MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Outline Construction Traffic Management Plan

September 2024
Rev: F01

MRCNS-J3303-RPS-10074
MOR001-FLO-CON-ENV-PLN-0055

PINS Reference: EN020028
APFP Regulations: 5(2)(j)
Document reference: J5

Document status					
Version	**Purpose of document**	**Approved by**	**Date**	**Approved by**	**Date**
F01	For issue	AS	September 2024	IM	September 2024

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Term	Meaning
400 kV grid connection cable corridor	The corridor within which the 400 kV grid connection cables will be located.
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.
Applicants	Morgan Offshore Wind Limited (Morgan OWL) and Morecambe Offshore Windfarm Ltd (Morecambe OWL).
Commitment	This term is used interchangeably with mitigation and enhancement measures. The purpose of commitments is to avoid, prevent, reduce or, if possible, offset significant adverse environmental effects. Primary and tertiary commitments are taken into account and embedded within the assessment set out in this Environmental Statement. Secondary commitments are incorporated to reduce effects to environmentally acceptable levels following initial assessment.
Environmental Statement	The document presenting the results of the Environmental Impact Assessment process.
Generation Assets	The generation assets associated with the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm include the offshore wind turbines, inter-array cables, offshore substation platforms and platform link (interconnector) cables to connect offshore substations.
Haul road	The haul road will provide vehicle access along the onshore export cable corridor and 400 kV grid connection cable corridor off the public highway and will be used where needed throughout the installation of the onshore export cables and 400 kV Grid Connection Cable. The haul road will be 6 m wide (excluding passing places).
Highway Authorities	Lancashire County Council and Blackpool Council as the Local Highway Authority and National Highways as the highway authority for the strategic network collectively referred to as the Highway Authorities.
Landfall	The area in which the offshore export cables make landfall (come on shore) and the transitional area between the offshore cabling and the onshore cabling. This term applies to the entire landfall area at Lytham St. Annes between Mean Low Water Springs and the transition joint bays inclusive of all construction works, including the offshore and onshore cable routes, intertidal working area and landfall compound(s).
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.
Local Planning Authority	The local government body (e.g., Borough Council, District Council, etc.) responsible for determining planning applications within a specific area.
Mean High Water Springs	The height of mean high water during spring tides in a year.
Mean Low Water Springs	The height of mean low water during spring tides in a year.
Mobilisation period	Period before and after standard construction working hours for deliveries, arrival of construction workers etc

Term	Meaning
Morecambe Offshore Windfarm: Transmission Assets	The offshore export cables, landfall and onshore infrastructure required to connect the Morecambe Offshore Windfarm to the National Grid.
Morgan Offshore Wind Project: Transmission Assets	The offshore export cables, landfall and onshore infrastructure required to connect the Morgan Offshore Wind Project to the National Grid.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	The offshore and onshore infrastructure connecting the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm to the national grid. This includes the offshore export cables, landfall site, onshore export cables, onshore substations, 400 kV grid connection cables and associated grid connection infrastructure such as circuit breaker compounds. Also referred to in this report as the Transmission Assets, for ease of reading.
Onshore export cable corridor	The corridor within which the onshore export cables will be located.
Onshore substation	The onshore substations will include a substation for the Morgan Offshore Wind Project: Transmission Assets and a substation for the Morecambe Offshore Windfarm: Transmission Assets. These will each comprise a compound containing the electrical components for transforming the power supplied from the generation assets to 400 kV and to adjust the power quality and power factor, as required to meet the UK Grid Code for supply to the National Grid.
Outline Construction Traffic Management Plan	A plan establishing vehicle routing and to ensure that vehicles can safely access the onshore elements of Transmission Assets.
Transmission Assets Order Limits	The area within which all components of the Transmission Assets will be located, including areas required on a temporary basis during construction and/or decommissioning (such as construction compounds).

Acronyms

Acronym	Meaning
AILs	Abnormal Indivisible Loads
CoT	Commitment
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
GPS	Global Positioning System
HGVs	Heavy Goods Vehicle
HDD	Horizontal Directional Drilling
LPA	Local Planning Authority
PRoW	Public Rights of Way
STGO	Road Vehicles (Authorisation of Special Types) Order 2003

Units

Unit	Description
kV	Kilovolt
m	Metres

1 Outline construction traffic management plan

1.1 Background

1.1.1 Introduction

1.1.1.1 This document forms the Outline Construction Traffic Management Plan (OCTMP) prepared for the Morgan and Morecambe Offshore Wind Farms: Transmission Assets (referred to hereafter as 'the Transmission Assets').

1.1.2 Project overview

1.1.2.1 Morgan Offshore Wind Limited (Morgan OWL), a joint venture between bp Alternative Energy Investments Ltd. (bp) and Energie Baden-Württemberg AG (EnBW), is developing the Morgan Offshore Wind Project. The Morgan Offshore Wind Project is a proposed wind farm in the east Irish Sea.

1.1.2.2 Morecambe Offshore Windfarm Ltd (Morecambe OWL), a joint venture between Zero-E Offshore Wind S.L.U. (Spain) (a Cobra group company) (Cobra) and Flotation Energy Ltd, is developing the Morecambe Offshore Windfarm, also located in the east Irish Sea.

1.1.2.3 The purpose of the Transmission Assets is to connect the Morgan Offshore Wind Project: Generation Assets and Morecambe Offshore Windfarm: Generation Assets (referred to collectively as the 'Generation Assets') to the National Grid.

1.1.2.4 Morgan OWL and Morecambe OWL (the Applicants), are jointly developing a single consent application for transmission assets associated with each of the generation assets, including offshore export cable corridors to landfall and aligned onshore export cable corridors to onshore substation and onward connection to the National Grid at Penwortham, Lancashire.

1.1.2.5 The key components of the Transmission Assets include offshore elements, landfall and onshore elements. Details of the activities and infrastructure associated with the Transmission Assets are set out in Volume 1, Chapter 3: Project Description of the Environmental Statement (ES) (document reference F1.3).

1.1.2.6 This OCTMP has been developed for onshore elements of Transmission Assets, landwards of Mean High Water Springs (MLWS). The elements of the Transmission Assets relevant to this plan are:

- Landfall:
  - landfall site: this is where the offshore export cables are jointed to the onshore export cables via the transition joint bays. This term applies to the entire area between Mean Low Water Springs (MLWS) and the transition joint bays.
- Onshore elements:

- onshore export cables: these export cables will be jointed to the offshore export cables via the transition joint bays at the landfall site, and will bring the electricity generated by the Generation Assets to the onshore substations;
- onshore substations: the two electrically separate onshore substations will contain the components for transforming the power supplied via the onshore export cables up to 400 kV; and
- 400 kV grid connection cables: these export cables will bring the electricity generated by the Generation Assets from the two electrically separate onshore substations to the existing National Grid substation at Penwortham.

1.1.2.7 Full details of the activities and infrastructure associated with the Transmission Assets are set out in Volume 1, Chapter 3: Project Description of the Environmental Statement.

1.1.3 Purpose of the Outline Construction Traffic Management Plan

1.1.3.1 This OCTMP contains the control measures and monitoring procedures for managing the potential traffic and transport impacts of constructing the Transmission Assets. The purpose of the OCTMP is to set out how the numbers and routing of Heavy Goods Vehicles (HGVs) will be managed during the construction phase, how the movement of construction worker traffic will be managed during the construction phase, details of measures to manage the safe passage of HGV traffic via the local highway network and details of localised road improvements if and where these may be necessary to facilitate safe use of the existing road network. This OCTMP will form the basis for detailed CTMPs, which will be prepared in consultation with Lancashire County Council and Blackpool Council as the Local Highway Authority and National Highways as the highway authority for the strategic road network.

1.1.3.2 This OCTMP has been drafted based on Volume 3, Chapter 7: Traffic and transport of the Environmental Statement (ES).

1.1.3.3 This OCTMP references the following documents:

- Volume 3, Chapter 7: Traffic and transport of the ES.
- Outline Highways Access Management Plan (document reference J8).
- Outline Code of Construction Practice (document reference J1).

