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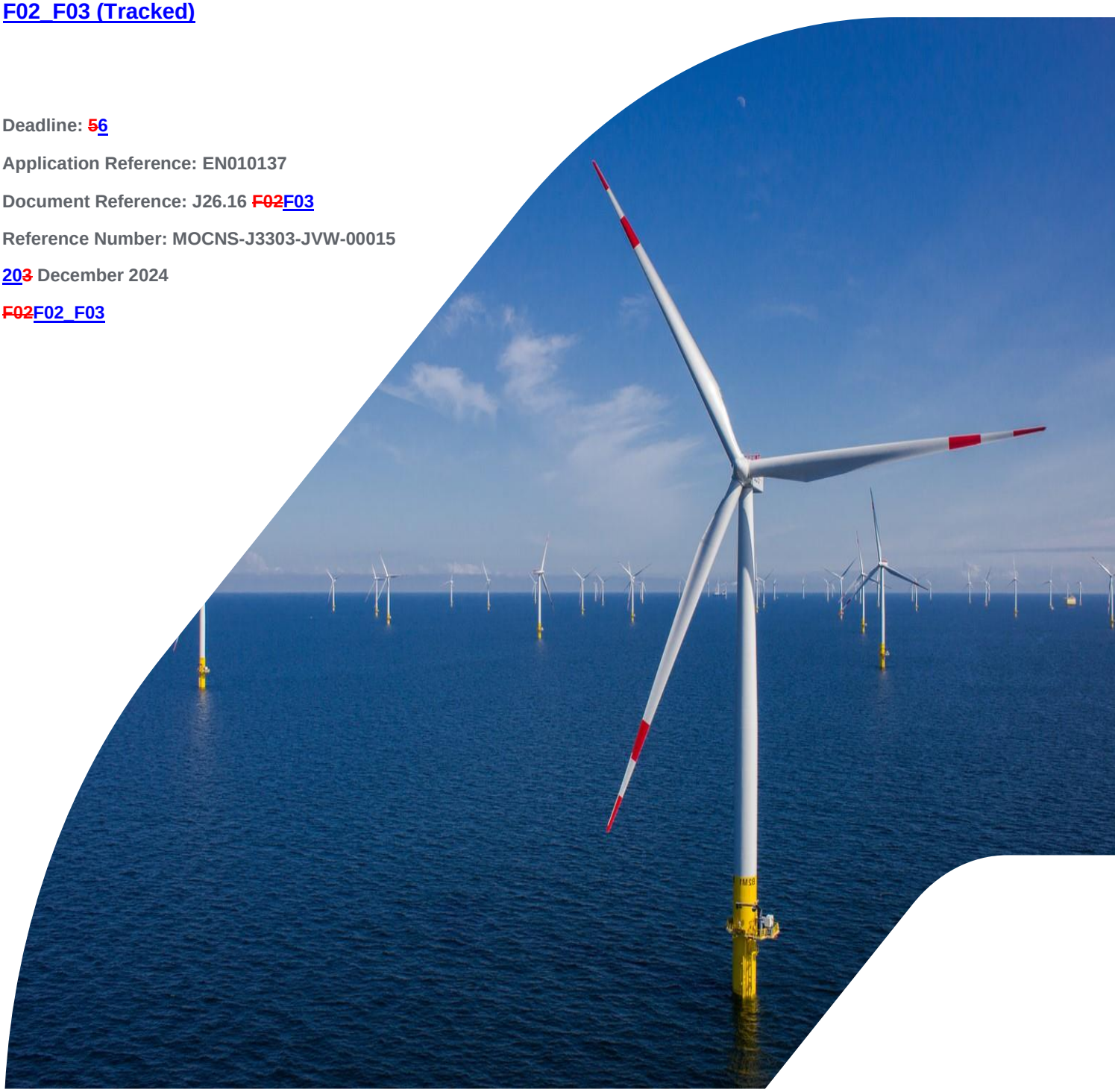
MONA OFFSHORE WIND PROJECT

Outline Highways Access Management Plan

F02_F03 (Tracked)



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Prepared for:

Mona Offshore Wind Ltd.

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Glossary

Term	Meaning
Project terminology	
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.
Local Highway Authority	A body responsible for the public highways in a particular area of England and Wales, as defined in the Highways Act 1980.
National Speed Limit	The default maximum speed permitted on a given road depending on the road type.
Offshore Transmission Owners	A company that operates and maintains offshore electric power transmission infrastructure in Great Britain, delivering electrical power from offshore wind farms to the National Grid.

Acronyms

Acronym	Description
CoCP	Code of Construction Practice
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
DMRB	Design Manual for Roads and Bridges
GPS	Global Positioning System
HA	Highway Authority
HAMP	Highway Access Management Plan
HGV	Heavy Goods Vehicles
MHWS	Mean High Water Springs
LHA	Local Highway Authority
LPA	Local Planning Authority
OFTO	Offshore Transmission Owners
Outline HAMP	Outline Highway Access Management Plan
RSA	Road Safety Audit
NSL	National Speed Limit
TCC	Temporary Construction Compound

Units

Unit	Description
kV	Kilovolt
mph	Miles per hour

m	Metres

1 Outline highways access management plan

1.1 Overview

1.1.1.1 This document forms the Outline Highways Access Management Plan (Outline HAMP) that supports Requirement 10 of the Development Consent Order (DCO) for 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 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 Highways Access Management Plan

1.2.1.1 The purpose of this Outline HAMP is to present the details and preliminary access designs for all temporary construction compound (TCC) accesses and the Mona Onshore Substation access. The general arrangement for haul road crossings and any road works have also been included.

1.2.1.2 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)).

1.2.1.3 The Outline HAMP should be read in conjunction with the Outline CoCP (Document Reference J26 F03). Key measures from the Outline CoCP [J26 F04] have been incorporated into the Outline HAMP. Additionally, Volume 3, Chapter 8 Traffic and transport of the Environmental Statement (Document Reference F3.8) includes contextual information.

1.2.1.4 Should the Mona Offshore Wind Project DCO be granted, this Outline HAMP will evolve and form the basis of a final HAMP, which will be prepared in consultation with Denbighshire County Council and Conwy County Borough Council as the Local Highway Authorities, prior to submission to the relevant authorities for approval. The final HAMP will set out the location, frontage, general layout, visibility and embedded mitigation measures for points of access to the onshore infrastructure.

1.3 Roles and responsibilities

1.3.1 Project team

1.3.1.1 The environmental roles required to implement the Outline HAMP are set out in the following sections below.

Primary management

1.3.1.2 The Applicant and its onshore project management team will be responsible for coordinating the onshore and intertidal works, ensuring that the measures in the HAMP are being implemented and giving necessary direction to Principal Contractor(s) (e.g. setting contractual obligations). The Principal Contractor'(s) management team will be responsible for coordinating the works within each Principal Contractor'(s) respective contracts.

Secondary management

Site Manager

1.3.1.3 The Site Manager will be responsible for maintaining the HAMP as a working document; ensuring environmental standards are adhered to and monitoring compliance during construction.

1.4 General principles

1.4.1 Introduction

1.4.1.1 This section sets out the over-arching principles being proposed for the implementation of the HAMP.

1.4.2 Construction principles

1.4.2.1 The Mona Offshore Wind Project will be constructed in an environmentally sensitive manner and will meet the requirements of all relevant legislation, codes of practice and standards as identified in the DCO and Environmental Statement.

1.4.3 Health and safety principles

1.4.3.1 Appropriate industry standards will be adopted and implemented for the health, safety and welfare of the construction staff on the Mona Offshore Wind Project. Arrangements will also be put in place to discharge duties under the Construction (Design and Management) Regulations 2015.

1.4.3.2 A Health and Safety Plan for the onshore works will be prepared by the Principal Contractor(s) post consent. The Health and Safety Plan will set out how the health and safety risks to construction workers, visitors and the public are identified and managed in accordance with legal requirements and best practice for the onshore works.

1.4.4 Environmental management

1.4.4.1 Each Principal Contractor is to be British Standard (BS) EN ISO 14001 (Environmental Management System (EMS)) certified. The EMS will provide the process for which environmental management is undertaken to ensure that the relevant findings of the Environmental Statement are addressed during the construction phase. The EMS will set out:

- The procedures to be implemented to monitor compliance with environmental legislation and other relevant requirements
- The key environmental aspects of the construction works and how they will be managed

- Staff competence and training requirements
- Record-keeping arrangements
- Monitoring compliance and the effectiveness of the measures included within the CoCP, as approved by the relevant planning authority in consultation with the relevant stakeholders.

1.4.4.2 As part of the EMS, the Principal Contractors will be required to plan their works in advance to ensure the works incorporate measures to reduce environmental effects.

1.4.5 Working hours

Core working hours

1.4.5.1 Core working hours as secured in the DCO will apply to the construction of the construction accesses and are set out below:

- 07:00 to 19:00 Monday to Saturday
- No working proposed on Sundays or bank holidays
- Up to one hour before and after core working hours for mobilisation ("mobilisation period").

1.4.5.2 During the mobilisation period, the contractor may undertake the following activities:

- Personnel briefings, inspections, tool-box talks, inductions
- Health and safety works
- Deliveries
- Movements to place of work
- Unloading
- General preparation and site maintenance works.

1.4.5.3 Mobilisation does not include heavy good vehicle (HGV) movements into and out of construction areas (i.e. HGV movements should only occur at the construction areas during the core working hours unless otherwise agreed) but suppliers can make use of the wider highway network outside these hours to travel. Mobilisation activities also do not include the operation of heavy machinery or the operation of generators or flood lights.

Emergency works

1.4.5.4 Emergency works may also be undertaken outside of the core working hours. In the event of any emergency, notification of the emergency will be given to the relevant planning authority and highways authority as soon as reasonably practicable.

1.4.6 Other measures

1.4.6.1 The following measures will be undertaken in accordance with the Outline CoCP (J26 F03):

- General site layout
- Good housekeeping

- Site security and fencing
- Construction lighting
- Management of construction waste
- Emergency planning and procedures
- Surface water and drainage management
- Communication plan.

1.5 Access strategy

1.5.1.1 The temporary construction accesses that facilitate vehicular access onto the Mona Onshore Development Area are:

- TCC 1 access
- TCC 2 access
- TCC 3 access
- TCC 4 access
- TCC 5 access
- Temporary construction Onshore Substation access
- Existing Bodelwyddan National Grid Substation.

1.5.1.2 The location of these accesses is presented on Figure 1.1.

1.5.1.3 The establishment of these accesses is set out in an access strategy: the basis of this access strategy has been informed by engagement with Conwy County Borough Council and Denbighshire County Council. All details of consultation have been included with section 8.3 of Volume 3, Chapter 8 Traffic and transport of the Environmental Statement (Document Reference F3.8).

1.5.1.4 The access strategy applied a hierarchical approach to selecting routes and where possible, seeks to reduce the impact of Heavy Goods Vehicle (HGV) traffic upon concentrations of sensitive receptors.

1.5.1.5 The temporary construction haul road will be used where possible to avoid routeing along the local highway network.

1.5.1.6 The assessment of routeing has determined that 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 Heavy Goods Vehicles (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.

1.5.1.7 Swept path analyses of key locations for the movements of construction HGVs have been included at Appendix A to demonstrate the suitability of this part of the route for these vehicles. Similarly, swept path analyses of key locations for the movements of cable drum vehicles have been included at Appendix B.

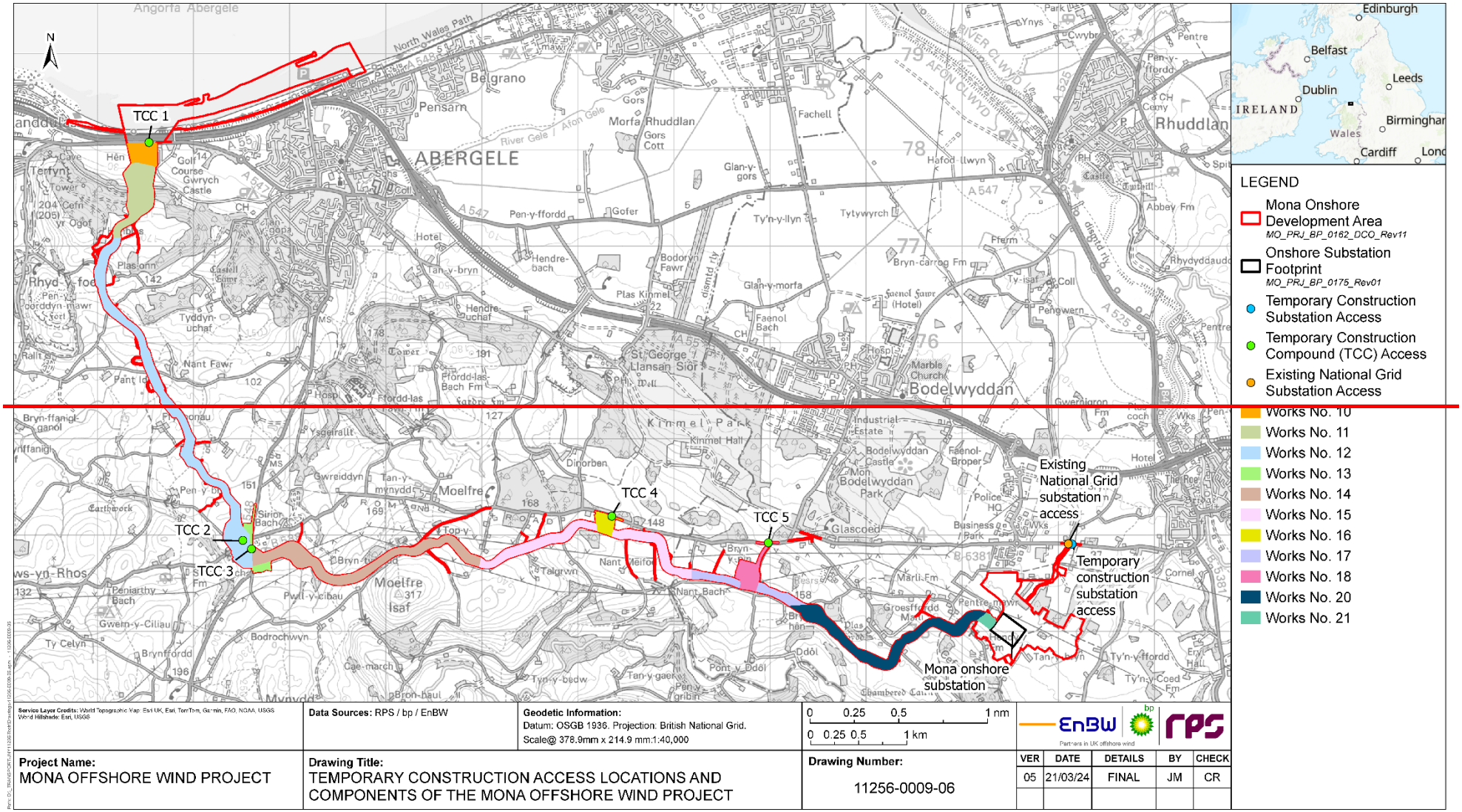
1.5.1.8 The swept path analyses determined that there would be difficulty for construction HGVs to turn through the B5381 Roman Road / A548 Penrefail crossroads safely. Therefore, minor works are proposed to ensure highway safety is maintained. Some widening is proposed to the north western quadrant of the junction and it is proposed to temporarily remove the kerbed splitter island on the western side of the B5381 Roman Road to improve the turning provision for large vehicles. These improvements are shown at Appendix C. The swept path analysis of construction HGVs through the improved layout is also attached at Appendix C.

1.5.1.9 Swept path analyses also determined that there would be difficulty for construction HGVs to turn through the B5381 Glascoed Road / B5381 Roman Road priority junction safely. Therefore, minor works are proposed to ensure highway safety is maintained. Some widening is proposed to the verge on the eastern and western sides of the bell mouth junction. At the bifurcated junction south of this junction it is proposed to modify the island accordingly. This does not impact upon the requisite visibility splay from this junction. These improvements are shown at Appendix C. The swept path analysis of construction HGVs through the improved layout is also attached at Appendix C.

1.5.1.10 The access strategy includes for both temporary construction accesses onto the public highway and haul road crossings of the public highway. The accesses provide for both ingress and egress to and from the existing public highway.

1.5.1.11 The general arrangement for crossings has been included within this Outline HAMP. Crossings only permit construction traffic to cross from one side of the existing public highway to the other. No construction ingress or egress to or from the public highway would be permitted at the crossing points other than for the purposes of crossing the public highway from one part of the haul road to another.

Table 1.1 presents the accesses, the proposed access strategy and associated component of the Mona Offshore Wind Project which the access serves. This information and the location of each construction access is also depicted graphically within Figure 1.1. The access routes for HGVs and for cable drum vehicles are shown on Figure 1.2 and Figure 1.3 respectively.


TCC 1
TCC 2
TCC 3
TCC 4
TCC 5
Existing National Grid substation access
Temporary construction substation access
Mona onshore substation
ABERGELE
Belgrano
Pensarn
Morfa Rhuddlan
Rhuddlan
Bodelwyddan
Moelfre
Kinmel Park
Glascoed
Edinburgh
Belfast
Dublin
Leeds
Birmingham
Cardiff
IRELAND
Wales
LEGEND
Mona Onshore Development Area
MO_PRJ_BP_0162_DCO_Rev11
Onshore Substation Footprint
MO_PRJ_BP_0175_Rev01
Temporary Construction Substation Access
Temporary Construction Compound (TCC) Access
Existing National Grid Substation Access
Works No. 10
Works No. 11
Works No. 12
Works No. 13
Works No. 14
Works No. 15
Works No. 16
Works No. 17
Works No. 18
Works No. 20
Works No. 21
Service Layer Credits: World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Hillshade: Esri, USGS
Data Sources: RPS / bp / EnBW
Geodetic Information:
Datum: OSGB 1936. Projection: British National Grid.
Scale@ 378.9mm x 214.9 mm:1:40,000
0 0.25 0.5 1 nm
0 0.25 0.5 1 km
Project Name:
MONA OFFSHORE WIND PROJECT
Drawing Title:
TEMPORARY CONSTRUCTION ACCESS LOCATIONS AND COMPONENTS OF THE MONA OFFSHORE WIND PROJECT
Drawing Number:
11256-0009-06
VER 05
DATE 21/03/24
DETAILS FINAL
BY JM
CHECK CR

