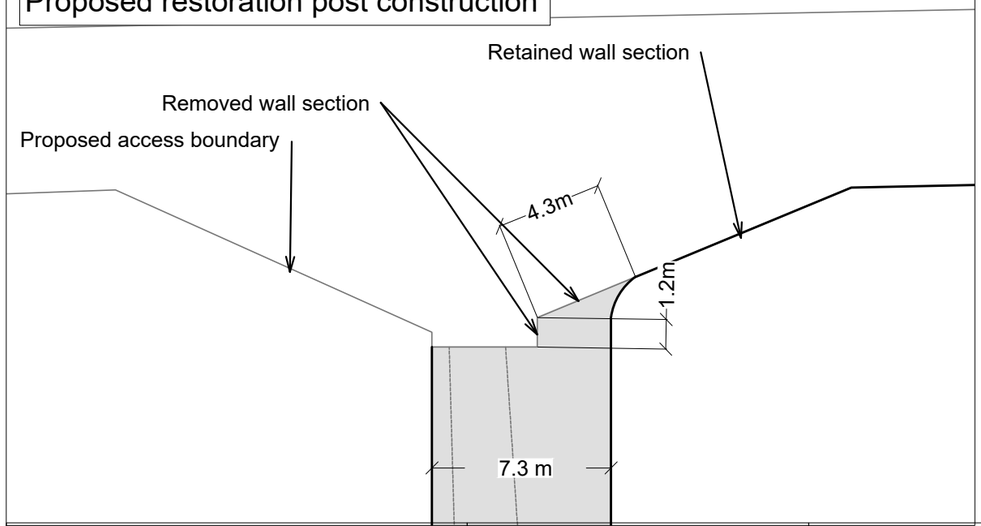
Existing



Construction



Proposed restoration post construction



LEGEND

PRELIMINARY
NOT FOR
CONSTRUCTION

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
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EnBW bp RPS
Partners in UK offshore wind

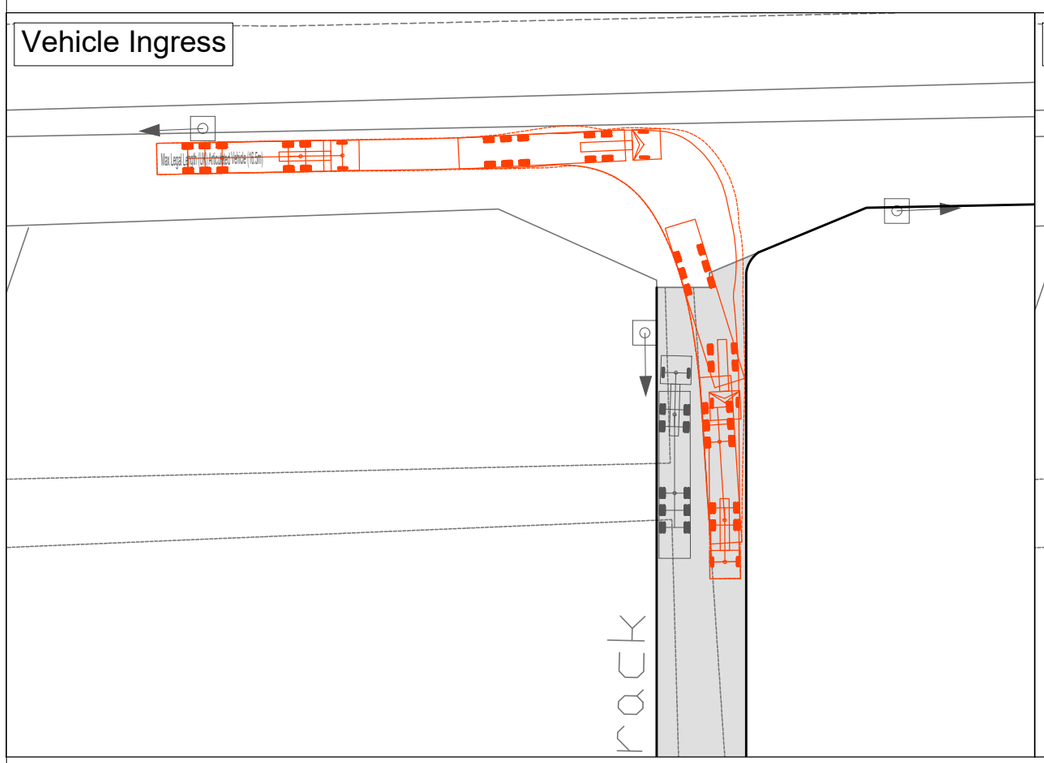
Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
TCC1 - ACCESS ONTO A547

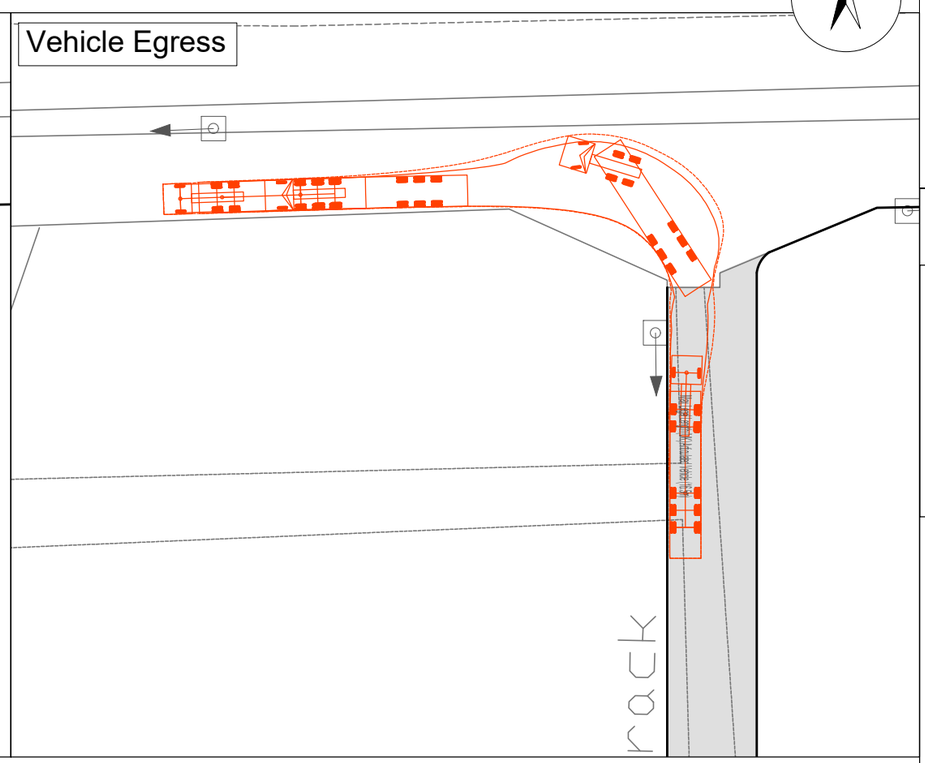
Drawing Number:
JNY11256-12

VER	DATE	DETAILS	BY	CHECK
00	20/12/23	FINAL	AJ	LS

Vehicle Ingress

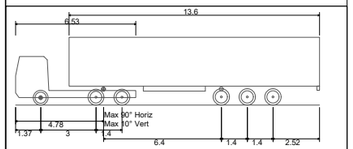


Vehicle Egress



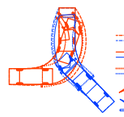
N

LEGEND



Max Legal Length (UK) Articulated Vehicle (16.5m)	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

Swept Path Key:



- Body path
- Chassis path
- Wing mirror path
- Red=forward movement
- Blue=reverse movement

PRELIMINARY
NOT FOR
CONSTRUCTION

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
Datum: . Projection: .