1.1.4 Structure of this document

1.1.4.1 This document is set out as follows:

- **Section 1.1** presents an introduction to the OCTMP;
- **Section 1.2** presents the scope of this OCTMP;
- **Section 1.3** presents the management of HGVs;

- **Section 1.4** presents the management of Abnormal Indivisible Loads (AILs);
- **Section 1.5** presents the management of construction workforce movement;
- **Section 1.6** presents an introduction site accesses;
- **Section 1.7** presents management and mitigations;
- **Section 1.8** presents highway crossings;
- **Section 1.9** presents the management of highway safety; and
- **Section 1.10** presents the implementation and monitoring of the OCTMP.

1.1.5 Implementation of the Outline Construction Traffic Management Plan

1.1.5.1 Following the granting of consent for the Transmission Assets, detailed Construction Traffic Management Plan(s) (CTMP) will be prepared on behalf of Morgan OWL and/or Morecambe OWL, prior to commencement of the relevant stage of works and will follow the principles established in this OCTMP. The detailed CTMP(s) will require approval by the relevant highways authority and National Highways as the highway authority for the strategic road network.

1.1.5.2 The Applicants have committed to implementation of detailed CTMP via the following commitment, CoT38 (see Volume 1, Annex 5.3: Commitments Register, document reference F1.5.3), and is secured by inclusion of Requirement 9 of the draft Development Consent Order (DCO) (document reference C1) Schedules 2A & 2B.

1.1.5.3 Below sets out the requirement wording for Project A (Project B's requirement mirror those of Project A for this requirement and are, therefore, not repeated):

(9) —(1) No stage of the Project A onshore works may commence until for that stage a construction traffic management plan (which must be in accordance with the outline construction traffic management plan), as appropriate for the relevant stage, has for that stage been submitted to and approved by the relevant highway authority or in respect of the strategic road network in consultation with National Highways.

(2) Any plan submitted under sub-paragraph (1) may cover one or more stage of the Project A onshore works.

(3) Each plan approved under sub-paragraph (1) must be implemented upon commencement of the relevant stage of the Project A onshore works.

1.1.5.4 The Transmission Assets may adopt a staged approach to the approval of DCO requirements enabling requirements to be approved in part or in whole, prior to the commencement of the relevant stage of works

according to whether a staged approach is to be taken to be taken to the delivery of the each of the offshore wind farms.

For onshore and intertidal works this approach will be governed by the inclusion of Requirement 3 within the draft DCO, which requires notification to be submitted to the relevant planning authority/authorities detailing whether Project A or Project B relevant works will be constructed in a single stage; or in two or more stages to be approved prior to the commencement of the authorised development.

1.1.5.5 Pre-construction and/or site preparation activities may be undertaken prior to the commencement of construction. These activities would comprise the following, in accordance with the definition of 'onshore site preparation works' as defined by the draft DCO and deemed marine licenses (Document Reference C1) and Volume 1, Chapter 3: Project Description:

- Site clearance;
- Demolition;
- Early planting of landscaping works
- Archaeological investigations;
- Environmental surveys;
- Environmental mitigation;
- Biodiversity benefit works;
- Removal of hedgerows and trees;
- Surveys and investigations for the purpose of assessing ground conditions;
- Remedial work in respect of any contamination or other adverse ground conditions;
- 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 and compounds for welfare facilities;
- Creation of site accesses;
- Onshore substation preparatory ground works; and
- Temporary display of site notices or advertisements.

1.2 Scope of this OCTMP

1.2.1 Construction activities

1.2.1.1 Volume 1, Chapter 3: Project description of the ES sets out further details in relation to construction activities, including information on temporary construction compounds which are generally established early on in the pre-construction/ construction phases to facilitate construction activities.

1.2.1.2 The potential adverse effects resulting from the construction activities relating to traffic and transport are assessed in Volume 3, Chapter 7: Traffic and transport of the ES and comprise the following potential effects:

- On non-motorised user delay, severance, and fear and intimidation due to HGV movements.
- Due to possible increased risk to road users as a result of the passage of construction vehicles along existing roads or at site accesses.
- Resulting from the movement of AILs associated with the construction of the onshore substations.

1.3 Management of HGV movements

1.3.1 Vehicle types

1.3.1.1 A variety of vehicle types will need to access the construction sites. These will include, but are not limited to:

- low loaders and HGVs to deliver:
  - plant;
  - construction machinery;
  - ducting and cables; and
  - fencing, 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; and
- delivery of components for the onshore substations

1.3.2 Vehicle routeing

1.3.2.1 The indicative access routes, shown at **Appendix A**, follow the most direct suitable route for HGV movement (considering road layout, geometries and any regulatory restrictions) using a road hierarchy of using motorways, followed by A classification roads, then B classification roads and then local roads to reach the temporary

construction compound accesses. These indicative access routes therefore maximise the use of higher classification roads and minimise the use of local roads.

1.3.2.2 Potential variations to this approach maybe as follows. However, exact routing will be subject to detailed design and will be developed by the Principal Contactors.

- A mini roundabout within Wrea Green comprising the B5259/Station Road/The Green where turning HGVs would need to cross onto the opposite side of the carriageway. HGVs to/from the temporary construction compound accesses on Bryning Lane will not therefore turn through this mini roundabout and will travel straight across it between Station Road and the Green, as shown at Appendix A.
- Construction vehicles to/from access 63 located on The Hamlet have been assigned via the temporary construction compound located on Leach Lane. There is not a continuous haul road between that compound and access 63, therefore these construction vehicles may potentially travel to that compound before travelling to access 63 via Appealing Lane as shown at Appendix B.
- Construction vehicles to/from access 9 located on B5410 Lytham St Annes Way have been assigned via the temporary construction compound located on B5261 Queensway. There is not a continuous haul road between that compound and access 9, therefore these construction vehicles may potentially travel to that compound before travelling to access 9 via A5230 Progress Way, A583 Preston New Road, and B5410 Lytham St Annes Way as shown at Appendix B..
- Construction vehicles to/from accesses 14 and 17 located on Ballam Road have been assigned via the temporary construction compound located on B5261 Queensway. There is not a continuous haul road between that compound and accesses 14 or 17, therefore these construction vehicles may potentially travel to that compound before travelling to accesses 14 or 17 via A5230 Progress Way, A583 Preston New Road, B5260 Fox Lane Ends and Ballam Road as shown at Appendix B. Construction vehicles to/from accesses 16 and 19 located on Ballam Road have been assigned via the temporary construction compounds located on Ballam Road. There is not a continuous haul road between those compounds and accesses 16 or 19, therefore these construction vehicles may potentially travel to one of those compounds before travelling to accesses 16 or 19 via Ballam Road as shown at Appendix B. .
- Construction vehicles to/from accesses 25, 26, 27, and 28 located on B5259 Saltcotes Road have been assigned via the temporary construction compounds located on Ballam Road. There is not a continuous haul road between those compounds and accesses 25, 26, 27 or 28, therefore these construction vehicles may potentially travel to one of those compounds before travelling to accesses 25, 26, 27 or 28 via B5260 Fox Lane Ends and B5259 Moss Side Lane as shown at Appendix B. .

