

FIVE ESTUARIES OFFSHORE WIND FARM

9.24: OUTLINE CONSTRUCTION TRAFFIC MANAGEMENT PLAN (CLEAN)

Application Reference
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Appendix 3: A120/ Bentley Road Swept Path Analysis

Appendix 4: Cable Drum Delivery Vehicle Swept Path Analysis

DEFINITION OF ACRONYMS

Acronym	Definition
AADL	Automobile Associated Developments Limited
AIL	Abnormal Indivisible Load
ALAR	Abnormal Load Assessment Report
CoCP	Code of Construction Practice
СТМР	Construction Traffic Management Plan
DCO	Development Consent Order
ECC	Export Cable Corridor
EACN	East Anglia Connection Node
GPS	Global Positioning System
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicles
LGV	Light Goods Vehicle
LRN	Local Road Network
NF OWF	North Falls Offshore Wind Farm
NGET	National Grid Electricity Transmission
NH	National Highways
OWF	Offshore Wind Farm
PAMP	Public Access Management Plan
PROW	Public Rights of Way
RSA	Road Safety Audit
SRN	Strategic Road Network
TCC	Temporary Construction Compound
TJB	Transition Joint Bays
WCH	Walking, cycling and horse-rider
WTGs	Wind turbine generators

GLOSSARY OF TERMS

Term	Definition
VE	Five Estuaries Offshore Wind Farm.
VE OWFL	Five Estuaries Offshore Wind Farm Limited (the Applicant)
Development Consent Order	An order made under the Planning Act 2008 granting development consent for a Nationally Significant Infrastructure Project (NSIP) from the Secretary of State (SoS).
EIA	Environmental Impact Assessment (the process of evaluating the likely environmental impacts of a proposed project or development).
ES	Environmental Statement (the documents that collate the processes and results of the EIA).
Export Cable Corridor (ECC)	The area(s) where the export cables will be located.
Blue Light Services	Means collectively Essex Police, Essex County Fire and Rescue and East of England Ambulance Service Trust (EEAST)
Static synchronous compensator (STATCOM)	A shunt-connected, reactive compensation device used on transmission networks equipment buildings.

1 INTRODUCTION

1.1 BACKGROUND

- 1.1.1 Five Estuaries Offshore Wind Farm Limited (the Applicant) has submitted an application to the Planning Inspectorate on behalf of the Secretary of State, for a Development Consent Order for the Five Estuaries Offshore Wind Farm (herein referred to as VE) under section 37 of the Planning Act 2008.
- 1.1.2 VE is the proposed extension to the operational Galloper Offshore Wind Farm. The project includes provision for the construction, operation, maintenance and decommissioning of an offshore wind farm located approximately 37 kilometres off the coast of Suffolk at its closest point in the southern North Sea; including up to 79 wind turbine generators and associated infrastructure making landfall at Sandy Point between Frinton-on-Sea and Holland-on-Sea, the installation of underground cables, and the construction of an electrical substation and associated infrastructure near to the existing Lawford Substation to the west of Little Bromley in order to connect the development to National Grid's proposed East Anglia Connection Node substation, which would be located nearby. All onshore connection infrastructure would be located in the administrative area of Tendring District Council, within Essex County Council. VE will have an overall capacity of greater than 100 Megawatts (MW) and therefore constitutes a Nationally Significant Infrastructure Project (NSIP) under the Section 15 (3) of the Planning Act 2008.

1.2 PURPOSE OF THIS OUTLINE CTMP

- 1.2.1 This Outline Construction Traffic Management Plan (Outline CTMP) has been produced to be submitted as part of the DCO application.
- 1.2.2 This is an outline document that, by reference to the assessments reported in the ES, sets out the key elements that will be secured in the Final CTMP(s) which will be submitted to and approved by the discharging authority as a requirement of the Development Consent Order (DCO) ahead of construction.
- 1.2.3 The Final Construction Traffic Management Plan(s)¹ (CTMP(s)) will be produced by the Principal Contractor(s) appointed to undertake the construction works, in accordance with this Outline CTMP.
- 1.2.4 This Outline CTMP sets out the approach that will be taken to manage the potential impacts of construction traffic for the onshore works and should be read in conjunction with the assessment of the anticipated VE construction traffic, which is provided in Volume 6, Part 3, Chapter 8: Traffic and Transport.

1.3 SCOPE OF THIS OUTLINE CTMP

- 1.3.1 For the avoidance of doubt, this Outline CTMP relates to construction traffic associated with the onshore elements of VE comprising:
 - Export cable installation from the landfall location to the transition jointing bays (TJBs) including Horizontal Directional Drilling (HDD)/trenchless works;
- > Temporary works associated with landfall HDD and TJB excavation:

¹ There is potential to be more than one Final CTMP, with such documents being prepared for different work areas or contractors.

- Cable installation along the onshore Export Cable Corridor (ECC) including jointing bays and potential HDD/trenchless crossings;
- Temporary works associated with the ECC and onshore substation (OnSS) including establishment of haul roads and Temporary Construction Compounds (TCCs);
- > Proposed OnSS and associated construction access, including widening works to Bentley Road; and
- Connection to existing National Grid infrastructure.
- 1.3.2 This document does not relate to construction traffic associated with offshore works seaward of Mean High Water Spring, that are principally marine activities.
- 1.3.3 The Final CTMP is intended to be a working document that evolves during the construction period. The CTMP only applies to the construction stage of the VE and does not apply to pre-commencement works, operation or decommissioning of VE. Should there be any changes to the Final CTMP once this has been approved by the discharging authority, the revised Final CTMP would be submitted to and approved by the discharging authority.
- 1.3.4 Whilst this Outline CTMP is for the construction of VE, given the potential for the overlap of construction periods of North Falls Offshore Wind Farm (NF OWF) and National Grid Electricity Transmission (NG) East Anglia Connection Node (EACN) Substation projects, reference is also made to these projects and the potential for coordinated CTMP measures.
- 1.3.5 This would be most relevant for the construction of VE and NF OWF, as the VE construction accesses (see Table 3.1) and haul roads/haul road crossings (see Table 3.2) would be used for the construction of both projects in the following 'build options' which cover the three delivery scenarios as set out in 9.30: Co-ordination Document):
 - "Build option 1" means scenario 1 in which the first project to construct will deliver works to support grid connection co-ordination, including the laying of onshore cable ducts for the second project;
 - "Build option 2" means scenarios 2 and 3 in which the undertaker only constructs those works required for VE.

1.4 ONSHORE SITE PREPARATION WORKS

- 1.4.1 As stated in 9.21 Code of Construction Practice (CoCP), the DCO allows the project to undertake site preparation works in advance of main construction, prior to approval of detailed requirements. Some of this work is necessary to inform the detailed design and therefore needs to be carried out ahead of the design being completed and approved. Other activities are not development but rather activities to prepare for development, which can be carried out in advance to prevent delay in commencing development or ensure that seasonally constrained actions are carried out in the correct season.
- 1.4.2 Site preparation works include:
- surveying or investigatory works including archaeological investigations, environmental surveys, investigations for the purpose of assessing ground conditions;
- > remediation of contamination:
- preparatory works to existing infrastructure and diversion and laying of utilities and services;
- creation of any temporary means of access;

- > site clearance including vegetation clearance; and
- erection of screening and fencing, site security works, creation of temporary hard standing, or the temporary display of site notices or advertisements.
 - 1.4.3 The Final CTMP does not need to be in place for the onshore site preparation works; however, in addition to the principles set out in paragraph 1.28 of 9.21: CoCP, where the works involve more than 10 vehicles accessing at any location (20 two-way movements) on the same day, the workforce would be provided with a copy of this Outline CTMP and be required to adhere to the following additional principles:
 - > Use of the agreed construction vehicle access routes (wherever possible); and
 - > No vehicles parked in a way which blocks the highway or restricts either vision or access.

1.5 STRUCTURE OF THIS OUTLINE CTMP

1.5.0 The structure of this Outline CTMP is provided in Table 1.1.

Table 1.1: Structure of this Outline CTMP

Section	Topic
Section 1	Introduction
Section 2	Responsibilities and notifications
Section 3	Key construction details and on-site control measures
Section 4	Vehicle numbers, routeing and off-site control measures
Section 5	Location specific control measures
Section 6	Highway improvements
Section 7	Abnormal Indivisible Loads
Section 8	Complaints and enquiries procedure, and monitoring
Section 9	References

2 RESPONSIBILITIES AND NOTIFICATIONS

2.1 RESPONSIBILITIES

- 2.1.1 For the construction of VE, the Principal Contractor(s) will be responsible for the implementation of the CTMP for the relevant work area, to monitor the application of measures within the CTMP, and to propose and make modifications to the Plan during the planning and construction process, if required. Monitoring of the CTMP will be undertaken and any necessary amendments would be made in consultation with Essex County Council as the local highway authority, and with National Highways (NH) in terms of impacts upon the strategic road network (SRN) with any revision of the plan requiring approval from the discharging authority.
- 2.1.2 Prior to the commencement of the construction of the relevant phase, a Traffic Management Co-ordinator (TMCo) would be appointed by the Principal Contractor(s).
- 2.1.3 Their key responsibilities would include:
- > Managing the implementation of the approved Final CTMP;
- > Collating monitoring data and preparing a monitoring report (as outlined in Section 8);
- Supporting engagement activities on construction traffic with the local community alongside the Community Liaison Officer (CLO);
- > Regular liaison and reporting to the Applicant;
- > Sharing information with emergency and healthcare services, e.g. dates of any road closures, abnormal indivisible load (AIL) movements, etc.;
- Supporting the Applicant with highway stakeholder engagement, including early engagement with the relevant highway authorities on the timescales and potential routing for the planned AIL movements to minimise disruption; and
- > Acting as a point of contact for construction workers and sub-contractors.
- 2.1.4 A Community Liaison Officer (CLO) will be appointed by the Project, as set out in 9.21: CoCP. A key part of their role will include responsibility to adequately communicate all factors relating to the construction, including traffic and transport management, throughout construction to the community.
- 2.1.5 The CLO will be a direct point of contact within the developer organisation will be made available and communicated widely for residents and the wider community to contact for information purposes or to discuss any VE construction matters, including those pertaining to traffic management.
- 2.1.6 The number of site personnel, traffic numbers, and the construction programme will be reviewed as VE progresses. Any significant changes would be discussed and agreed with both Essex County Council and National Highways (if appropriate). Regular meetings, where required, may be organised for monitoring purposes.
- 2.1.7 The Applicant is committed to putting in place effective communication channels, and to record and act on comments, complaints or queries during the construction of VE, such as on the measures included in the Final CTMP, raised by interested parties.

2.2 LOCAL RESIDENTS

- 2.2.1 The Project will engage with local residents and will manage public relations with local residents and businesses that will be affected by the construction and related traffic. The CLO will undertake proactive community liaison, keeping local residents informed of the type and timing of works involved, including traffic management measures to be implemented and any planned temporary road closures. This will be undertaken through a range of methods which could include emails, posters, notices, exhibitions, letters, newsletters, website updates and parish council meetings and would take account of the local demographic of the area in terms of the suitability of the most suitable engagement method.
- 2.2.2 Communication and notices will also be provided to the relevant parish councils as well as Tendring District Council and Essex County Council to ensure that community representatives are aware of construction activity and can liaise with community members.

2.3 ABNORMAL INDIVIDIBLE LOADS

- 2.3.1 Two types of AlLs would be required to be transported for the construction of the Project:
 - Cable Drums, and construction equipment on a large low loader (non-Special Order vehicles); and
 - > Transformers and shunt reactors for the OnSS (Special Order vehicles)
- 2.3.2 The cable drums and construction equipment would be delivered to access points along the Onshore ECC and may require an escort/pilot vehicle on some sections of the local construction access routes, to be discussed and agreed with the relevant highway authorities before such traffic movements commence. The quantities of these are included in the HGV numbers.
- 2.3.3 The delivery of Special Order AlLs are expected to be:
 - > 2 to 4 Transformers on 20-24 axle frame trailers; and
 - > 8 to 12 items of Oversized indivisible plant such as shunt reactors and static synchronous compensator (STATCOM).
- 2.3.4 Whilst the Special Order AILs will be small in number, they would be of a size that may require temporary works to accommodate the loads. All temporary works such as removal of street furniture, will be subject to discussion with the relevant local highway authorities, NH and Essex Police and form part of a delivery plan for each AIL, which will also consider:
 - > Locations of laybys or other such holding areas;
 - > The avoidance ferry departure times including any delayed departures; and
 - > Potential diversion routes.
- 2.3.5 Each delivery will be planned in advance, escorted, and managed such that any impacts are minimised. Such arrangements will be procured through standard processes at the appropriate time, as set out further below.
- 2.3.6 The Police, Fire and Ambulance service (defined as the blue light services) and other key stakeholders would be given written notification of AIL deliveries and kept fully informed throughout the delivery period.