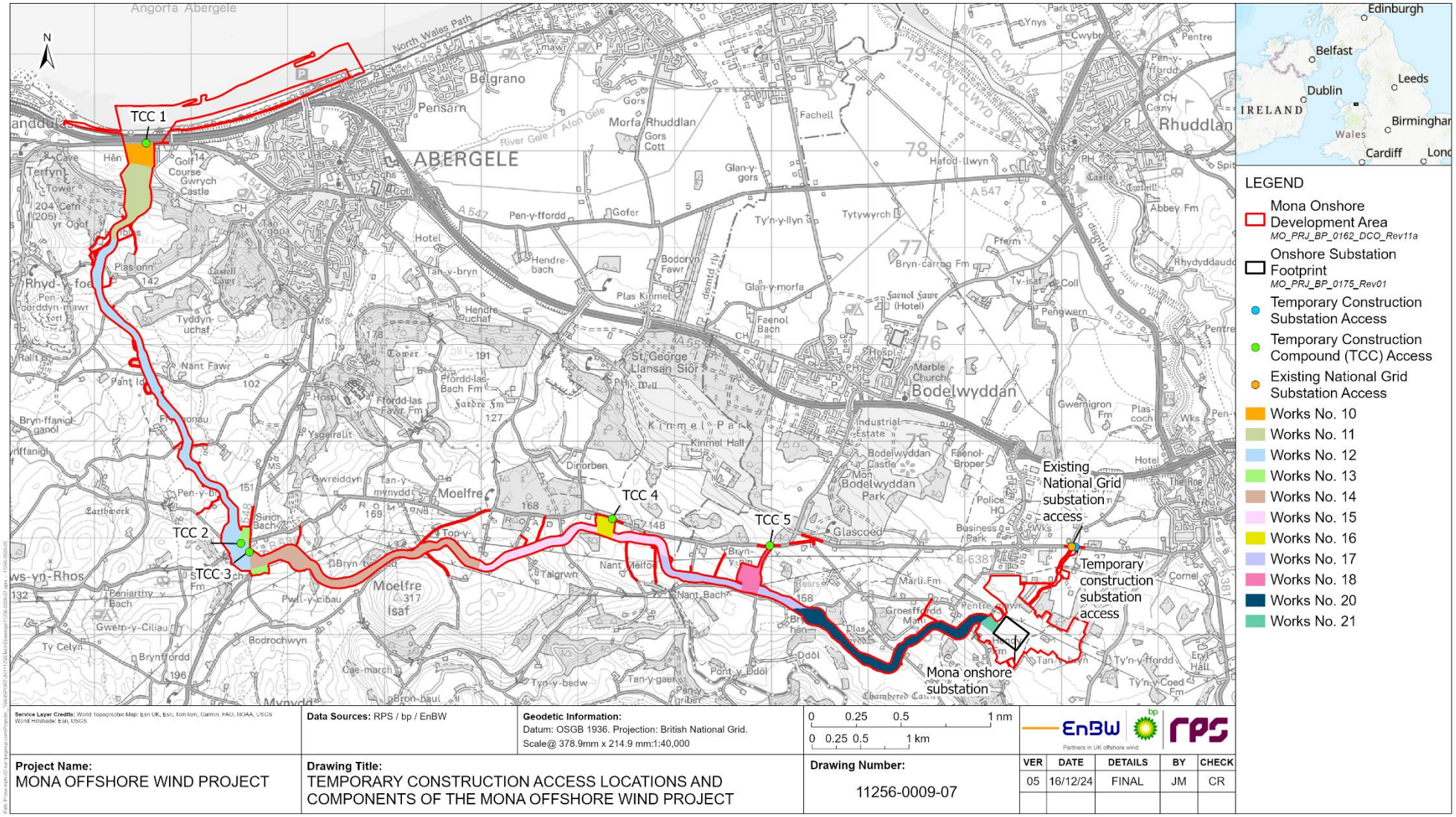
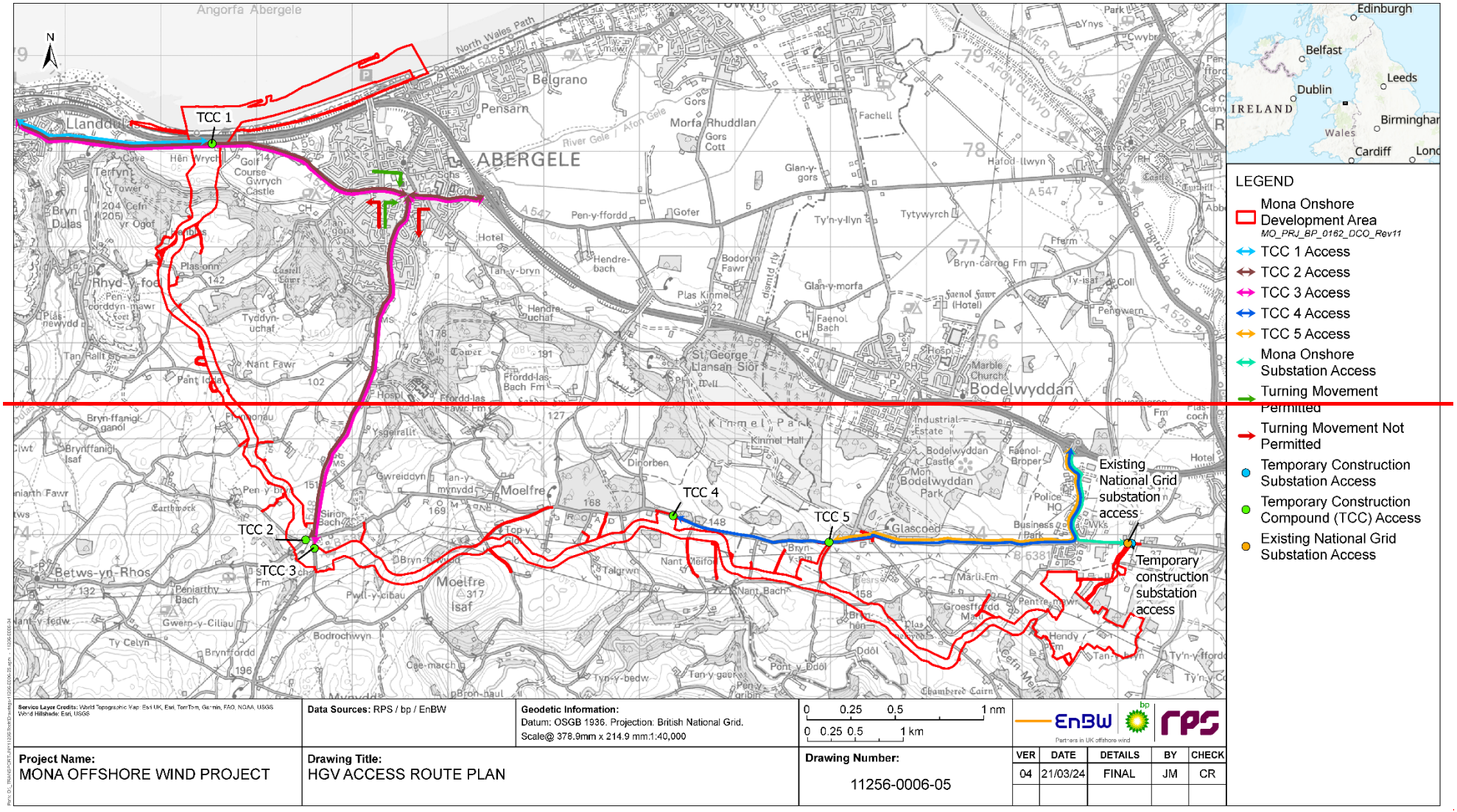


Figure 1.1: Temporary construction access locations and components of the Mona Offshore Wind Project.



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

Data Sources: RPS / bp / EnBW

Geodetic Information:
Datum: OSGB 1936. Projection: British National Grid.
Scale@ 378.9mm x 214.9 mm:1:40,000

0 0.25 0.5 1 nm
0 0.25 0.5 1 km

Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
HGV ACCESS ROUTE PLAN

Drawing Number:
11256-0006-05

VER	DATE	DETAILS	BY	CHECK
04	21/03/24	FINAL	JM	CR

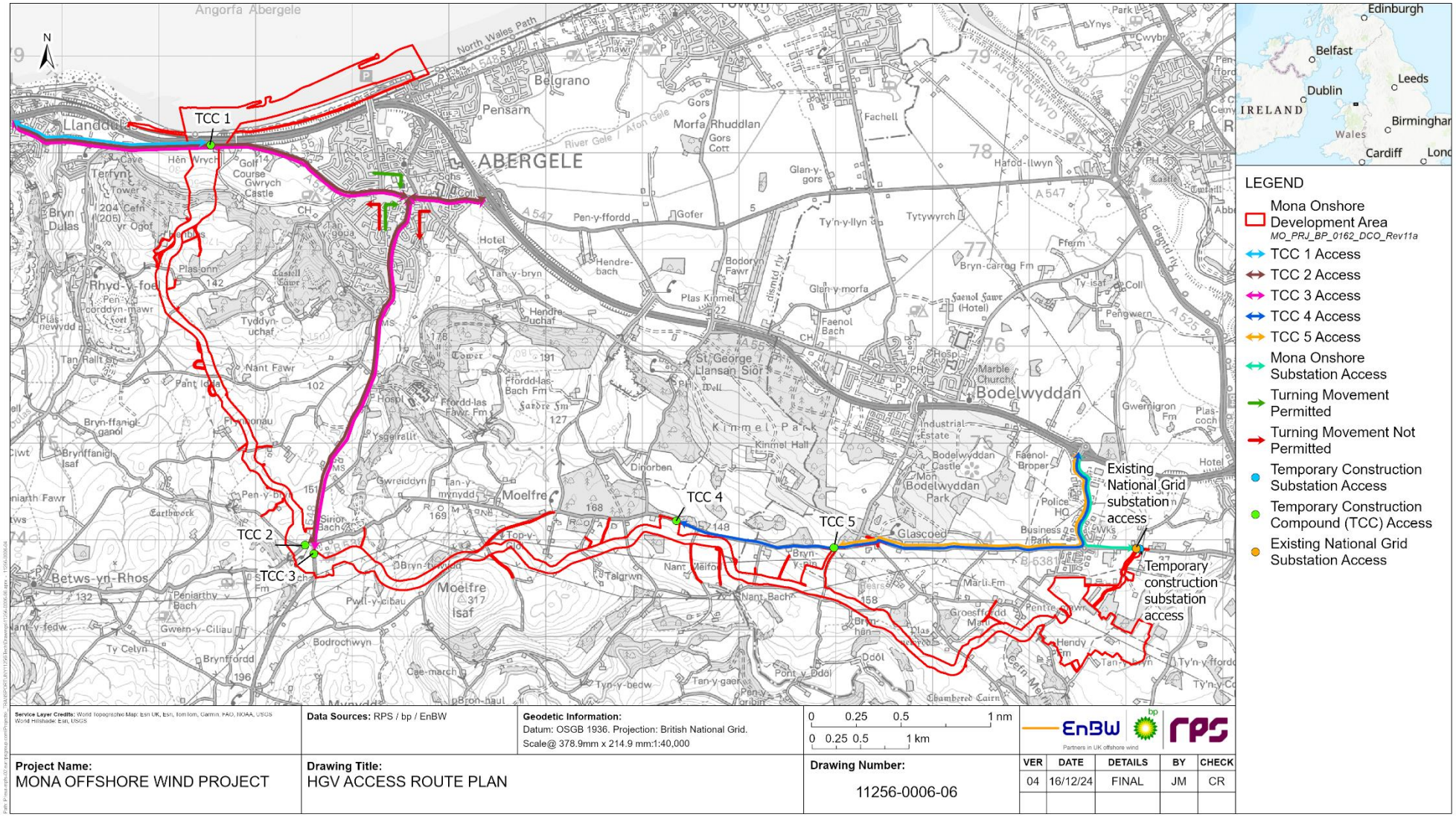
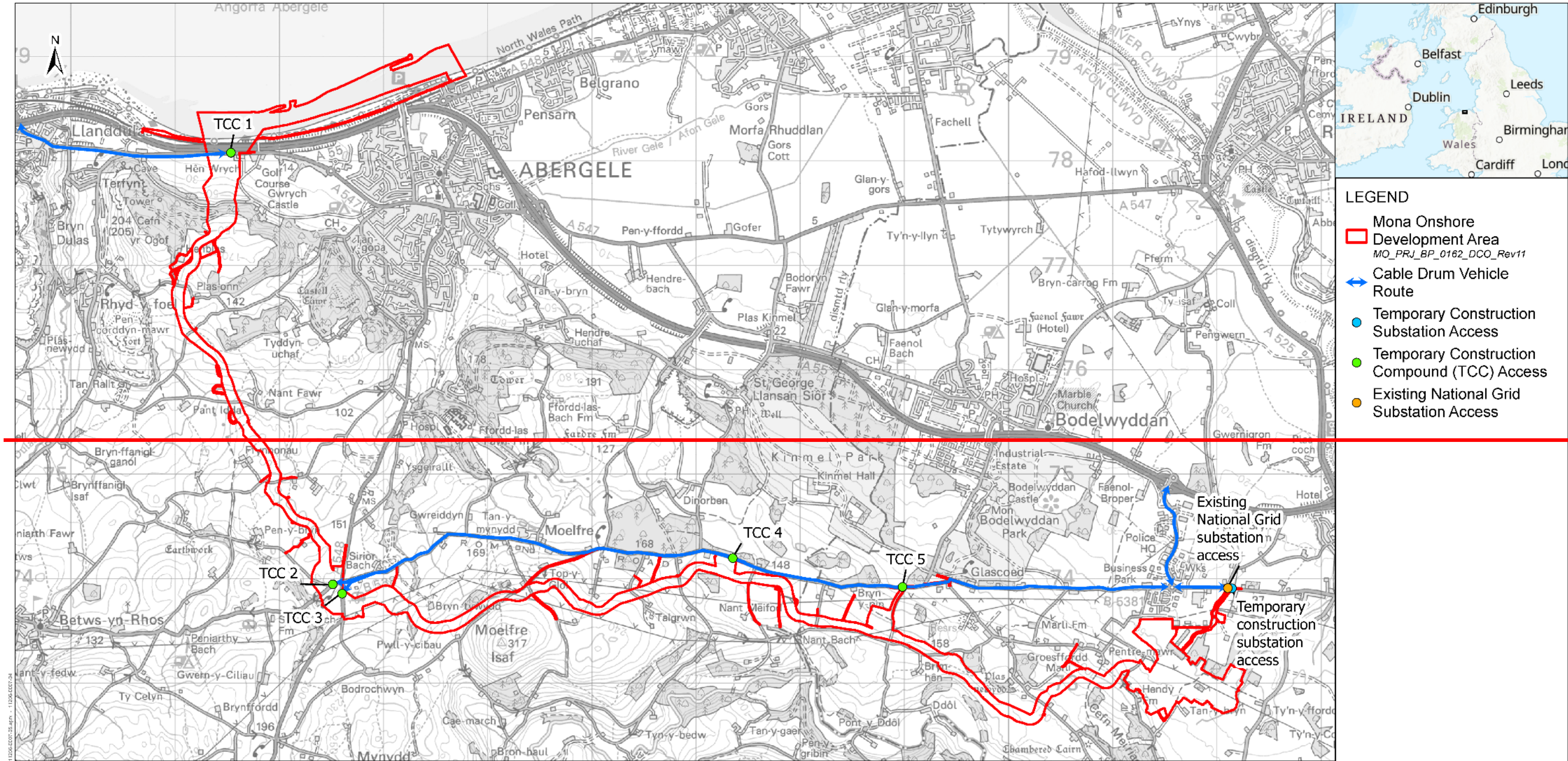


Figure 1.2: HGV access route plan.



Service Layer Credits: World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS World Hillshade: Esri, USGS	Data Sources: RPS / bp / EnBW	Geodetic Information: Datum: OSGB 1936. Projection: British National Grid. Scale@ 378.9mm x 214.9 mm 1:40,000	0 0.25 0.5 1 nm; 0 0.25 0.5 1 km
Project Name: MONA OFFSHORE WIND PROJECT	**Drawing Title:** CABLE DRUM VEHICLE ACCESS ROUTE PLAN	**Drawing Number:** 11256-0007-05	

VER	DATE	DETAILS	BY	CHECK
04	21/03/24	FINAL	JM	CR

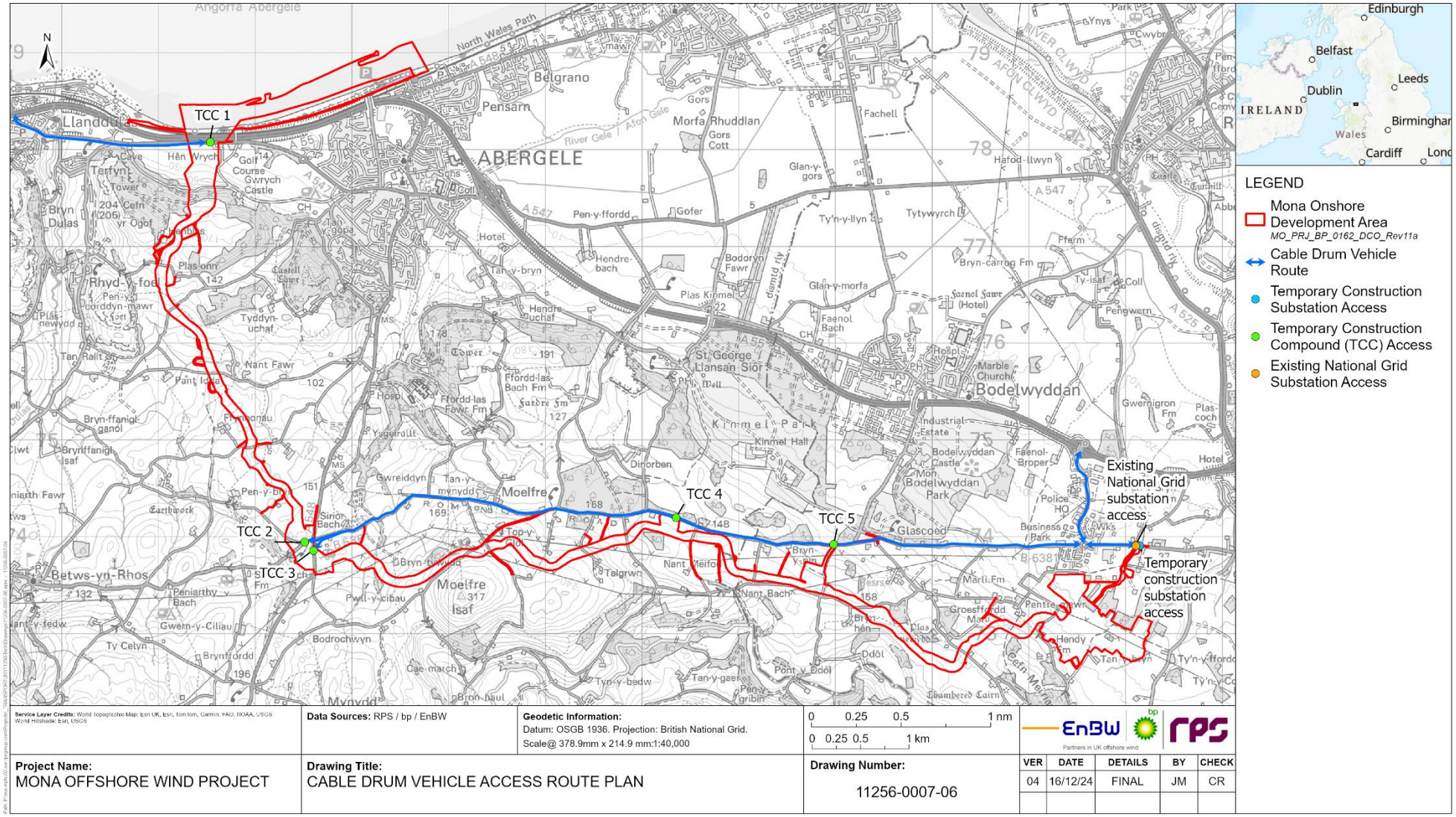


Figure 1.3: Cable drum vehicle access route plan.

Table 1.1: Proposed accesses and components of the Mona Offshore Wind Project.

Access	Component	HGV access route	Cable drum vehicle access route
TCC 1	Work No. 10 Work No. 11	A55, A547	A55, A547
TCC 2	Work No. 13 Work No. 12	A55, A547, A548, B5381	A55, Ffordd William Morgan, B5381
TCC 3	Work No. 13 Work No. 14	A55, A547, A548	A55, Ffordd William Morgan, B5381, A548
TCC 4	Work No. 15 Work No. 16	A55, Ffordd William Morgan, B5381	A55, Ffordd William Morgan, B5381
TCC 5	Work No. 17 Work No. 20	A55, Ffordd William Morgan, B5381	A55, Ffordd William Morgan, B5381
Onshore Substation	Onshore Substation	A55, Ffordd William Morgan, B5381	A55, Ffordd William Morgan, B5381

1.6 Access design

1.6.1 Overview

1.6.1.1 There are five TCC accesses and two temporary construction accesses to the Onshore Substation being considered within this Outline HAMP. The existing Bodelwyddan National Grid Substation access will be used on a short temporary basis until such time that the temporary access for the Onshore Substation is brought into use. The locations of these are shown on Figure 1.1.

1.6.1.2 When considering access requirements and design standards, where measured vehicle speeds, posted speed limits or vehicle speeds with any temporary reduced speed limits higher than 40 mph, then highway design standards set out in the Design Manual for Roads and Bridges (DMRB) have been adopted. For those up to 40 mph, Manual for Streets 2 (MfS2) guidance (and the Manual for Streets principles) has been adopted.

1.6.1.3 The specific considerations for each access are outlined below and summarised in Table 1.2.

1.6.2 Temporary construction compound 1

1.6.2.1 TCC 1 access is proposed to be located along the A547 at an existing access junction to an open field with some areas of trees and shrubbery. The access is currently used for agricultural purposes.

1.6.2.2 At this location there is an existing wall (forming part of the Gwrych Castle wall) on both sides of the bellmouth and this abuts the edge of the carriageway. It is not possible to provide a visibility splay which accords with a recognised highway design standard without removal or relocation of the wall along the length of any such visibility splay. Therefore, access to this compound has been considered via the implementation of temporary traffic signals.

1.6.2.3 The width of the current access between the wall is not wide enough to allow for HGVs or cable drum delivery vehicles to turn through it safely, therefore, widening is required

with part reconstruction of the wall. This wall is a listed asset and is considered within Volume 3, Chapter 5 the Historic environment chapter of the Environmental Statement (Document reference F3.5).

1.6.2.4 Due to the concentration of sensitive receptors within Abergele it is suggested that all construction HGVs and cable drum delivery vehicles arrive and depart via the A547 west through the A55 Junction 23.

1.6.2.5 Temporary (portable) traffic signal control will be implemented in both directions along the A547 Abergele Road and another portable traffic signal will be provided in the access road to provide three-way control with safe unopposed right turn movements into the access.

1.6.2.6 Forward visibility has been assessed to the signal heads, the posted speed limit along the A547 is 50 mph and the requisite visibility of 160 m can be achieved. There is the potential to temporarily reduce the speed limit to 40 mph as part of the detailed design in discussion with Denbighshire County Council.

1.6.2.7 A preliminary access design has been completed and is shown by drawings JNY11256-12 and JNY11256-13. Swept path analysis has been completed of a maximum length articulated vehicle and a cable drum vehicle and is presented by drawings JNY11256-12.1 and JNY11256-12.2. These drawings are attached at Appendix D and are set out in Table 1.3.

1.6.3 Temporary construction compound 2

1.6.3.1 TCC 2 access is proposed to be located along the B5381 Roman Road west of the Penrefail crossroads with the A548. The location of TCC 2 is approximately 60 m to the west of the A548 allowing for safe separation.

1.6.3.2 Due to the narrow geometries and alignment of the B5381 to the west of the access, a visibility splay for vehicle speeds of 40 mph has been assessed and is achievable at 2.4 m x 81.6 m. Due to the proximity of the A548 to the east, the extent of the visibility splay to the east of the access extends to this where any oncoming vehicles would be turning through the junction; an appropriate visibility splay of 2.4 m x 61 m is achievable.