Scale@ 378.9mm x 214.9 mm:

Scale 1:500

0 10 20

EnBW bp rps
Partners in UK offshore wind

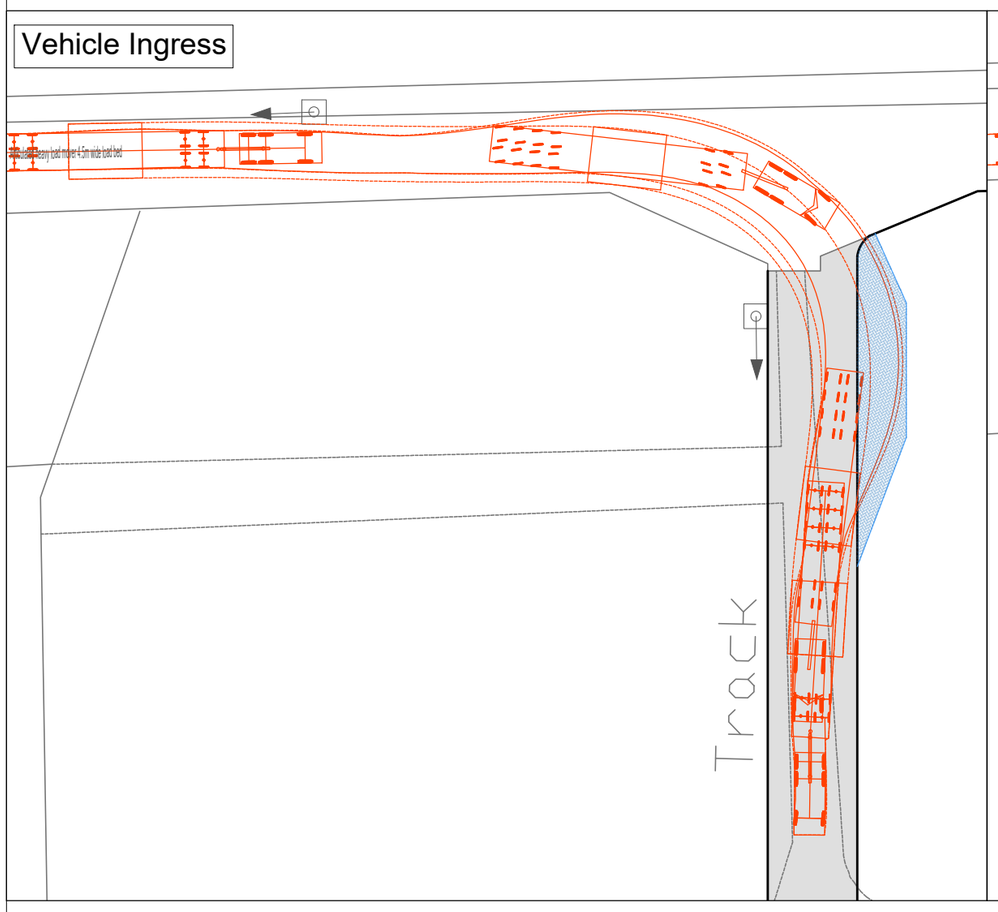
Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
TCC1 - ACCESS ONTO A547 16.5M ARTICULATED VEHICLE SWEPT PATH ANALYSIS

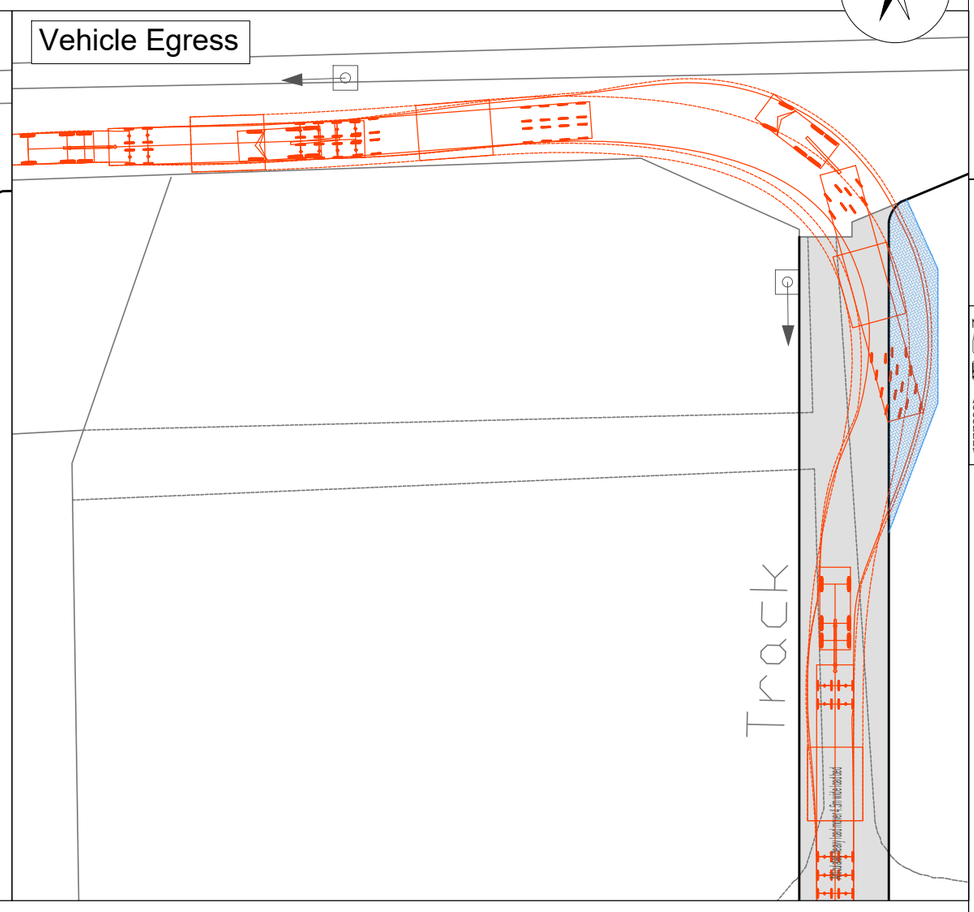
Drawing Number:
JNY11256-12.1

VER	DATE	DETAILS	BY	CHECK
00	20/12/23	FINAL	AJ	LS

Vehicle Ingress

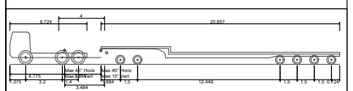


Vehicle Egress



N

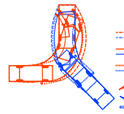
LEGEND



Articulated heavy load mover 4.5m wide load bed

Overall Length	29.816m
Overall Width	4.500m
Overall Body Height	3.818m
Min Body Ground Clearance	0.567m
Max Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	18.862m

Swept Path Key:



- Body path
- Chassis path
- Wing mirror path
- Red=forward movement
- Blue=reverse movement

PRELIMINARY
NOT FOR
CONSTRUCTION

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
Datum: . Projection: .