- Construction vehicles to/from access 33 located on Corka Lane have been assigned via the temporary construction compound located on Bryning Lane. There is not a continuous haul road between that compound and access 33, therefore these construction vehicles may potentially travel to that compound before travelling to access 33 via B5259 Moss Side Lane and Bryning Lane as shown at Appendix B. Construction vehicles to/from access 48 located on A584 Preston New Road have been assigned via the temporary construction compound located on A584 Preston New Road. There is not a continuous haul road between that compound and access 48, therefore these construction vehicles may potentially travel to that compound before travelling to access 48 via A584 Preston New Road and A583 Blackpool Road as shown at Appendix B.
- Construction vehicles to/from access 55 located on Lodge Lane have been assigned via the temporary construction compounds located on A583 Blackpool Road and A584 Preston New Road. There is not a continuous haul road between those compounds and access 55, therefore these construction vehicles may potentially travel to one of those compounds before travelling to access 55 via A583 Blackpool Road, A584 Preston New Road and Lodge Lane as shown at Appendix B because it cannot be accessed via the haul road.
- Construction vehicles to/from access 56 located on A583 Blackpool Road have been assigned via the temporary construction compounds located on A583 Blackpool Road and A584 Preston New Road. There is not a continuous haul road between those compounds and access 56, therefore these construction vehicles may potentially travel to one of those compounds before travelling to access 56 via A583 Blackpool Road and A584 Preston New Road as shown at Appendix B because it cannot be accessed via the haul road. Construction vehicles to/from access 57 located on A583 Blackpool Road have been assigned via the temporary construction compounds located on A583 Blackpool Road and A584 Preston New Road. There is not a continuous haul road between those compounds and access 57, therefore these construction vehicles may potentially travel to one of those compounds before travelling to access 57 via A583 Blackpool Road and A584 Preston New Road as shown at Appendix B.
- Construction vehicles to/from access 58 located on Nelson Way have been assigned via the temporary construction compounds located on A583 Blackpool Road and A584 Preston New Road. There is not a continuous haul road between those compounds and access 58, therefore these construction vehicles may potentially travel to one of those compounds before travelling to access 58 via A583 Blackpool Road, A584 Preston New Road and Nelson Way as shown at Appendix B. The accesses along the A583, A584 and A59 (accesses 01, 03, 48, 49, 50, 51, 52, 53, 56, 57, and 62) are onto either a dual carriageway road or a four lane single

carriageway road. Therefore, left in/left out access arrangements have been devised for highway safety reasons, as set out in the Outline Highways Access Management Plan (Document Reference J8).

1.3.2.3 The indicative HGV access routes and the associated access points set out above are presented at Appendix B.

1.3.2.4 The detailed CTMP(s) will include agreed methods of communication with the relevant highways authorities to confirm that these routes remain appropriated and are agreed prior to commencement of construction.

1.3.2.5 The Principal Contractor(s) and any sub-contractor(s) will be required to comply with the agreed routeing plans as a part of the detailed CTMP(s) 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(s) 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.

1.3.2.6 If deemed necessary by the relevant highways authority, 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.

1.3.2.7 If deemed necessary by the relevant highways authority, construction access routes will have temporary signs posted along the confirmed routes.

1.3.3 Timing of HGV movements

1.3.3.1 Standard construction working hours are identified in the Outline Code of Construction Practice (J1). The core working hours will be 07.00 to 19.00 Monday to Saturday (CoT18).

1.3.3.2 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, and 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 construction site. No vehicles 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.

1.3.3.3 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 relevant planning authorities.

1.3.3.4 Consideration will be giving to the timing of HGV movements through locations with sensitive receptors, for example where HGV movements

may pass through road links with schools, during school opening and closing times.

1.3.4 Reducing the impact of HGV movements

1.3.4.1 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(s). Site supervisors will be encouraged to re-use HGVs where possible, such as using vehicles which have been 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.

1.3.4.2 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.

1.3.4.3 Where there is a greater risk of mud from the construction works being transport onto the highway network by HGVs i.e. each of the onshore substations, wheel cleaning facilities will be provided at the access/egress location 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 J1.2).

1.4 Management of abnormal indivisible loads

1.4.1.1 It is expected that a number of AILs comprising large components such as transformers will be transported to the onshore substations. In addition, smaller AILs will also need access for cable drum deliveries to the access points along the onshore export cable corridors and 400 kV grid connection cable corridors. Cable drums are expected to be delivered to temporary construction compounds or to the relevant access points along the onshore export cable corridor and 400 kV grid connection cable corridor via specialised cable drum trailer for installation. Where cable drums are delivered to temporary construction compounds, subsequent redistribution across the onshore export cable corridor and 400 kV grid connection cable corridor may then be required. For assessment purposes, all cable drum movements have been considered as AILs. The AILs are expected to be components that exceed standard load weight and possible exceed standard width and length.

1.4.1.2 Depending on the width, length or weight of the laden vehicle, different notice periods will be provided to Highway Authorities, 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 of the STGO 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 of the STGO.

1.4.1.3 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. All cable drum deliveries are expected to travel to the onshore export cable corridor and 400 kV grid connection cable corridor from the M55. The number of AILs movements are expected be low.

1.4.1.4 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 1.4.1.2** 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. If and where relevant, this may include prior notification given to the police who will notify the locality via local newspapers/radio etc so that other users have advance notification.

1.4.1.5 Some AILs may require escort, as agreed with the local police authority and/or the relevant highways authority, prior to the movements taking place. Escorts would control the AILs as well as interacting 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.

1.4.1.6 The timing of AIL deliveries will be discussed and agreed with the relevant highways authority to minimise delay for other road users and to minimise risk to highway users.

1.5 Management of construction workforce movements

1.5.1 Construction workforce travel

1.5.1.1 The value in managing and reducing the impact of the movement of construction staff is recognised. The detailed CTMPs will document measures that can be implemented to encourage contractors to make use of sustainable transport modes where possible and where appropriate. These measures may include:

- Measures to increase vehicles 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 and practicable, 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 working hours (between 7am and 7pm Monday - Saturday) seeks to avoid construction workers travelling during the highway network peak hours and this reduces impacts on the local road network during network peak hours.

1.6 Site accesses

1.6.1 Design

1.6.1.1 Access locations are identified in the Outline Highway Access Management Plan (document reference J8). Where changes to the final design of any site accesses may be required these will be agreed with the relevant highways authority prior to installation of the site access.

1.6.1.2 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.

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

1.6.1.4 All site access will be provided with appropriate fencing. All site accesses will be designed to eliminate the risk of vehicles queueing 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.

1.6.1.5 Parking on and around construction sites will avoid parking on verges or highways, to avoid vehicles idling and waiting for access and to defer construction workers from driving to site unnecessarily.

1.7 Management and mitigation

1.7.1.1 Where there is a risk that vehicles will deposit mud and debris on the highway I.e. in the vicinity of construction site accesses at the onshore substations, 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 Contractors to secure its removal with minimal delay.

1.7.1.2 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 relevant highways authority 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.

1.7.1.3 Contact numbers will be on display for the general public to communicate with the Contractors in relation to the highways.

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

1.7.1.5 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.

- Where the requisite visibility splays cannot be provided at an access and so traffic on the highway may be temporarily stopped up 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.

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

1.7.1.7 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.

1.7.1.8 Some example layouts of these traffic management measures and features are shown on **Diagram 1.1** to **Diagram 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.