1.6.3.3 A preliminary access design and swept path analysis of a maximum length articulated vehicle have been completed and are presented by drawing JNY11256-14. These drawings are attached at Appendix D and are set out in Table 1.3.

1.6.4 Temporary construction compound 3

1.6.4.1 TCC 3 access is proposed to be located along the A548, 100 m to the south of the Penrefail crossroads where the posted speed limit is the National Speed Limit (NSL) of 60 mph.

1.6.4.2 In order to achieve requisite visibility splays for 60 mph vehicle speeds to the south, extensive hedgerow and tree removal would be required. Just north of the Penrefail crossroads there is a crest in the carriageway which would also obstruct the requisite visibility splay to the north.

1.6.4.3 Therefore to avoid extensive removal of trees and hedgerow, a temporary speed restriction is proposed. The requisite visibility splay in line with a 50 mph speed restriction is 2.4 m x 160 m, whilst for 40 mph is 2.4 m x 81.6 m. Both of these are achievable.

1.6.4.4 There is hedgerow with some small trees and shrubs along the boundary to the south of the access. The visibility splay for 40 mph vehicle speeds would allow the hedgerow and trees to be retained whilst for 50 mph vehicle speeds would require some of these to be removed/replaced. Both visibility splay options can be achieved.

1.6.4.5 Therefore, a temporary speed reduction to 40 mph is preferred in order to reduce impact on small trees and shrubbery.

1.6.4.6 A preliminary access design has been completed and is shown by drawing JNY11256-15. Swept path analysis has been completed of a maximum length articulated vehicle and is presented by drawing JNY11256-16. These drawings are attached at Appendix D and are set out in Table 1.3.

1.6.5 Temporary construction compound 4

1.6.5.1 TCC 4 access is proposed to be located along the B5381.

1.6.5.2 To the west is an agricultural building which abuts the edge of carriageway and restricts visibility. To the east there is a crest in the carriageway which also constrains visibility.

1.6.5.3 The posted speed limit is the NSL of 60 mph, however a traffic survey has determined that the 85th percentile speeds are 52 mph eastbound and 55 mph westbound. Therefore, visibility requirements in line with the DMRB would be 2.4 m x 160 m to the west and 2.4 m x 215 m to the east. Due to the constraints described above these visibility requirements would not be achievable without extensive tree/hedgerow removal. The same extent would be required with a temporary speed restriction to 50 mph also.

1.6.5.4 Therefore, to avoid extensive removal of a hedgerow, a temporary speed restriction to 40 mph is proposed. The requisite visibility splay requirements of 2.4 m x 81.6 m are achievable in both directions from the proposed location of the access with minimal impact upon the hedgerow.

1.6.5.5 There is an existing field access approximately 15 m to the east of the proposed TCC 4 access, which will need to further be considered during the detailed design stage.

1.6.5.6 A preliminary access design and swept path analysis of a maximum length articulated vehicle have been completed and are presented by drawing JNY11256-17. These drawings are attached at Appendix D and are set out in Table 1.3.

1.6.6 Temporary construction compound 5

1.6.6.1 TCC 5 access is located along the B5381 just west of Engine Hill and the B5381 Roman Road/B5381 Glascoed Road junction.

1.6.6.2 At this location there is an existing access track currently used for agricultural purposes along which there are trees. In order to avoid disruption, removal or relocation of the trees, the proposed construction access track will be to the west of this existing access track.

1.6.6.3 To the east and west at this location visibility is constrained by bends in the road, trees and hedgerow therefore, a temporary speed reduction has been assessed. The posted speed limit along this section is the NSL of 60 mph however the measured 85th percentile vehicle speeds are 46.6 mph eastbound and 44.1 mph westbound.

1.6.6.4 Initially a temporary speed restriction to 40 mph was assessed with a priority-controlled access however it was determined that the requisite visibility splays would still be constrained by trees, hedgerow and the bends in the carriageway.

1.6.6.5 Due to the constraints on visibility from a priority junction, temporary (portable) traffic signal control is proposed. Portable traffic signals will be provided in both directions along the B5381 Roman Road and another portable traffic signal will be provided in the access road.

1.6.6.6 Forward visibility has been assessed to the temporary traffic signals with a temporary 40 mph speed restriction and is achievable.

1.6.6.7 A preliminary access design has been completed and is shown by drawing JNY11256-18.1. Swept path analysis has been completed of a maximum length articulated vehicle and is presented by drawing JNY11256-19.1. These drawings are attached at Appendix D and are set out in Table 1.3.

1.6.7 Onshore Substation access

1.6.7.1 There are two substation accesses being considered for the construction of the Mona Offshore Wind Project. The existing Bodelwyddan National Grid Substation access will be used on a short temporary basis until such time that the temporary construction substation access for the onshore substation is brought into use.

1.6.7.2 The existing Bodelwyddan National Grid substation access is located along the B5381 and is currently used for access to the Bodelwyddan National Grid Substation, to the Burbo Bank Extension Offshore Transmission Owners (OFTO) Substation and the Gwynt y Mor OFTO Substation.

1.6.7.3 The proposed location of the temporary construction access to the Onshore Substation is considered along the B5381 to the east of the existing Bodelwyddan National Grid substation access. This proposed location is the same location as the previous construction access for the Burbo Bank Extension which has since been restored to its agricultural use.

1.6.7.4 At this location the post speed limit is 40 mph however approximately 50 m west of the access the posted speed limit is 30 mph. It is proposed that a temporary speed restriction of 30 mph is put in place across the access junction in accordance with the arrangements that were previously adopted for the Burbo Bank Extension. The requisite visibility splays of 2.4 m x 43 m in both directions are achievable.

1.6.7.5 A preliminary access design and swept path analysis of a maximum length articulated vehicle have been completed and are presented by drawing JNY11256-22.1. These drawings are attached at Appendix D and are set out in Table 1.3.

1.6.8 Summary of visibility requirements

1.6.8.1 Table 1.2 below presents a summary of visibility considerations for each temporary construction access.

Table 1.2: Access visibility requirements.

Access	Measured 85th percentile vehicle speeds (mph) or posted speed limit		Requisite visibility (m) (2.4 m setback for priority control)	Visibility achievable	Traffic control measures	Notes
	Eastbound	Westbound				
TCC 1	50	50	160	No	Temporary portable signals to be enacted throughout entirety of construction period.	Temporary portable signals due to existing wall limiting visibility.
TCC 2	NSL (60)	NSL (60)	215	No	N/A	Vehicle speeds of up to 40 mph at the proposed access due to narrow geometries and alignment of the road to the west and crossroads junction to the east.
TCC 3	NSL (60)	NSL (60)	215	No	Temporary speed limit restriction from NSL of 60 mph to 40 mph to be enacted throughout entirety of construction period. Temporary speed restriction to 50 mph may also be achieved.	Temporary speed restriction proposed due to trees, hedgerow and shrubs constraining visibility to the south and a crest constraining visibility to the north.
TCC 4	52.4	55	160	No	Temporary speed limit restriction from NSL of 60 mph to 40 mph to be enacted throughout entirety of construction period.	Temporary speed restriction suggested to avoid extensive hedgerow and tree removal/ relocation.
TCC 5	46.6	44.1	160	No	Temporary portable signals Temporary speed limit restriction from NSL of 60 mph to 40 mph to be enacted throughout entirety of construction period.	Temporary portable signals and temporary speed restriction suggested to avoid extensive hedgerow and tree removal / relocation.

Access	Measured 85th percentile vehicle speeds (mph) or posted speed limit		Requisite visibility (m) (2.4 m setback for priority control)	Visibility achievable	Traffic control measures	Notes
	Eastbound	Westbound				
Onshore Substation access	40	30	81.6, 43 respectively	Yes	Temporary speed limit restriction from 40 mph to 30 mph to be enacted throughout entirety of construction period.	Previously used access for which the same arrangements with the same measures are proposed.

1.6.9 Preliminary access design

1.6.9.1 Preliminary access designs are presented on Figure 1.1 which incorporate the considerations presented above in section 1.6 above are included at Appendix D.

1.6.9.2 Table 1.3 below presents the access and the preliminary design drawings related to each.

Table 1.3: Preliminary access design summary.

Access	Preliminary design drawings
TCC 1	JNY11256-12 JNY11256-12.1 JNY11256-12.2 JNY11256-13
TCC 2	JNY11256-14
TCC 3	JNY11256-15 JNY11256-16
TCC 4	JNY11256-17
TCC 5	JNY11256-18.1 JNY11256-19.1
Mona onshore substation access	JNY11256-22.1

1.6.10 Haul road and its crossings with the highway

1.6.10.1 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 onshore export 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.

1.6.10.2 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 the public highway,

traffic management would be used to ensure the safety of highway users and haul road vehicles. Details are set out in Figure 1.4, 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.

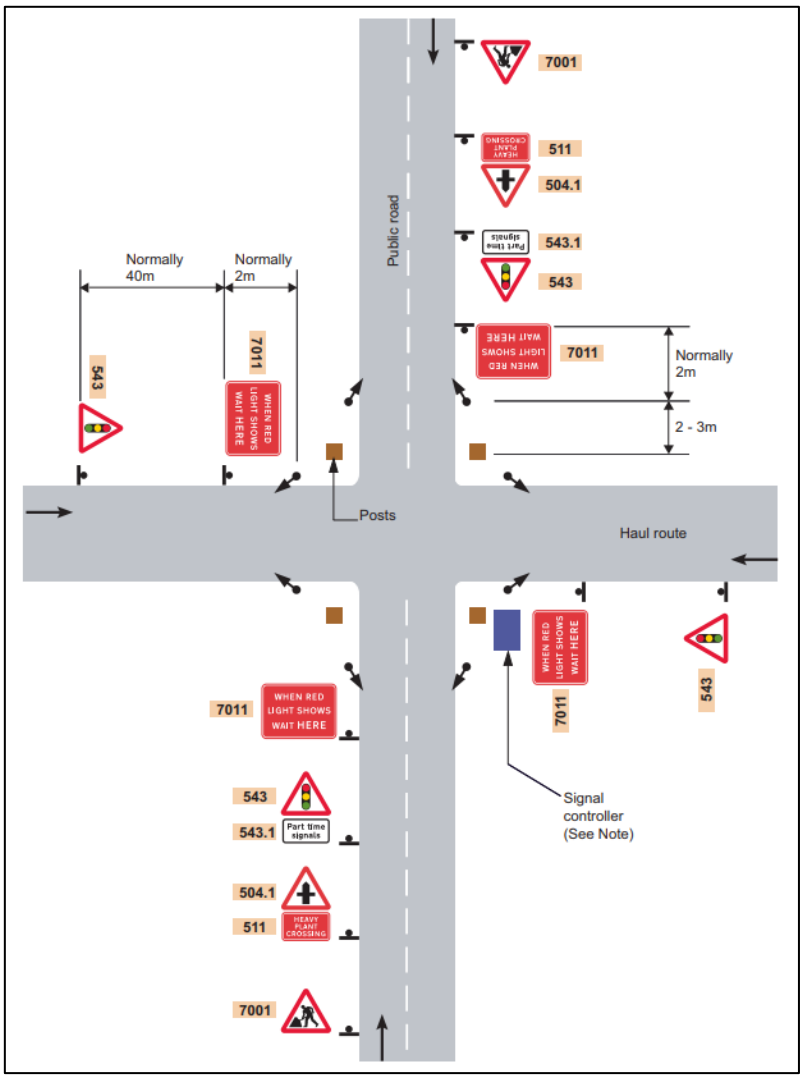


Figure 1.4: Haul route crossing.

1.6.11 Road safety

1.6.11.1 The following mitigation measures have been developed to reduce the risk to the travelling public and construction personnel and are applied to each access and crossing (where applicable):

- Temporary direction and warning signs to advise of turning vehicles would be provide for all accesses. This signage would highlight the proposed accesses to construction personnel traffic to avoid late breaking manoeuvres and highlight to the travelling public the potential for turning vehicles
- Temporary warning signs to advise of crossing vehicles would be provided for all crossings. This signage would highlight to the travelling public the potential for crossing vehicles
- All accesses constructed to facilitate two-way HGV movements to prevent vehicles having to give way on the highway

- All crossings constructed to prevent access from the highway, ensuring vehicles do not attempt to access or egress these locations
- All priority controlled accesses and crossings provided with appropriate visibility splays to allow vehicles to safely ingress and egress. These visibility splays will be maintained by the Principal Contractor for the duration of use of the access
- All signalised accesses provided with appropriate forward visibility to the temporary portable signal heads to allow a safe stopping sight distance to the signals
- All accesses onto and crossings over the public highway to incorporate a bound (concrete or asphalt) surface to prevent dust and dirt being tracked on to the highway
- Temporary reduction in the existing speed limit in the vicinity of all accesses and crossings to be considered to reduce the speed of vehicles in the vicinity of these locations (all temporary speed restrictions will be managed by Conwy County Borough Council and Denbighshire County Council via a Traffic Regulation Order(s) if required)
- Where appropriate a banksman will be situated at an access to assist construction vehicles to ingress and egress.

1.6.12 Technical approval

1.6.12.1 The detailed designs for the accesses, crossings and any associated traffic management measures will be submitted to the relevant Local Highway Authority (LHA) for technical approvals and agreement.

1.6.12.2 The technical approval process will include submission of finalised drawings, showing full details of access and crossing arrangements, including drainage, lighting, signing, and standard construction details.

1.6.12.3 The accesses highlighted within this Outline HAMP, save for TCC 1, are temporary and following completion of construction would be reinstated to their former state. The improved access to TCC 1 could be retained, which would improve the turning ability of vehicles through the access and thus provide long term highway safety benefit on the A547 Abergele Road. The works to the wall will be consented under a Listed Building Consent and agreed with the landowner.

1.6.12.4 All temporary speed limit restrictions associated with temporary accesses will be implemented by the relevant LHA following an application by the contractor.

Road safety audit

1.6.12.5 The technical approval process will comply with the Road Safety Audit (RSA) process (as outlined within the Design for Manual Roads and Bridges GG 119, National Highways, January 2022) for all accesses and crossings. The RSA process comprises of a systematic process for the independent safety review of highway schemes. The purpose of the RSA process is to minimise the future occurrences and severity of collisions once a scheme has been built.

1.7 Traffic management

1.7.1 Overview

1.7.1.1 Temporary traffic management will be implemented at each of the accesses and crossings to maintain highway safety and to ensure minimal delays to existing road users.

1.7.1.2 In addition, to minimise the impacts of construction traffic on the wider highway associated with the construction of the accesses and crossings, wider control measures proportionate to the scale of the proposed works are detailed below.

1.7.2 Road works

1.7.2.1 Traffic management measures may be required for various reasons and the type of traffic management measure 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.

1.7.2.2 Traffic management measures that could be used would include stopping traffic on the highway, this could be via temporary portable signals or via manually operated stop/go signs.

1.7.2.3 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.

1.7.2.4 Some example layouts of these traffic management measures and features are shown on Figure 1.5 to Figure 1.8. 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.

1.7.2.5 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.

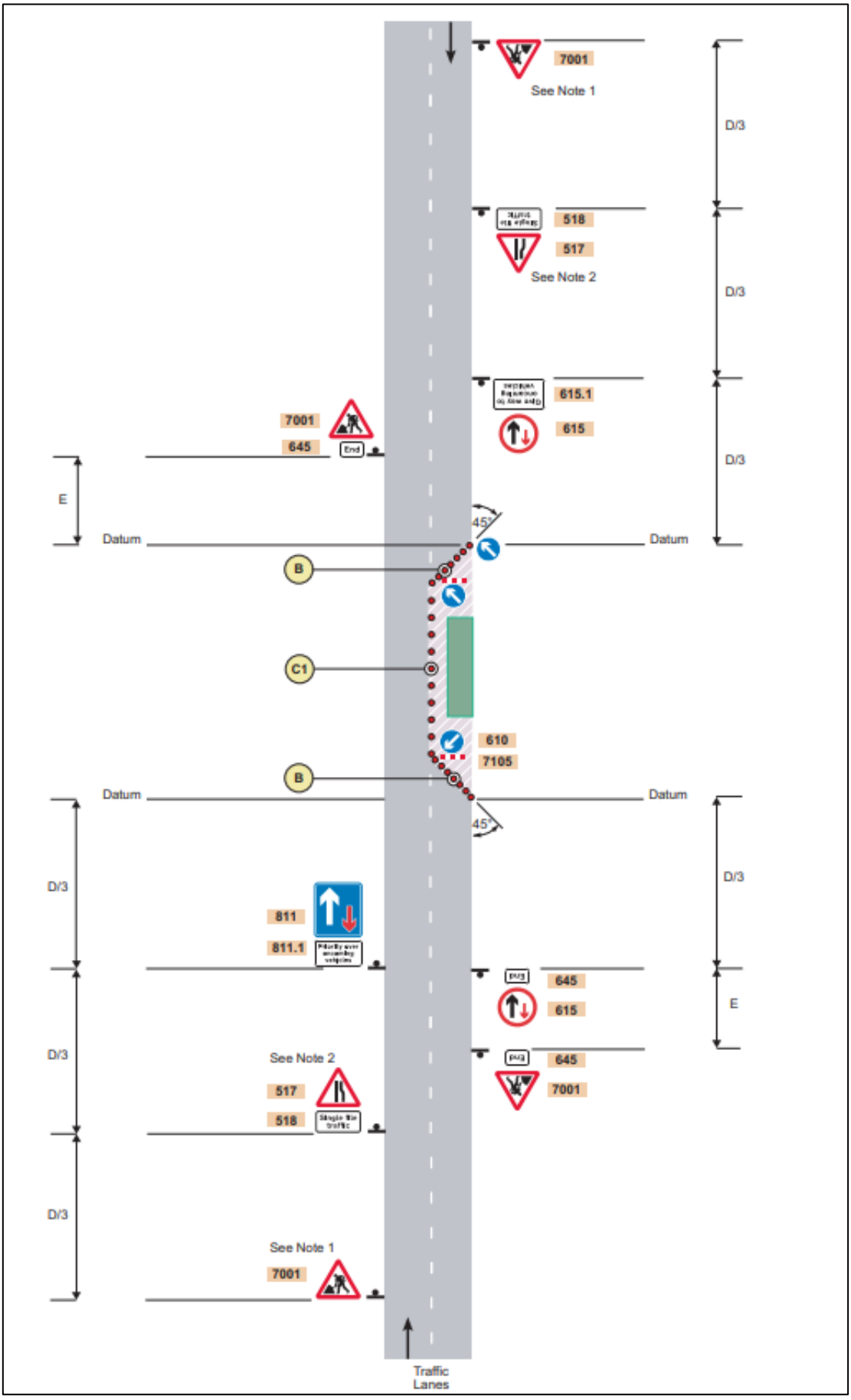


Figure 1.5: Priority signs on a two-lane single carriageway road.

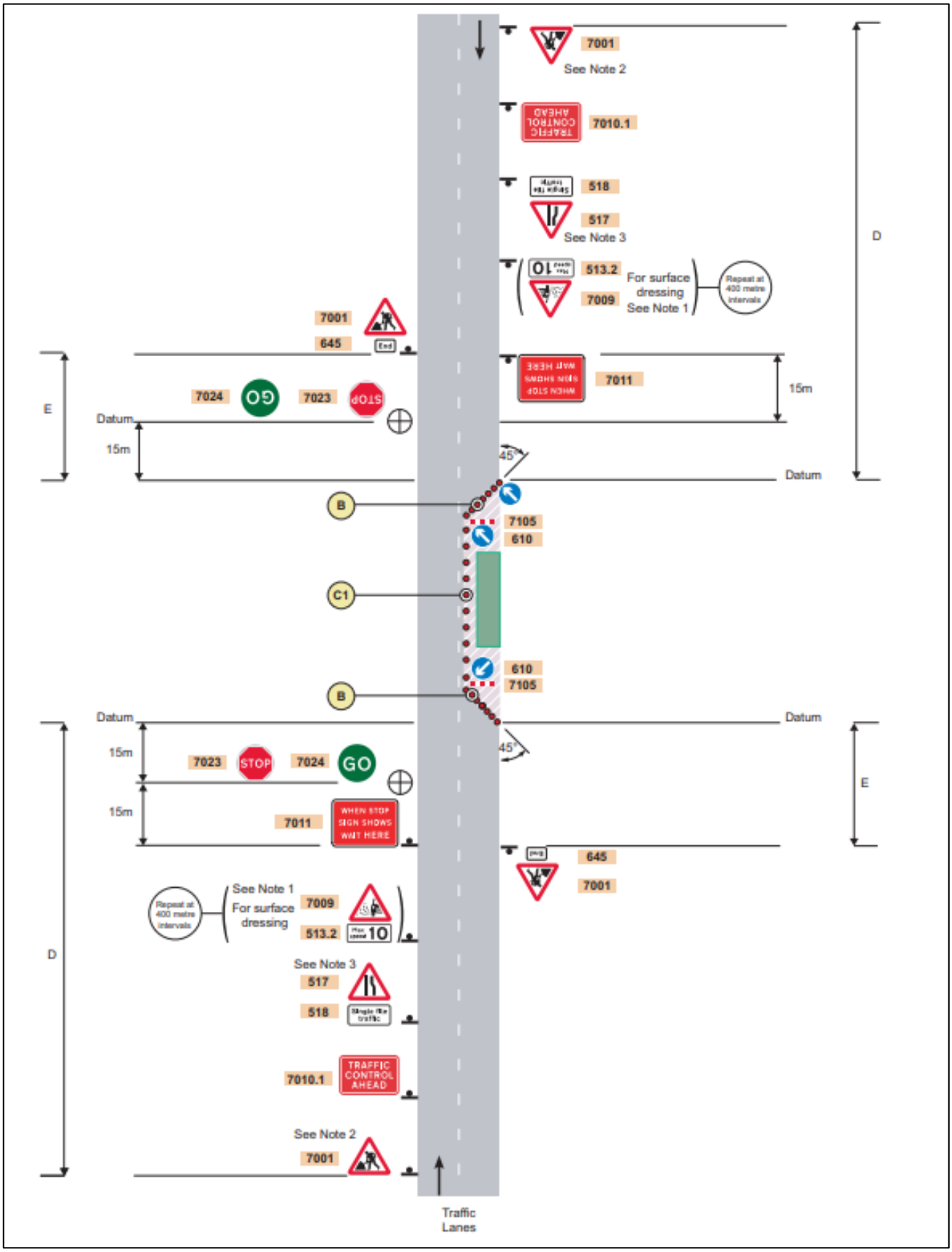


Figure 1.6: Stop/go signs on a two-lane single carriageway road.