- 2.3.7 The following email address at Essex Police would be used abloads@essex.police.uk in relation to the planned AIL deliveries.
- 2.3.8 The movement of AILs will be outside of the restrictions (routes and times) contained within the CTMP and will be subject to separate agreement with the relevant highway authorities and police through the Electronic Service Delivery for Abnormal Loads (ESDAL) system. This includes notification to stakeholders and advising of timings, routes and any asset protection measures (with the relevant highway authorities, police and Network Rail) appropriate to the type of load. This would be a minimum of 2 days for loads up to 80 tonnes and a minimum of 5 days for loads over 80 tonnes, not including a Saturday, a Sunday or a public holiday.
- 2.3.9 Should delivery of AILs or other construction traffic activities, be required outside of the core working hours (see 9.21: CoCP, Section 3.2) would be subject to separate agreement with the relevant highway authorities and police through the ESDAL system.
- 2.3.10 The Project will keep residents fully informed of details in relation to the timing of the delivery of AlLs. Ahead of any delivery, the CLO will communicate, where appropriate, information via local notice boards, email updates to stakeholders and those who have registered for updates via the website. The communication could also include notifications issued to the local press and, where appropriate, notification letters to local residents and businesses that may be impacted.
- 2.3.11 Notification letters will contain the following information:
 - > Name and contact details of relevant Applicant personnel;
 - > Estimated commencement date for deliveries;
- > Duration of delivery period;
- > Estimated times of deliveries:
- Any details of the route (if appropriate); and
- > Request to keep the highway clear of parked cars during the delivery period (if appropriate)
- 2.3.12 The Project will make every effort to work with local stakeholders to ensure disruption caused by AIL deliveries is minimised. Groups of particular relevance include, but are not limited to;
 - > Schools;
 - > Local bus operators, including school bus operators;
 - Local doctors, surgeries or health providers;
 - > Holiday accommodation developments;
 - > Royal Mail;
 - Leisure Centres; and
 - Churches.
- 2.3.13 Contact with these service providers will be made in advance of planned AIL deliveries.

2.4 BLUE LIGHT SERVICES

2.4.1 The Police, Fire and Ambulance service (defined as the 'Blue Light Services') will be given written notice of:

- Planned temporary lane or road closures required to install the export cable across roads where Horizontal Directional Drilling (HDD) or other trenchless technique is not being used (timescale for the notification to be agreed with Essex County Council); and
- > AIL deliveries and kept fully informed throughout the delivery period (through the ESDAL system described in Paragraph 2.3.8).

Engagement on any Police escorts required to support the delivery of the AILs should be undertaken as early as practicable, due to the limited specialist resources to support AIL movements.

2.5 PLANNED ENGINEERING WORKS

2.5.1 The Project will work with Essex County Council and NH to identify any planned engineering works that conflict with the delivery route times. Discussions will then be made to minimise disruption to the local community and the planned engineering works.

2.6 COMMUNITY EVENTS

2.6.1 The CLO will engage with key stakeholders and the local community to keep informed of any planned community events, so that the Project can avoid these wherever practicable when scheduling any construction activities that may cause disruption and AIL deliveries.

3 KEY CONSTRUCTION DETAILS AND ON-SITE CONTROL MEASURES

- 3.1.1 In accordance with good construction practice, opportunities will be sought to reduce the overall number of HGV movements by consolidating loads and using the largest feasible vehicles, taking into account any other environmental constraints that may affect HGV routes and the size of vehicle.
- 3.1.2 Also, VE will plan for maintaining stockpiles of critical path items such as aggregate. These stockpiles will facilitate advanced planning of deliveries, maximise payloads, and enable a smooth import profile to be maintained.

3.2 CONSTRUCTION SITE ACCESS AND TEMPORARY CONSTUCTION COMPOUNDS

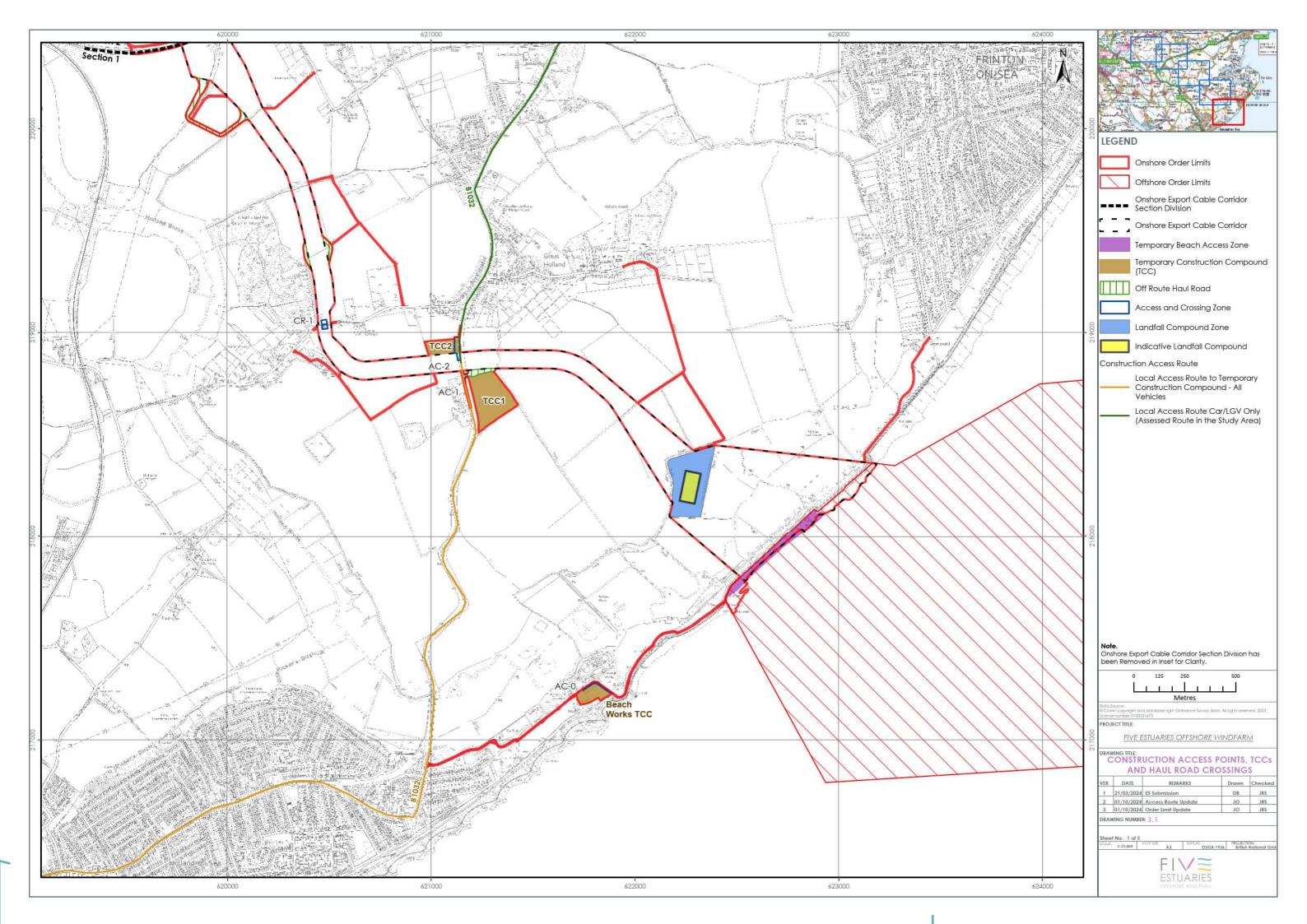
- 3.2.1 The proposed construction access locations and TCCs are set out in Table 3.1. These are also found in Figure 3.1. The construction accesses would also be used by vehicles associated with the construction of NF OWF, should the two projects be constructed in build-option 1, as described in Paragraph 1.3.5. In build option 2 there may be some overlap if the project's delivery times are close together however this will be less that in scenario 1.
- 3.2.2 General Arrangement (GA) drawings of the construction access designs are provided in Appendix 1, prepared by:
 - > Royal Haskoning DHV (RHDHV) for AC-1 to AC-8; and
 - Mott MacDonald for AC-9 to AC-12.
- 3.2.3 The designs have been based on the largest vehicle type required to utilise the access (with the exception of a large low loader, which is an AIL (non-special order), which would use the accesses when there would be no other construction vehicle movements and use the whole width of the access if required).
- 3.2.4 Visibility splays are based on 85th percentile speeds and the criteria in the Design Manual for Roads and Bridge (DMRB) (Section 3 of CD 123 Geometric design of at-grade priority and signal-controlled junctions and Table 2.10 of CD 109 Highway Link Design) for speeds above 37mph, or Manual for Streets (MfS) Table 7.1 for speeds of 37mph or lower.
- 3.2.5 The construction access designs have been subject to a Stage 1 Road Safety Audit (RSA) (see Appendix R of Volume 6, Part 6, Annex 8.2: Transport Assessment Part 5). RHDV and Mott Macdonald responded to the Stage 1 RSA in Designer's Response Reports (see Appendix S of Volume 6, Part 6, Annex 8.2: Transport Assessment Part 5).
- 3.2.6 The construction access designs have been discussed and agreed with Essex County Council; however, the final location, layout and control measures that will be required would be discussed and agreed with Essex County Council through detailed design investigations post DCO consent.
 - The Final CTMP(s) will include details of such measures which will include the following:
 - Additional temporary signage to warn road users of heavy plant turning in the highway;
 - > Additional temporary traffic calming measures for highway users at the access point;
 - > Pedestrian arrangements at the access point;
 - > Extent of road-sweeping activity in vicinity of access point; and

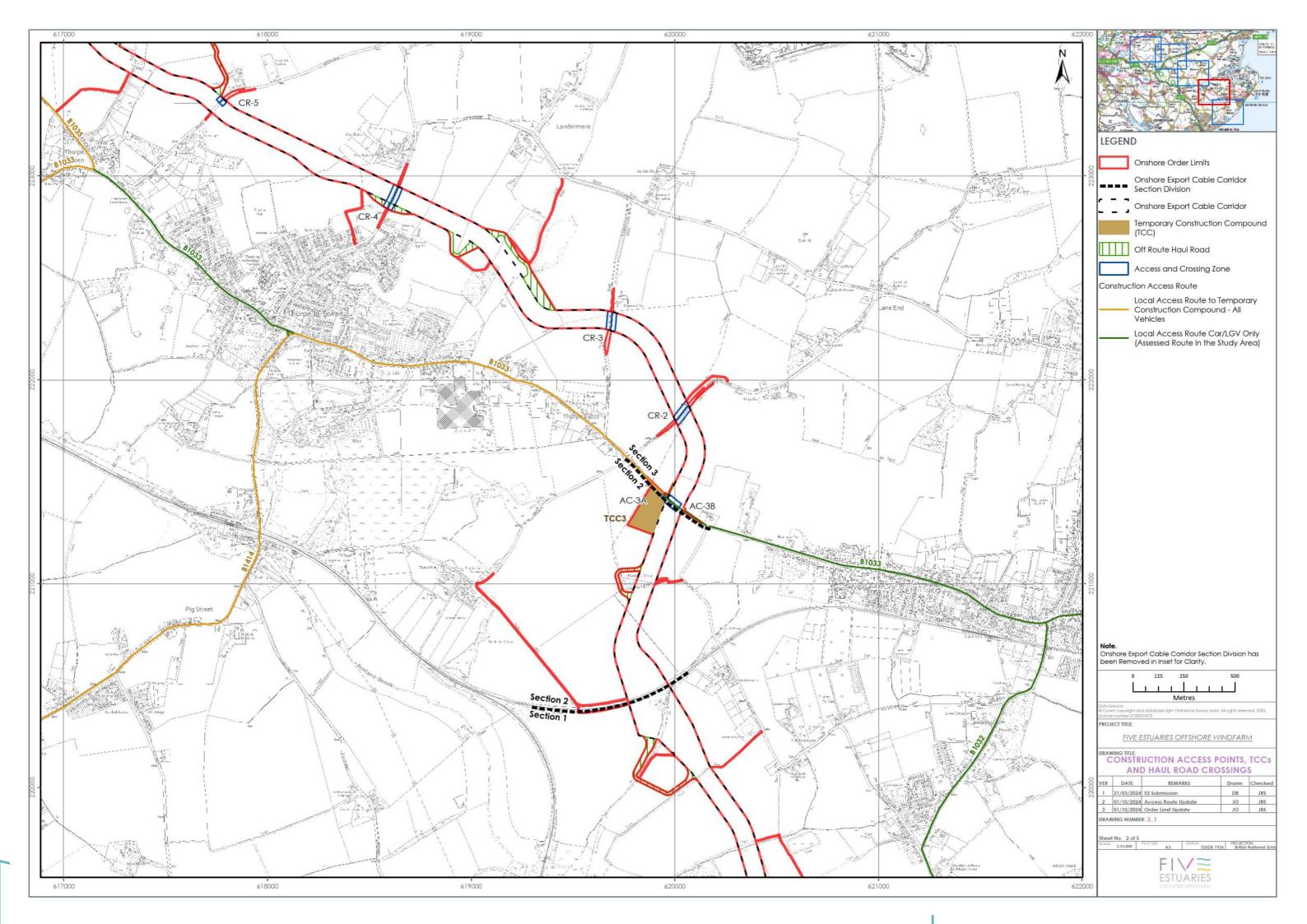
- > Frequency of monitoring of highway condition.
- 3.2.7 Based on discussions with Essex County Council the following known traffic management measures have been identified:
 - > Temporary speed limit reduction to 40mph on the B1035 Tendring Road/ B1035 Thorpe Road/ Whitehall Lane/ Swan Lane in the vicinity of AC-4 and AC-5;
 - Temporary speed limit reduction to 40mph on The B1033 Thorpe Road in the vicinity of AC-3A/ AC-3B:
 - Temporary speed limit reduction to 40mph on the B1035 Clacton Road in the vicinity of AC-8A/ AC-8B;
- > Temporary speed limit reduction to 40mph on Bentley Road between the A120 and AC-10/ AC-11: and
- > Temporary speed limit reduction to 30mph on Ardleigh Road in the vicinity of AC-12/12A and AC-13.
- 3.2.8 All traffic management measures adopted will be in accordance with Traffic Signs Manual, Chapter 8, Traffic Safety Measures and Signs for Road Works and Temporary Situations (Department for Transport (DfT), 2009).
- 3.2.9 Any required road space booking for the construction of the accesses will be approved by the local highway authority i.e. via Essex County Council's permitting system.
- 3.2.10 TCCs will be constructed to provide site facilities for the workforce and also allow plant and materials to be stored safely and securely near the works. Should VE and NF OWF be built out simultaneously, there would be a TCC for each project within the TCC area defined.
- 3.2.11 Each TCC will provide the following:
 - Laydown areas;
 - > Car parking for small to medium vehicles;
 - Parking and unloading areas for HGVs;
 - Waste storage facilities; and
 - > Welfare facilities.
- 3.2.12 Each TCC located at the key construction sites will provide similar facilities, though with greater provision for car parking and HGV unloading areas where appropriate. In addition, they may include offices which will not only serve the adjoining construction activities but also as an administration area for the cable route.
- 3.2.13 All TCCs will have sufficient areas available at all times for all vehicles to enter in a forward gear and to be accepted directly.