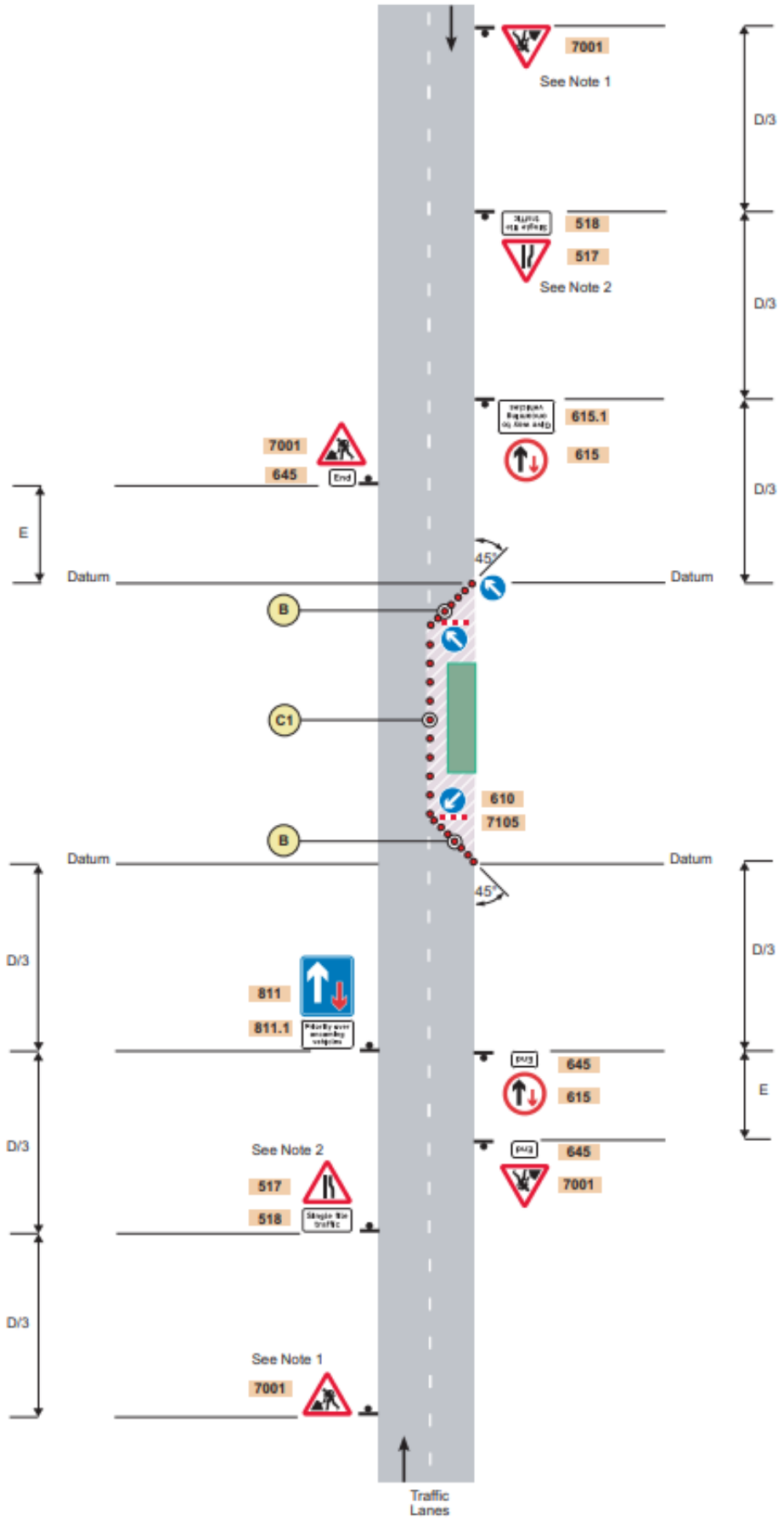


Diagram 1.1: Priority signs on a two-lane single carriageway road

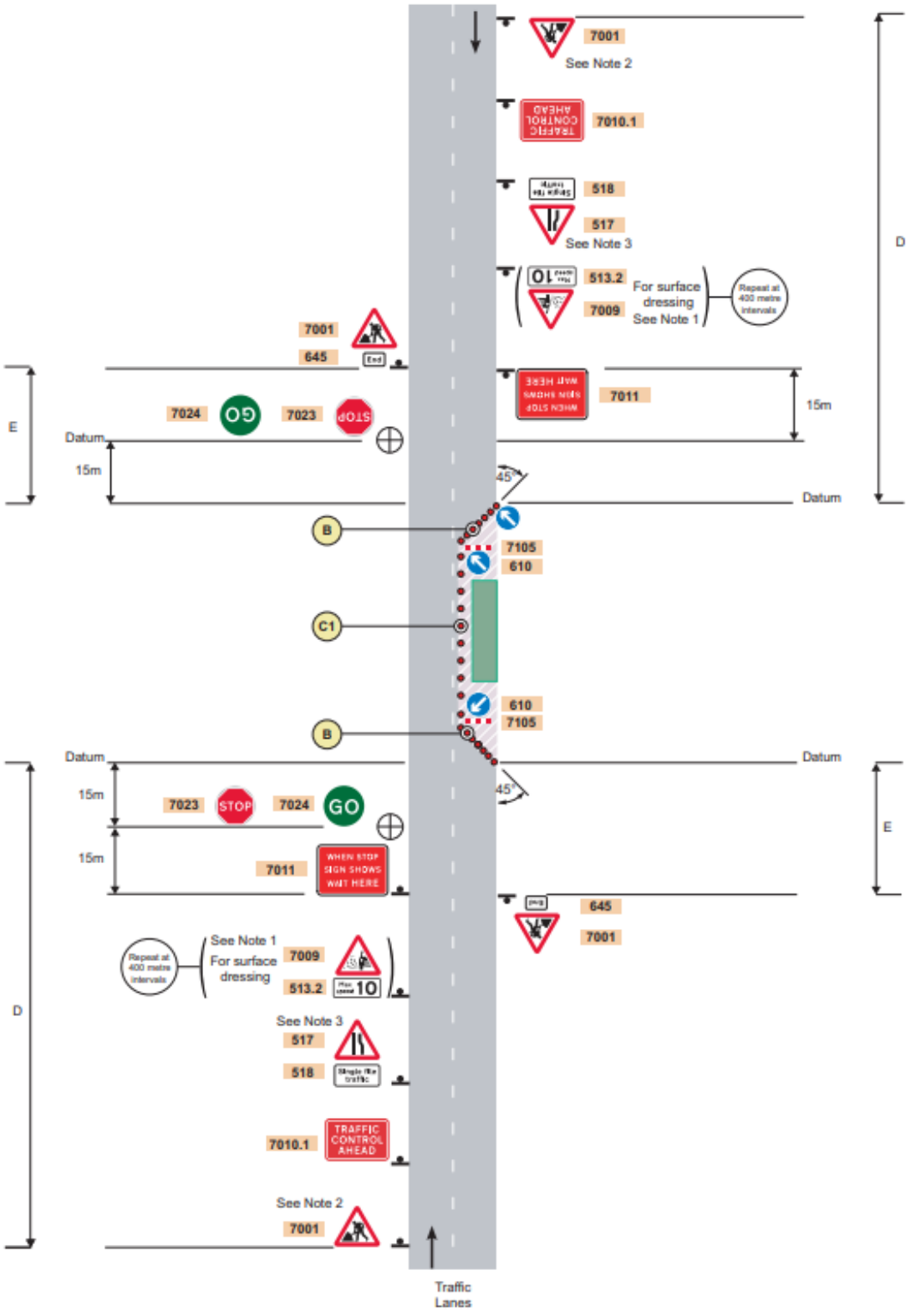


Diagram 1.2: Stop/go signs on a two-lane single carriageway road