Scale@ 378.9mm x 214.9 mm:

Scale 1:500

0 10 20

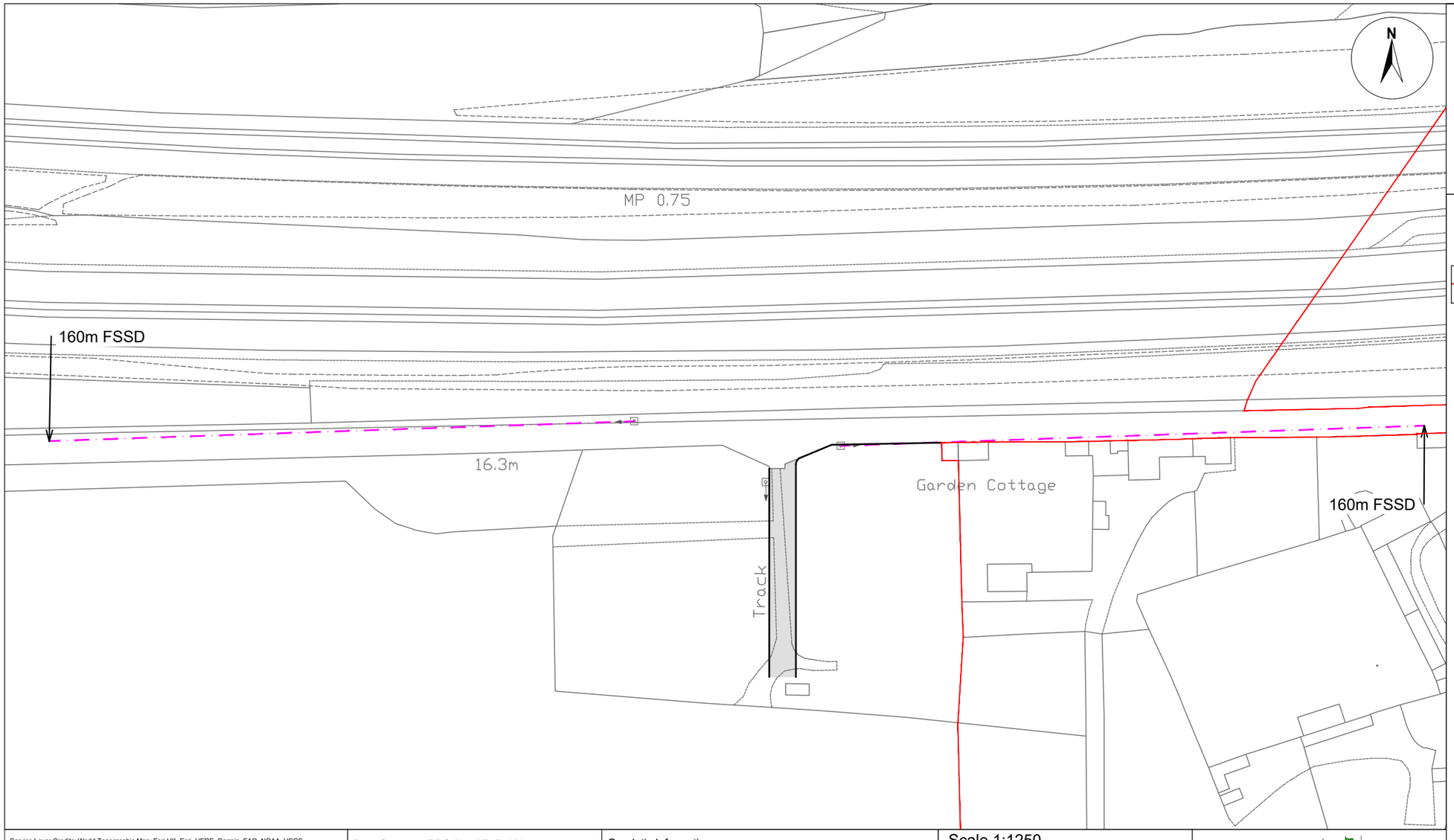
EnBW bp rps
Partners in UK offshore wind

Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
TCC1 - ACCESS ONTO A547
CABLE DRUM VEHICLE SWEPT PATH ANALYSIS

Drawing Number:
JNY11256-12.2

VER	DATE	DETAILS	BY	CHECK
00	07/12/23	FINAL	AJ	LS



LEGEND

Temporary Portable Signals

Red line boundary

PRELIMINARY
NOT FOR
CONSTRUCTION

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
Datum: . Projection: .

Scale@ 378.9mm x 214.9 mm:

Scale 1:1250

0 10 20 30 40 50 60

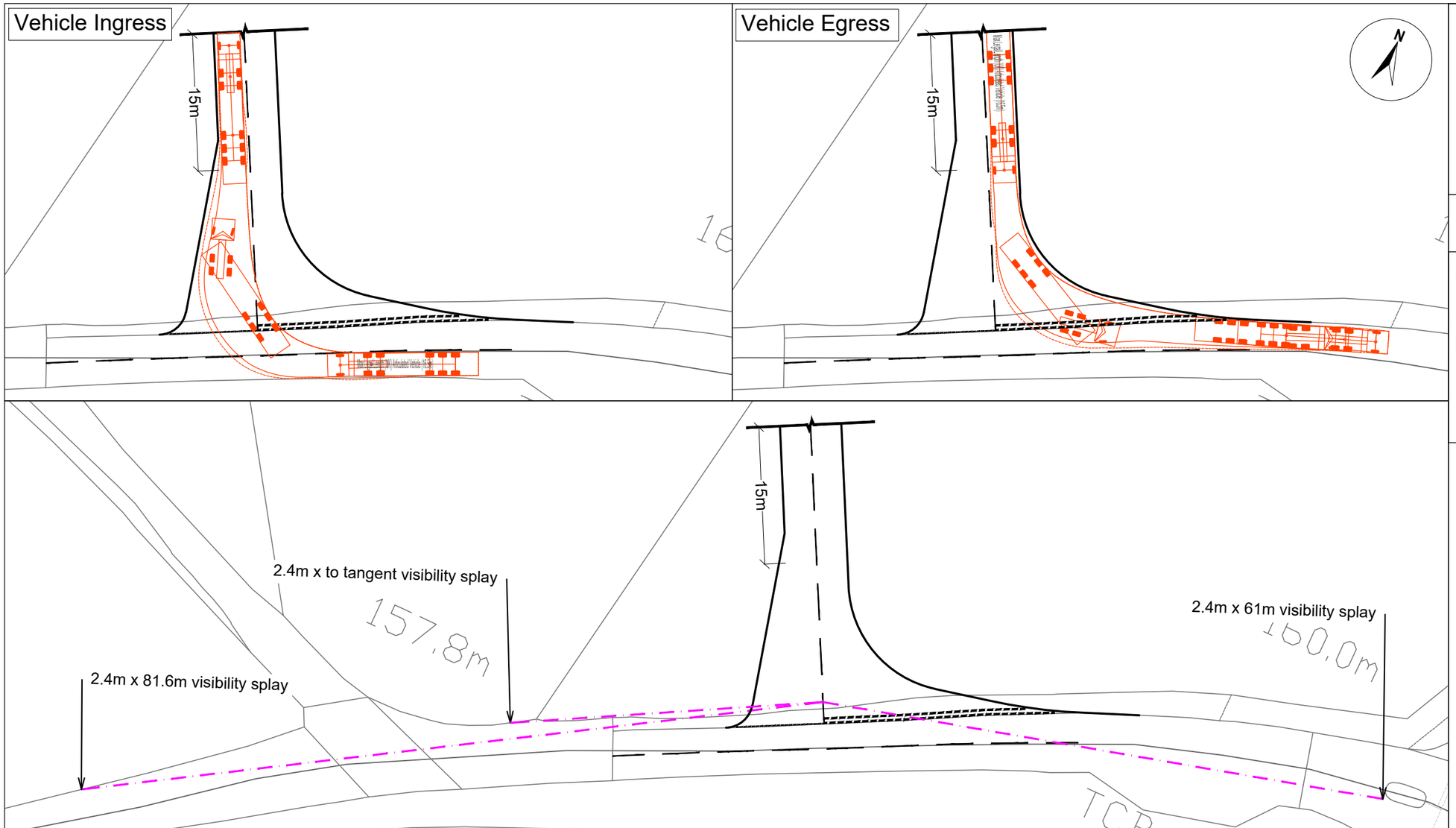
EnBW bp rps
Partners in UK offshore wind

Project Name:
MONA OFFSHORE WIND PROJECT

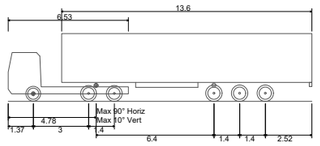
Drawing Title:
TCC1 - ACCESS ONTO A547 FORWARD VISIBILITY

Drawing Number:
JNY11256-13

VER	DATE	DETAILS	BY	CHECK
00	07/12/23	FINAL	AJ	LS

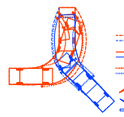


LEGEND



Max Legal Length (UK) Articulated Vehicle (16.5m)	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

Swept Path Key:



- Body path
- Chassis path
- Wing mirror path
- Red=forward movement
- Blue=reverse movement

PRELIMINARY
NOT FOR
CONSTRUCTION

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
Datum: . Projection: .

Scale@ 378.9mm x 214.9 mm:

Scale 1:500

0 10 20

EnBW bp Partners in UK offshore wind

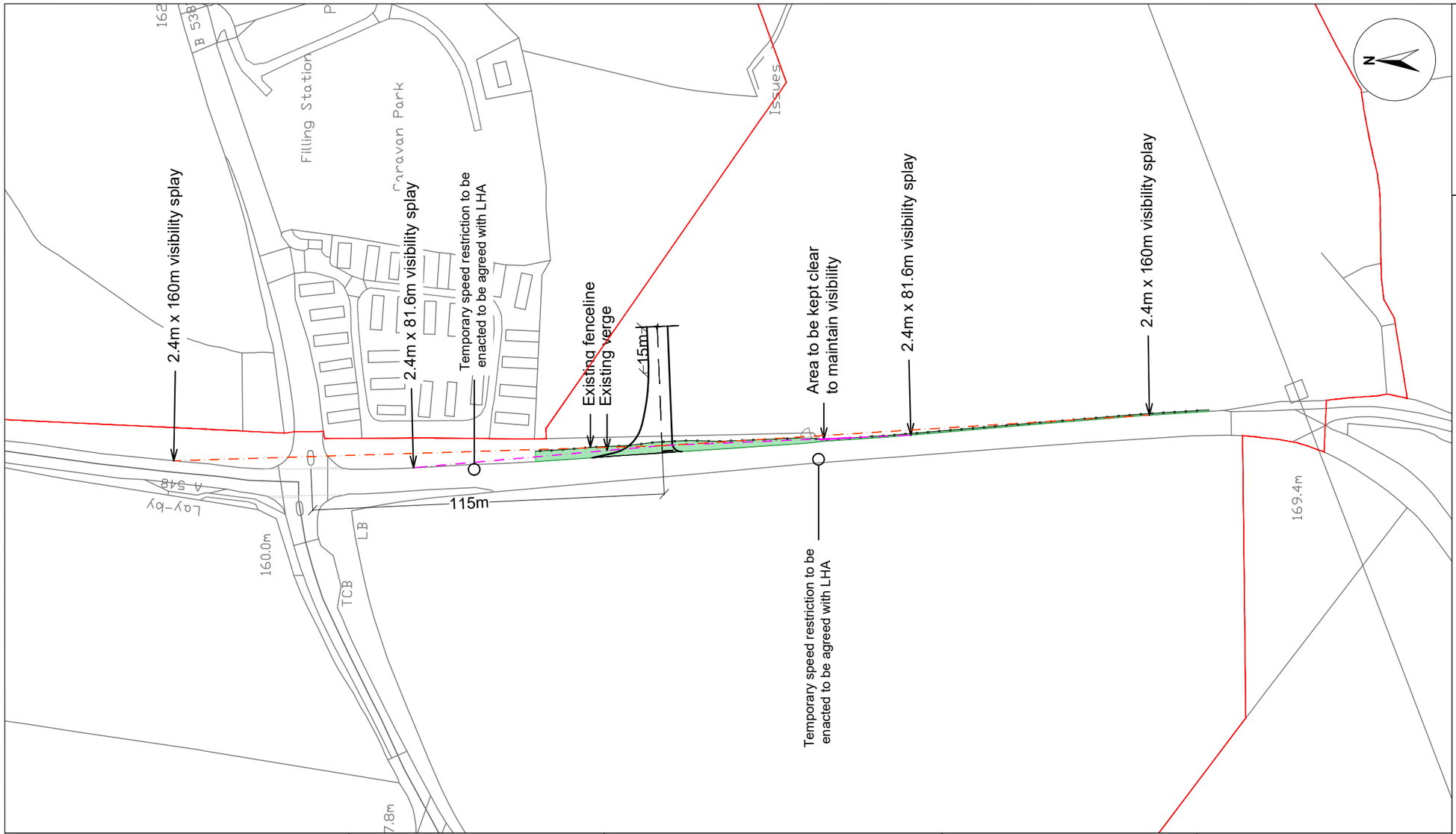
rps

Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
TCC 2 - ACCESS ONTO B5381

Drawing Number:
JNY11256-14

VER	DATE	DETAILS	BY	CHECK
00	07/12/23	FINAL	AJ	LS



LEGEND

Red line boundary

PRELIMINARY
NOT FOR
CONSTRUCTION

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
Datum: . Projection: .