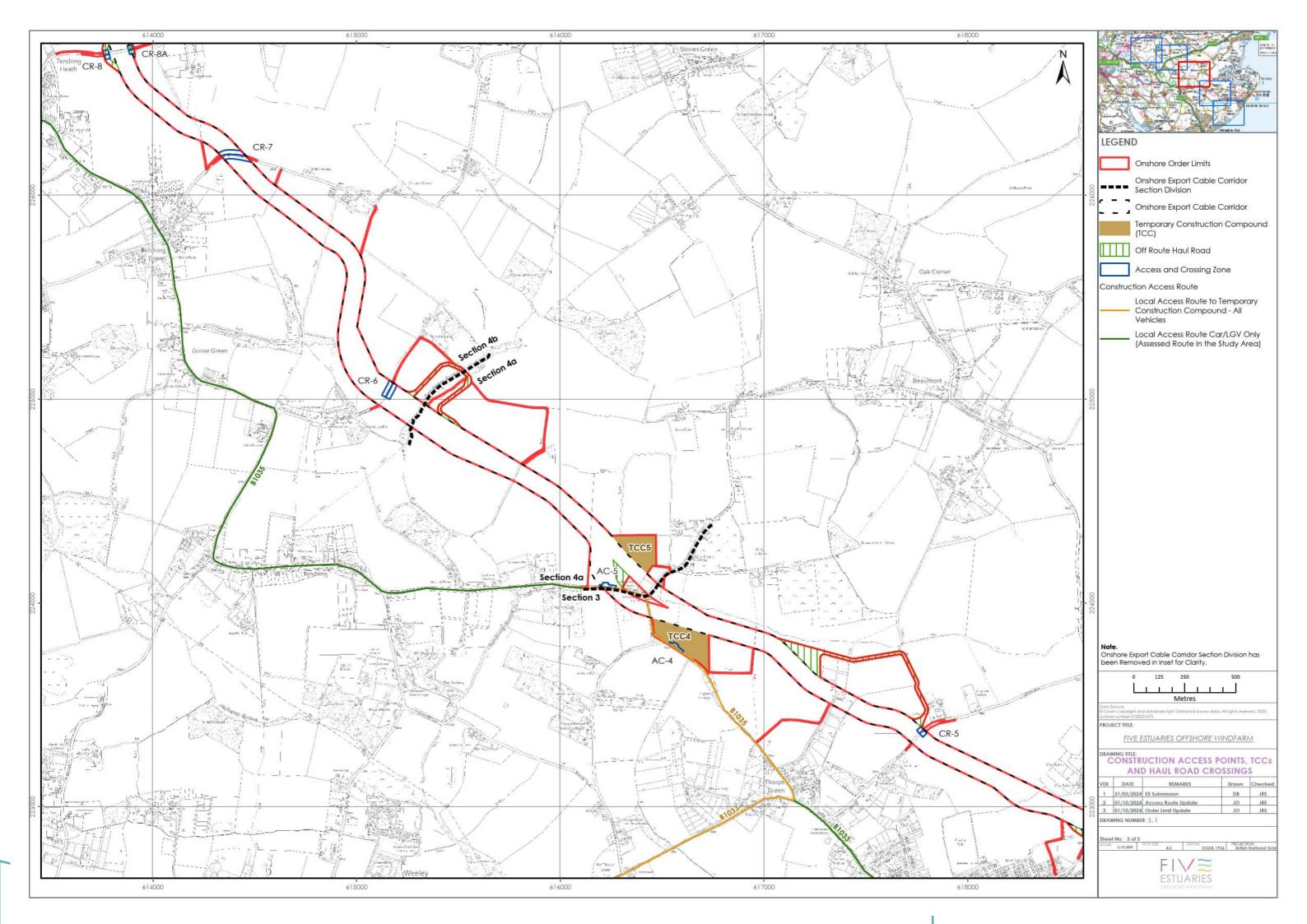
Table 3.1: Construction access points and TCCs

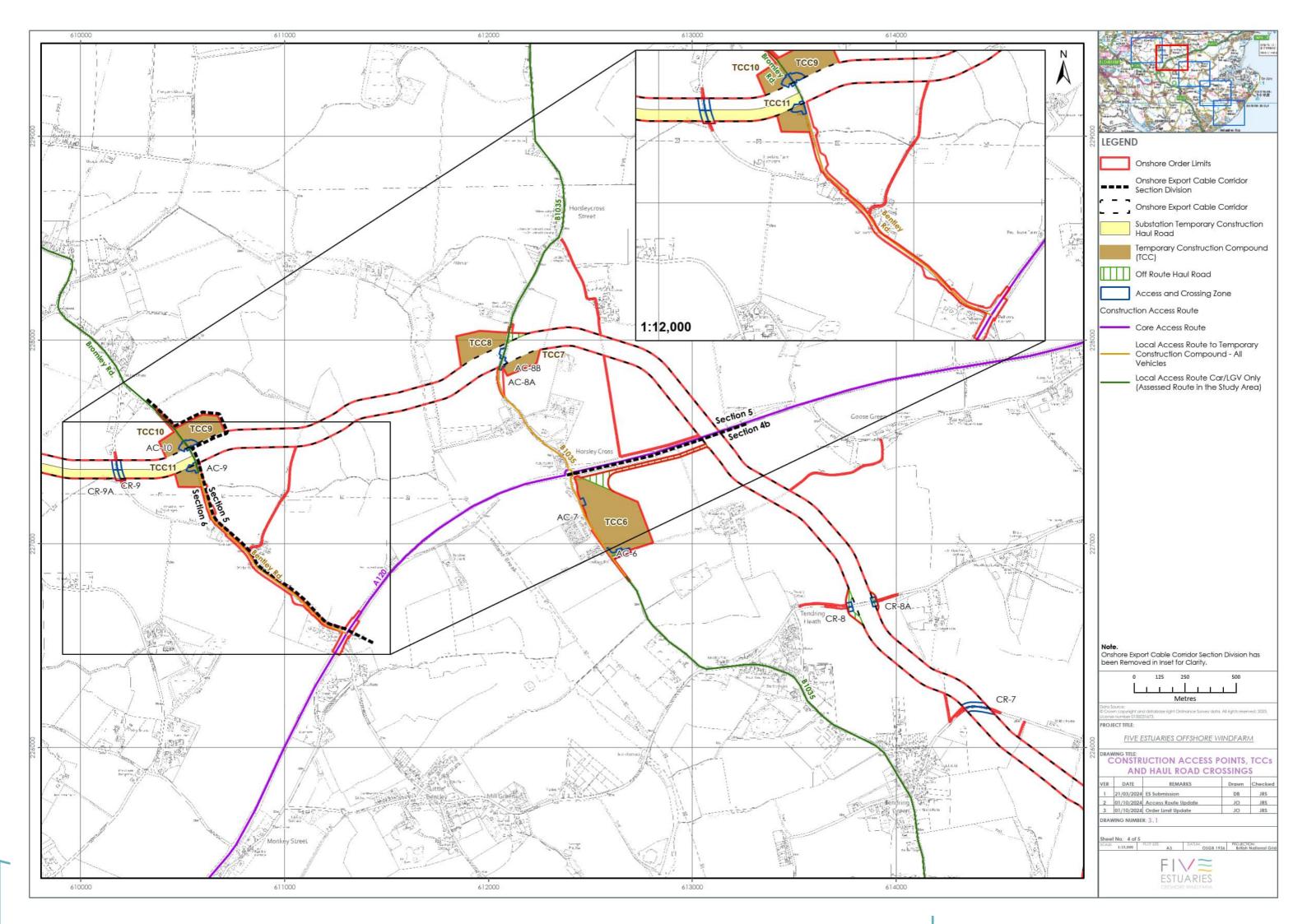
Access/TCC	Highway link	Details
AC-0	Holland Haven Country Park access/ Manor Way	For access to the beach for personnel to monitor HDD (or other trenchless technique) progress. This access is shared with Anglian Water and the Port of London Authority, liaison with both parties will be required on

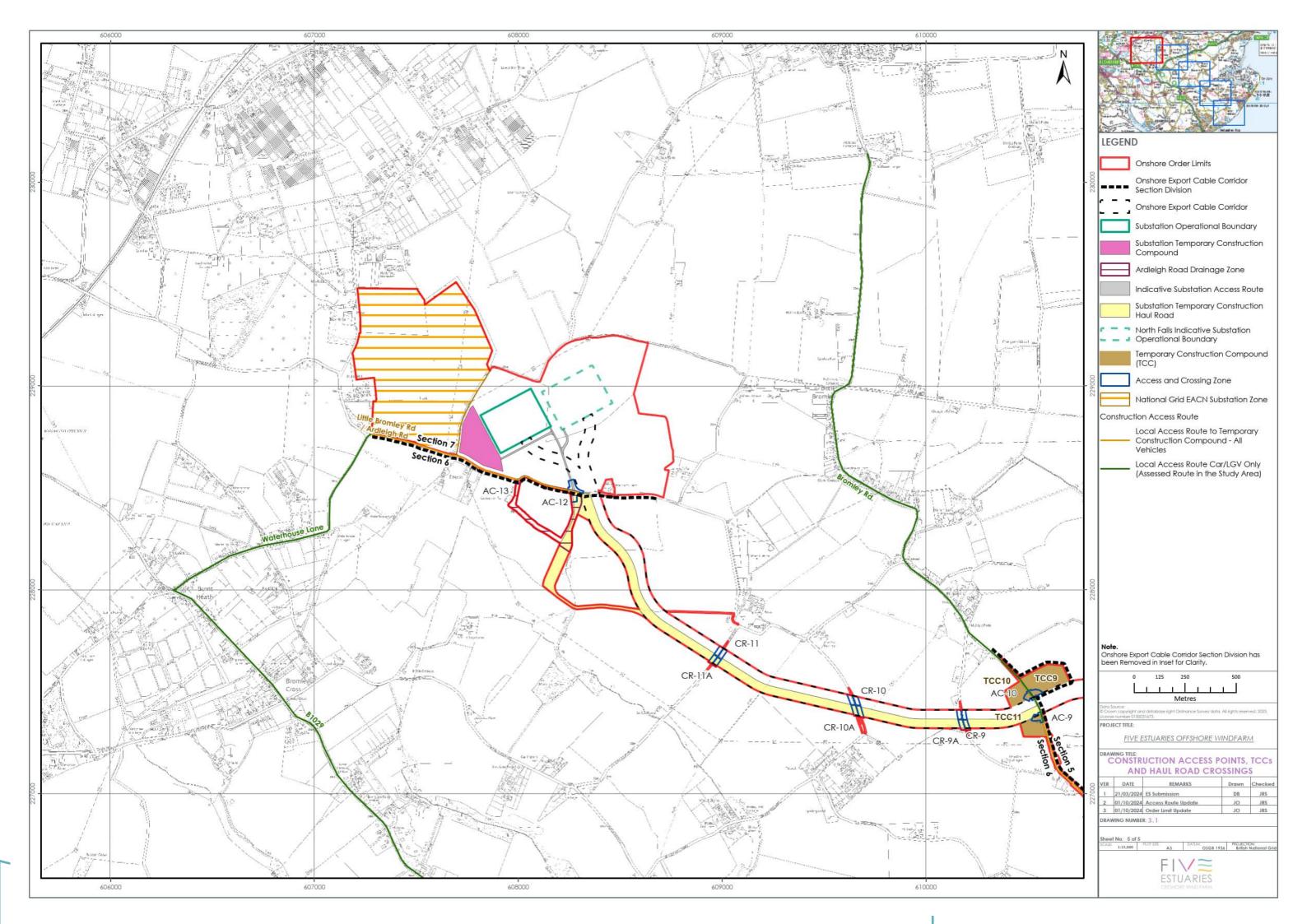
Access/TCC	Highway link	Details
		any management measures that restrict vehicular access.
AC-1/TCC 1	B1032 Clacton Road	For access to Onshore ECC Route Section 1, between landfall and the Great Eastern Mainline Spur
AC-2/TCC 2	B1032 Clacton Road	For access to Onshore ECC Route Section 1, between landfall and the Great Eastern Mainline Spur
AC-3A/TCC 3	B1033 Thorpe Road	For access to Onshore ECC Route Section 2 between the Great Eastern Mainline Spur and the B1033 Thorpe Road
AC-3B	B1033 Thorpe Road	For access to Onshore ECC Route Section 3 between the B1033 Thorpe Road and the B1035 Tendring Road
AC-4/ TCC 4	B1035	For access to Onshore ECC Route Section 3 between the B1033 Thorpe Road and the B1035 Tendring Road
AC-5/TCC 5	B1035 Thorpe Road	For access to Onshore ECC Route Section 4a between B1035 Tendring Road and Tendring Brook
AC-6/TCC 6	B1035 south of A120	For access to Onshore ECC Route Section 4b between the A120 and Tendring Brook
AC-7/TCC 6	B1035 south of A120	For access to Onshore ECC Route Section 4b between the A120 and Tendring Brook
AC-8A/TCC 7	B1035 Clacton Road	For access to Onshore ECC Route Section 5 between the B1035 Clacton Road and the A120
AC-8B/TCC 8	B1035 Clacton Road	For access to Onshore ECC Route Section 5 between the B1035 Clacton Road and Bentley Road
AC-9/TCC 9	Bentley Road	For access to Onshore ECC Route Section 5 between the B1035 Clacton Road and Bentley Road
AC-10/TCC 9	Bentley Road	For access to Onshore ECC Route Section 6/7, the OnSS and 400kV route
AC-11/TCC 10	Bentley Road	For access to Onshore ECC Route Section 6/7, the OnSS and 400kV route
AC-12/12A/ OnSS TCC	Ardleigh Road	Could be used during periods of construction works set up or close down and access to EACN Substation Compound and 400kV connection works. Specific measures should be considered to manage any HGV traffic on Ardleigh Road.
AC-13	Ardleigh Road	For access to Ardleigh Road OnSS drainage zone