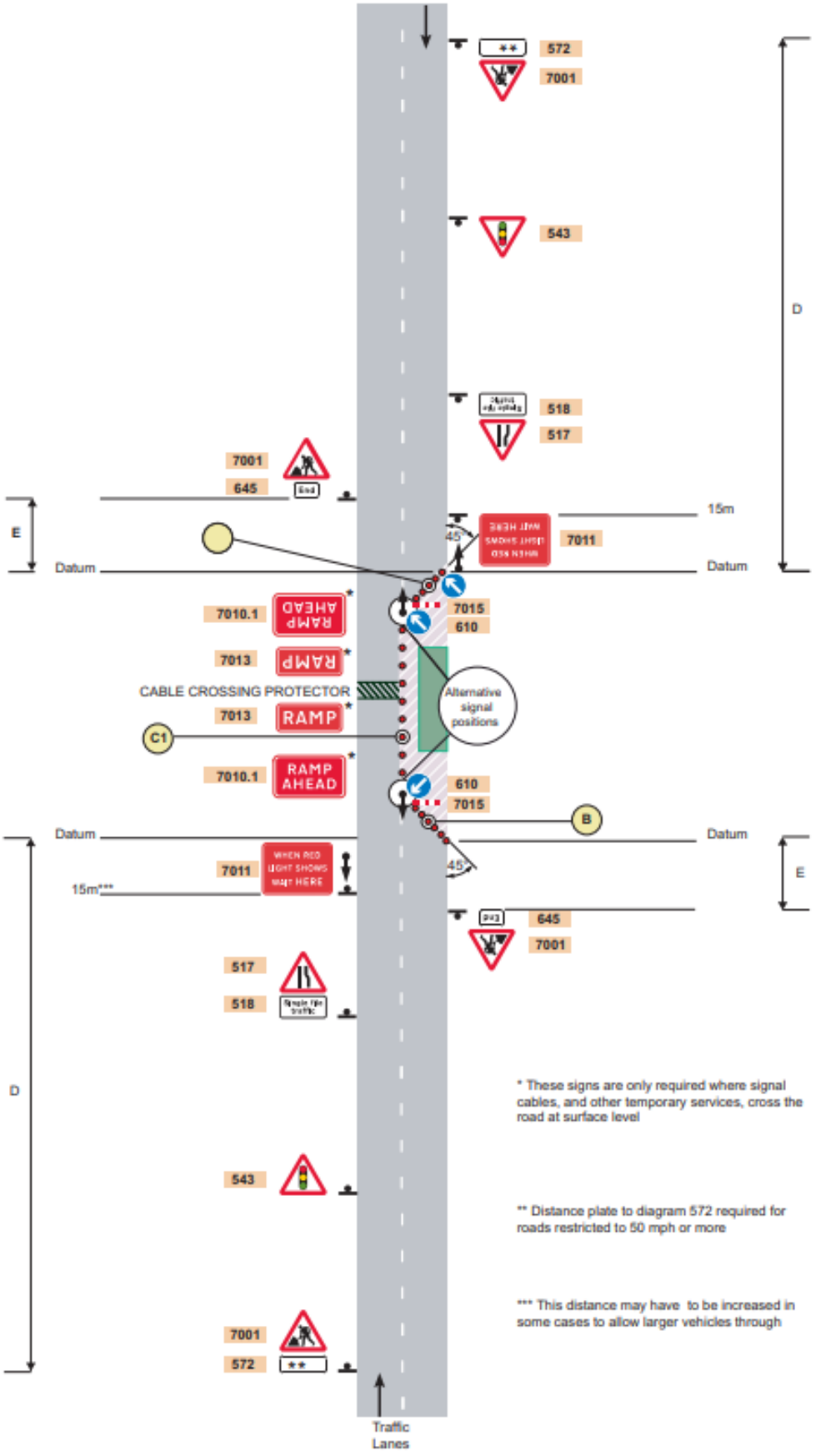


Diagram 1.3: Portable traffic signals on a two-lane single carriageway road

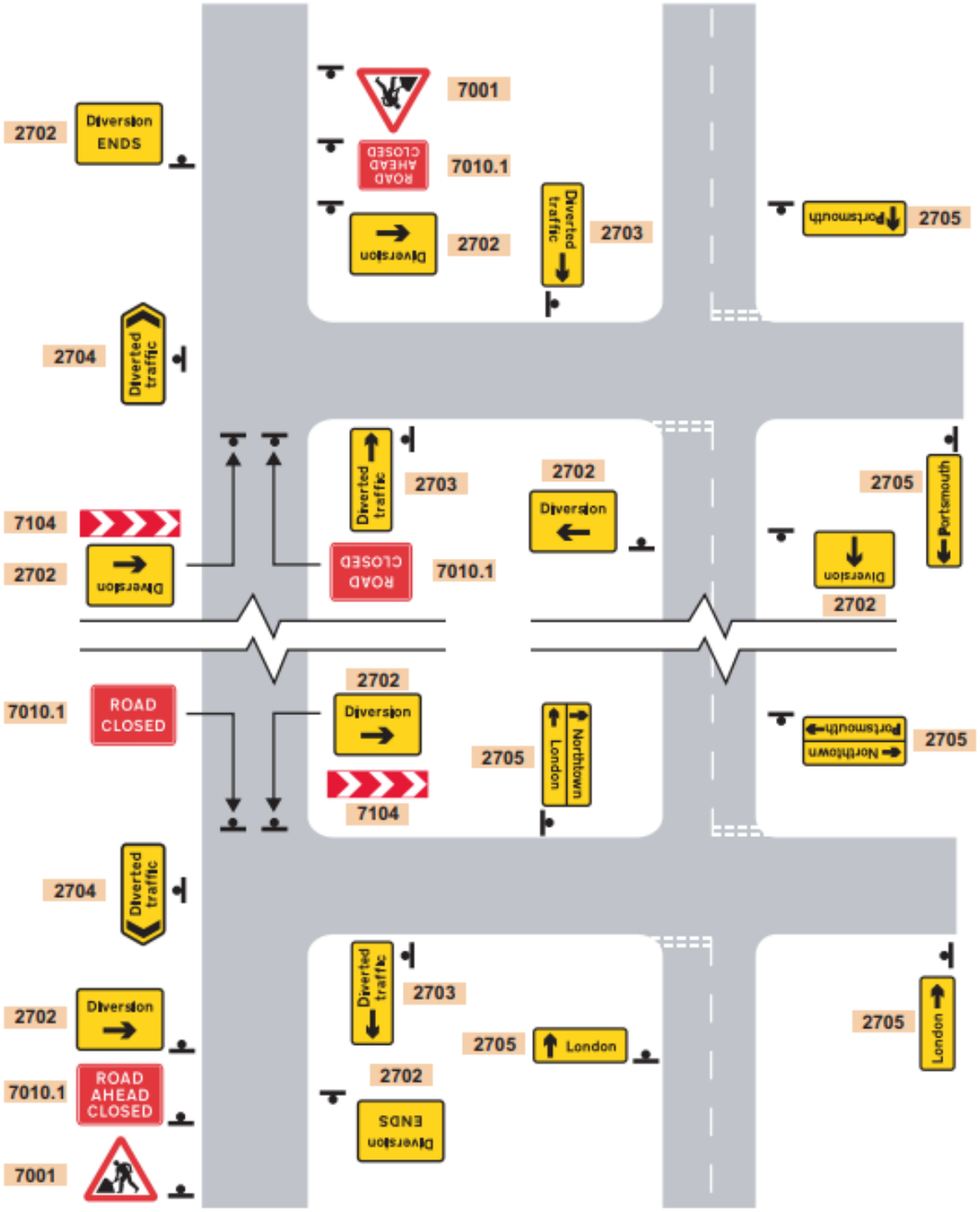
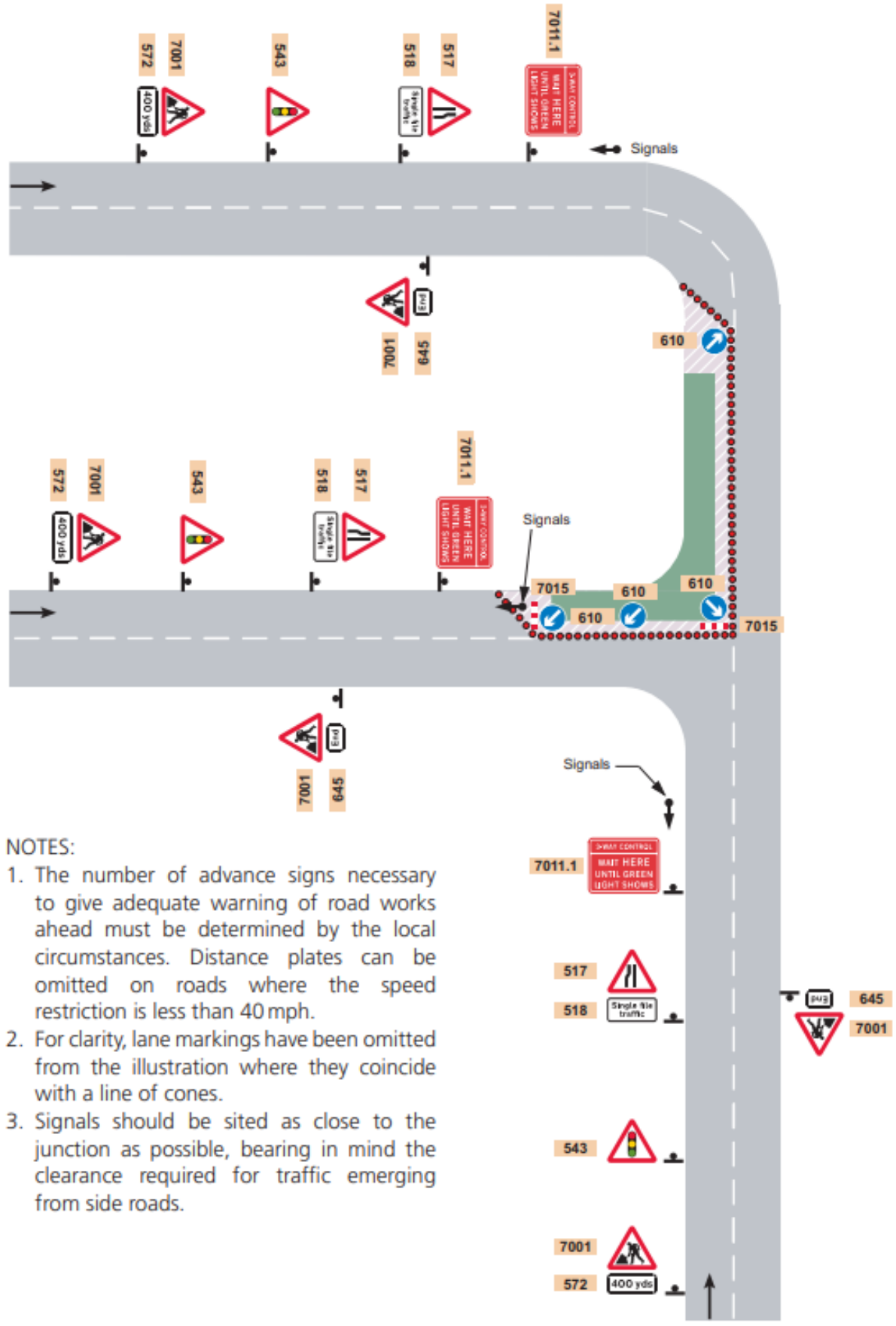