Scale@ 378.9mm x 214.9 mm:

Scale 1:1500

0 50

EnBW bp rps
Partners in UK offshore wind

Project Name:
MONA OFFSHORE WIND PROJECT

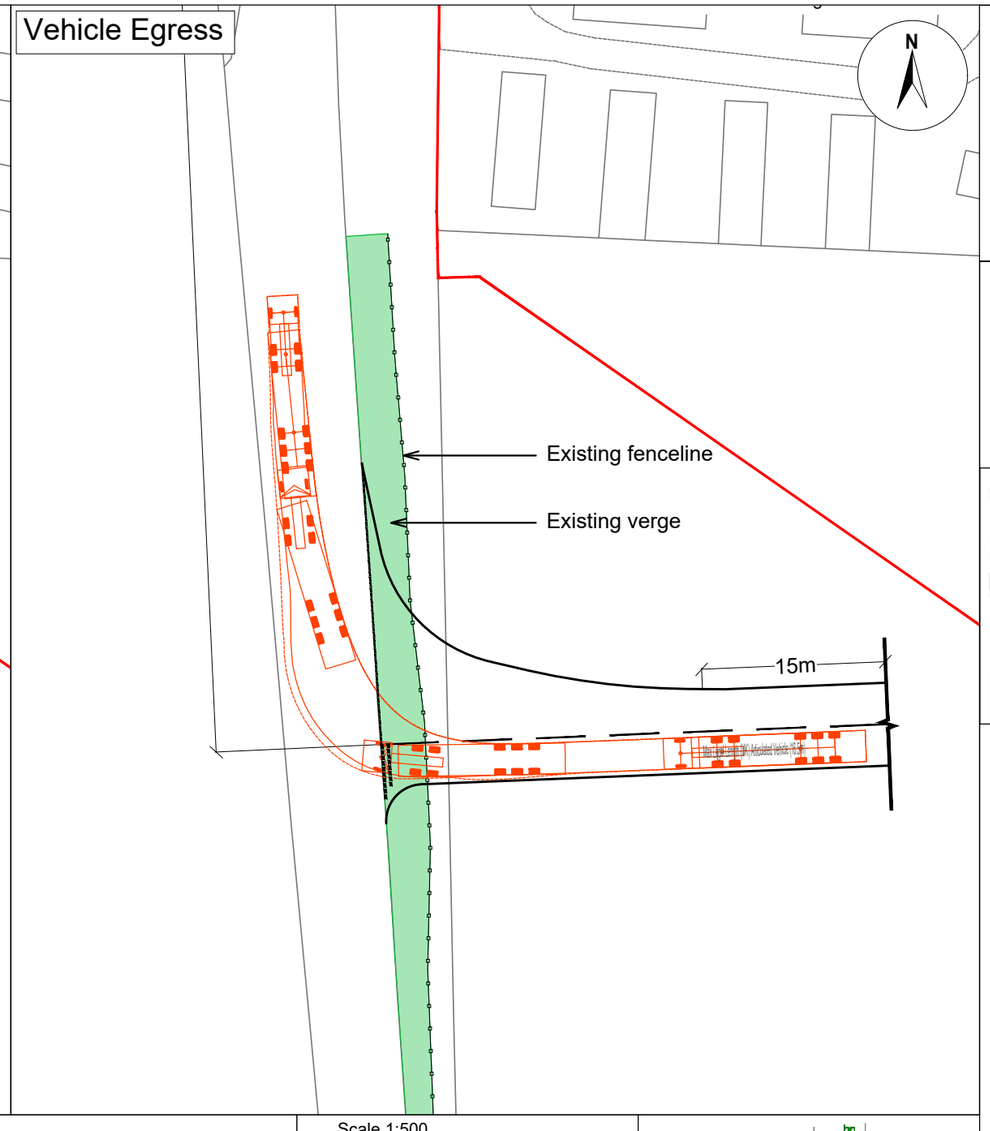
Drawing Title:
TCC 3 - ACCESS ONTO A548 VISIBILITY SPLAY

Drawing Number:
JNY11256-15

VER	DATE	DETAILS	BY	CHECK
00	07/12/23	FINAL	AJ	LS

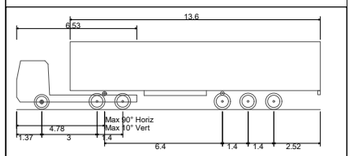
Vehicle Ingress

Vehicle Egress



LEGEND

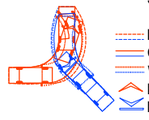
Red line boundary



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

Swept Path Key:



- Body path
- Chassis path
- Wing mirror path
- Red=forward movement
- Blue=reverse movement

PRELIMINARY
NOT FOR
CONSTRUCTION

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
Datum: . Projection: .

Scale@ 378.9mm x 214.9 mm:

Scale 1:500

0 10 20

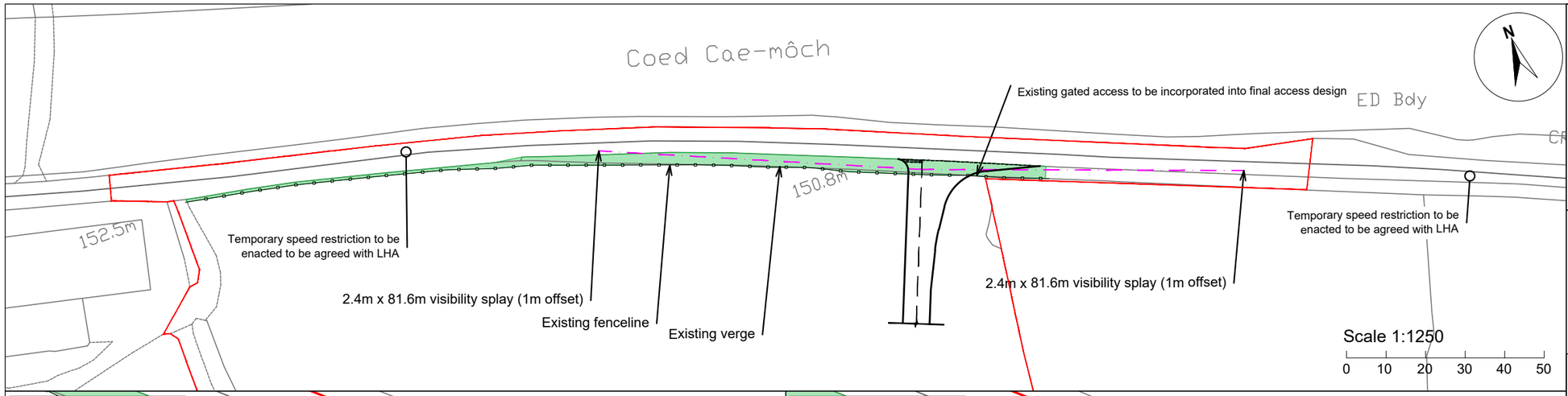
EnBW bp rps
Partners in UK offshore wind