Figure 1.7: Manually operated stop/go signs and priority signs.

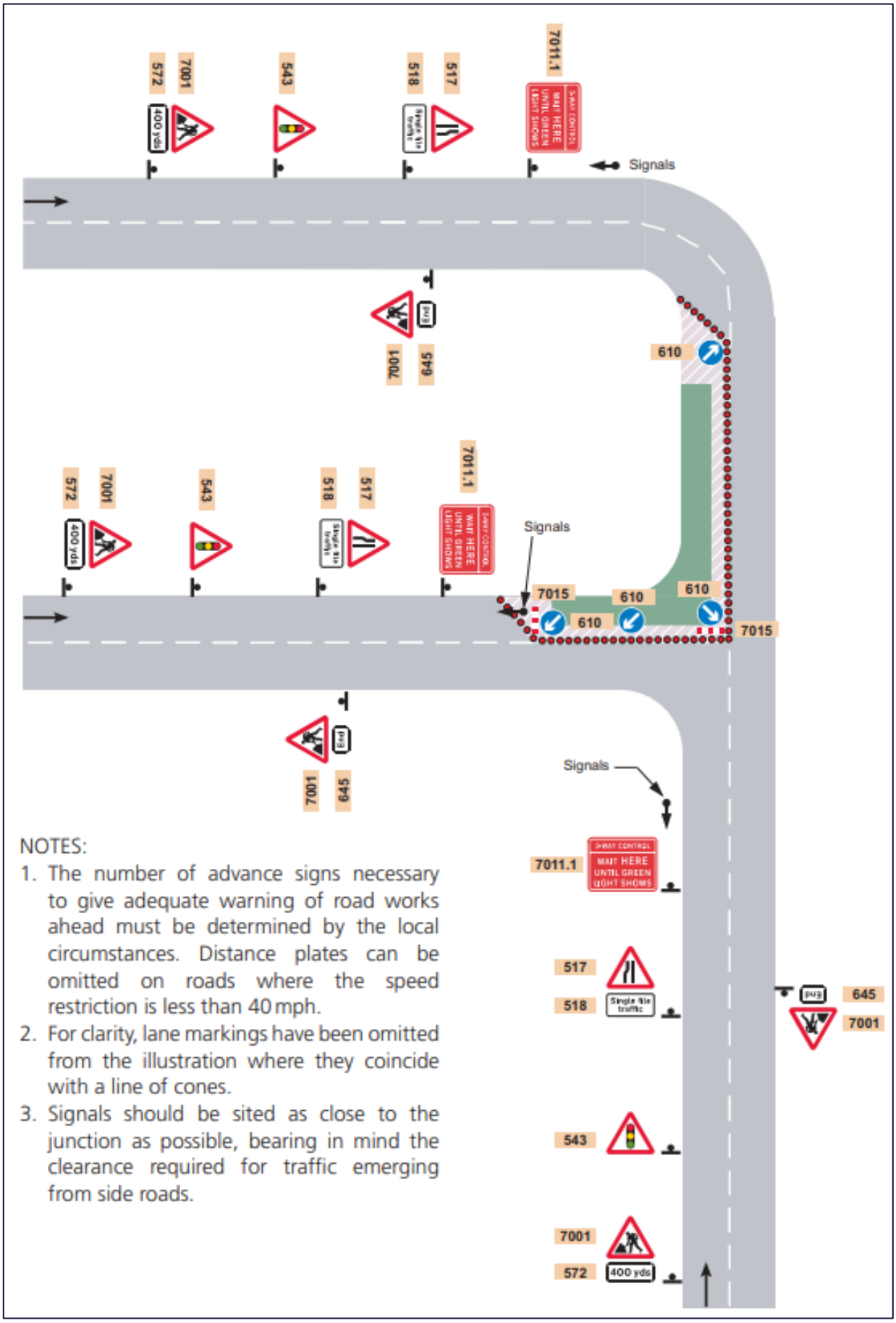


Figure 1.8: Roadworks at a T-junction – traffic control by means of portable traffic signals.

1.7.2.6 An example layout of the portable temporary signals proposed to be used at TCC 1 and TCC 5 accesses is presented by Figure 1.9 below. This layout includes the signage associated with temporary portable signals at a priority junction.

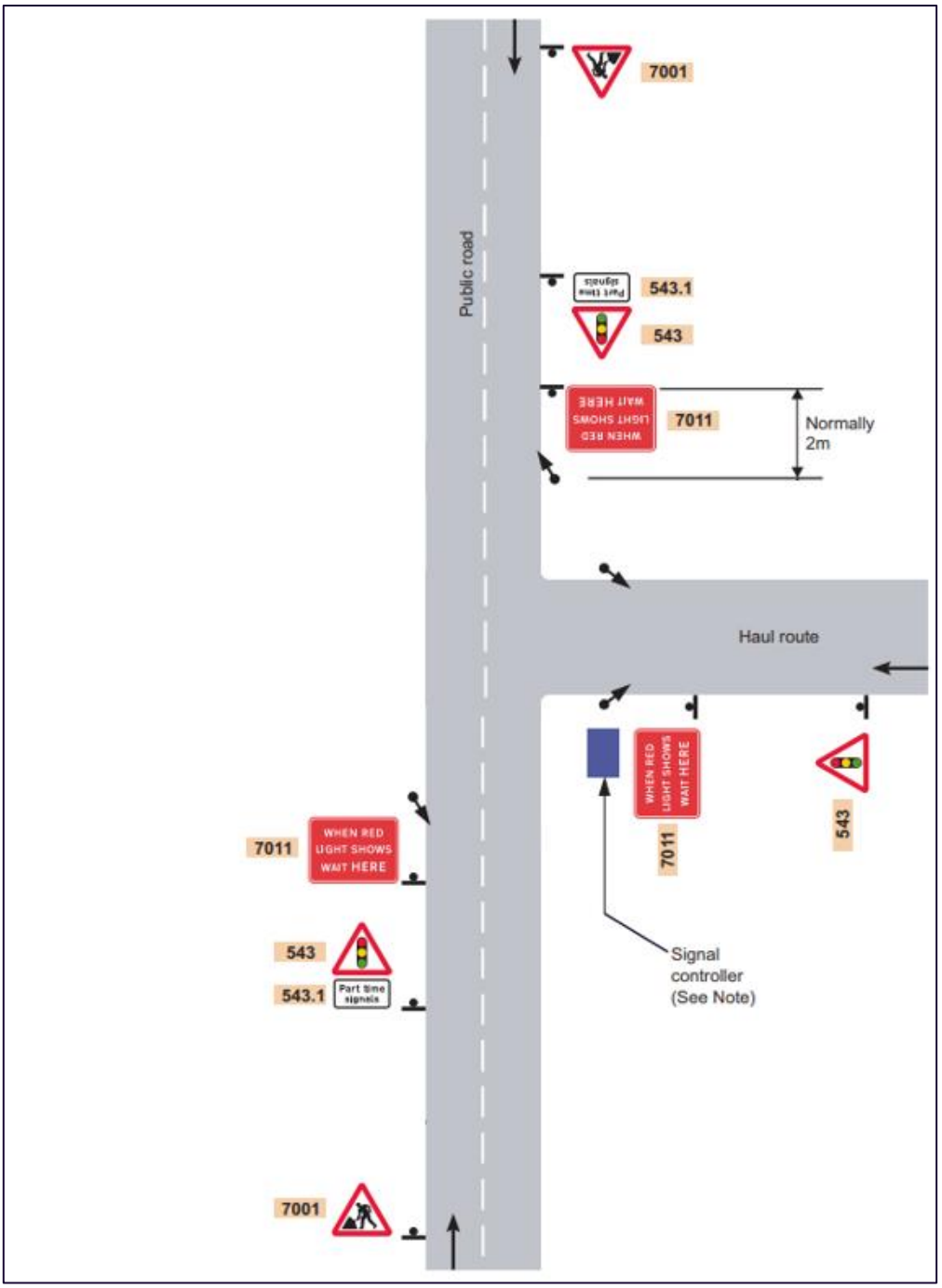


Figure 1.9: Roadworks at T-junction – traffic control by means of three-way portable signals.

Reporting

1.7.2.7 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 Local Planning Authorities (LPAs) and Highway Authorities throughout the works.

1.7.2.8 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.

1.7.2.9 Monitoring activities and responsibilities will be agreed with the relevant stakeholder. The final Construction Traffic Management Plan(s) (CTMP) will include contact details of those responsible for the final CTMP(s) and a clear schedule of monitoring activities and timescales.

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

Timings

1.7.2.11 Standard construction working hours are identified in the Outline Code of Construction Practice (Document Reference J26). The core working hours will be 07.00 to 19.00 Monday to Saturday.

1.7.2.12 There may also be up to one hour before and after for mobilisation, 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 (00:00 to 00:00 Monday to Sunday). This includes any emergency works that may be required that would not require any advanced notice to the LPA.

1.7.2.13 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.

Delivery routes

1.7.2.14 The final CTMP(s) will include communication with the LHAs to confirm that the proposed routes remain appropriate and are agreed for use when construction is ready to commence.

1.7.2.15 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 the 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.

1.7.2.16 If deemed necessary by the LHAs, 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.

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

Control of deposits on the highway

1.7.2.18 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 dust.

1.7.2.19 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 appropriate locations to ensure that HGVs do not deposit mud and dust onto the highway network. Further information on dust management is provided in the Outline Dust Management Plan (Document Reference J26.2).

Compliance and monitoring

1.7.2.20 Compliance with all the monitoring plans, including the final CTMP 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 and of the monitoring obligations. The Principal Contractor will be appointed before the start of onshore construction work. The role of the Principal Contractor 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 LHAs throughout the works.

1.7.2.21 The Principal Contractor will be responsible for a system whereby construction HGVs are identifiable and include Global Positioning System (GPS) tracking to enable their routes to be monitored where necessary.

1.7.2.22 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.

1.7.2.23 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 final CTMP(s).

1.7.2.24 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.

1.7.2.25 Monitoring activities and responsibilities will be agreed with the relevant Local Planning Authorities and LHAs. 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.

1.7.3 Monitoring records

1.7.3.1 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).

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

1.7.3.3 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

1.7.3.4 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.

1.7.4 Enforcement and corrective measures

1.7.4.1 If the Principal Contractor is made aware of a potential breach of the final 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 relevant Highways Authority (HA). The relevant HA will then review the information, request further clarification (if required) and confirm to the Principal Contractor if a material breach has occurred.

1.7.4.2 If the breach is found to be material the following three stage process will be followed:

- Stage one – The relevant HA confirms a breach and requests that the Principal Contractor considers the data and concerns. The HA 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.

1.8 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.

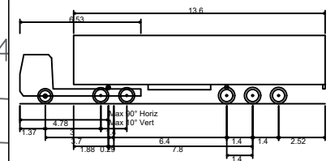
Highways England / Transport Scotland / Welsh Government / Department for Infrastructure (2020). Design Manual for Roads and Bridges (DMRB) CD 123 - Geometric design of at-grade priority and signal controlled junctions. Available at https://www.bing.com/ck/a?!&&p=38333e75be04171bJmltdHM9MTcwMzExNjgwMCZpZ3VpZD0wMTBhZTc4Mi0zNTM5LTZkZjctMjM2Yi1mNGNmMzRhMDZjMzMmaW5zaWQ9NTIwNg&ptn=3&ver=2&hsh=3&fclid=010ae782-3539-6df7-236b-f4cf34a06c33&psq=DMRB+C+123&u=a1aHR0cHM6Ly93d3cuc3RhbmRhcmRzZm9yaGlnaHdheXMuY28udWsvdHNlcy9hdHRhY2htZW50cy85NjJhODFjMS1hYmRhLTQ0MjQtOTZjOS1mZTRjMjI4NzMwOGM&ntb=1 . Accessed December 2023.

Highways England / Transport Scotland / Welsh Government / Department for Infrastructure (2020). Design Manual for Roads and Bridges (DMRB) GG119–Road Safety Audit. Available at https://www.standardsforhighways.co.uk/tses/attachments/710d4c33-0032-4dfb-8303-17aff1ce804b?inline=true. Accessed December 2023

The Chartered Institute of Highways and Transportation (2010) Manual for Streets 2 – Wider Application of the Principles. Available at https://www.tsrgd.co.uk/pdf/mfs/mfs2.pdf. Accessed December 2023

Appendix A: Swept path analysis – HGVs

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:
Datum: . Projection: .

Scale@ 378.9mm x 214.9 mm:

Scale 1:500

0 10 20

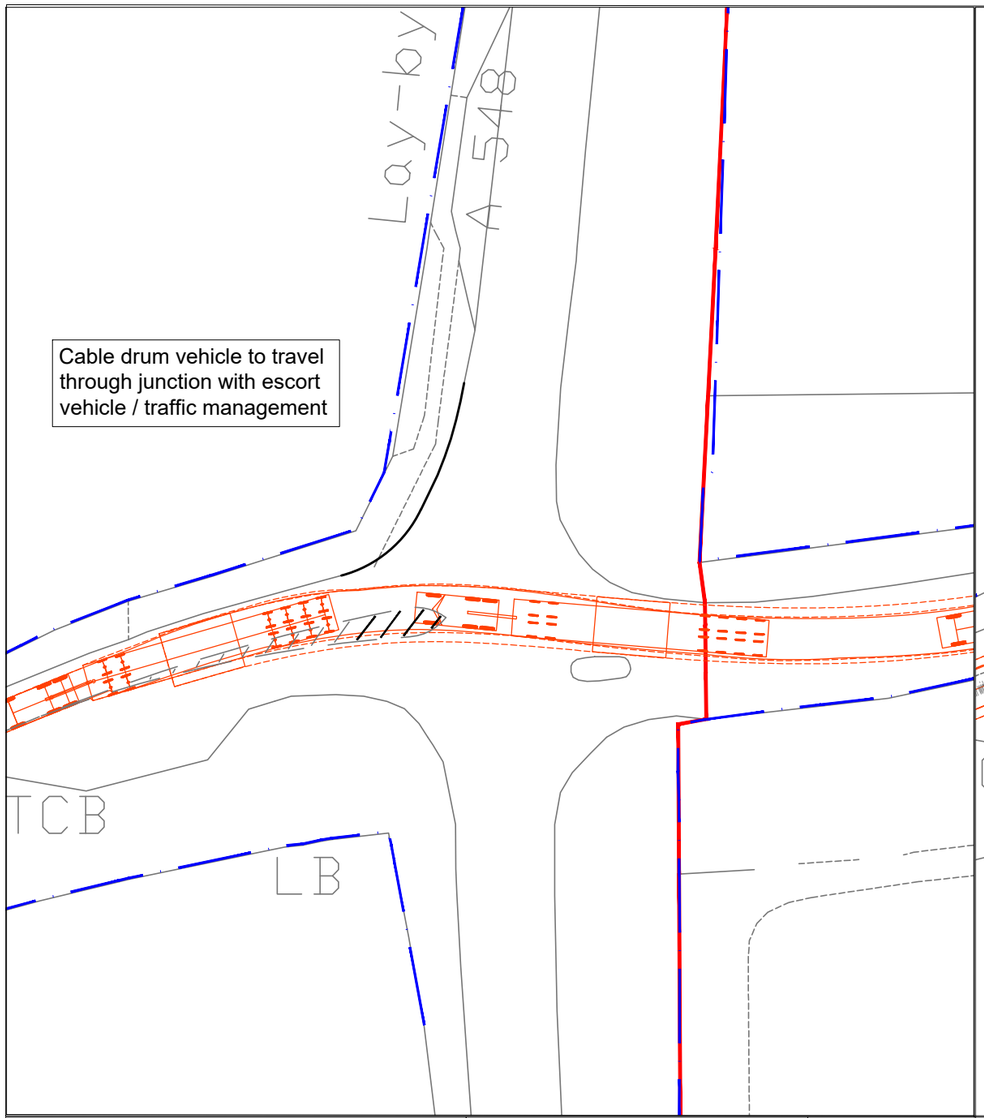
Project Name:
MONA OFFSHORE WIND PROJECT

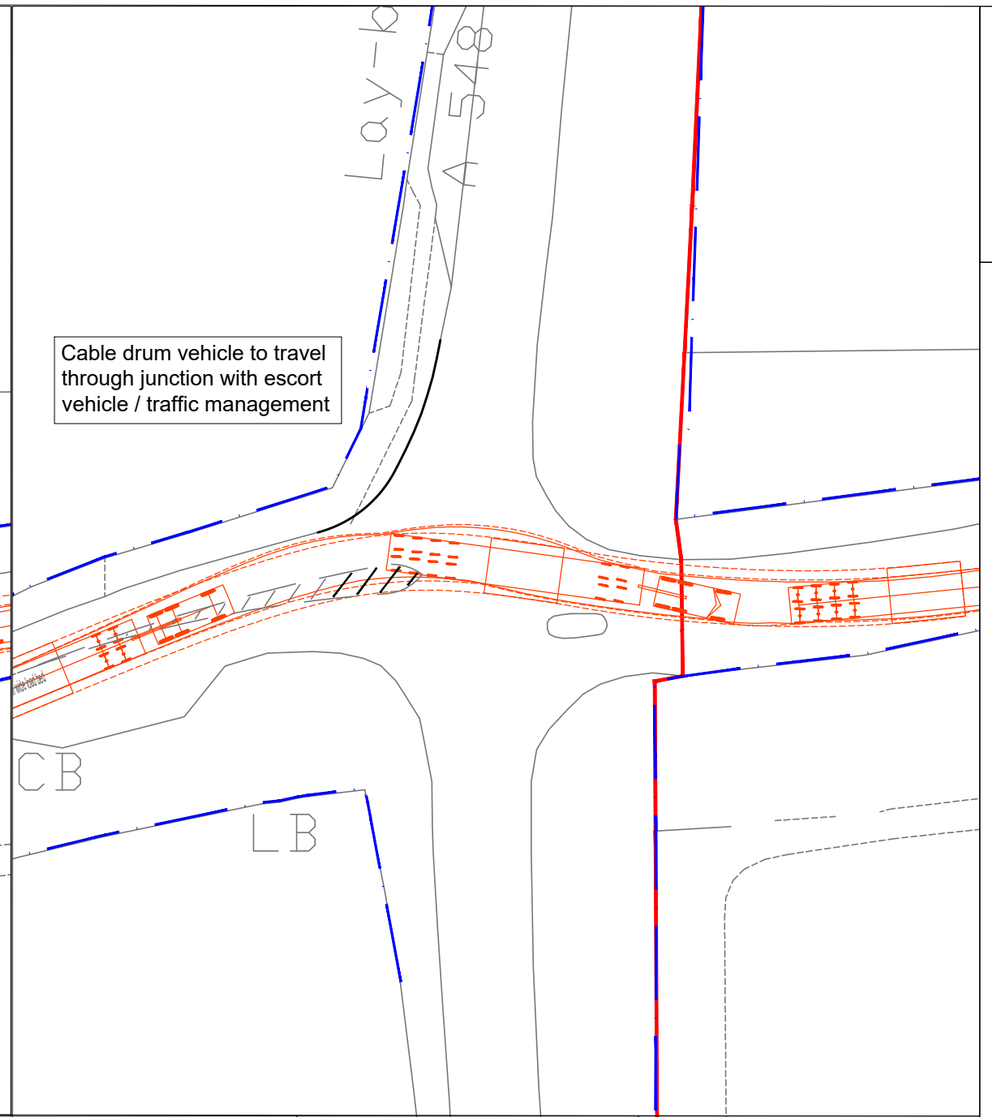
Drawing Title:
A547 / A548 SIGNALISED JUNCTION
- SWEPT PATH ANALYSIS

Drawing Number:
JNY11256-23

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

Appendix B: Swept path analysis – cable drum vehicles





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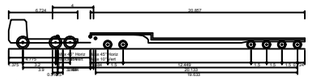