3.3 PARKING

3.3.1 Parking areas located at the TCCs will have safe and secure barriers to segregate all personnel from site plant and vehicle routes. All signage within designated car parking areas must be followed, with no vehicles parked in a way which restricts either vision or access.

3.4 ON-SITE HAUL ROADS

- 3.4.1 Onsite haul roads will be monitored on a daily basis to identify any deterioration of condition. Non-emergency remedial works to the track will be carried out at times outside peak times of usage, significant emergency repairs will be undertaken immediately, and adjacent haul road sections will be restricted from use as required to safely accommodate works.
- 3.4.2 All routes will be monitored for dust and control or suppression methods will be deployed as appropriate through the use of dust suppression water bowsers.

3.5 ROAD CROSSING

CONSTRUCTION VEHICLES

- 3.5.1 As a primary control measure, contractors will be required to minimise travel along the public highway between different sections of the haul road. This will be achieved where possible through the construction of haul road crossings with entry and exit points directly opposite each other.
- 3.5.2 Where such access points are required to form crossings of the public highway, suitable measures will be incorporated in the access designs to ensure that the construction traffic crossing the highway is controlled for the duration of construction of that section.
- 3.5.3 The locations identified to have a haul road crossing point are identified in Table 3.2. The haul road crossings would also be used by vehicles associated with the construction of NF OWF, should the two projects be constructed in build-option 1 as described in Paragraph 1.3.5.
- 3.5.4 Road crossings will require control measures to ensure safe movement of construction traffic across the public highway as well as maintaining the safety of all other highway users.
- 3.5.5 The Final CTMP(s) will include details of such measures which will include the following:
- > Additional temporary signage to warn road users of heavy plant crossing the highway;
- > Additional temporary traffic calming measures for highway users at the crossing point;
- Pedestrian arrangements at the crossing point;
- > Extent of road-sweeping activity in vicinity of access point; and
- Frequency of monitoring of highway condition.

Table 3.2: Haul Road crossing locations

Crossing	Highway link	ECC Route Section
CR-1	Little Clacton Road	1
CR-2	B1034 Sneating Hall Lane	3
CR-3	Damant's Farm Lane	3
CR-4	B1414 Landermere Road	3
CR-5	Golden Lane	4a
CR-6	Lodge Lane	4b
CR-7	Wolves Hall Lane	4b
CR-8A and CR-8B	Stones Green Road	4b
CR-9A and CR-9B	Payne's Lane	6
CR-10A and CR-10B	Spratts Lane	6
CR-11A and CR-11B	Barlon Road	6
AC-12	Ardleigh Road	6/ 7

- 3.5.6 General Arrangement (GA) drawings of the haul road crossings are provided in Appendix 1, prepared by Royal Haskoning DHV (RHDHV). AC-12, which would also be a crossing for construction vehicles for VE and NF OWF) has been designed by Mott MacDonald and could be used for vehicles associated with the construction of the EACN Substation.
- 3.5.7 The haul road crossing designs have been subject to a Stage 1 Road Safety Audit (RSA) (see Appendix R of Volume 6, Part 6, Annex 8.2: Transport Assessment Part 5). RHDV and Mott Macdonald responded to the Stage 1 RSA in Designer's Response Reports (see Appendix S of Volume 6, Part 6, Annex 8.2: Transport Assessment Part 5).
- 3.5.8 The haul road crossing designs have been discussed and agreed with Essex County Council in principle; however, the final location, layout and control measures that will be required at the haul road crossings would be discussed and agreed with Essex County Council through detailed design investigations post DCO consent, under the Final CTMP(s) and the protective provisions.
- 3.5.9 Based on discussions with Essex County Council the following known traffic management measure has been identified:
- > Temporary speed limit reduction to 40mph or temporary speed limit to 40mph and temporary traffic signal operation on Golden Lane in the vicinity of CR-5.
- 3.5.10 All traffic management measures adopted will be in accordance with Traffic Signs Manual, Chapter 8, Traffic Safety Measures and Signs for Road Works and Temporary Situations (Department for Transport (DfT), 2009).
- 3.5.11 Any required road space booking for the construction of the haul road crossing works will be approved by the local highway authority i.e. via Essex County Council's permitting system.

CABLE ROUTE

- 3.5.12 The Onshore ECC will cross a number of public roads for which trenchless crossing techniques may be used to install the cable ducting. Therefore, no management measures for the control of traffic will be required for this aspect of the works.
- 3.5.13 Open trenching will be used for installing the cable under some public roads, which will require either a temporary lane closure or a full temporary road closure whilst these works are undertaken.

TEMPORARY ROAD CLOSURES

- 3.5.14 For roads where it is not possible to keep one lane open in order to maintain a safe separation between the construction works and travelling public there will be a requirement for a temporary closure to through traffic.
- 3.5.15 The final design of any temporary road closure would be developed by the appointed contractor in consultation with Essex County Council as the local highway authority under Part 4 of Article 14 of the DCO.
- 3.5.16 For roads where there is an alternative route option, signage advising of the diversion would be provided.
- 3.5.17 For minor roads that provide access to a small number of users without alternative access options, to ensure that access can be maintained, it may be possible to use steel plates to allow local access over the open trenches.
- 3.5.18 The Principal Contractor(s) will endeavour to programme temporary road closures, if required, outside of peak agricultural activity.

3.6 ON-SITE TRAFFIC SAFETY

- 3.6.1 All traffic visiting construction sites will be required to report to site security where they will obtain clear instructions, before further movement is acceptable. If applicable an induction will be completed, vehicle permits will be issued, and the Site rules & emergency procedure will be explained.
- 3.6.2 The site speed limit shall be 15 mph on all internal site roads / hauls roads and must be adhered to at all times. Appropriate speed limits within the TCCs will be set. Speed limit signs shall be installed on all haul roads and site access roads.
- 3.6.3 All traffic will use the signed site directions and all drivers will accommodate other haul road users in a courteous manner. Reversing (other than to park) within the compound areas is not permitted.
- 3.6.4 Full time site traffic (vehicles/plant situated on-site for majority of construction phase) that requires re-fuelling will follow the instructions supplied at their induction and also the guidelines within their method statement for the works.
- 3.6.5 Heavy site traffic will be equipped with audible reversing warning with additional visual aids e.g. reversing cameras, mirrors utilised on all plant. All safety features must be inspected on a daily basis with faults immediately reported to the Foreman Fitter who will assess and repair any damage to the plant. Site management will ensure that all loads are covered fully to limit the loss of material in transit.

3.7 VEHICLE CLEANING

3.7.1 Measures to ensure materials are not transferred onto the highway, such as a wheel and body wash, will be operated at each construction access, Road cleaning will take place when required to remove any deposits that are carried from the site.

3.8 BANKS PERSON

3.8.1 A banks person will be used to direct construction vehicles in and out of a VE construction access, where required, in conjunction with any other traffic management measures.

3.9 PUBLIC ACCESS MANAGEMENT

- 3.9.1 The specific location and measures for ensuring the safety of users of the Public Rights of Way (PRoW) that cross or are adjacent to the proposed construction works are set out in the Outline Public Access Management Plan (Outline PAMP) 9.25: Outline PAMP.
- 3.9.2 The Final CTMP(s) will set out information on how HGV drivers will be briefed before arriving at a construction access or TCC, and any considerations for other road users, particularly Non-Motorised Users (NMU). Signs shall be provided at the exits at construction accesses or TCCs to remind drivers of the dangers to NMUs.

4 HGV NUMBERS, VEHICLE ROUTEING AND OFF-SITE CONTROL MEASURES

4.1 HGV NUMBERS

- 4.1.1 The peak daily HGV trips that have been assessed per link on the proposed construction access routes in Volume 6, Part 3, Chapter 8: Traffic and Transport for VE are summarised in Appendix 2. These appendices form the basis of a monitoring strategy set out later in Section 8 of this Outline CTMP.
- 4.1.2 To ensure compliance with the assessed worst-case scenario for HGV trips (within Appendix 2) for VE, a booking system for deliveries would be established by the Principal Contractor to monitor HGVs at supply chain source and point of delivery. The booking system would enable a daily profile of deliveries to be maintained, allow the Principal Contractor(s) to ensure that the required deliveries are forecast and planned and also serves to inform route compliance.
- 4.1.3 Should VE and NF OWF construction programmes overlap, the TMCo will liaise with NF OWF to establish their potential forward programme for deliveries and the Final CTMP(s) will set out any additional controls to minimise the potential impacts of HGVs movements associated with both projects.
- 4.1.4 To provide the relevant highway authorities with an indication of when peak deliveries may occur within the construction programme, the Final CTMP(s) would also be updated to include the indicative profiles for monthly deliveries per each road link for the construction duration.

4.2 HGV TIMINGS

DELIVERY PERIOD

- 4.2.1 Section 3.2 of 9.21: CoCP outlines that construction work for the onshore works must only take place between 07:00 hours and 19:00 hours Monday to Saturdays, with no activity on Sundays and bank holidays.
- 4.2.2 It is therefore proposed that HGVs would not be permitted to arrive at site before 07:00 or depart after 19:00 hours (Monday to Saturday). This would however mean that HGVs could be travelling to or from the site outside of the working hours. Any HGVs which are projected to arrive on site prior to 07:00 would be required to park at an appropriate lorry park, services and other designated overnight parking locations until they can complete their journey within appropriate restrictions. These locations would be agreed with the relevant highway authorities prior to the commencement of construction and would be communicated to drivers within their delivery instructions.
- 4.2.3 9.21: CoCP includes a list of limited circumstances where onshore works could occur outside of the working hours (07:00 to 19:00 Monday to Saturday) but notes that save for emergency works, full details (including but not limited to type of activity, vehicle movements and type, timing and duration and any proposed mitigation) of all essential construction activities undertaken outside of the consented construction hours must be agreed with the relevant planning authority in writing in advance, and must be carried out within the agreed time. The TMCo would ensure this prior agreement with discharging authority was reached for any such out of hours onshore works, and that works were undertaken within the agreed time, utilising the same methods as outlined above for the monitoring and management of the standard working hours.

A120 EAST OF HORSLEY CROSS ROUNDABOUT

4.2.4 Should, once appointed, the Principal Contractor(s) identify the requirement for vehicle movements through the A120/ Parkeston Road or A120/ B1352 roundabouts that would result in greater than 30 two-way vehicle movements at either junction, during a highway network peak hour² the Principal Contractor(s) will discuss with NH the requirement for any supporting junction capacity assessments and/ or the need for mitigating measures, before 30 two-way vehicle movements can be permitted. This would be undertaken as part of the preparation and approval of the Final CTMP(s) prior to the commencement of construction. This may also be applicable all affected SRN junctions in the study area (the A120 from A12 Junction 29 to Parkeston Roundabout), should the forecast number of vehicle movements be greater than assessed.

4.3 VEHICLE ROUTEING

ACCESS ROUTES FOR HGVS AND WORKFORCE VEHICLES

4.3.1 The anticipated routes for both construction HGVs and construction workforce traffic (cars/ LGVs) to TCCs or construction access points are provided in Table 4.1 below and illustrated in Figure 4.1.