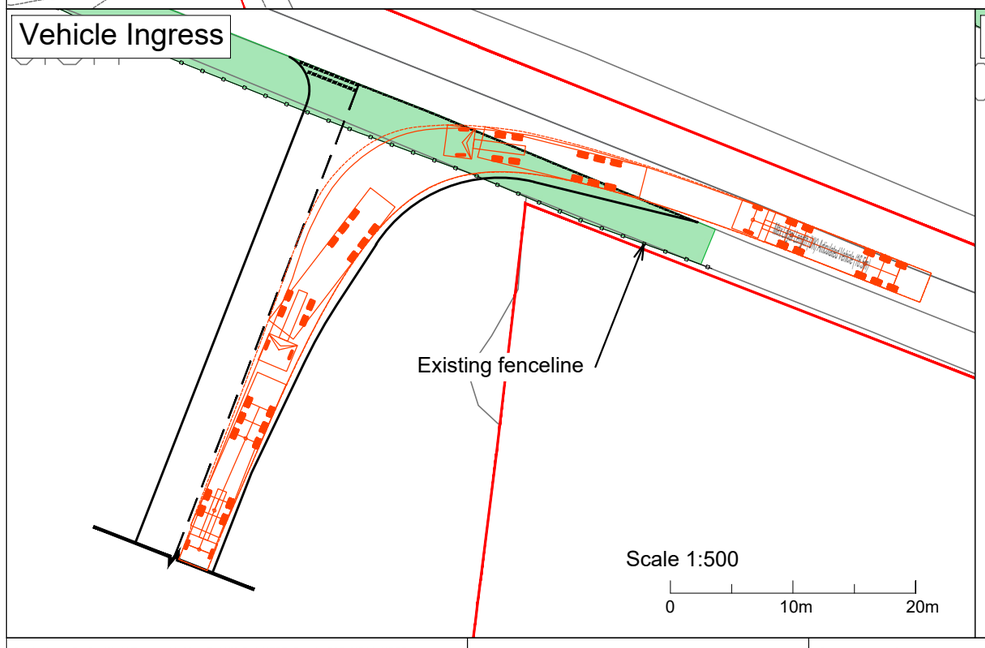
Project Name:
MONA OFFSHORE WIND PROJECT

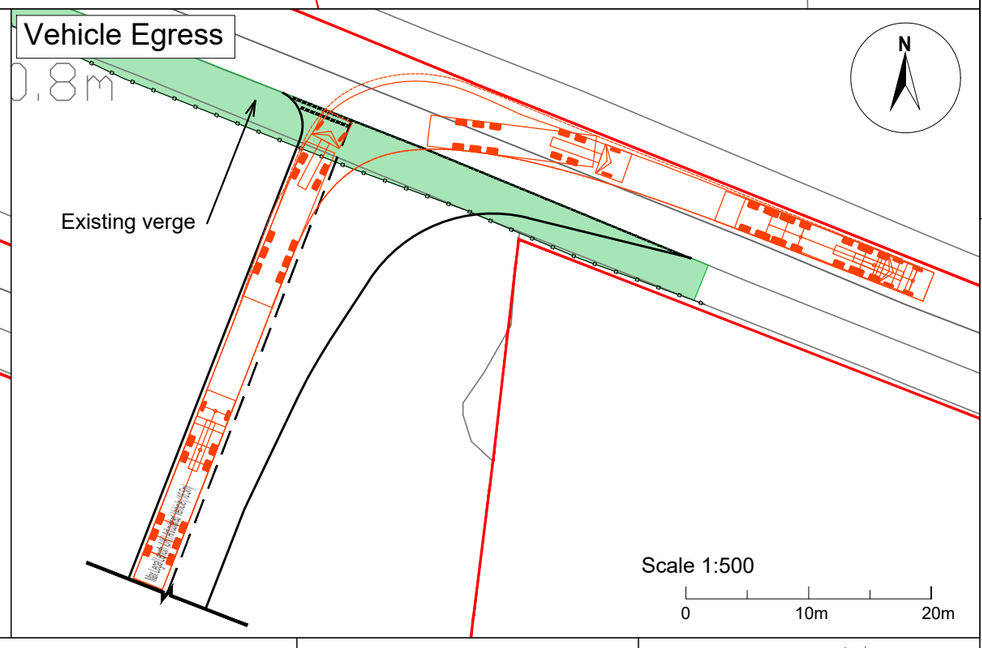
Drawing Title:
TCC 3 - ACCESS ONTO A548

Drawing Number:
JNY11256-16

VER	DATE	DETAILS	BY	CHECK
00	08/12/23	FINAL	AJ	LS

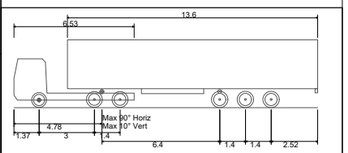






LEGEND

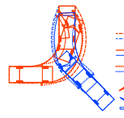
Red line boundary



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

Swept Path Key:



- Body path
- Chassis path
- Wing mirror path
- Red=forward movement
- Blue=reverse movement

PRELIMINARY
NOT FOR
CONSTRUCTION

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
Datum: . Projection: .
Scale@ 378.9mm x 214.9 mm:

Scale 1:500 / 1:1250

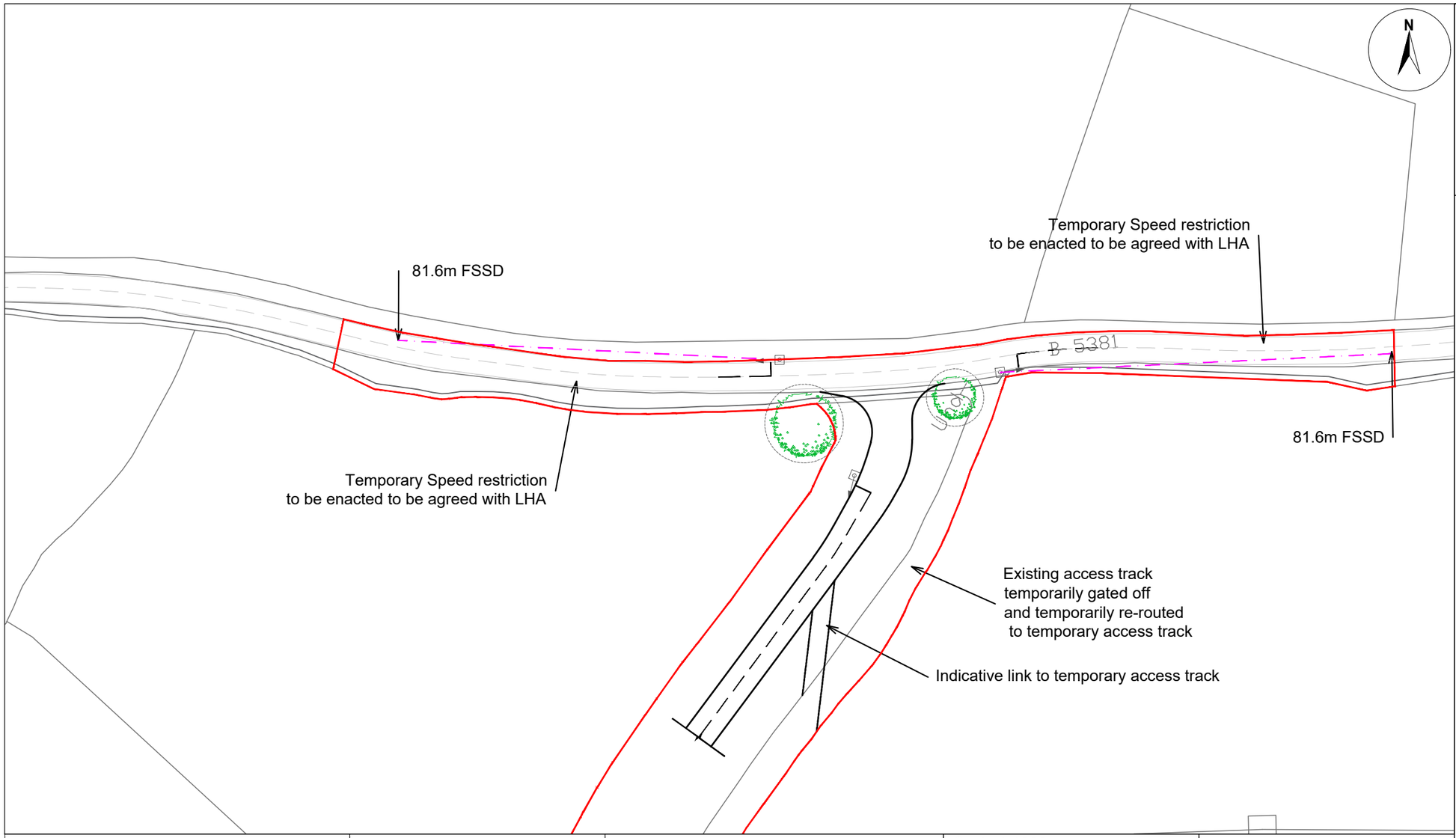
EnBW bp RPS
30 Partners in UK offshore wind

Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
TCC 4 - ACCESS ONTO B5381

Drawing Number:
JNY11256-17

VER	DATE	DETAILS	BY	CHECK
00	08/12/23	FINAL	AJ	LS



LEGEND

Temporary Portable Signals

Red line boundary

PRELIMINARY
NOT FOR
CONSTRUCTION

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
Datum: . Projection: .

Scale@ 378.9mm x 214.9 mm:

Scale 1:1000

0 10 20 30 40 50

EnBW bp rps
Partners in UK offshore wind

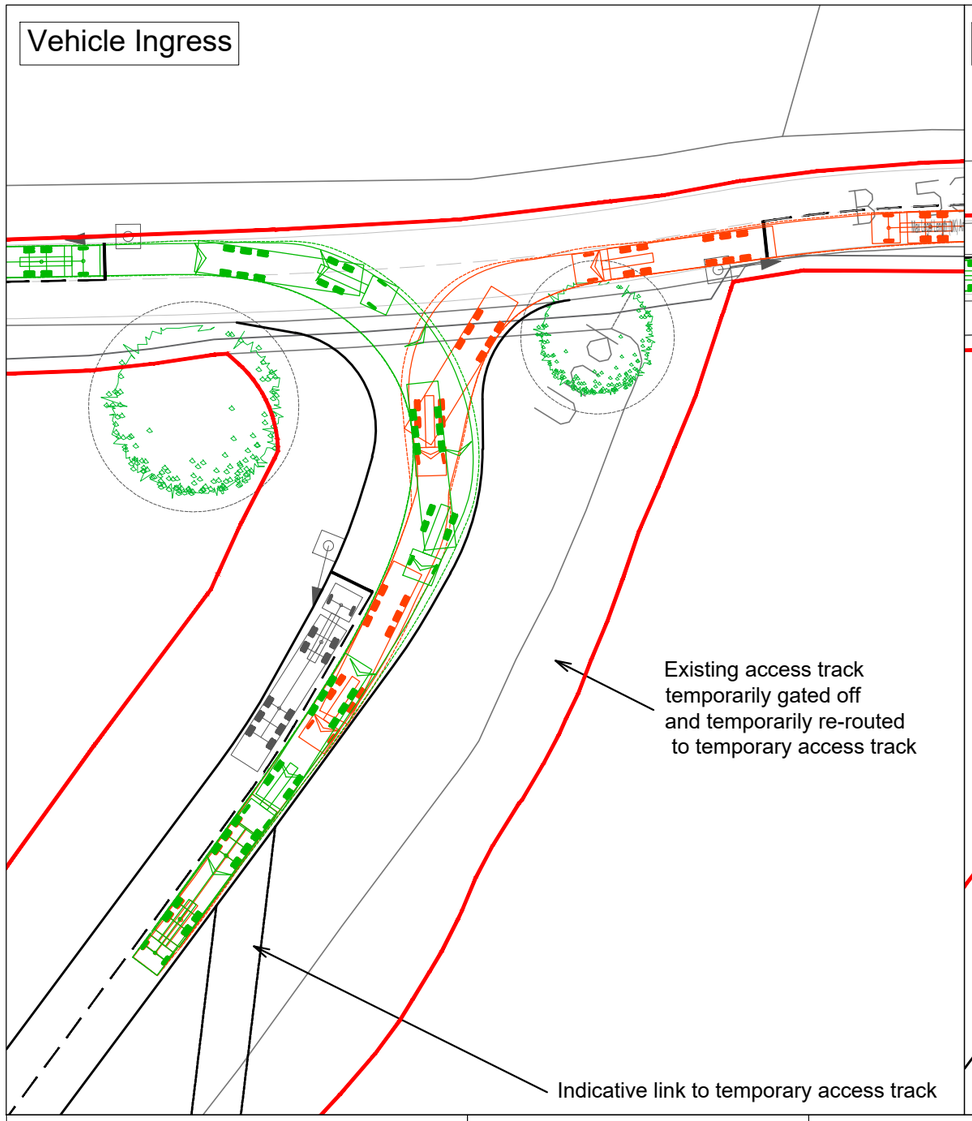
Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
TCC5 - ACCESS ONTO B5381
FORWARD VISIBILITY