Articulated heavy load mover 4.5m wide load bed

Overall Length	29.816m
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

0 10 20

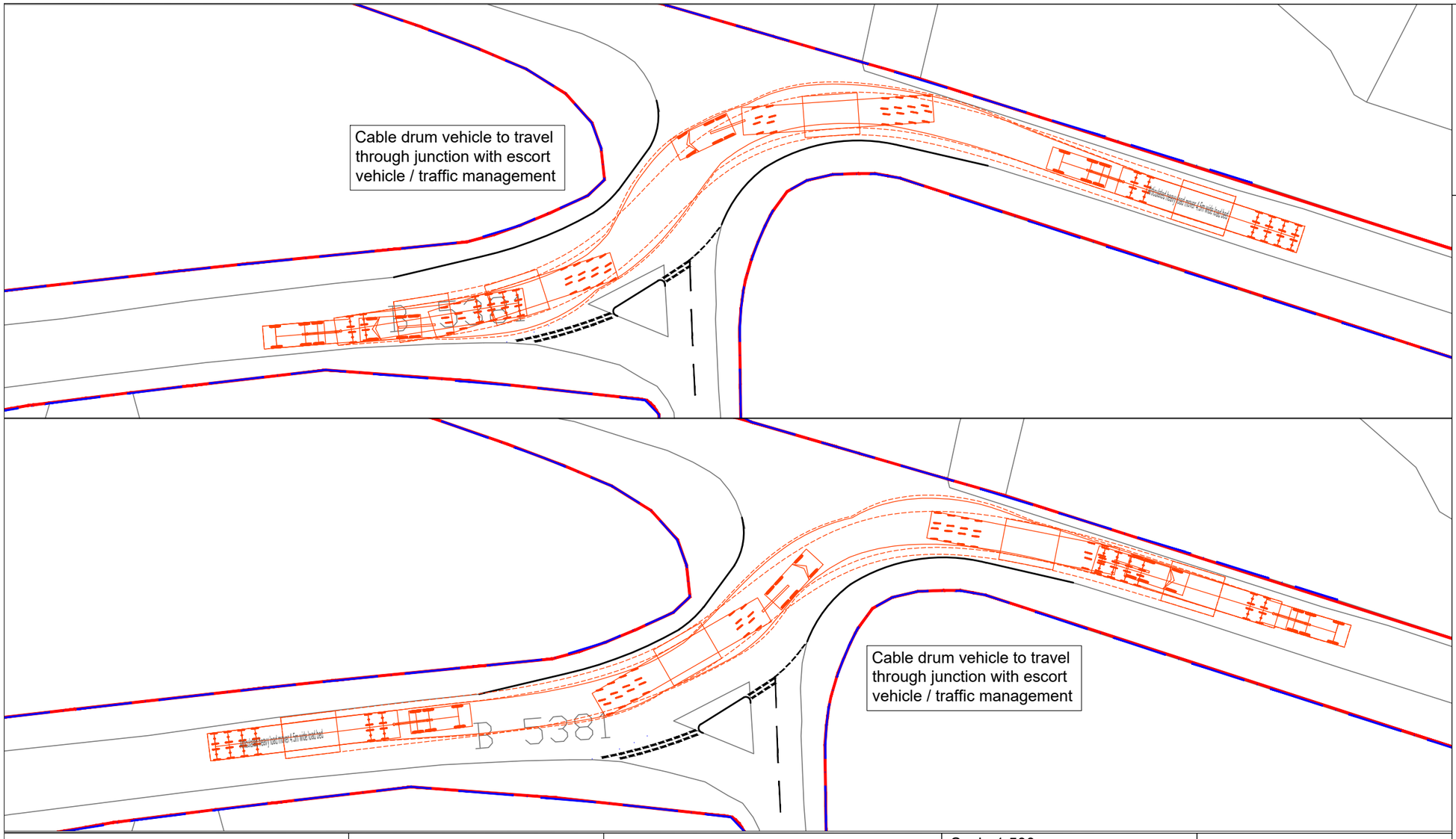
EnBW bp RPS
Partners in UK offshore wind

Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
PENREFAIL CROSSROADS
CABLE DRUM VEHICLE

Drawing Number:
JNY11256-06

VER	DATE	DETAILS	BY	CHECK
01	06/12/23	FINAL	DI	DA



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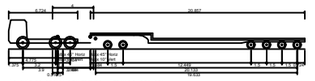

Articulated heavy load mover 4.5m wide load bed

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 0 10 20	EnBW bp Partners in UK offshore wind rps

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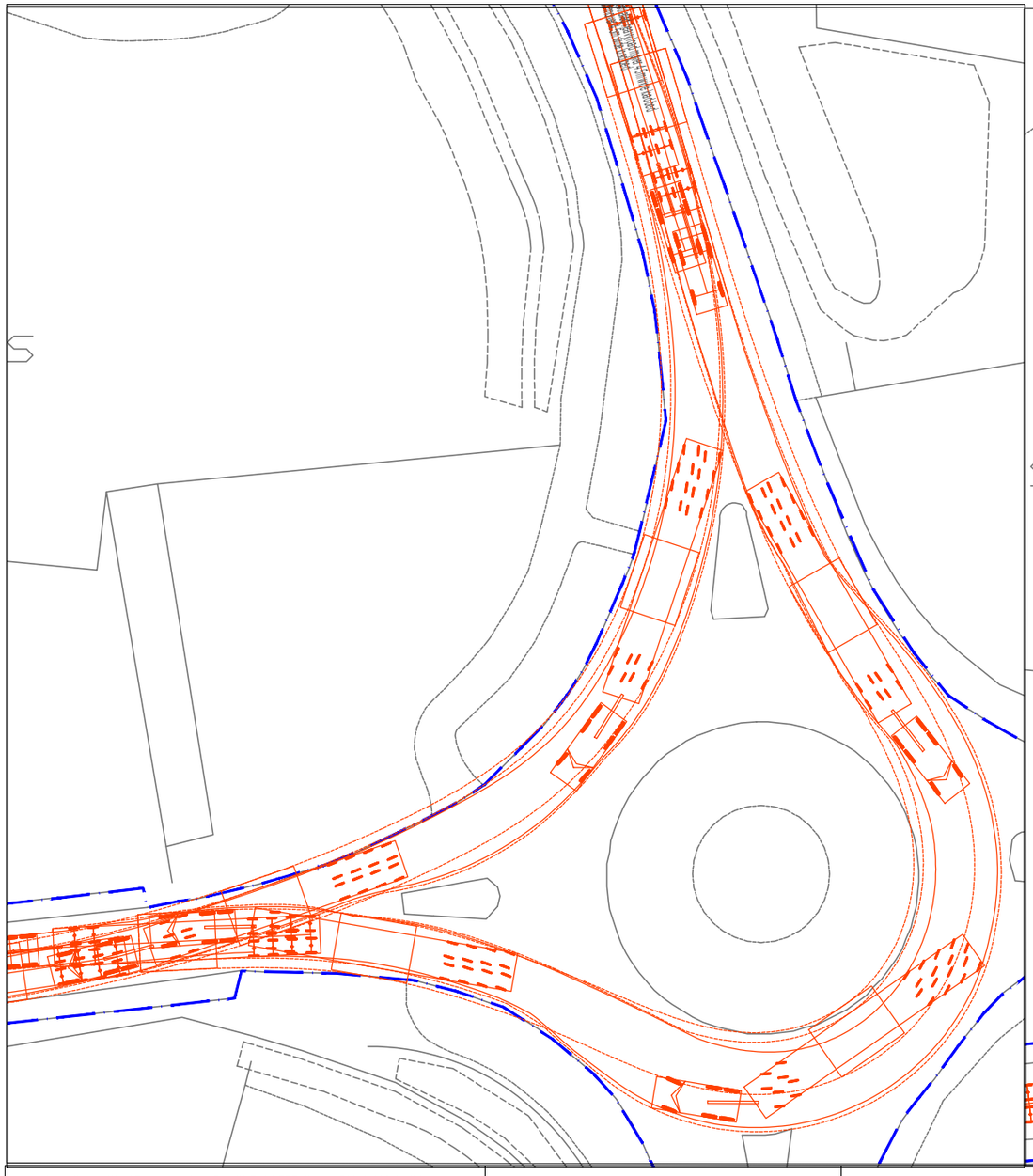

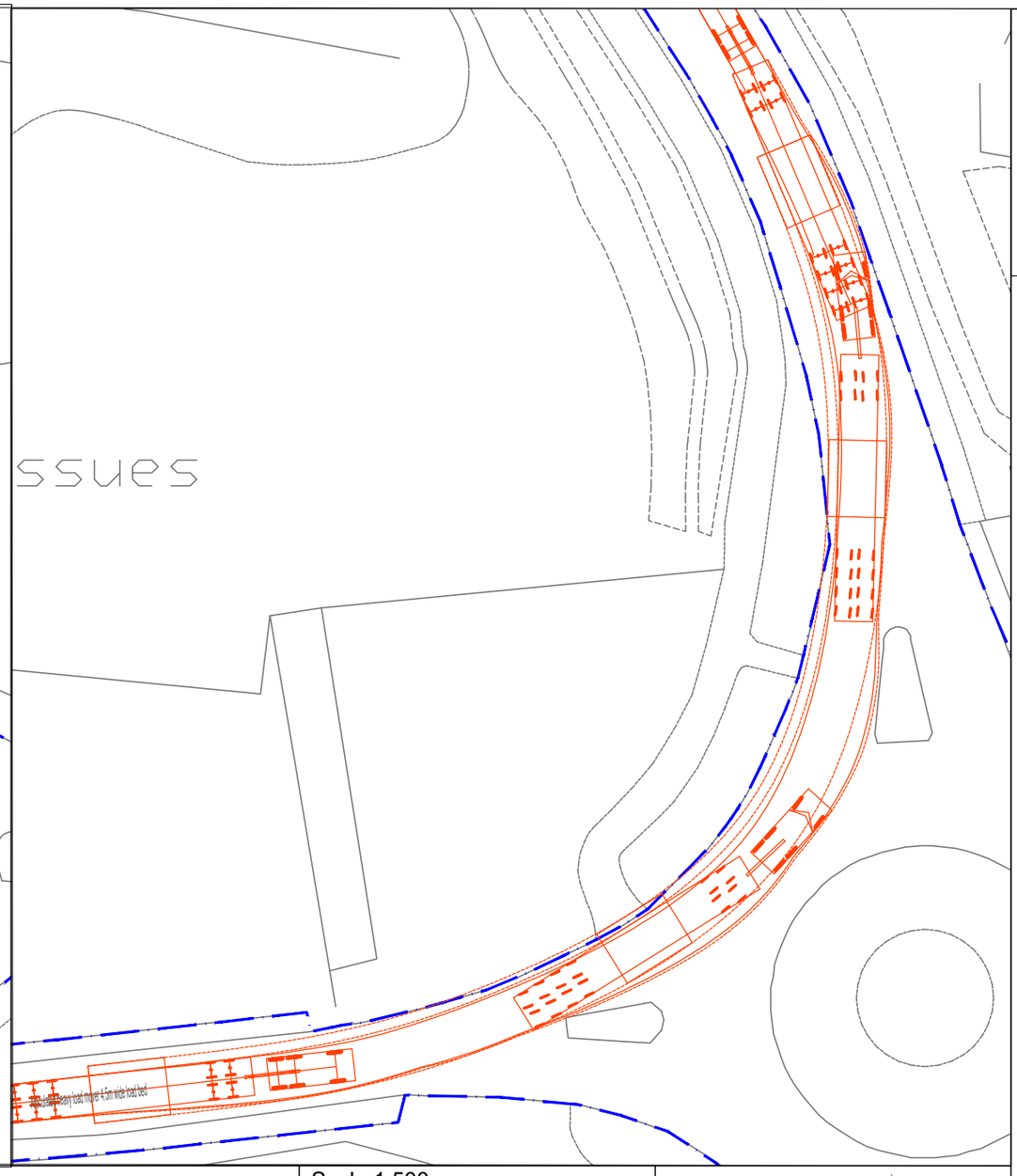

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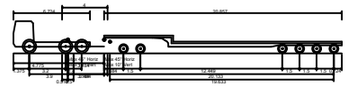


Articulated heavy load mover 4.5m wide load bed

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

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

Partners in UK offshore wind

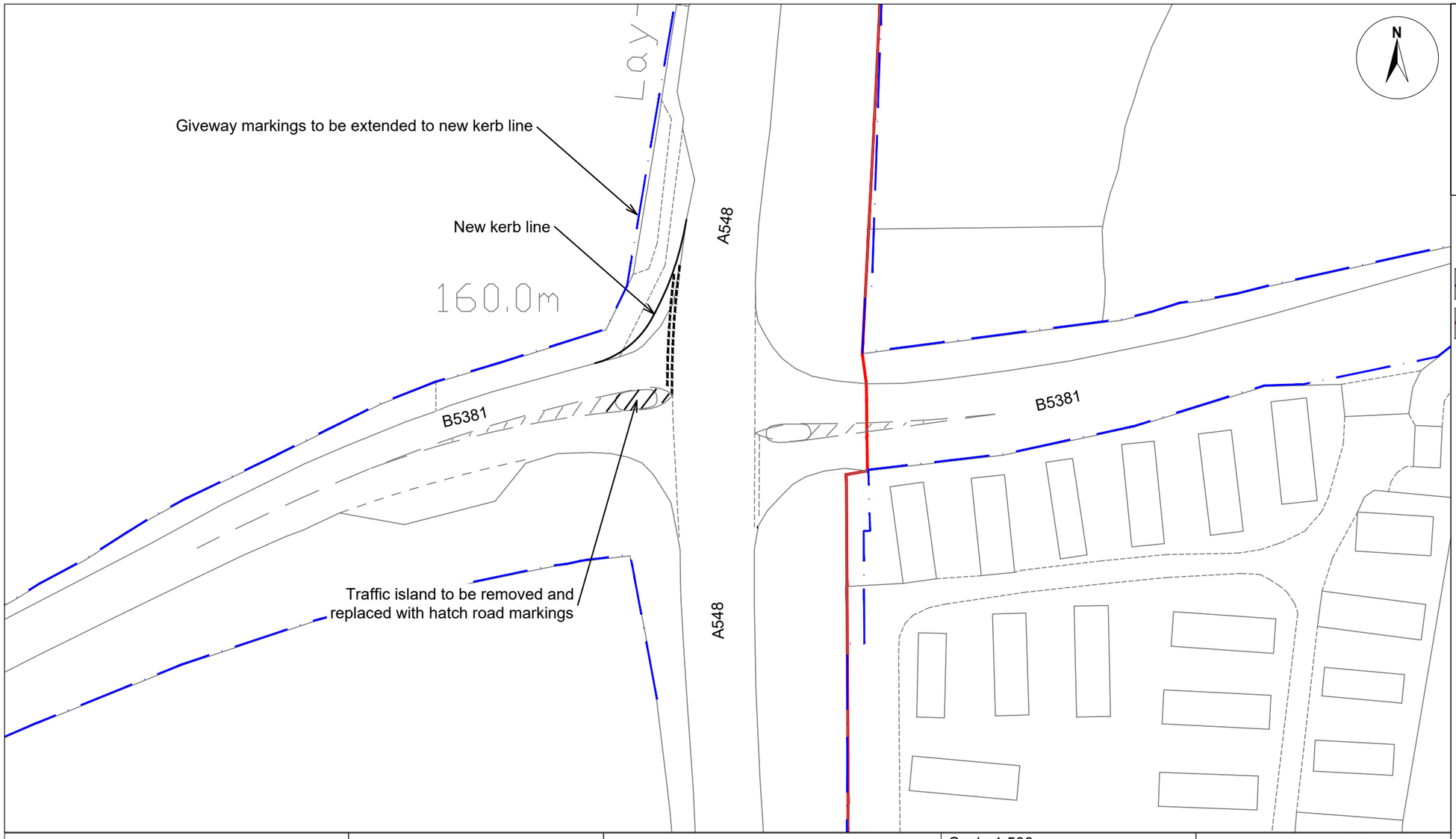
Project Name:
MONA OFFSHORE WIND PROJECT

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

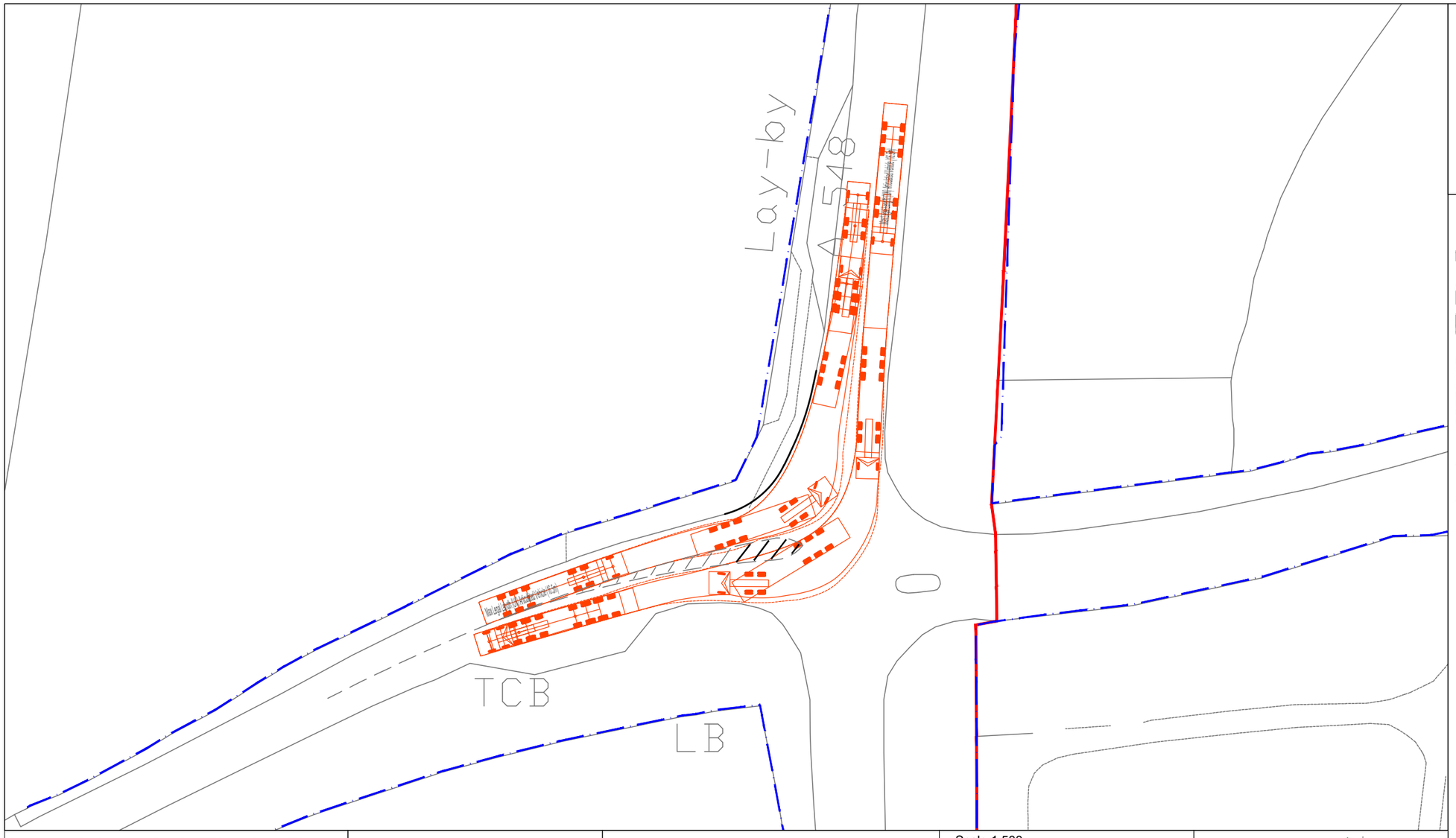
Appendix C: Preliminary junction works designs



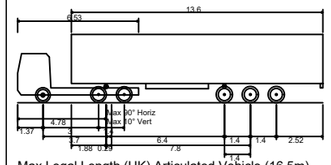
Service Layer Credits: World Topographic Map: Esri UK, Esri, HERE, Garmin, FAO, NOAA, USGS World Hillshade: Esri, USGS	Data Sources: RPS / bp / EnBwW	Geodetic Information: Datum: . Projection: . Scale@ 378.9mm x 214.9 mm:	Scale 1:500 0 10 20	EnBW bp RPS Partners in UK offshore wind

Project Name:	Drawing Title:	Drawing Number:
MONA OFFSHORE WIND PROJECT	PENREFAIL CROSSROADS PRELIMINARY WORKS	JNY11256-20