Table 4.1: Construction access routes

Construction Access	ECC Route Section	Access Route
	1	A12, A120, A133, B1027 Valley Road/ Frinton Road, B1032 Clacton Road (Holland Haven Country Park access/ Manor Way for AC-0)
AC-0 / AC-1/ TCC 1/ AC-2/		or
TCC 2		A120, U-turn at A12 J29, A120, A133, B1027 Valley Road/ Frinton Road, B1032 Clacton Road (Holland Haven Country Park access/ Manor Way for AC- 0)
AC-3A/ TCC 3/ AC-3B	2/3	A12, A120, A133, B1033, B1441 Weeley Road/ Clacton Road, B1414 Harwich Road/ Station Road, B1033 Frinton Road/ Thorpe Road

² Any hour period between 07:00 and 09:00 or 16:15 and 18:15

Construction Access	ECC Route Section	Access Route
		or
		A120, U-turn at A12 J29, A120, A133, B1033, B1441 Weeley Road/ Clacton Road, B1414 Harwich Road/ Station Road, B1033 Frinton Road/ Thorpe Road
	3	A12, A120, A133, B1033 Colchester Road, B1035 Tendring Road
AC-4/TCC 4		or
		A120, U-turn at A12 J29, A120, A133, B1033 Colchester Road, B1035 Tendring Road
	4a	A12, A120, A133, B1033 Colchester Road, B1035 Tendring Road, B1035 Thorpe Road
AC-5/TCC 5		or
		A120, U-turn at A12 J29, A120, A133, B1033 Colchester Road, B1035 Tendring Road, B1035 Thorpe Road
AC-6/ AC-7/ TCC 6	4b	A12, A120, B1035
		or
		A120, B1035
	5	A12, A120, B1035 Clacton Road
AC-8A/ TCC 7/ AC-8B/ TCC 8		or
		A120, B1035 Clacton Road
AO 40/TOC 2	5	A12, A120, Bentley Road
AC-10/TCC 9		or

Construction Access	ECC Route Section	Access Route
		A120, U-turn at Harwich Road roundabout, Bentley Road
AC-9/ AC-11/ TCC 10/ TCC 11/ AC-12/12A/ OnSS TCC/ AC-13 / 400kV unlicensed works	6/ 7/ 400kV Route/ OnSS	A12, A120, Bentley Road (and Ardleigh Road for access to the proposed location of the NGET EACN substation)
		A120, U-turn at Harwich Road roundabout, Bentley Road (and Ardleigh Road for access to the proposed location of the NGET EACN substation)

ACCESS ROUTES FOR WORKFORCE VEHICLES ONLY

- 4.3.2 The additional anticipated routes (assessed in Volume 6, Part 3, Chapter 8: Traffic and Transport). for construction workforce traffic (cars/ LGVs only) to access TCCs or construction access points are set out below and illustrated in Figure 4.1:
 - > B1035 via Tendring, Goose Green and Tendring Green;
 - > B1033 via Kirby Cross;
 - B1032 via Great Holland;
 - > B1027 between Colchester and the A133);
 - > B1029 between the B1027 and Waterhouse Lane;
 - > A133 between Colchester and the A133;
 - > Waterhouse Lane;
 - > Bromley Road/ Shop Road/ Bentley Road (north of AC-9); and
 - > Progress Way/ B1441

4.4 CONTROL MEASURES

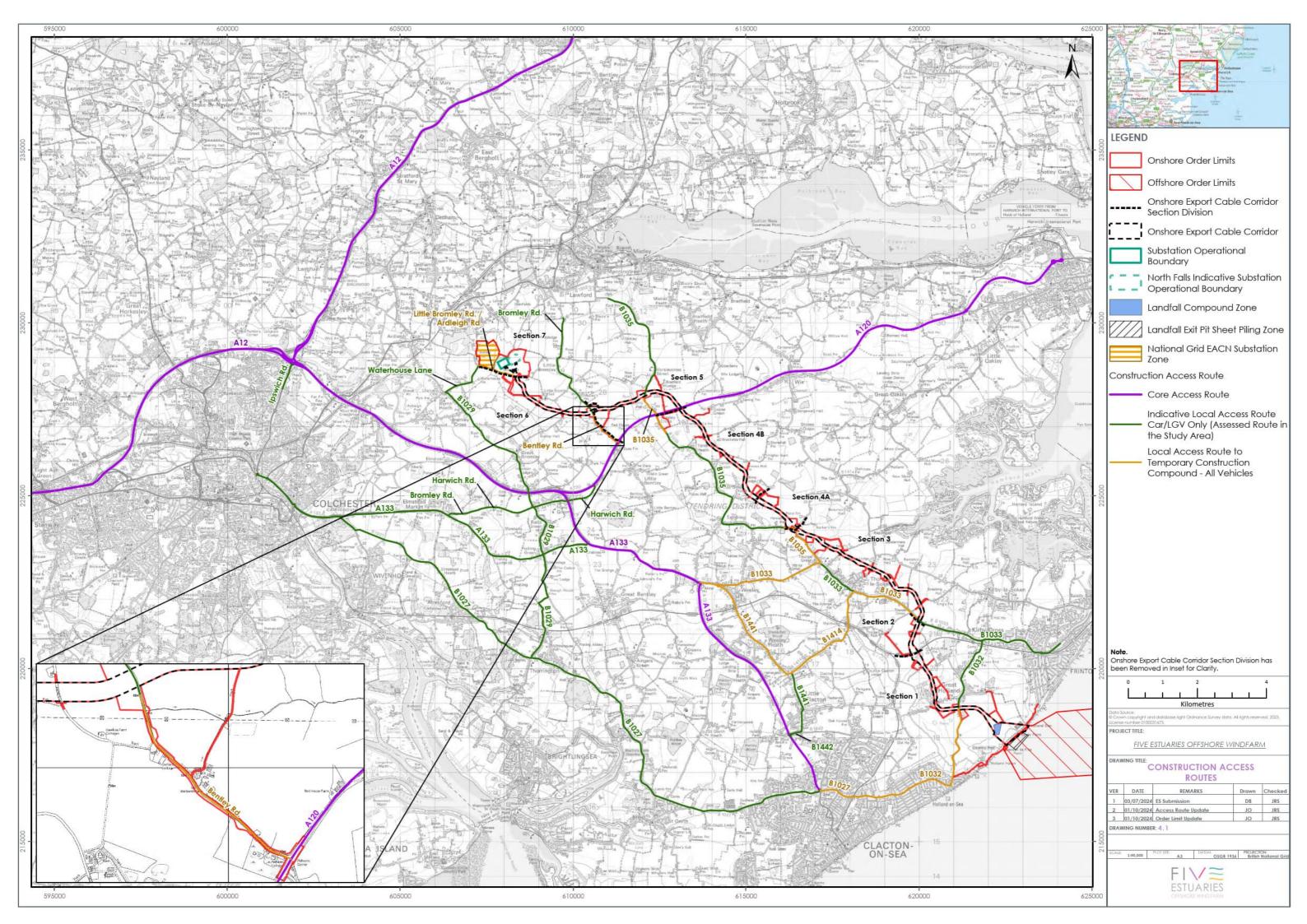
DRIVER DELIVERY PACKS

- 4.4.1 To support the strategy to control HGV routes, each driver would be issued with a delivery induction pack. This pack would include the following information:
 - > Timings, pre-booked slots;
 - Clarification of approved HGV routes, including a plan showing the delivery routes, the location of the site access and areas with road safety concerns;
 - Speed limit requirements;
 - > Details of reporting accidents and 'near misses';
 - Details of the types of locations that would not be acceptable to park on the local highway network;

- Details of appropriate lorry parks, services and other designated overnight parking locations where drivers are permitted to stop which should be used for those deliveries due to arrive at a TCC prior to 07:00 and at other times when advised to do so i.e. in the major incident scenario as referred to in Paragraphs 4.4.9 to 4.4.11;
- > A copy of the identifier to display in the vehicle window;
- > Details of any restrictions on delivery hours; and
- > Details of disciplinary measures for non-compliance (set out in Section 8.3).

ROUTEING ADHERENCE

- 4.4.2 All delivery contractors and construction staff will be instructed to use the agreed construction access routes, with compliance with the agreed CTMP for each work area of the onshore works being a condition of supply contracts and a number of measures will be implemented to ensure compliance with routeing:
- Construction access routes will have temporary signs posted along the proposed routes to site accesses prior to the commencement of construction activities, with the nature and placement of signage to be agreed with Essex County Council and NH and will be set out in the Final CTMP(s). Where multiple access points use a common road to site, signage will be clearly distinguishable between access points.
- > Signage will also be placed at the exit of construction site access points to instruct construction traffic to follow the designated route;
- The delivery routes and timings would be communicated by the Principal Contractor to all companies and/or drivers involved in the transport of materials and plant to and from site by HGV construction vehicle;
- An 'identifier' would be placed within the window of all delivery vehicles to enable residents to identify if an HGV is engaged on work on the Project and would be submitted to and approved by the relevant highway authorities as part of the Final CTMP(s);
- Data from HGVs that are fitted with monitoring devices (such as Global Positioning System (GPS) tracking) to record the routes, timing, speed of vehicles when making deliveries, will be available to assist in auditing and complaint investigation. The Principal Contractor would be required to ensure a high proportion of HGVs are fitted with GPS so that route compliance can be checked. The specific proportion of HGVs that will be required to be fitted with GPS will be defined by the Principal Contractor(s, discussed and agreed with Essex County Council as local highway authority as part of the approval of the Final CTMP(s); and
- > The registration numbers for all HGVs making deliveries would be recorded. Coupled with the HGV monitoring device data (where fitted) outlined above, this would allow a check of any reported



WALKING, CYCLING AND HORSE-RIDER (WCH) MANAGEMENT

- 4.4.4 Where reasonably practicable and where it is safe to do so, the Project will aim to maintain access for WCHs along the public highway at locations such as at construction accesses and haul road crossings.
- 4.4.5 Specific locations on the construction vehicle access routes where management measures such as warning signage may be required on the public highway will be identified in the final CTMP(s) and are likely to include: (and not limited to):
 - > Bentley Road;
 - > B1027 St. John's Road/Valley Road;
 - > The circular cycle routes promoted by Essex County Council (See Appendix N of Volume 6, Part 6, Annex 8.2: Transport Assessment Part 4);
 - > The B1033 Colchester Road at and including the roundabouts with the A133 and B1441; and
 - > The B1441 Clacton Road.

ROAD CONDITION SURVEYS

- 4.4.6 Prior to the start, and following completion, for each stage of the onshore works of the construction works, road condition surveys for access roads will be undertaken and agreed with Essex County Council. These surveys will inform any works that may be required to rectify specific damage to the road network as a direct result of construction work.
- 4.4.7 The roads to be surveyed would be discussed and agreed with Essex County Council to include in the Final CTMP(s). The Principal Contractor(s) will undertake discussions with Essex County Council regarding the method of surveying / monitoring road condition and how any impacts that can be attributed to the project can be reasonably identified. The discussions will include the potential use of road condition data that is currently collected on a regular basis by Essex County Council, as described in the Essex County Council Maintenance and Inspection Strategy (April 2022).
- 4.4.8 For the purpose of this Outline CTMP, the roads to be included have been identified as those that are used as a haul road crossing (see Table 3.2) and where the maximum increase in HGVs is forecast to be 100% or more, which would be the B1035 Tendring Road and Bentley Road. Additionally, to support the widening works on Bentley Road, a core sample survey would be required to determine existing construction due to uncertainty of the as built condition of the road and potential for minimal construction depths.

EMERGENCY PLANNING

MAJOR INCIDENTS

4.4.9 An emergency plan will be developed to address a possible major incident, that should wherever possible include use of "A" and "B" classified roads in order to gain access to or egress from the Onshore ECC TCCs or OnSS.

- 4.4.10 The CLO will establish a line of communication with Essex County Council's Emergency Planning Officer and Traffic Manager and the blue light services. If notified of a major incident obstructing the highway used by VE construction vehicles, the Principal Contractor would liaise directly with suppliers to suspend HGV deliveries along affected routes.
- 4.4.11 The Principal Contractor will liaise with Essex County Council to identify and assess alternative temporary access arrangements.

VEHICLE RECOVERY

- 4.4.12 The Principal Contractor(s) will be required to identify a local recovery service which will be used in the event of a contractor vehicle breakdown.
- 4.4.13 The recovery of any vehicle by Essex Police will be in line with appropriate legislation and the terms of the contract with Automobile Associated Developments Limited (AADL) to deliver the Vehicle Recovery Scheme. The Vehicle Recovery Liaison Officer is responsible for overseeing AADL in managing the scheme.
- 4.4.14 Any vehicle recovery co-ordinated by the Principal Contractor would ensure the service provider identified provides a service equal to or better than the AADL recovery contract to ensure additional congestion and undue costs are avoided.

PROTESTERS AND POTENTIAL DELAYS

The Principal Contractors should consider the potential for protest and any additional measures that may be required to minimise the potential of queuing on the highway in the final CTMP(s).

COORDINATION WITH OTHER DEVELOPMENTS

4.4.15 The Applicant will ensure liaison takes place by the Principal Contractor(s) with Essex County Council and NH to ensure that where construction works will take place at the same time as other developments, including NF OWF and EACN, cumulative impacts on the SRN and Local Road Network (LRN) will be minimised wherever practical.

5 LOCATION SPECIFC CONTROL MEASURES

5.1 ARDLEIGH ROAD

5.1.1 Should VE HGVs require the use of Ardleigh Road between access AC-12 to access AC-13 (for the OnSS drainage works zone) and the proposed NGET EACN Substation construction site (for 400kV grid connection works), it is proposed to use mobile traffic management measures to manage the potential for conflict between two vehicles and non-motorised users along this narrow road prior to it being widened associated with the NGET EACN Substation project.