Diagram 1.4: Layout of signs for road works on single carriageway roads with diversions

Diagram 1.5: Manually operated stop/go signs and priority signs



NOTES:

1. The number of advance signs necessary to give adequate warning of road works ahead must be determined by the local circumstances. Distance plates can be omitted on roads where the speed restriction is less than 40 mph.
2. For clarity, lane markings have been omitted from the illustration where they coincide with a line of cones.
3. Signals should be sited as close to the junction as possible, bearing in mind the clearance required for traffic emerging from side roads.

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

1.8 Highway crossings

1.8.1 Onshore export cable corridor and 400 kV grid connection cable corridor highway crossing locations and operation

1.8.1.1 It is envisaged that all crossings of the public highway will be undertaken using Horizontal Directional Drilling (HDD) or other trenchless technologies, including direct pipe or micro-tunnel. Except for Leach Lane. Proposed crossing methodologies for roads are set out within the Volume 1, Annex 3.2: Onshore crossing schedule of the ES.

1.8.1.2 Trenchless methods for cable installation 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.

1.8.1.3 There will be some locations whereby the haul road crosses the highway and/pr where traffic management will be required. 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 cross, what is served by the highway link and the alternative routes available. Methods may include temporary shuttle working, crossings, or temporary closure.

1.8.1.4 Indicative priority, stop/go and signalled shuttle working arrangements are shown on **Diagram 1.1** to **Diagram 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.

1.8.2 Agreement, management, and advance notification

1.8.2.1 Where traffic management measures are required, these will be agreed in advance with the relevant highways authorities.

1.8.2.2 Any temporary road closures/introduction of one-way roads and any diversions will be advertised in advance and alternative routes indicated through signage.

1.8.2.3 Measures will be put in place to discourage unauthorised access to the onshore export cable corridor and 400 kV grid connection cable corridor from the highway at crossing points and that the adjacent works sites are secure.

1.8.2.4 Any works within the highway will be reinstated to a standard commensurate prior to the commencement of the works and agreed with the relevant highways authority.

1.8.3 Haul road and its crossings with the highway

1.8.3.1 A haul road will be constructed along the majority of the onshore export cable corridor and 400 kV grid connection cable corridor to provide for the HGV access for construction, with gaps (or ‘lock-outs’) only

occurring at some HDD locations and road crossings. The haul road will enable vehicles to move along the onshore export cable corridor and 400 kV grid connection 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 practicable, to minimise adverse impacts on the local road network.

1.8.3.2 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 **Diagram 1.7**, 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). If the crossing is not signal controlled, the variant of diagram 511 (as shown on **Diagram 1.7**) 'heavy plant crossing' should be placed in advance of the crossing place. The precise layout for each will be confirmed by the Principal Contractor(s) based upon the specific requirements of each location.

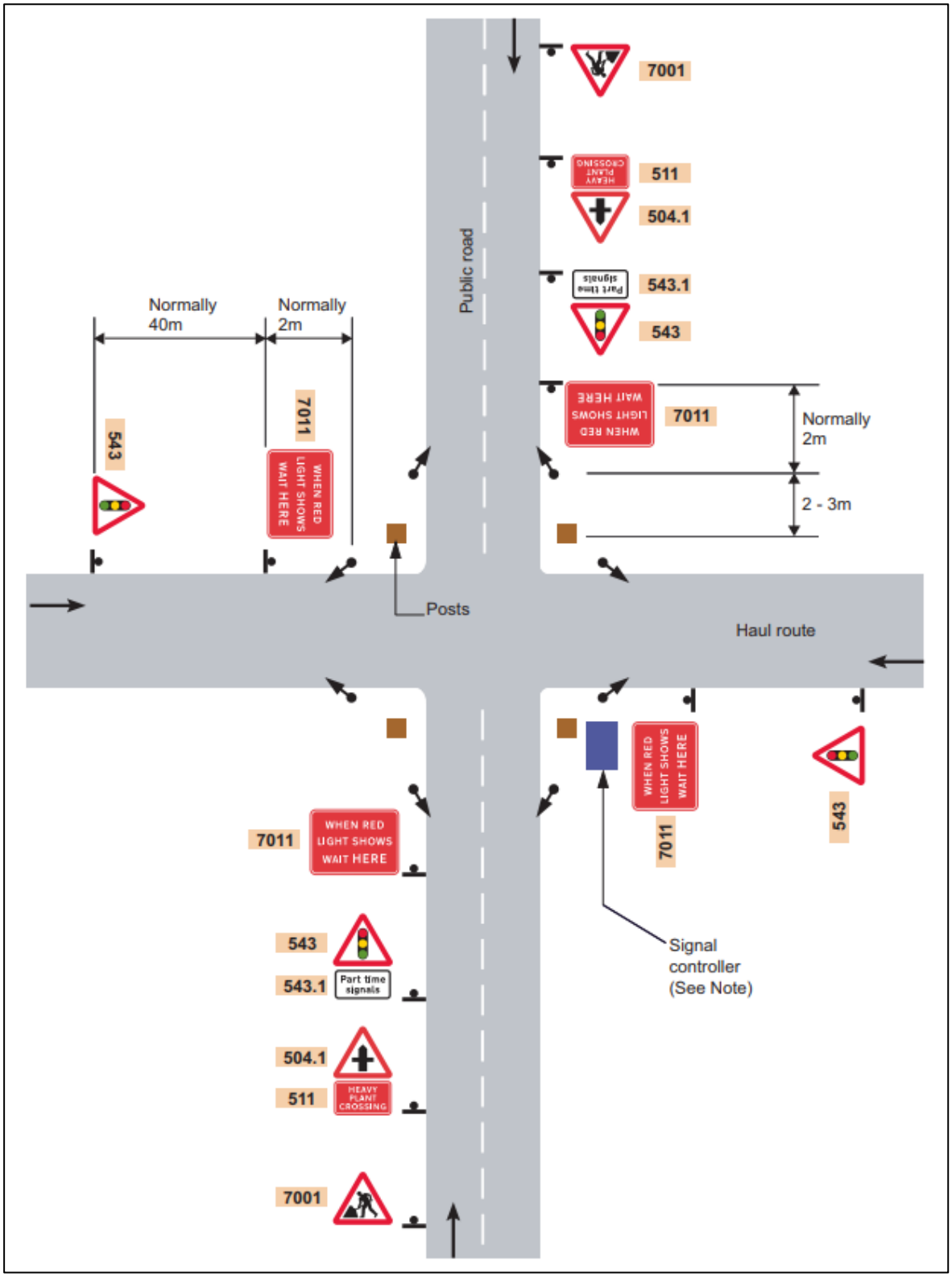


Diagram 1.7: Haul road crossing

1.8.4 Public rights of way

1.8.4.1 Several Public Rights of Way (PRoW) and areas of land with informal public access will potentially be affected by the construction of the Transmission Assets. Prior to any temporary stopping up or localised diversion of the PRoW, measures will be agreed in accordance with

those established in the Outline Public Rights of Way Management Plan (document reference J1.5) to manage the interface between the works and PRoW with the relevant PRoW officers.