VER	DATE	DETAILS	BY	CHECK
01	11/12/23	FINAL	AJ	DA



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

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

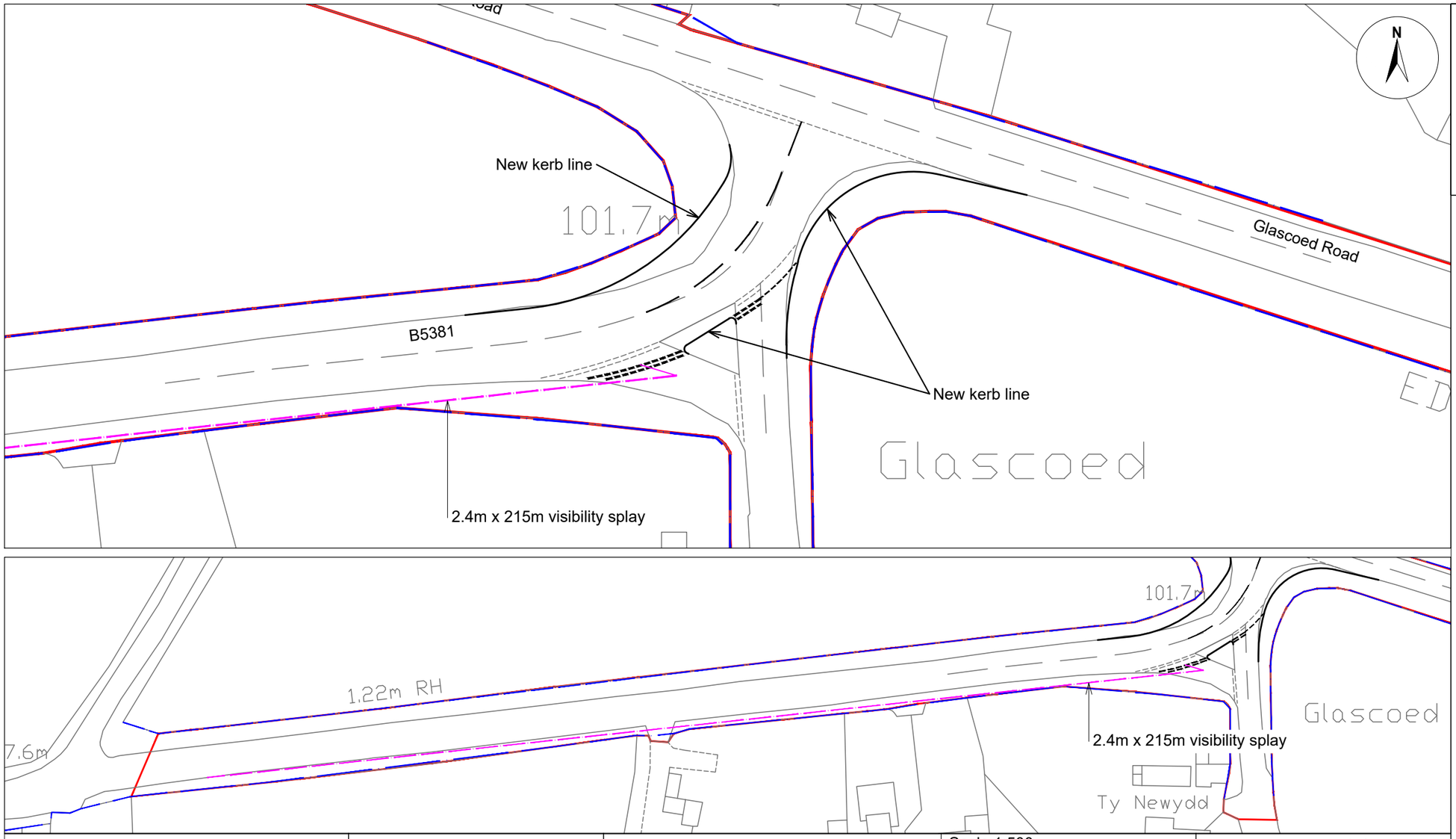
EnBW bp RPS
Partners in UK offshore wind

Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
PENREFAIL CROSSROADS
MAXIMUM LEGAL LENGTH ARTICULATED HGV

Drawing Number:
JNY11256-05

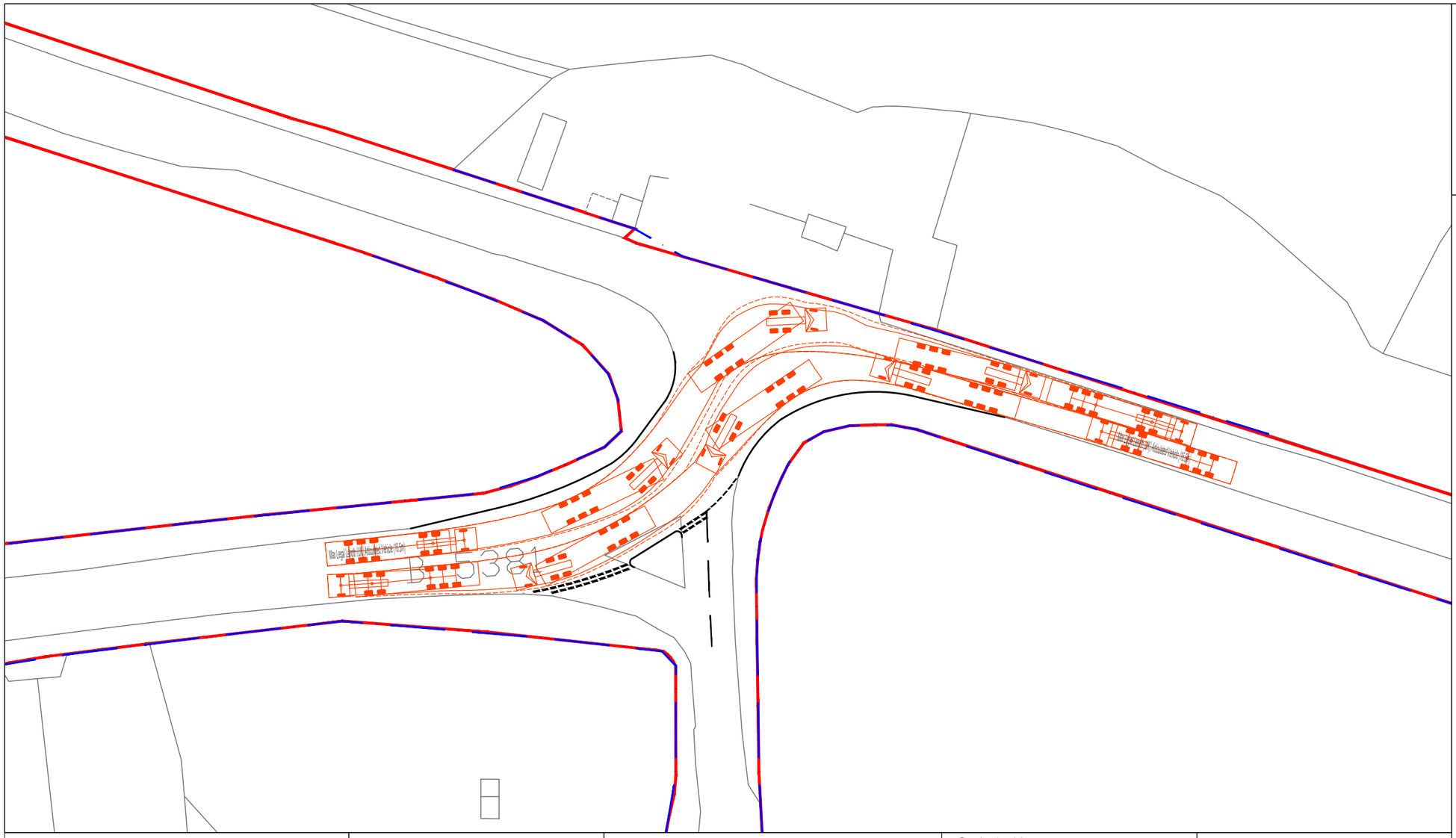
VER	DATE	DETAILS	BY	CHECK
01	05/12/23	FINAL	DI	DA



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 Partners in UK offshore wind · bp · rps

Project Name:	Drawing Title:	Drawing Number:
MONA OFFSHORE WIND PROJECT	B5381 JUNCTION PRELIMINARY WORKS	JNY11256-21

VER	DATE	DETAILS	BY	CHECK
01	11/12/23	FINAL	AJ	DA



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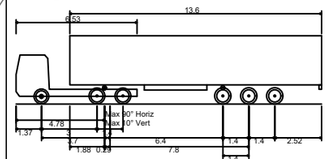


Max Legal Length (UK) Articulated Vehicle (16.5m)

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

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 rps
Partners in UK offshore wind

Project Name:
MONA OFFSHORE WIND PROJECT

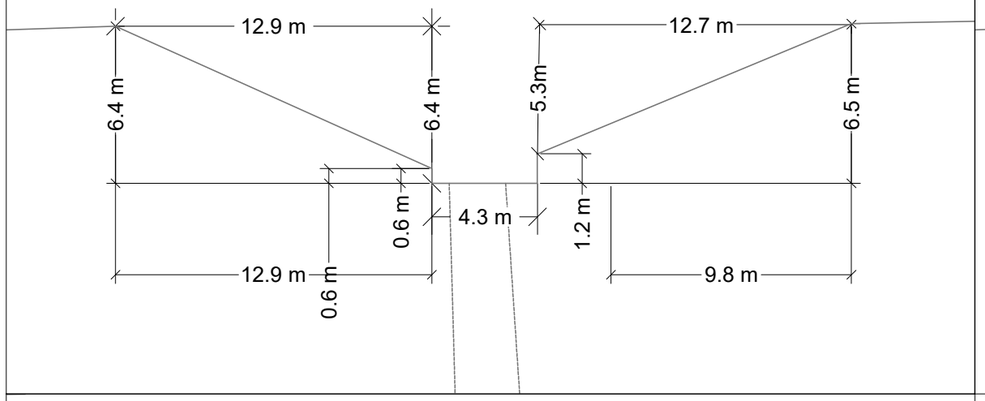
Drawing Title:
B5381 JUNCTION
MAXIMUM LEGAL LENGTH ARTICULATED HGV

Drawing Number:
JNY11256-07

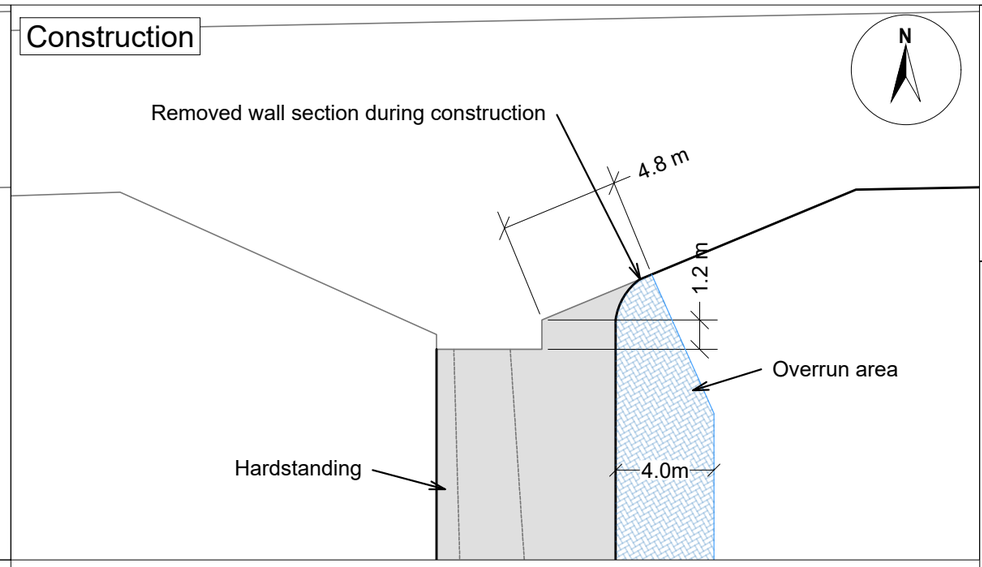
VER	DATE	DETAILS	BY	CHECK
01	01/12/23	FINAL	DI	DA

Appendix D: Preliminary access designs

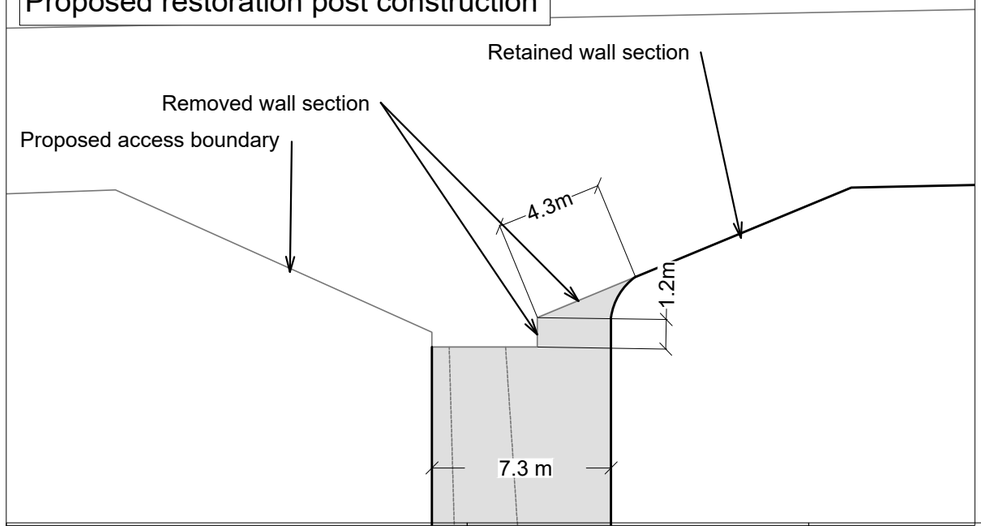
Existing



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:
Datum: . Projection: .

Scale@ 378.9mm x 214.9 mm:

Scale 1:250

0 5 10

EnBW bp RPS
Partners in UK offshore wind

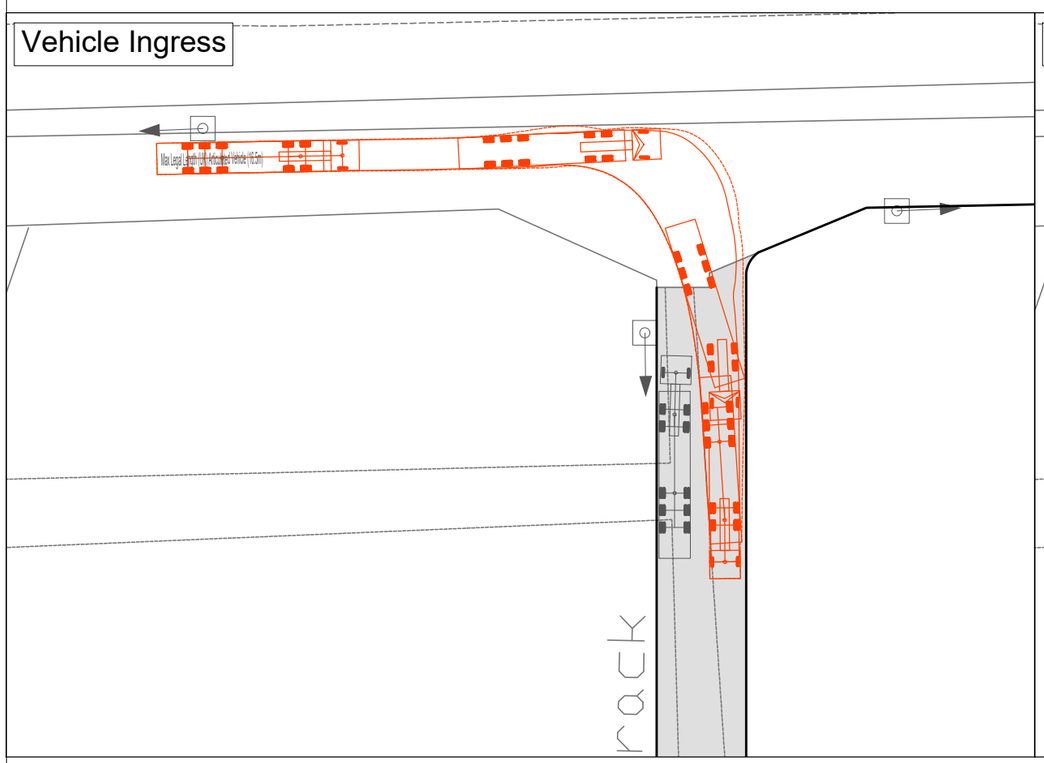
Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
TCC1 - ACCESS ONTO A547

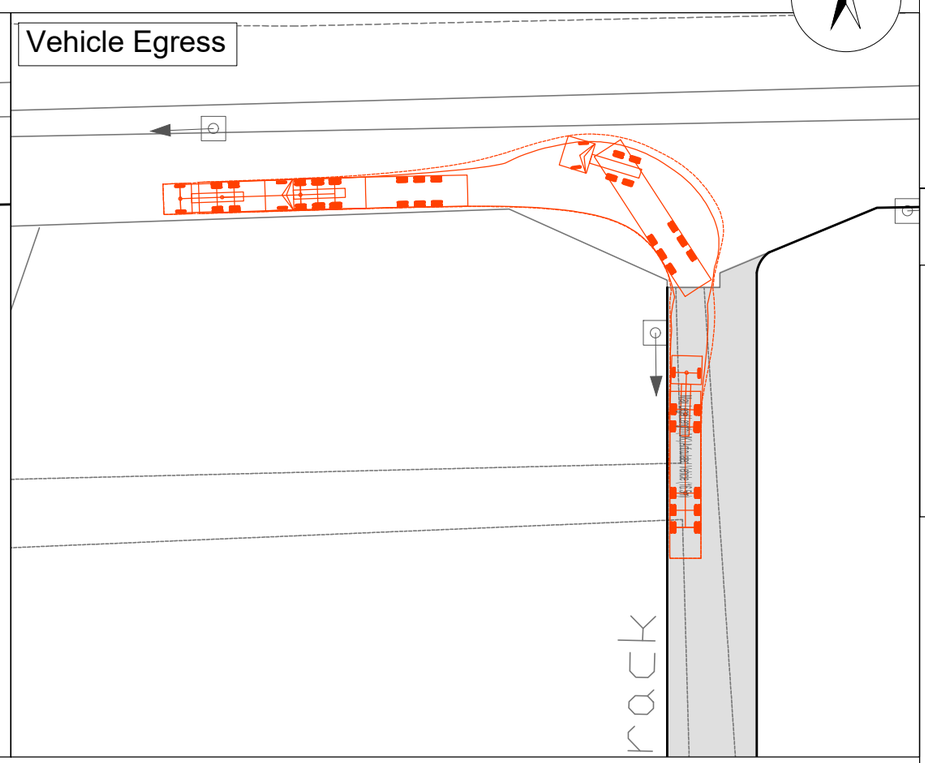
Drawing Number:
JNY11256-12

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

Vehicle Ingress



Vehicle Egress



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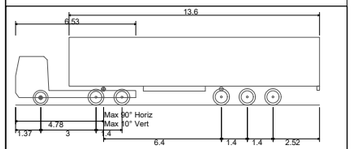
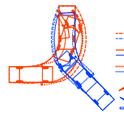
LEGEND



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

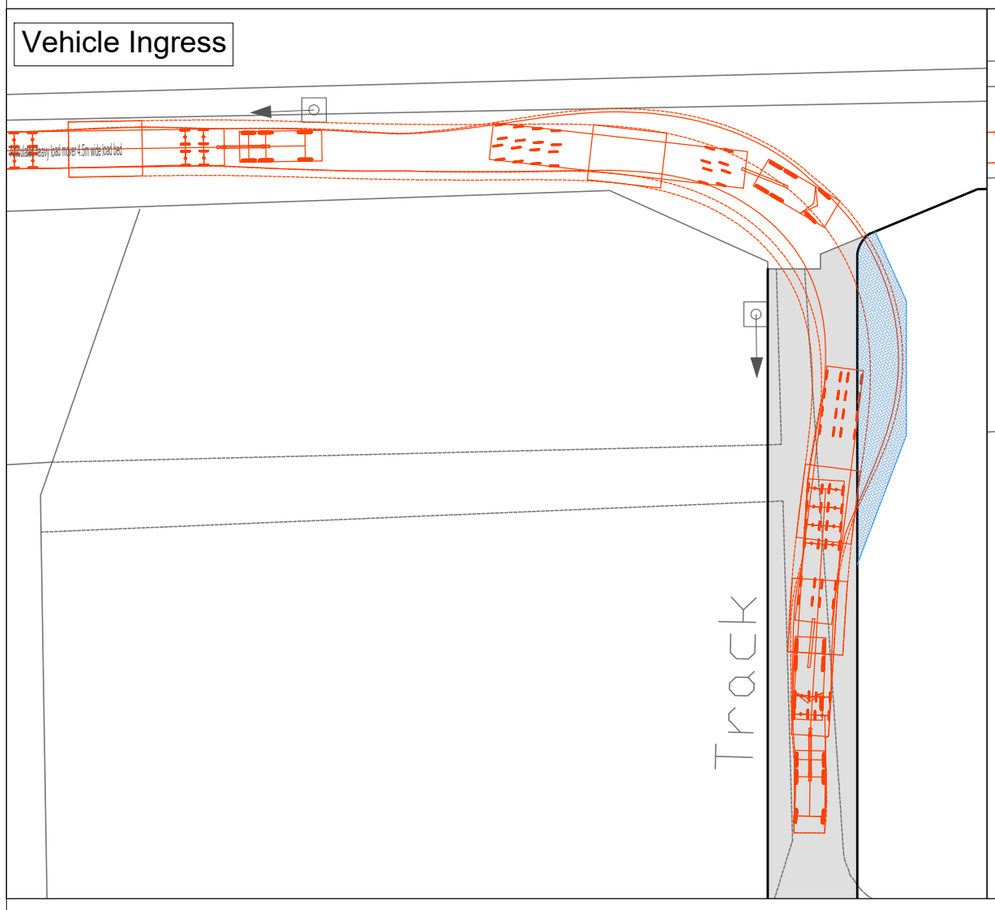
Project Name:
MONA OFFSHORE WIND PROJECT