5.1.2 These measures could include:

- Using an escort vehicle to guide construction traffic along Ardleigh Road and past oncoming traffic;
- Using 'Stop-works' signage to hold traffic back (for up to two minutes in any 15 minute period) whilst construction traffic travels along Ardleigh Road; or
- > A banksman to observe oncoming traffic on Ardleigh Road and signal to the construction traffic driver when it is clear to proceed.
- 5.1.3 Full details of the measures proposed along Ardleigh Road would be included in the relevant CTMP for that stage of works.

5.2 BENTLEY ROAD

- 5.2.1 Due to the potential traffic and transport effects related to noise on Bentley Road in the scenario where VE, NF OWF and NGET EACN Substation are constructed simultaneously, the Principal Contractor(s) will discuss potential additional traffic management measures to further minimise the effects should this scenario occur. The potential measures would be discussed and agreed and included within the final CTMP associated with the onshore substation (works 15B) so that they could be implemented in advance of any peaks in construction traffic occurring.
- 5.2.2 A specific Bentley Road Monitoring and Mitigation Plan will be prepared for inclusion in the final CTMP associated with the onshore substation (works 15B) to address this.

6 HIGHWAY IMPROVEMENTS

6.1 PROPOSALS

- 6.1.1 The following improvements are proposed at the A120/Bentley Road junction and along Bentley Road to facilitate the construction traffic of VE, and would also be required for NF OWF and EACN):
 - A120/Bentley Road junction improvement widening of the carriageway and the acceleration taper for merging vehicles onto the A120 (see Appendix X of Volume 6, Part 6: Annex 8.2: Transport Assessment Part 6) A swept path analysis of a maximum length legal articulated vehicle at the A120/Bentley junction is provided in Appendix 3;
 - Widening of Bentley Road to between 6.0 and 6.75m between the A120 and the VE construction accesses on Bentley Road (see Appendix X of Volume 6, Part 6: Transport Assessment Part 6); and
 - > Provision of a temporary 40mph speed limit along Bentley Road from the junction with the A120.
- 6.1.2 The Order Limits will also include land to construct a temporary segregated Non-Motorised User (NMU) path along Bentley Road.

6.2 TRAFFIC MANAGEMENT

A120/ BENTLEY ROAD JUNCTION

- 6.2.1 Lane narrowing of the A120 eastbound carriageway will be required for the installation of the merge taper at the junction and the carriageway widening.
- 6.2.2 The management of the delivery of any works on the A120 at the Bentley Road junction will be approved by the maintaining authority of the A120 i.e. NH.

BENTLEY ROAD WIDENING

- 6.2.3 To complete the widening works along Bentley Road, the preference, would be to use temporary traffic signals with shuttle working through the works. Alternatively, the road may need to be temporarily closed to traffic, although access to residences would need to be retained for the duration. The final details will be confirmed in the relevant CTMP and subject to agreement with Essex County Council.
- 6.2.4 Should a temporary road closure be required, which would be avoided as far as practicable, a signed diversion route(s) would be identified. The potential options for temporary diversion routes, which would need to be discussed and agreed with Essex County Council prior to the widening works being undertaken, are:
 - Shop Road, Bromley Road, Dead Lane and the B1035 to the Horsley Cross roundabout;
- > Shop Road, Bentley Road, Church Road, Spratts Lane, Badley Hall Road, B1029, Harwich Road to the A120/ Harwich Road roundabout; and
- > Shop Road, Bentley Road, Church Road, Spratts Lane, Hilliards Road and Park Road to the A120/ Park Road junction.
- 6.2.5 The management of the delivery of any works on Bentley Road will be approved by the local highway authority i.e. via Essex County Council's permitting system.

6.3 ROADWORKS COMMUNICATION

The Principal Contractor(s) will investigate the use of the One Network (https://uk.one.network/communicate) to communicate live road closure and traffic management updates to Google and Apple Maps and major sat-nav services.

7 ABNORMAL INVISIBLE LOADS (AILS)

7.1 CABLE DRUM AND CONSTRUCITON EQUIPMENT DELIVERIES

- 7.1.1 Based on the largest low loader anticipated, a series of swept path analysis drawings have been prepared showing the vehicle manoeuvre at each of the junctions on the construction access vehicle routes on the highway network within the study area. These are provided in Appendix 4 and do not identify any issues.
- 7.1.2 Prior to the planned cable drum deliveries and construction equipment that requires low loaders, the Principal Contractor(s) will undertake any further review of the access routes required for the cable drum and construction equipment deliveries, such as any structures that require crossing. Any further analysis would be shared with Essex County Council to illustrate the feasibility of the deliveries and if any mitigation is required.

7.2 SPECIAL ORDER DELIVERIES

7.2.1 The construction of the onshore substation will require the delivery of a number of Special Order AlLs. These are expected to comprise transformers and reactors for the proposed OnSS.

REACTORS

7.2.2 The location that the reactors would be delivered from is unknown at this stage. An assessment of the route once identified, would be undertaken and discussed with the relevant highway authorities in advance of any notification being issued/movements.

TRANSFORMERS

7.2.3 An initial assessment of the anticipated route for the AIL deliveries between the nearest port (to accord with the NH water preferred policy), which is Harwich, and the Temporary Substation Access Haul Road from Bentley Road to Ardleigh Road has been undertaken to inform the DCO application.

7.2.4 The assumed route is:

- > Port of Harwich;
- > Parkeston Bypass;
- St Nicholas Roundabout onto the A120;
- Parkeston Roundabout on the A120;
- > A new roundabout on the A120 to be constructed to accommodate a new development;
- > B1352 Roundabout on the A120;
- > B1035 Horsley Cross Roundabout on the A120; and
- > Bentley Road.
- 7.2.5 Details of the AIL route investigations and the swept path drawings of the A120/ Bentley Road junction are provided in Appendix Y of Volume 6, Part 6, Annex 8.2: Transport Assessment – Part 6.
- 7.2.6 In terms of an initial assessment, a swept path analysis of the A120 Bentley Road junction has been undertaken, which shows the transformer delivery vehicle would need to turn into Bentley Road from the A120 east via a contraflow using the eastbound carriageway for a section of around 200m.

- 7.2.7 No modifications to the junction (other than those proposed for standard construction HGVs) would be required.
- 7.2.8 Whilst the above proposal has been agreed in principle by NH, concerns have been raised about the impact of the loading to the A120 pavement around the Wix Bypass, further discussions are required in advance of using this route to agree any pre and post condition survey requirements, additional options and mitigation measures (for example an additional mitigation option could be the temporary placement of localised steel plates or trackway to spread the load over areas of concern) may be considered during the detailed design stage, should the DCO be approved.
- 7.2.9 Once the specific transportation vehicles have been confirmed (post consent), an Abnormal Load Assessment Report (ALAR) will be prepared which will set out the key points and issues associated with the selected route for the AlLs, to verify that the route is feasible for the delivery, subject to physical and operational mitigation works agreed with NH. The ALAR will inform the traffic management measures that will need to be identified for the movement of the AlL. The ALAR will be shared with relevant stakeholders for information.

CONTROL MEASURES

- 7.2.10 The following would need to be adhered to for AIL deliveries:
 - All temporary works, such as removal of street furniture, will be subject to discussion with the relevant highway authority and form part of a delivery plan for each AIL;
 - > Prior to the movement of AlLs, public awareness is required to allow residents to plan and time their journeys to avoid disruption;
 - > The movement of AILs will be timed to avoid periods of heavy traffic flow (i.e. for those that are able to be transported during the night) to minimise disruption to the public. Specific timing restrictions imposed by the police or local authority have not been determined at this stage; local residents along the route will be informed when the AILs are travelling along the route to ensure that interaction between the local community and AIL delivery vehicles is minimised;
- > Due to the size of vehicles required to transport these loads, escorts may be required for the entire route to control oncoming and conflicting traffic.
- > AIL vehicles will be accompanied by escort vehicles. The escort vehicles are in place to provide manoeuvring assistance, warning of hazards and to report information on clearances etc to the drivers of the AIL vehicles; and
- > If a road closure is required, arrangements will be put in place to facilitate local access to properties on the closed route and to ensure safe passage of any emergency vehicles which may require access.
- 7.2.11 To further improve driver information, NH will be approached as operators of Variable Message Signs on the trunk road network to investigate whether existing signs could be used to warn drivers of AILs and to warn them of potential delays.

8 COMPLAINTS AND ENQUIRY PROCEDURES, AND MONITORING

8.1 ENQUIRIES AND COMPLAINTS

- 8.1.1 It is important that members of the public or interested parties are able to make enquiries or valid complaints about the transport elements of the construction works. Such complaints and enquiries can provide a valuable feedback mechanism which helps reduce potential impacts on sensitive features and also allows the construction techniques to be refined and improved.
- 8.1.2 It is anticipated that the complaints and enquiries procedure can be made via the CLO, as set out in 9.21: CoCP, Section 2.4.
- 8.1.3 The CLO will manage and respond to any questions and complaints and keep a robust record of all correspondence. A system for dealing with enquiries or complaints will be established by the Applicant and the Principal Contractor.
- 8.1.4 A Communications and Public Relations Procedure will be developed and implemented throughout construction to ensure that local residents, parish and town councils and businesses are kept informed of work activities. This will also include providing the local community information about types and timings of works, transport routes, likely hours of traffic movements and traffic management measures that will be carried out. Paying particular attention to potential work outside of standard hours and where activities occur in close proximity to residential properties.
- 8.1.5 All complaints and enquiries will be logged promptly by the Applicant and kept on site for review by Essex County Council upon request.

8.2 CHECKING AND CORRECTIVE ACTION

- 8.2.1 As outlined above, it is intended for the Final CTMP(s) to be a 'living document' which is updated periodically as and when required. Any revised Final CTMP would be submitted to and approved by the discharging authority.
- 8.2.2 Each contractor will be responsible for finalising the programme of monitoring, the results of which will be fed back for inclusion within the CTMP if necessary.

HGV NUMBERS

8.2.3 To ensure compliance with the assessed daily HGV trips (outlined in Appendix 2), the TMCo would operate a booking system for all deliveries. The booking system would be monitored (by the TMCo) to ensure the assessed number of trips are adhered to.

HGV ROUTEING

8.2.4 To assist the TMCo in responding to any complaints regarding HGV routeing, the booking system would provide an initial check. The booking system would allow the TMCo to check if the reported HGV may have been employed in delivering to the Project, e.g. allowing checking of number plates, supplier names, scheduled timings and origin and destination, etc.

- 8.2.5 The TMCo would also implement a system to help the public distinguish HGV construction vehicles associated with the Project from other traffic on the network. Each vehicle would be required to display a unique identifier within the window of the cab (a recognisable logo) that would allow members of the public to report any concerns such as driver behaviour or the use of unapproved routes via a published telephone contact number.
- 8.2.6 Vehicle tracking software, together with delivery records would serve to augment the unique identifier to allow the TMCo to respond to any complaints and provide a complete evidence base.

ROAD SAFETY

8.2.7 The TMCo would operate a 'near miss' reporting system for all highways incidents. The TMCo would ensure that all accidents and near misses are recorded within this system and that drivers are reminded to report all issues through inductions. Any accidents or near misses would be recorded, investigated and reported to the relevant highway authorities by the TMCo. The TMCo would retain records of all incidents and submit to the relevant highway authorities upon request. If emerging issues are identified, the TMCo would initiate discussions with stakeholders to promote a 'Zero Harm Culture'

MONITORING REPORTING

- 8.2.8 Data recorded from the monitoring processes outlined above would be drawn together by the TMCo to produce a monthly monitoring update during construction of the relevant phase and shared with the relevant highway authorities.
- 8.2.9 In compiling the monitoring update, the TMCo would be able to identify effective / ineffective measures and the requirement for any remedial action to achieve the agreed targets.

8.3 ENFORCEMENT

- 8.3.1 To ensure that the final CTMP is effectively enforced to following matters have been defined as non-compliance that would be investigated to understand if corrective measures would be required:
 - Exceedance of target daily vehicle numbers. Exceedance which could indicate a pattern requiring further investigation is defined as:
 - two or more occurrences of less than 10% more than the limit (e.g. If the limit is 300 vehicle movements per day and the recorded movements were 330 or below) within one working week; or
 - > five or more occurrences of less than 10% more than the limit within one month, or
 - > any exceedance greater than 10% of the limit (i.e. if the limit is 300, then 331 or more)
 - Failure to display the unique identifier, or to remove the unique identifier when not making deliveries to the Project;
 - > Construction workers overspill parking on the public highway;
 - Construction traffic operating outside agreed hours;
 - > HGV drivers not adhering to the agreed routes / times; or

- > HGV drivers parking or waiting on the highway in inappropriate locations, which could result in a highway safety issue
- 8.3.2 Following the identification of a potential non-compliance, the TMCo would investigate the circumstances and compile a report for the relevant highway authority as soon as reasonably practicable. The report would outline the outcome of the investigation and what corrective action (as necessary) has been implemented.
- 8.3.3 If the non-compliance is found to be material, the TMCo would take appropriate action within the jurisdiction of the contract and report back to the relevant highway authority.
- 8.3.4 Individual employee non-compliances would be addressed through UK employment law whereby the process outlined above may form the basis for disciplinary proceedings, if appropriate.