1.9 Management of highway safety

1.9.1 Existing accident record

1.9.1.1 Within section 7.6.5 of Volume, Chapter 7: Traffic and transport of the ES, an analysis of existing Personal Injury Accident data has been undertaken to identify clusters of Personal Injury Accidents (four or more occurring at the same location of within 25 m of each other). A further analysis looked at those clusters, severity, and any consistent contributory factors. No matters in relation to the exiting highway layout or geometries were discovered to be the cause of the incidents.

1.9.2 Monitoring and mitigation for Transmission Assets

1.9.2.1 HGV injury accidents and near misses associated with the Transmission Assets 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.

1.9.2.2 If localised mitigation measures are required, these will be agreed with the Highway Authorities and incorporated into the detailed CTMP(s).

1.9.3 Highway condition

1.9.3.1 Where necessary and where agreed with the relevant highways authority as a part of the detailed CTMP(s), video surveys may be undertaken of those local roads where it is considered that the passage of construction HGVs may cause deterioration of highways. These roads will not include motorways, A roads, and B roads. The schedule of highways to be surveyed will be agreed with the relevant highways authorities prior to any construction activities taking place.

1.9.3.2 Once construction activities have ceased in a given location the video survey of the associated highway links would be repeated to identify any significant changes in highway condition. The results will be discussed with the relevant highways authority and where it is agreed that damage has resulted from the passage of HGVs associated with construction work a remediation strategy will be discussed with the highways for any damage agreed to have resulted from vehicle movements associated with Transmission Assets.

1.10 Monitoring of the CTMP

1.10.1 Compliance and monitoring

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

1.10.1.2 The Principal Contractor(s) will be responsible for ensuring that all sub-contractors are aware of the requirements of the detailed CTMP(s) and of the monitoring obligations.

1.10.1.3 The role of the Principal Contractor(S) will continue throughout the onshore construction duration. They will be the central point of contact for all monitoring processes during their respective construction phases.

1.10.1.4 If necessary, the Principal Contractors will be responsible for a system whereby construction HGVs are identifiable.

1.10.1.5 Where practicable and necessary, 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.

1.10.1.6 Where necessary, the registration numbers for all construction HGVs accessing compounds would be recorded.

1.10.1.7 Establishing these central points 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.

1.10.1.8 Monitoring activities and responsibilities will be agreed with the relevant highways authority as a part of the detailed CTMP(s). The detailed CTMP(s) will include contact details of those responsible for the detailed CTMP(s) along with a clear schedule of monitoring activities and timescales.

1.10.2 Monitoring records

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

1.10.2.2 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 detailed 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.

1.10.2.3 Records of the above will be retained by the Principal Contractor(s).

1.10.3 Enforcement and corrective measures

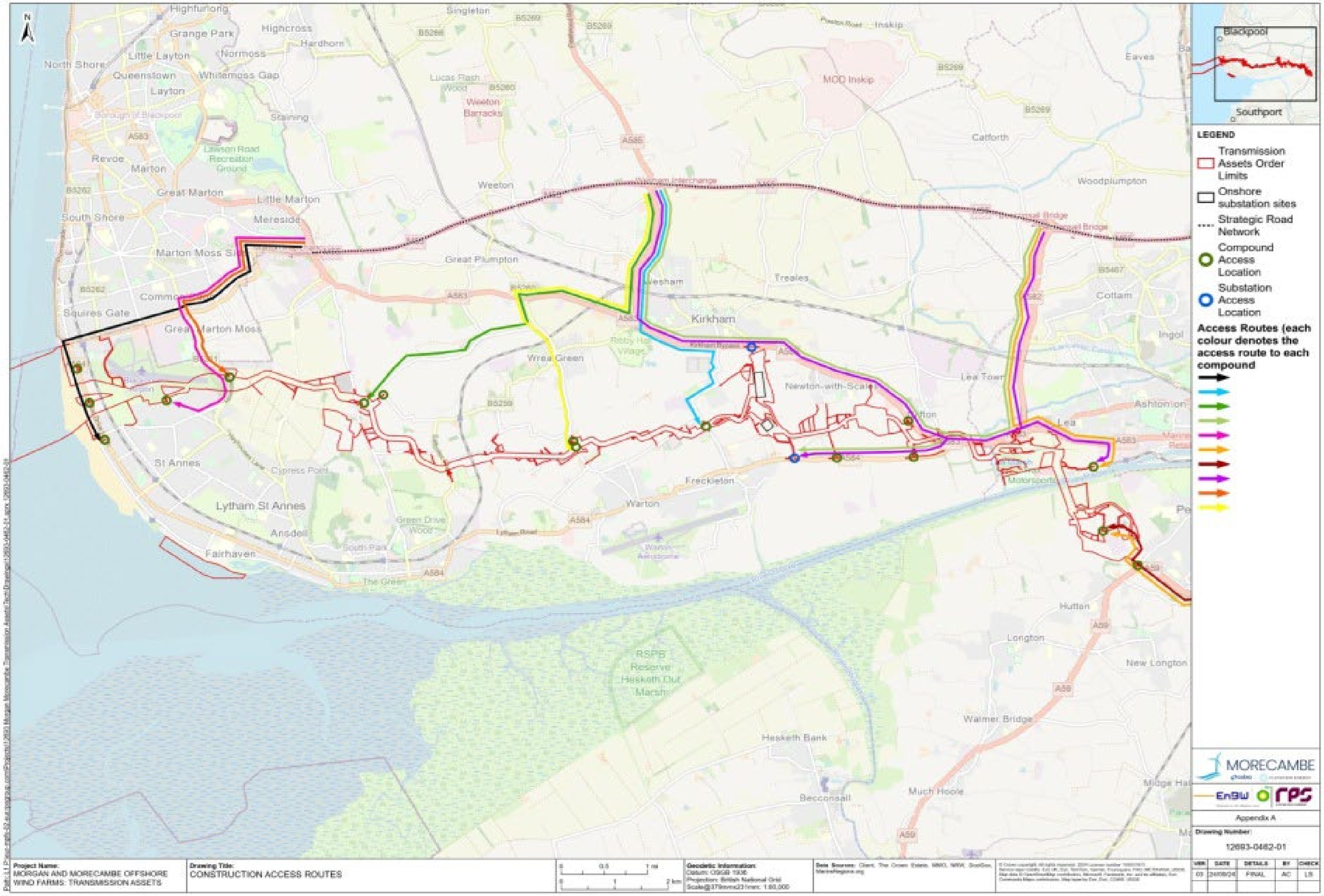
1.10.3.1 If the Principal Contractor(s) are made aware of a potential breach of the detailed CTMP(s) (except where otherwise agreed with the relevant LPA or in the event of an emergency), they will be required to investigate the circumstances and create a report for the relevant highways authority, and any subsequent will be discussed and agreed with the relevant highways authority, as appropriate.