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

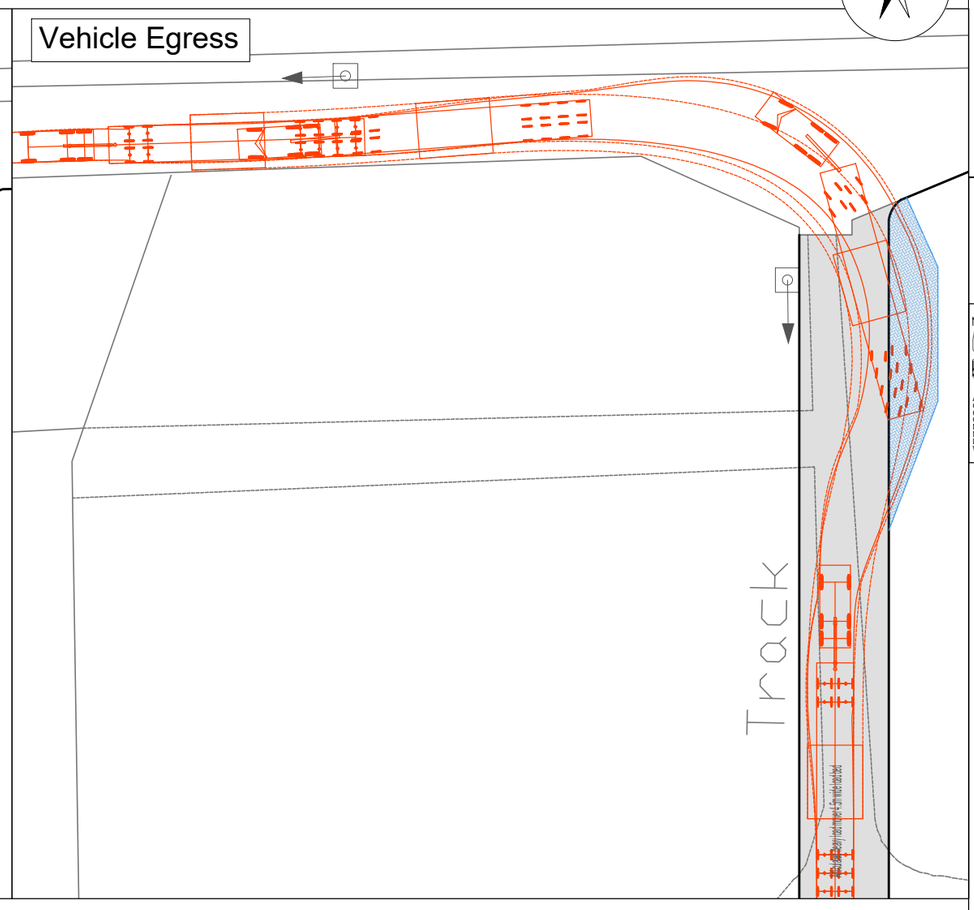
Drawing Number:
JNY11256-12.1

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

Vehicle Ingress



Vehicle Egress



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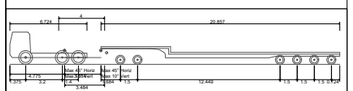
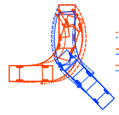
LEGEND



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

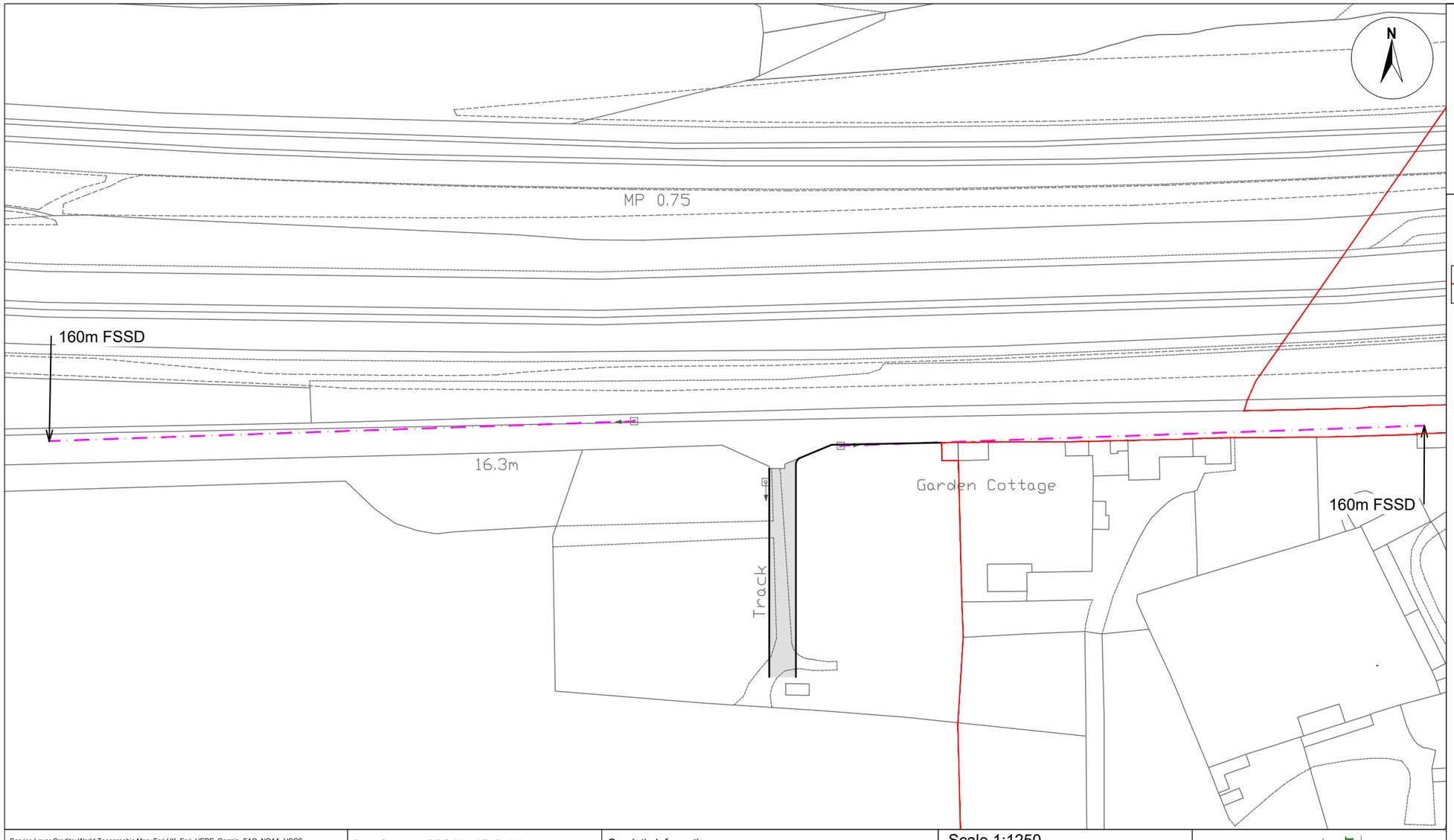
EnBW bp rps
Partners in UK offshore wind

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

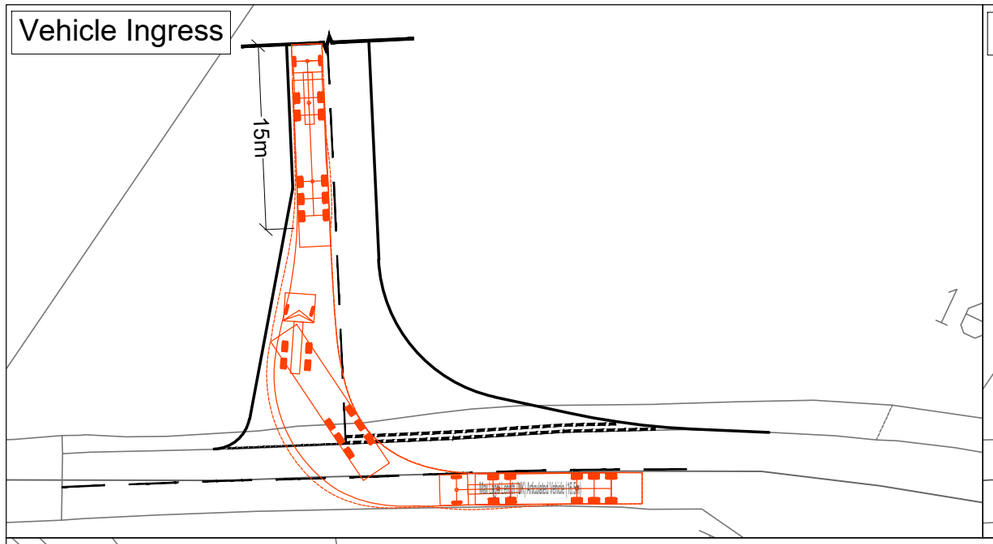
Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
TCC1 - ACCESS ONTO A547 FORWARD VISIBILITY

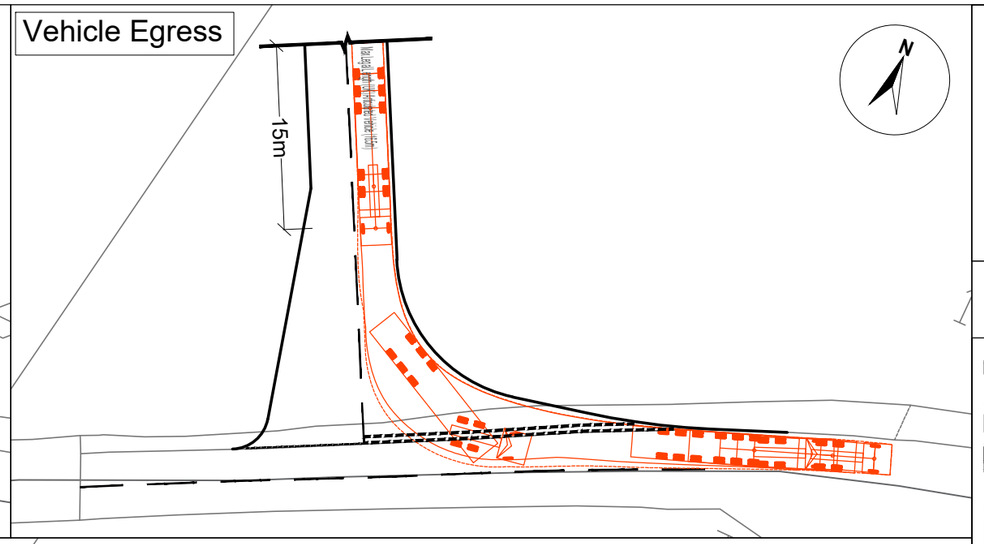
Drawing Number:
JNY11256-13

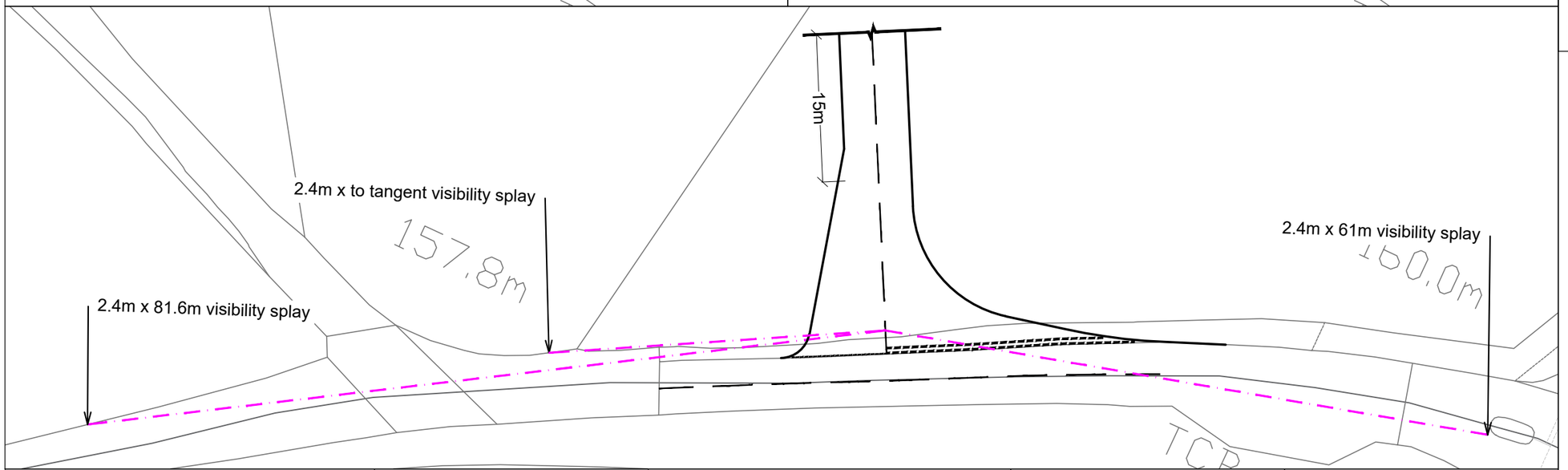
VER	DATE	DETAILS	BY	CHECK
00	07/12/23	FINAL	AJ	LS

Vehicle Ingress

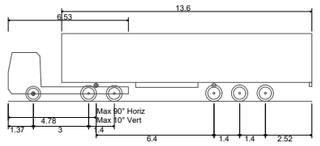


Vehicle Egress



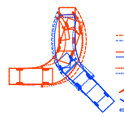


LEGEND



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

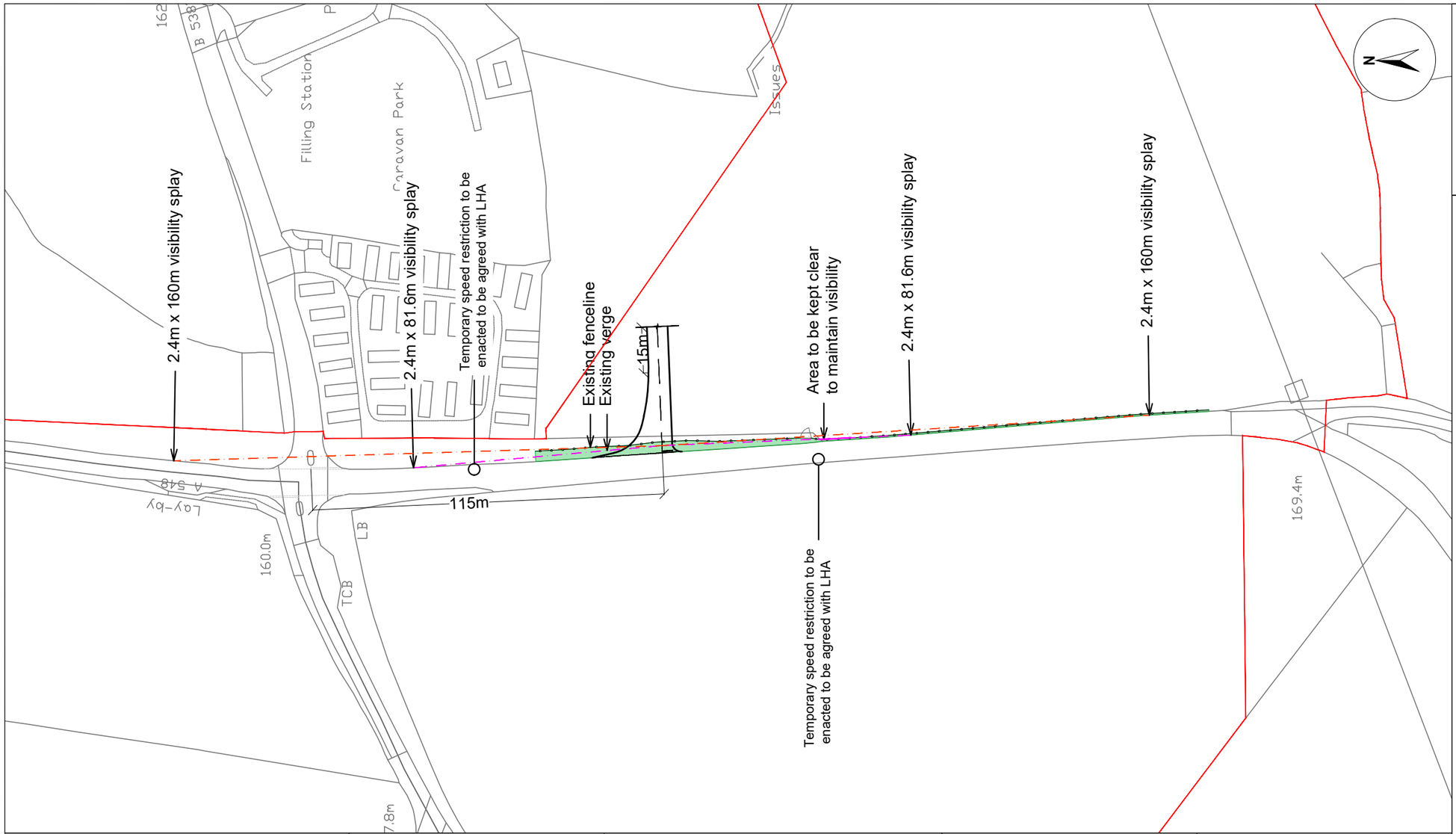
rps

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

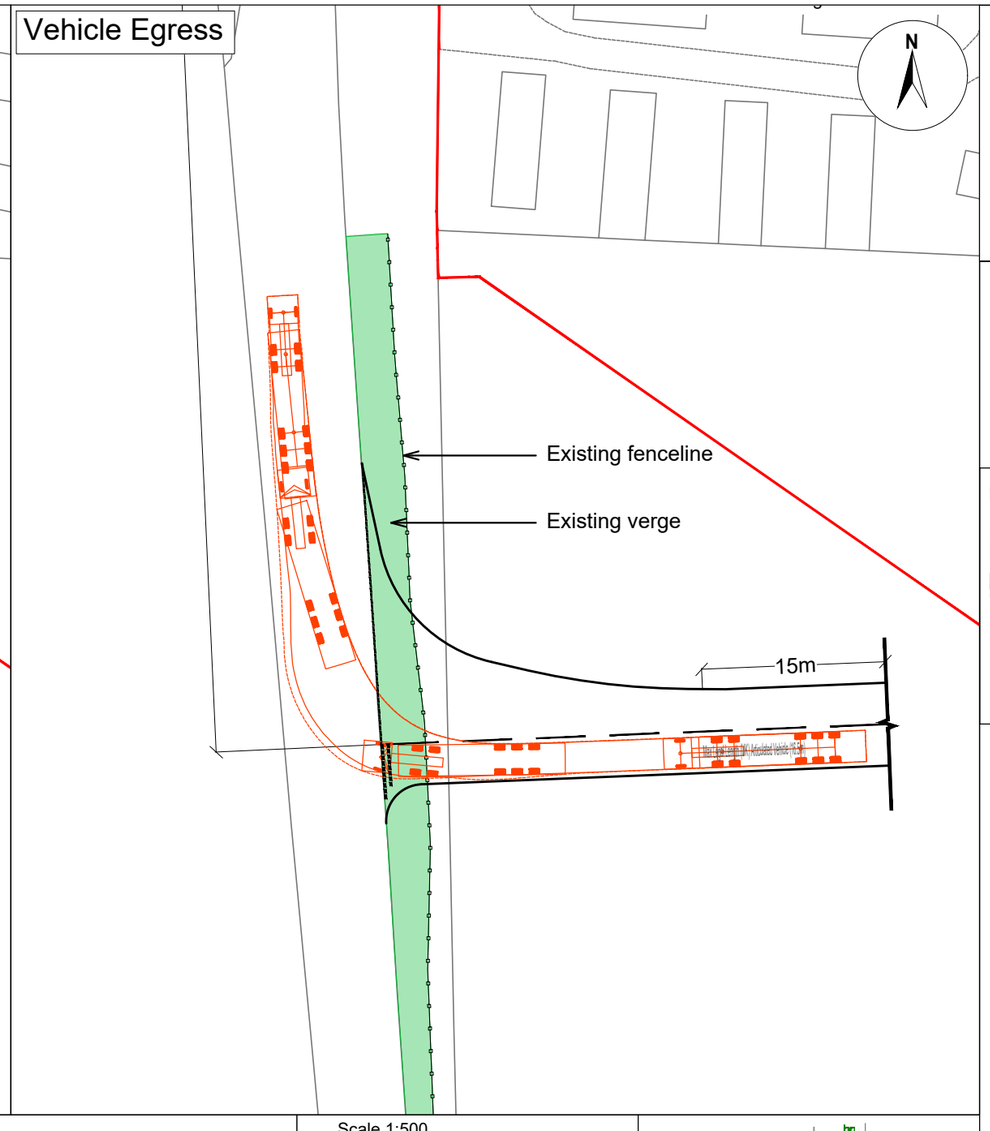
Drawing Title:
TCC 3 - ACCESS ONTO A548 VISIBILITY SPLAY