9 REFERENCES

DMRB, CD 123 Geometric design of at-grade priority and signal-controlled junctions (National Highways, 2021)

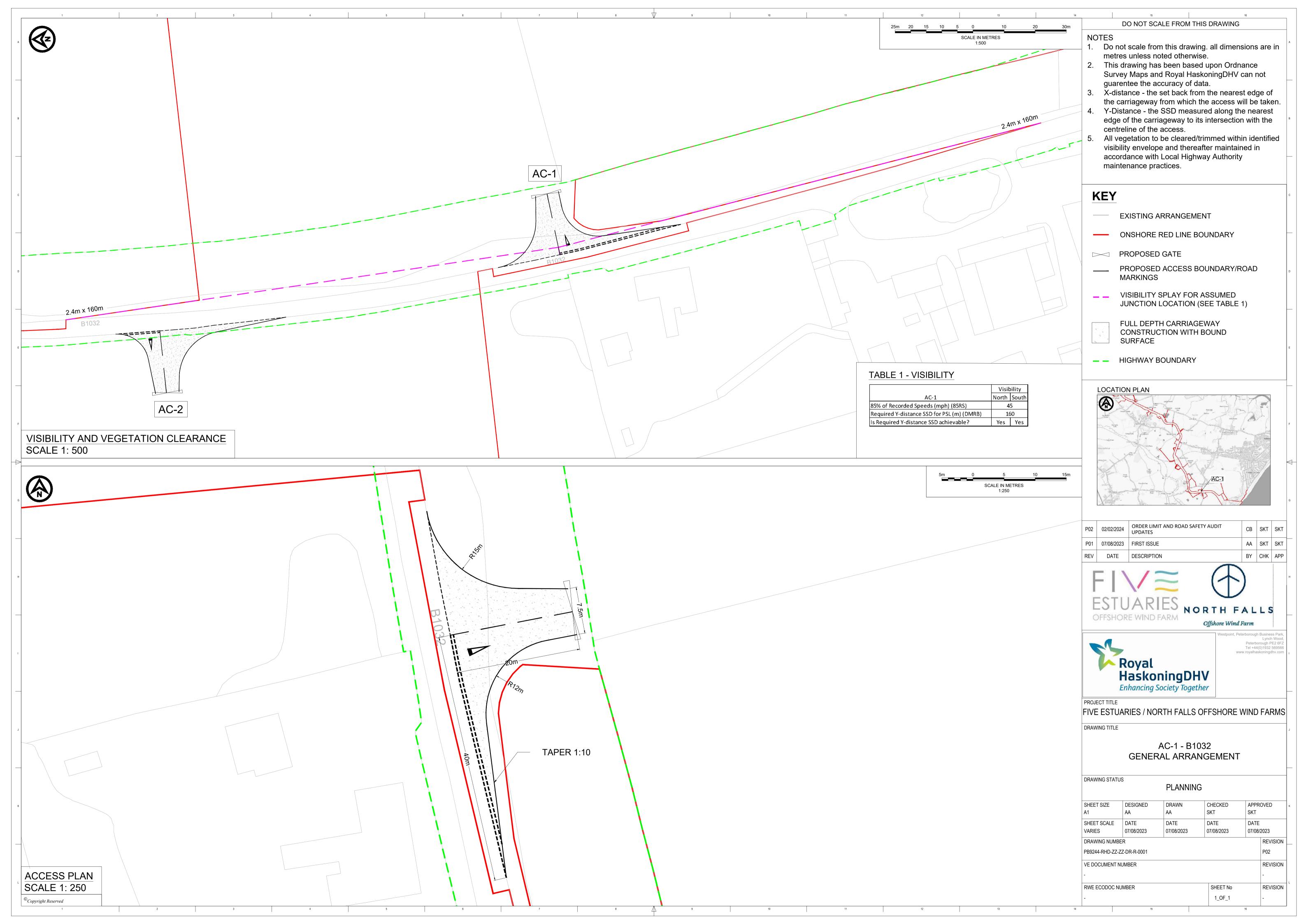
DMRB, CD 109 Highway Link Design (National Highways, 2020)

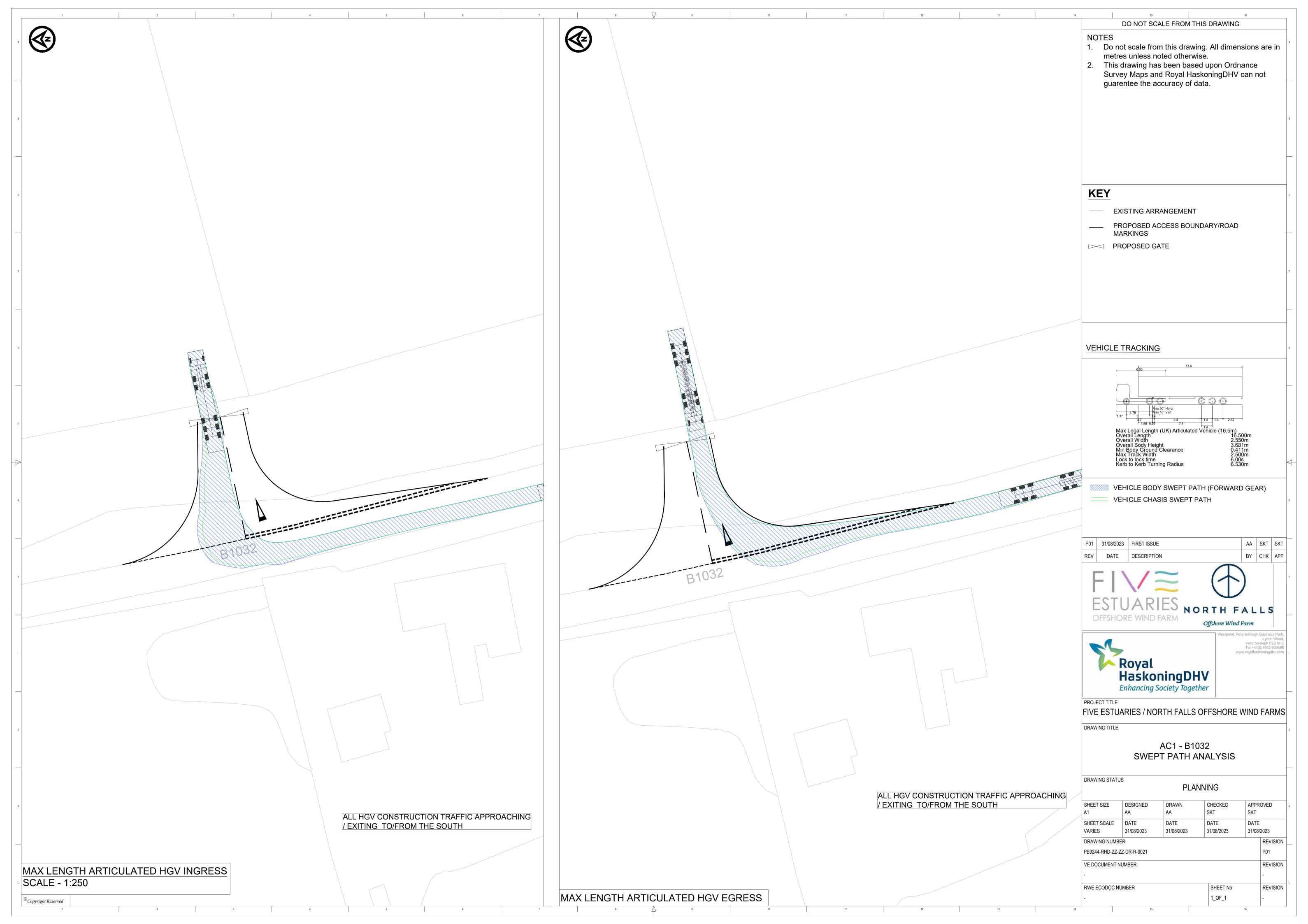
Essex County Council, Maintenance and Inspections Strategy: Carriageway, Footways and Cycleways (July 2022)

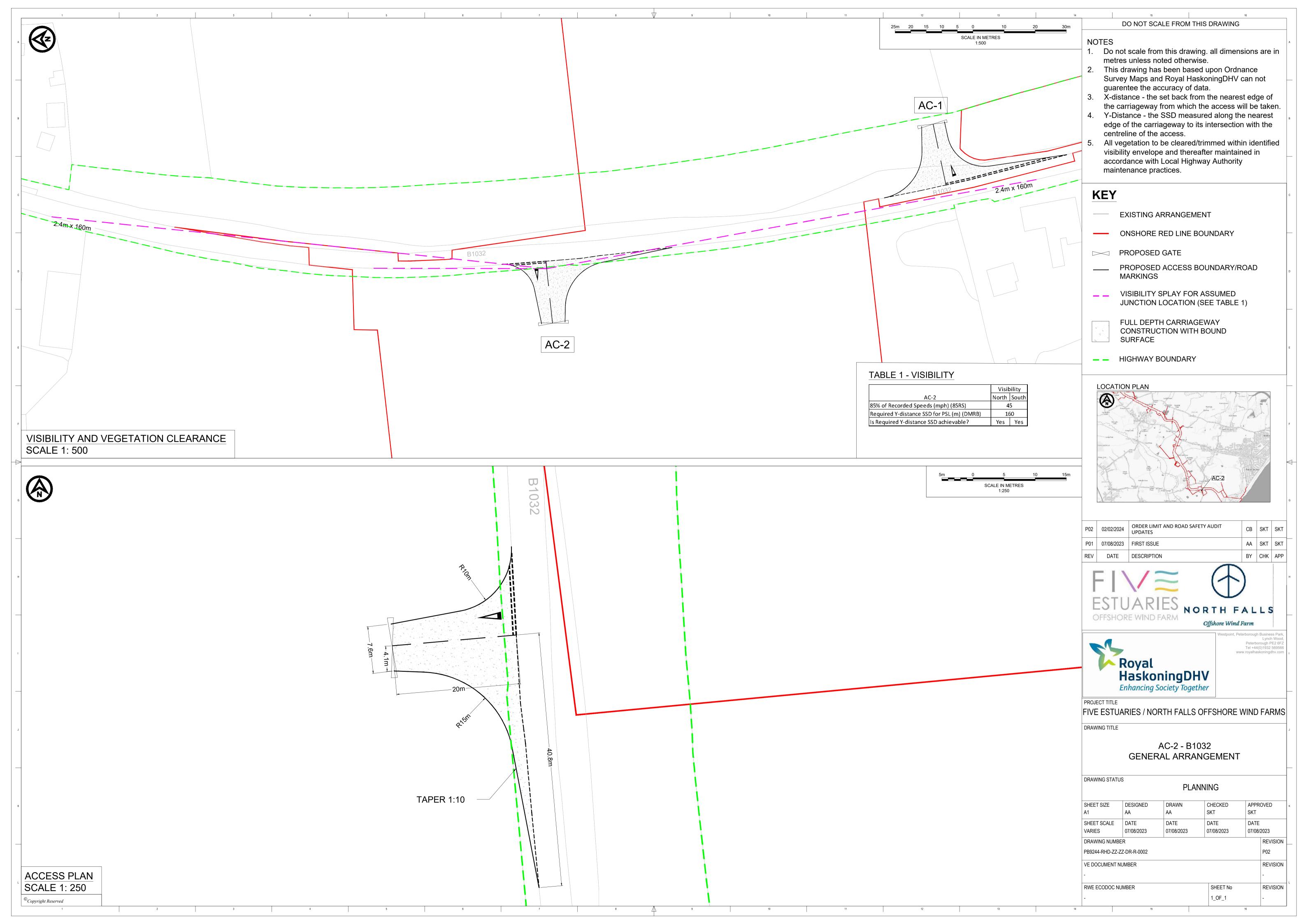
Manual for Streets, (Department for Transport, 2007)

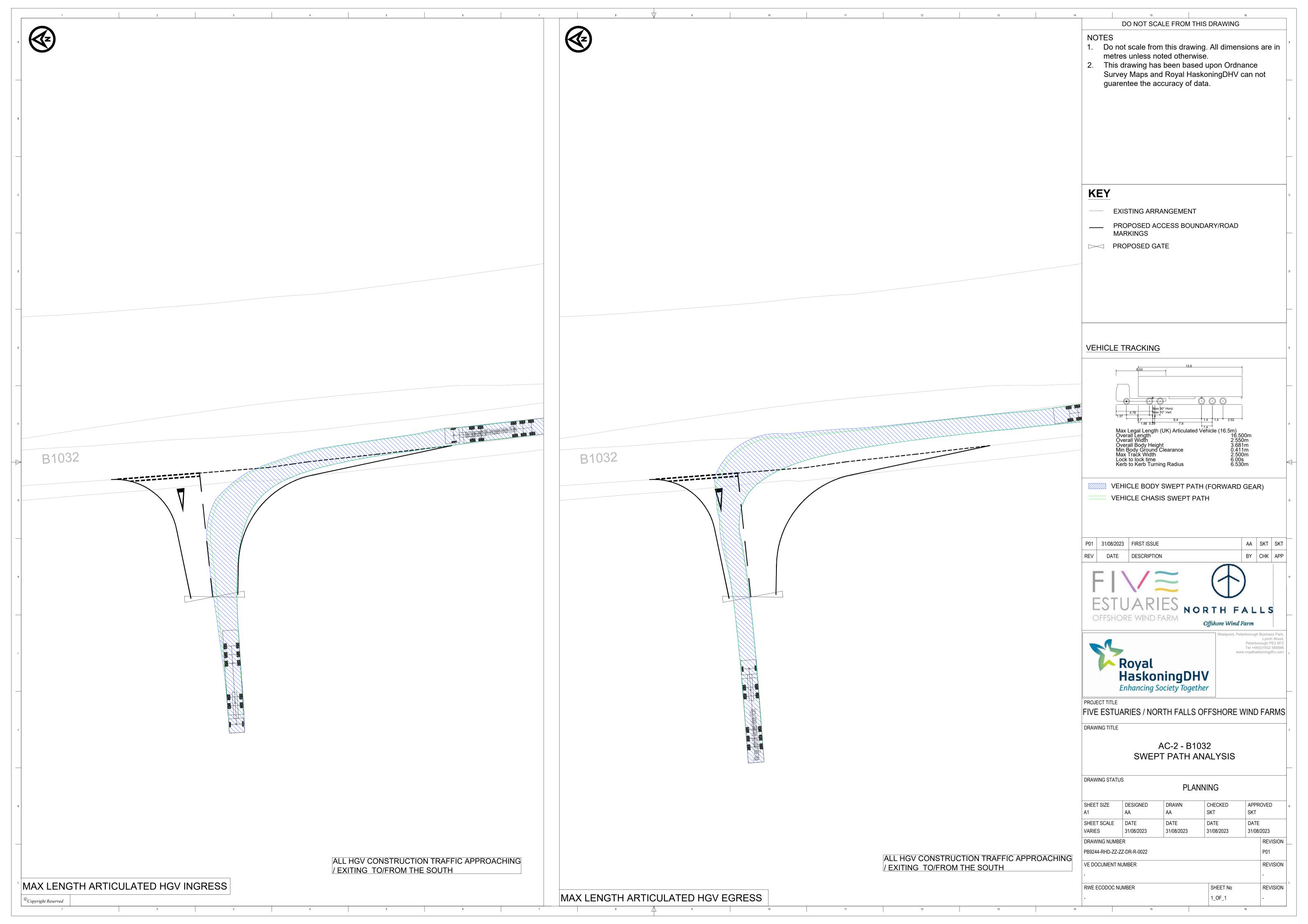
Traffic Signs Manual, Chapter 8, Traffic Safety Measures and Signs for Road Works and Temporary Situations (Department for Transport, 2009).