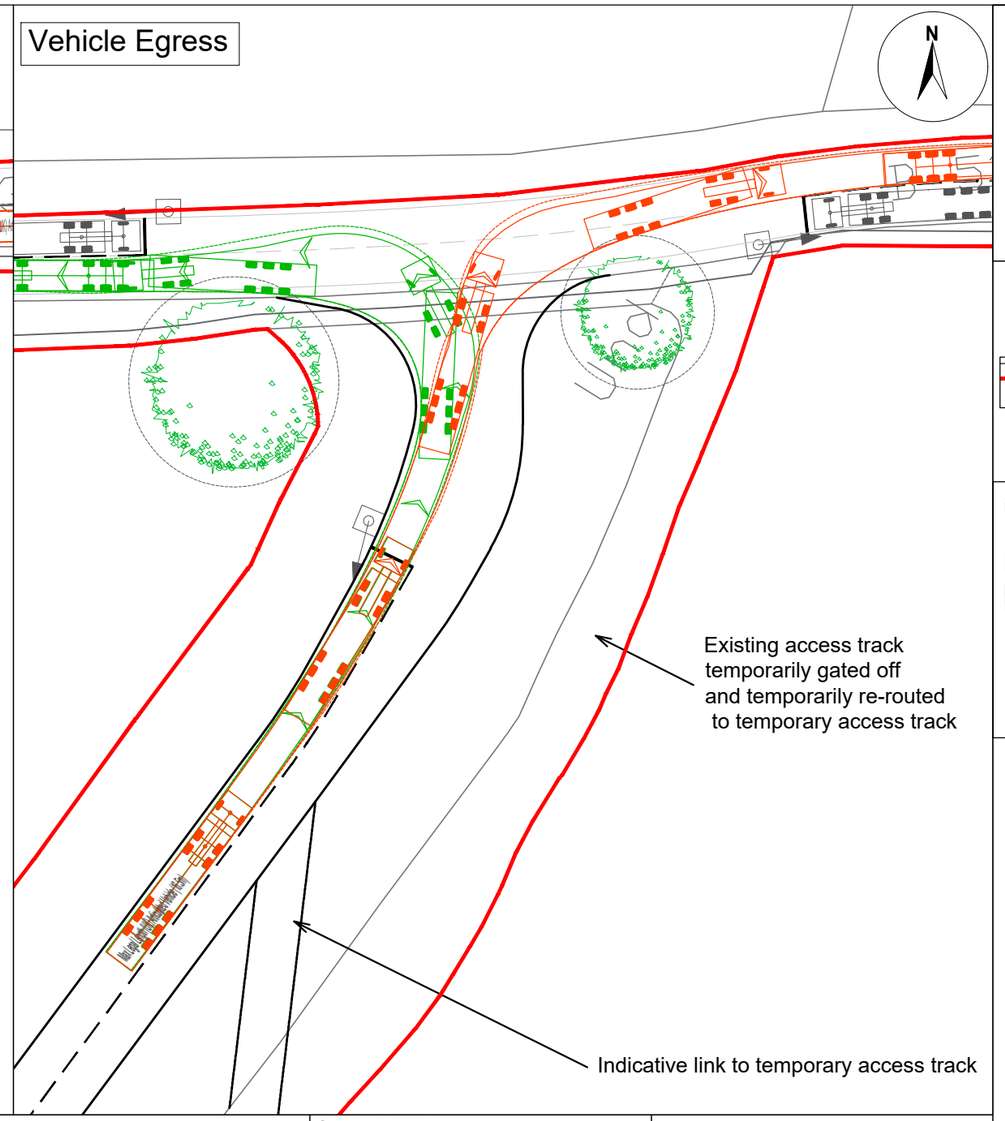
Drawing Number:
JNY11256-18.1

VER	DATE	DETAILS	BY	CHECK
00	08/12/23	FINAL	AJ	LS
01	16/01/24	FINAL	AJ	LS

Vehicle Ingress

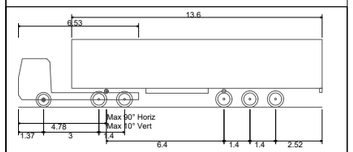


Vehicle Egress



LEGEND

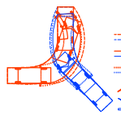
- Temporary Portable Signals
- Red line boundary



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

Swept Path Key:



- Body path
- Chassis path
- Wing mirror path
- Red=forward movement
- Blue=reverse movement

PRELIMINARY
NOT FOR
CONSTRUCTION

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
Datum: . Projection: .

Scale@ 378.9mm x 214.9 mm:

Scale 1:500

0 10m 20m

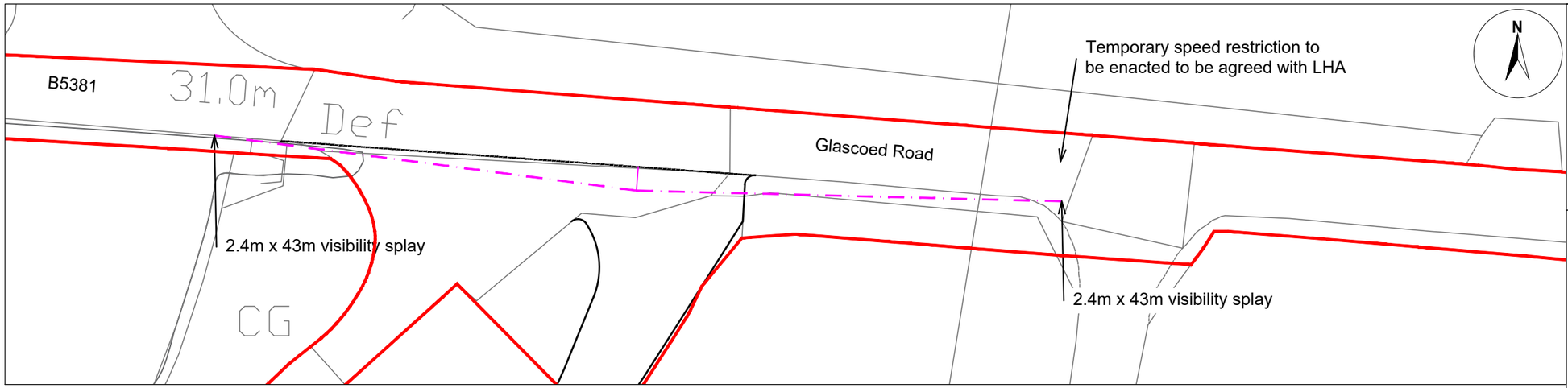
EnBW bp RPS
Partners in UK offshore wind

Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
TCC5 - ACCESS ONTO B5381

Drawing Number:
JNY11256-19.1

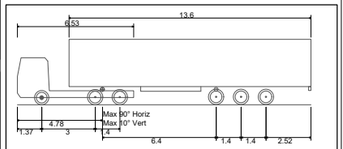
VER	DATE	DETAILS	BY	CHECK
00	08/12/23	FINAL	AJ	LS
01	16/01/24	FINAL	AJ	LS



N

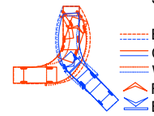
LEGEND

Red line boundary



Max Legal Length (UK) Articulated Vehicle (16.5m)	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

Swept Path Key:



- Body path
- Chassis path
- Wing mirror path
- Red=forward movement
- Blue=reverse movement

PRELIMINARY
NOT FOR
CONSTRUCTION

Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS

Data Sources: RPS / bp / EnBwW

Geodetic Information:
Datum: . Projection: .

Scale@ 378.9mm x 214.9 mm:

Scale 1:500

0 10 20

EnBW bp RPS
Partners in UK offshore wind

Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
SUBSTATION ACCESS - B5381

Drawing Number:
JNY11256-22.1

VER	DATE	DETAILS	BY	CHECK
00	19/12/23	FINAL	AJ	LS
01	16/01/24	FINAL	AJ	LS