Drawing Number:
JNY11256-15

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

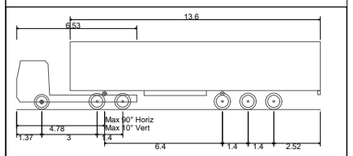
Vehicle Ingress

Vehicle Egress



LEGEND

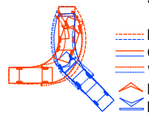
Red line boundary



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

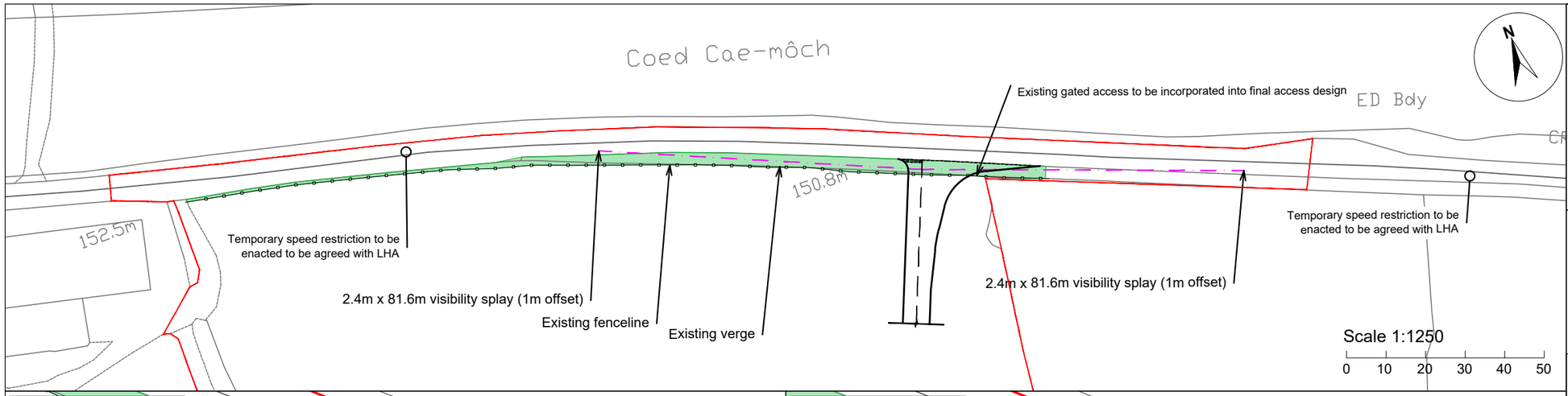
EnBW bp rps
Partners in UK offshore wind

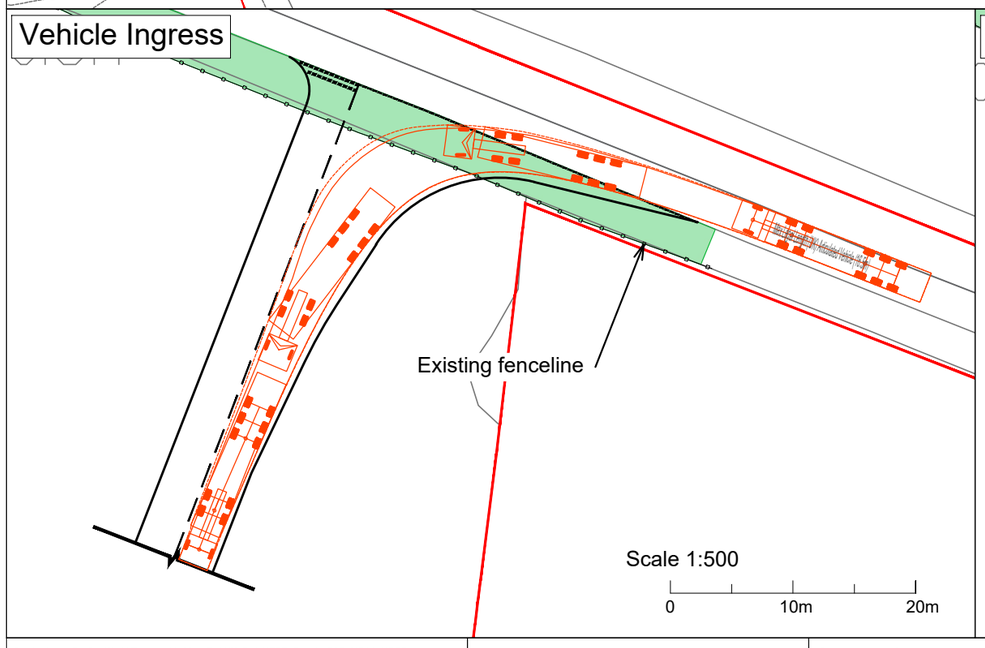
Project Name:
MONA OFFSHORE WIND PROJECT

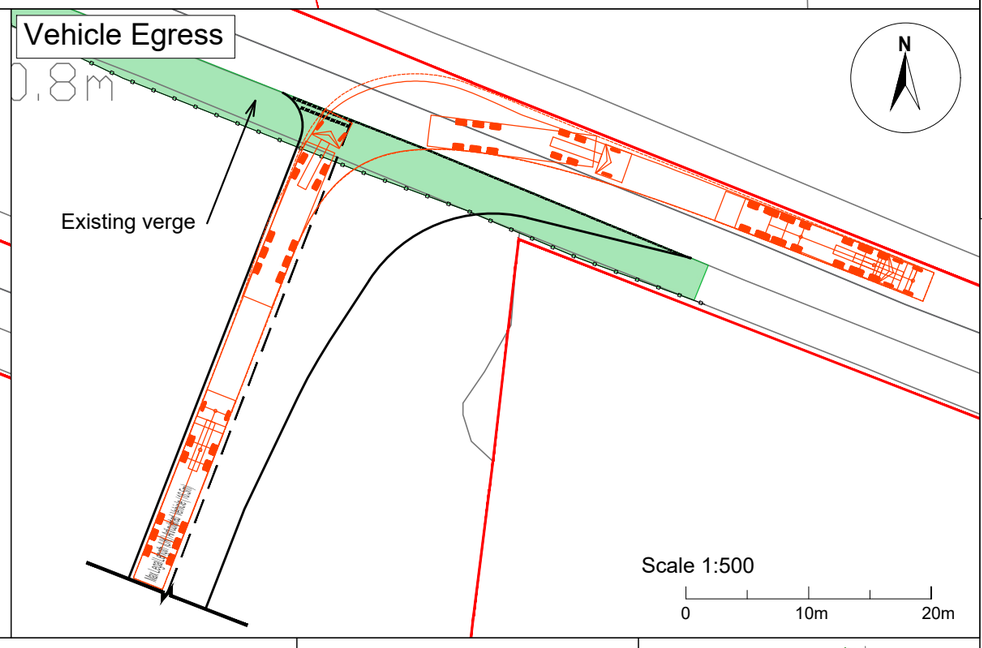
Drawing Title:
TCC 3 - ACCESS ONTO A548

Drawing Number:
JNY11256-16

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

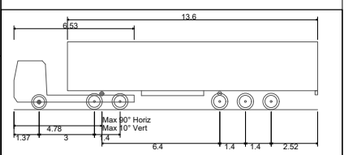






LEGEND

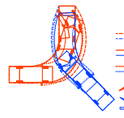
Red line boundary



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

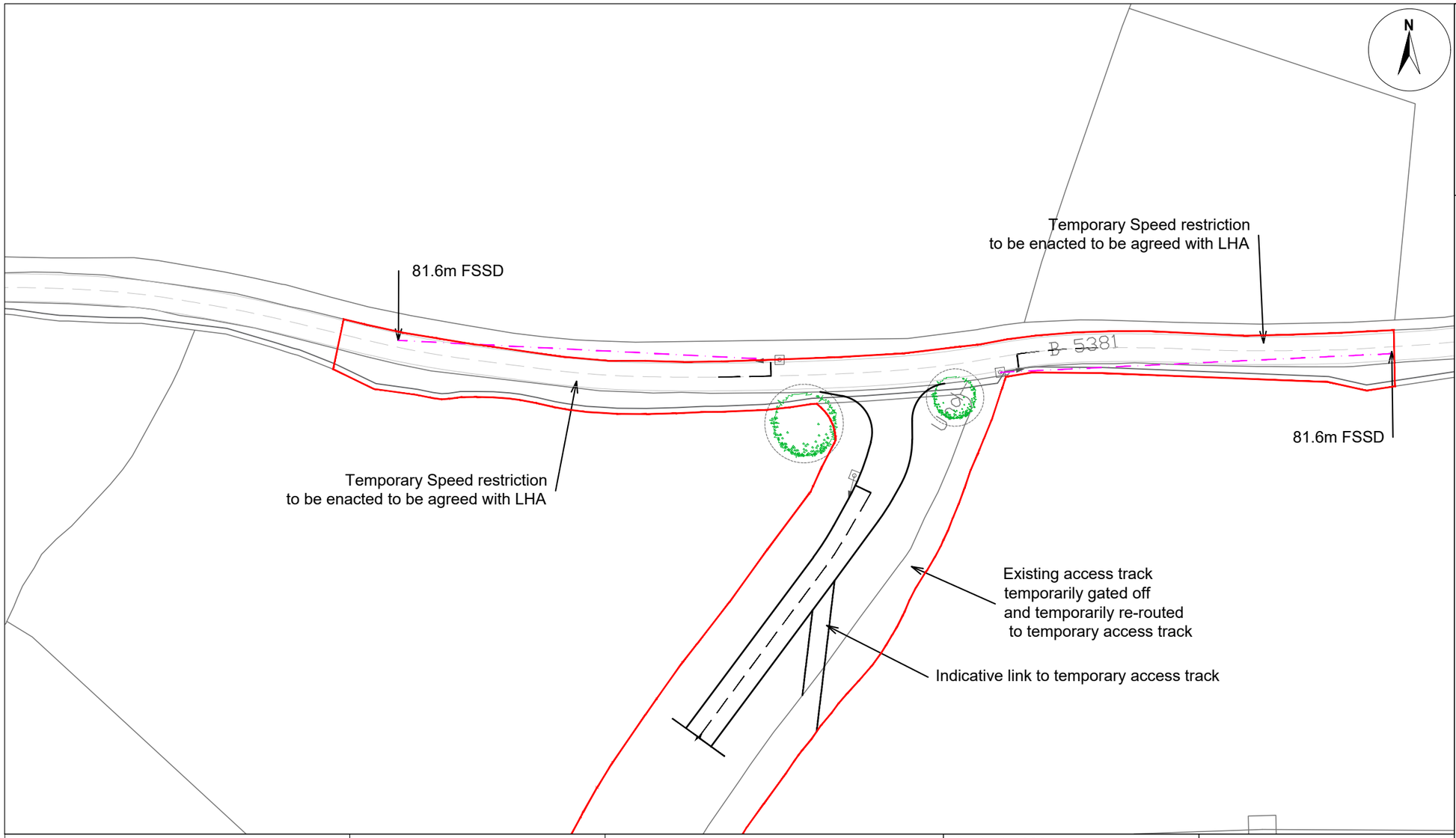
EnBW bp RPS
30 Partners in UK offshore wind

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

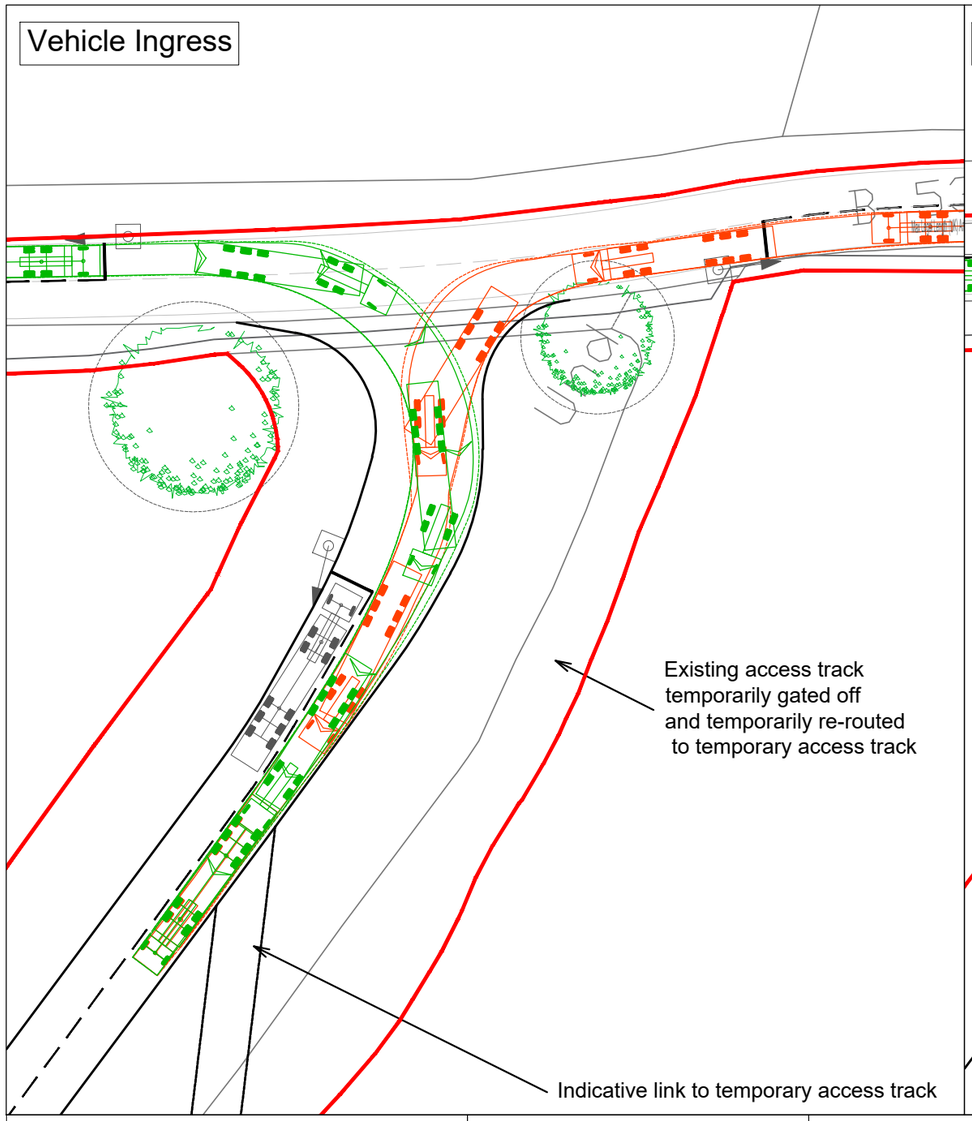
Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
TCC5 - ACCESS ONTO B5381
FORWARD VISIBILITY

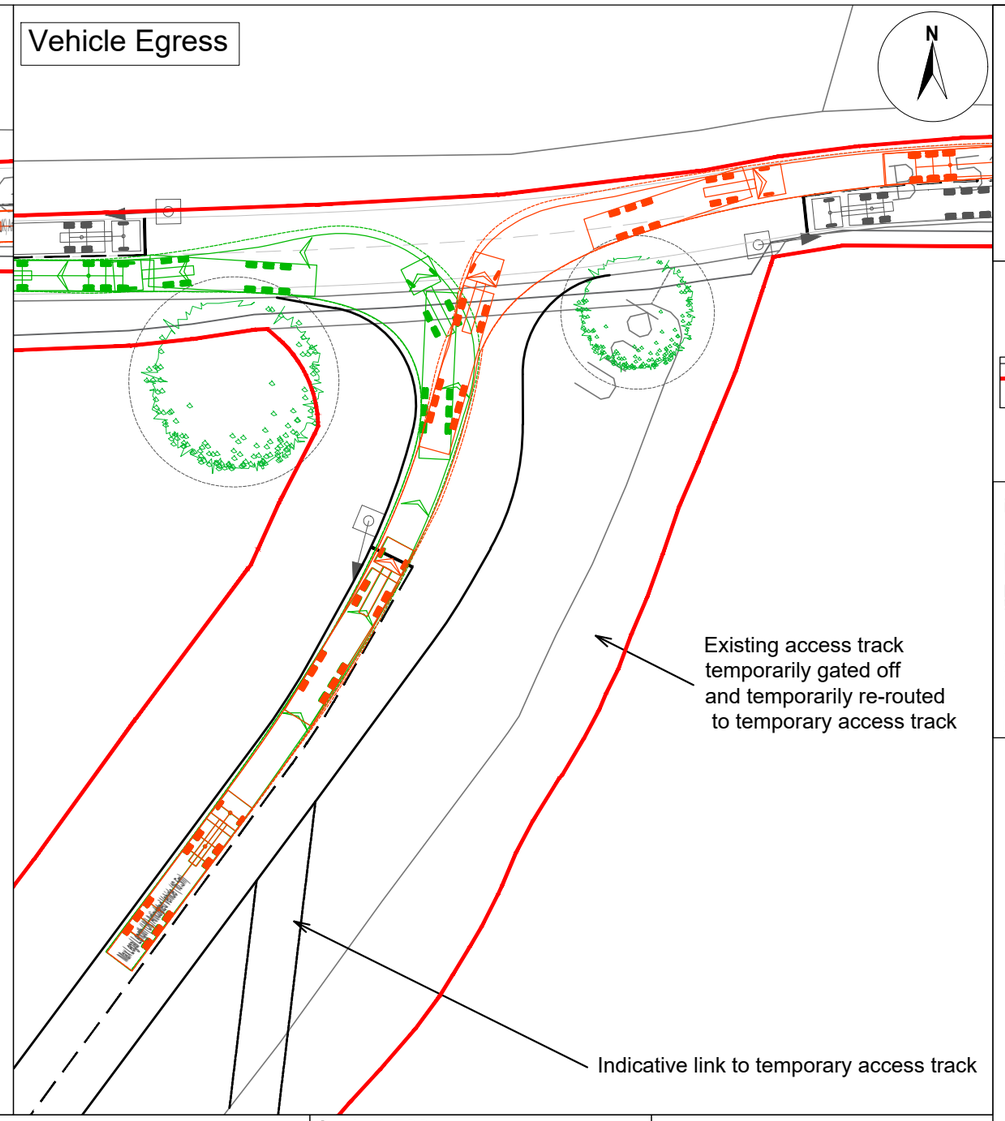
Drawing Number:
JNY11256-18.1

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

Vehicle Ingress



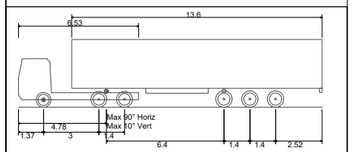
Vehicle Egress



LEGEND

Temporary Portable Signals

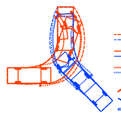
Red line boundary



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

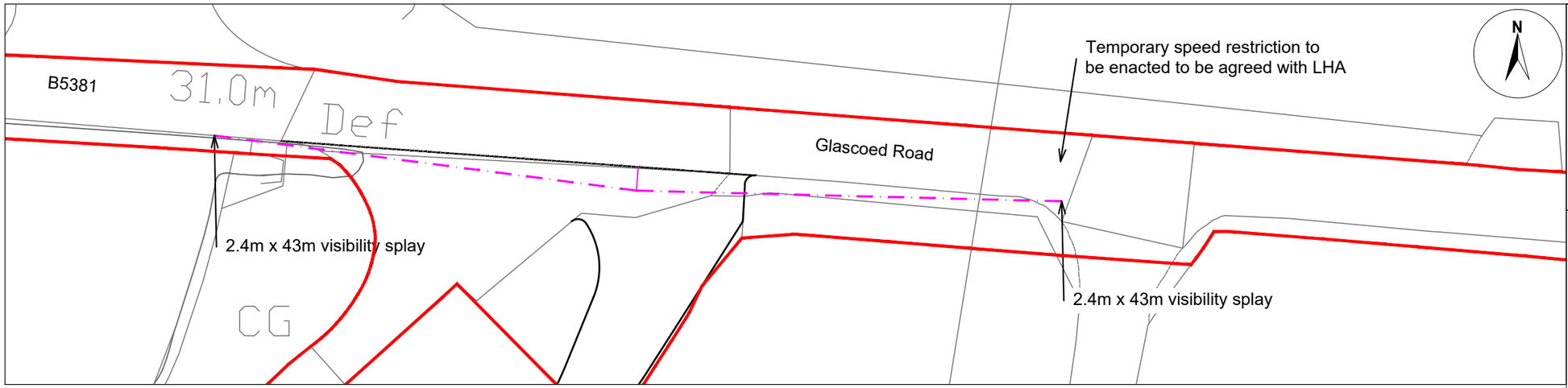
EnBW bp RPS
Partners in UK offshore wind

Project Name:
MONA OFFSHORE WIND PROJECT

Drawing Title:
TCC5 - ACCESS ONTO B5381

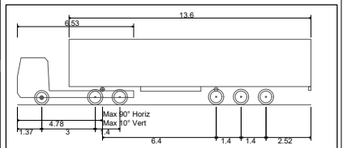
Drawing Number:
JNY11256-19.1

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



LEGEND

Red line boundary



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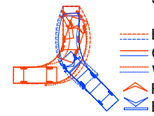

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0 10 20

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