1.11 References

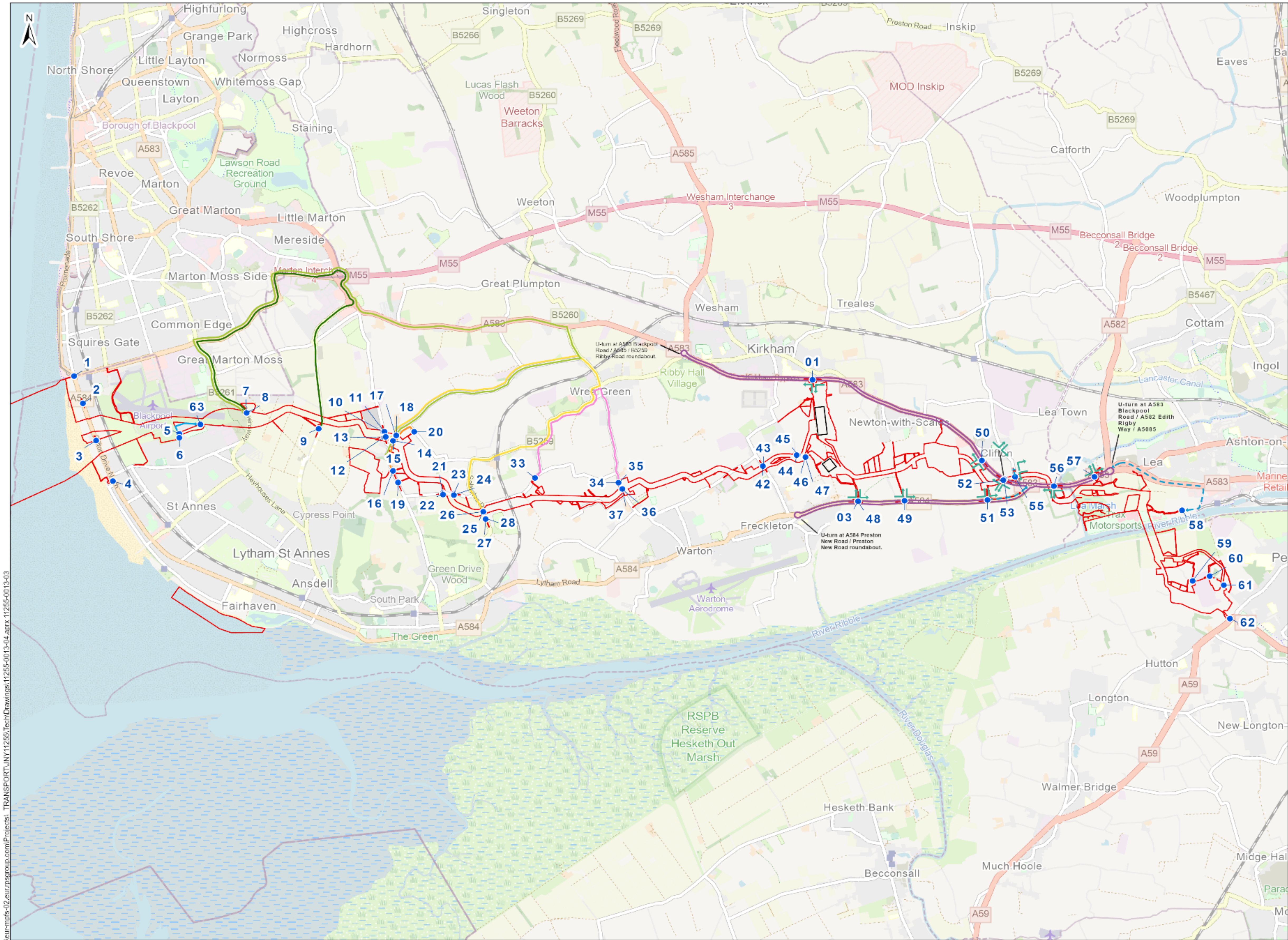
Department for Transport/Welsh Government/Transport Scotland/Department for Infrastructure (2009) Traffic Signs Manual Chapter 8, Traffic Safety Measures and Signs for Road Works and Temporary Situations Part 1: Design. Available at https://assets.publishing.service.gov.uk/media/5a74adeaed915d7ab83b5ab2/traffic-signs-manual-chapter-08-part-01.pdf. Accessed August 2024.

The Secretary of State for Transport (2003) The Roads Vehicles (Authorisation of Special Types) (General) (Order). Available at : https://www.legislation.gov.uk/uksi/2003/1998/article/4/made?view=plain. Accessed : December 2023

Appendix A: Indicative construction vehicle route plan


N
Highfurlong
Grange Park
Highcross
Hardhorn
Singleton
B5269
B5268
Preston Road
Inskip
North Shore
Little Layton
Normoss
Queenstown
Whitemoss Gap
Layton
Lucas Flash Wood
B5260
Weeton Barracks
MOD Inskip
Eaves
Blackpool
Southport
Staining
Lawson Road Recreation Ground
A583
Revoe
Marton
Great Marton
Little Marton
B5262
Weeton
Catforth
Woodplumpton
South Shore
Mereside
Marton Moss Side
Great Plumpton
Treales
Wesham
Kirkham
Cottam
Squires Gate
Great Marton Moss
Wrea Green
Ingol
Lea Town
Newton-with-Scales
Ashton on
Lea
St Annes
Cypress Point
Freckleton
Lytham St Annes
Warton
Green Drive Wood
A584
Ansdell
Fairhaven
South Park
The Green
Hutton
Longton
New Longton
RSPB Reserve Hesketh Out Marsh
A59
Walmer Bridge
Hesketh Bank
Much Hoole
Becconsall
LEGEND
Transmission Assets Order Limits
Onshore substation sites
Strategic Road Network
Compound Access Location
Substation Access Location
Access Routes (each colour denotes the access route to each compound
MORECAMBE
Appendix A
Drawing Number:
12693-0462-01
Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS
Drawing Title:
CONSTRUCTION ACCESS ROUTES
Geodetic Information:
Datum: OSGB 1936
Projections: British National Grid
Scale@A3landscape: 1:60,000
Data Sources:
VER
DATE
DETAILS
BY
CHECK
03
24/08/18
FINAL
AC
LS

Appendix B: Additional indicative HGV routes plan


N
Highfurlong
Grange Park
Highcross
Singleton
Hardhorn
North Shore
Little Layton
Normoss
Queenstown
Whitemoss Gap
Layton
Borough of Blackpool
Staining
Lucas Flash Wood
Weeton Barracks
MOD Inskip
Inskip
Eaves
Catforth
Revoe
Marton
Lawson Road Recreation Ground
Great Marton
Little Marton
Weeton
Wesham Interchange
Woodplumpton
South Shore
Mereside
Beccansall Bridge
Marton Moss Side
Marton Interchange
Great Plumpton
Common Edge
Squires Gate
Great Marton Moss
Wesham
Treales
Cottam
Kirkham
Ribby Hall Village
Wrea Green
Newton-with-Scales
Lea Town
Ingol
Ashton-on-
Lea
Clifton
Blackpool Airport
St Annes
Cypress Point
Freckleton
Warton
Lytham St Annes
Ansdell
Green Drive Wood
South Park
Fairhaven
The Green
Warton Aerodrome
Lytham Road
River Ribble
Hutton
Longton
New Longton
RSPB Reserve Hesketh Out Marsh
River Douglas
Walmer Bridge
Hesketh Bank
Much Hoole
Becconsall
Midge Hall
Lancaster Canal
U-turn at A583 Blackpool Road / A585 / B5259 Ribby Road roundabout
U-turn at A583 Blackpool Road / A582 Edith Rigby Way / A5085
U-turn at A584 Preston New Road / Preston New Road roundabout.
Blackpool
Southport

LEGEND

- Transmission Assets Order Limits
- Onshore substation sites

Additional HGV Routes

- 0
- 1
- 2
- 3
- 4
- 5
- Highway Access Points
- Routes for U-turns where right turns are not permitted
- Routes between compounds and accesses where there is no construction haul road
- Turning movement permitted at access junctions

Appendix B

Drawing Number: 11255-0013-04

VER	DATE	DETAILS	BY	CHECK
03	24/09/24	FINAL	AC	LS

Project Name: MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title: HGV ACCESS ROUTES WHERE THERE ARE RESTRICTIONS

0 0.5 1 mi
0 1 2 km

Geodetic Information:
Datum: OSGB 1936
Projection: British National Grid
Scale@379mmx231mm: 1:60,000

Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

Path: L:\Projects\...\TRANSPORT\...\Drawings\11255-0013-04.aprx 11255-0013-03