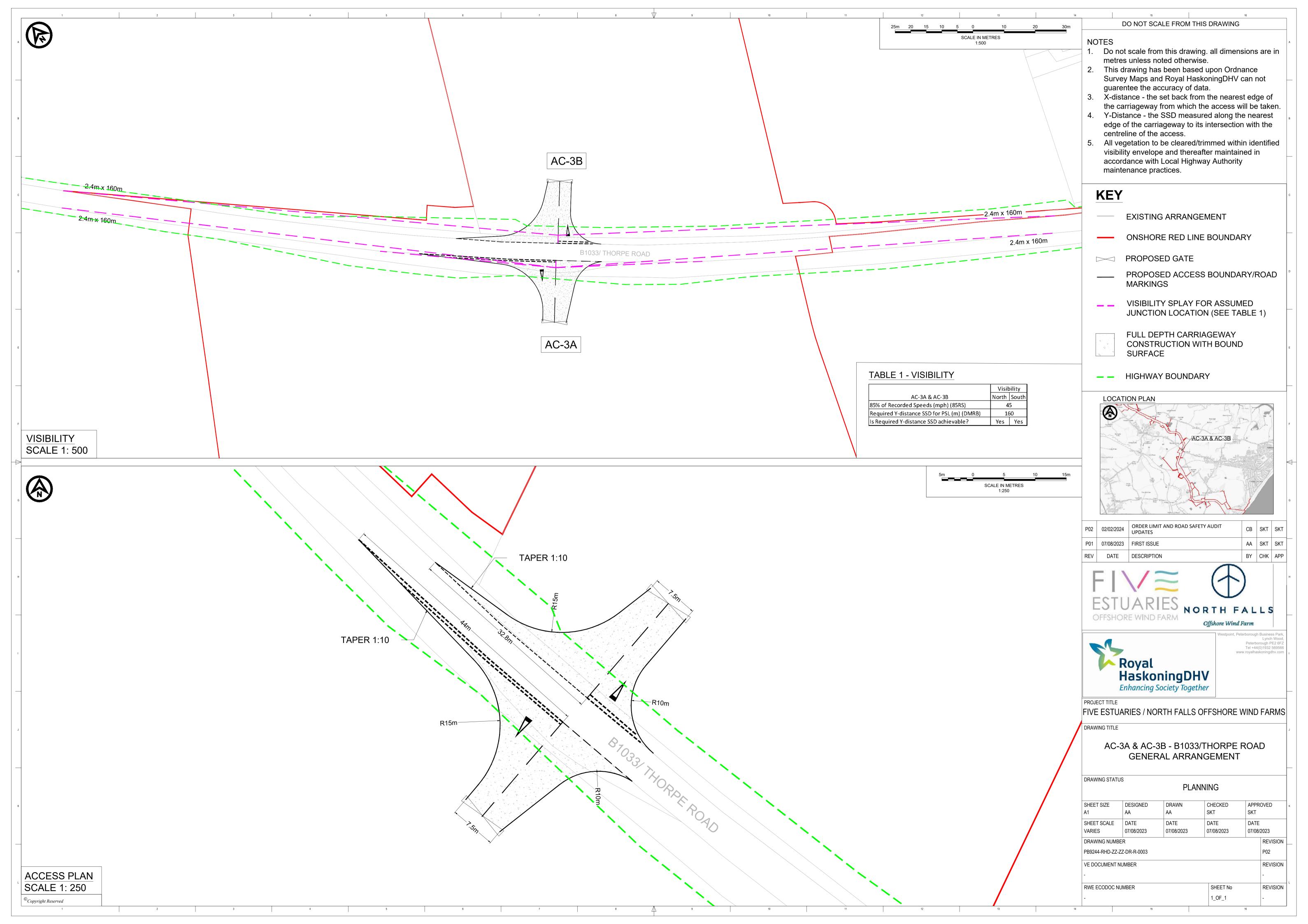
APPENDIX 1: CONSTRUCTION ACCESS AND HAUL ROAD CROSSING GENERAL ARRANGEMENT DRAWINGS

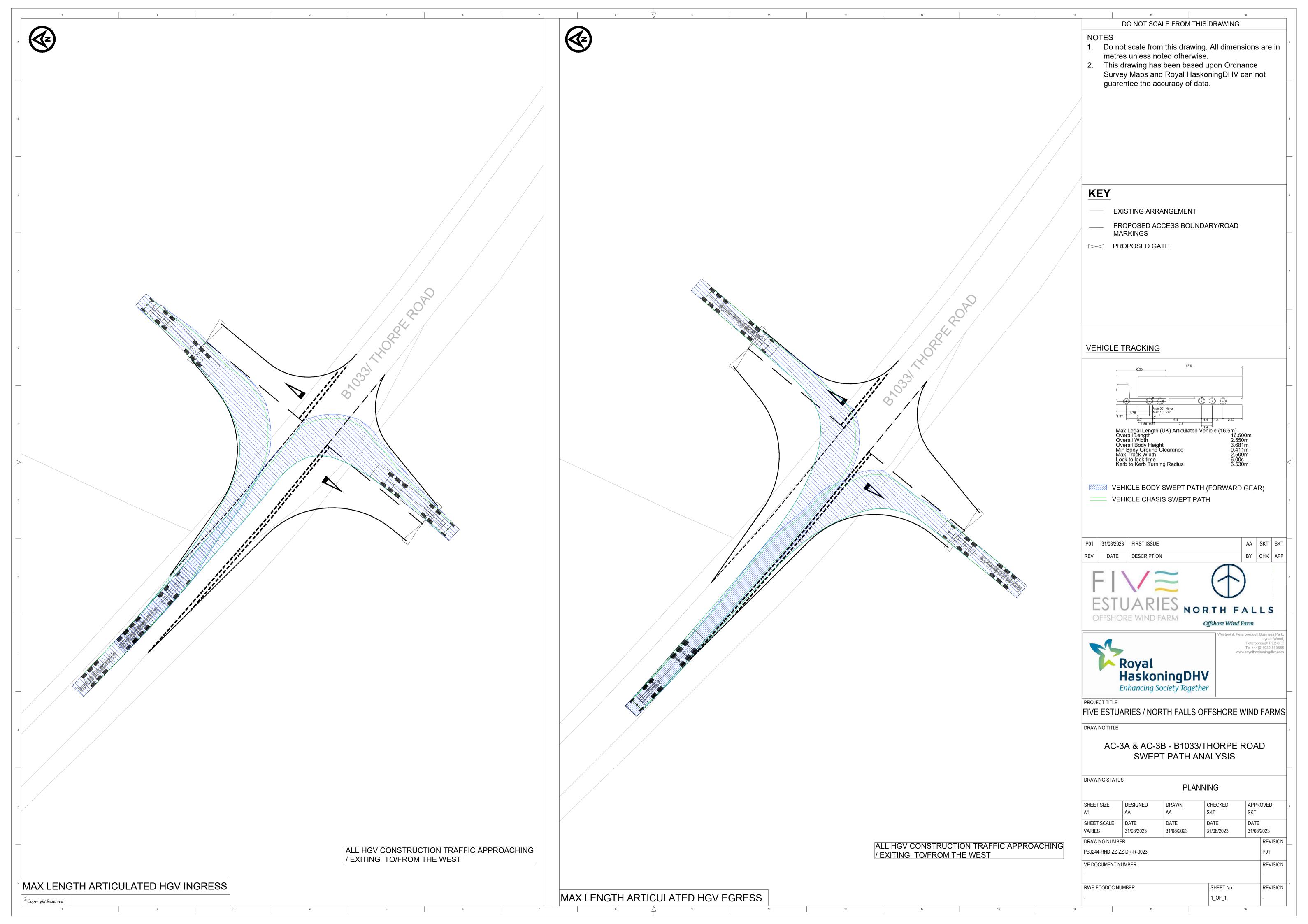


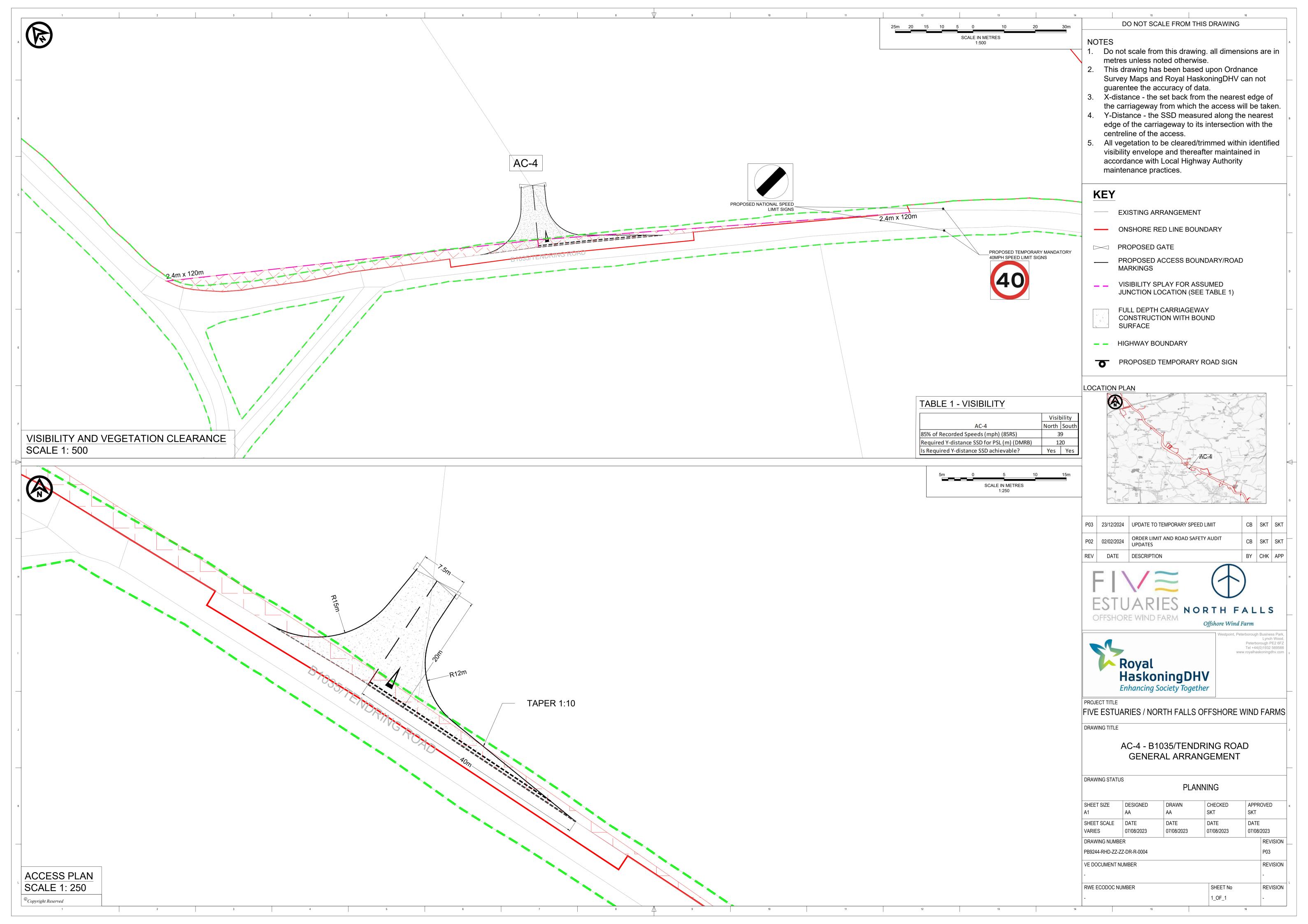


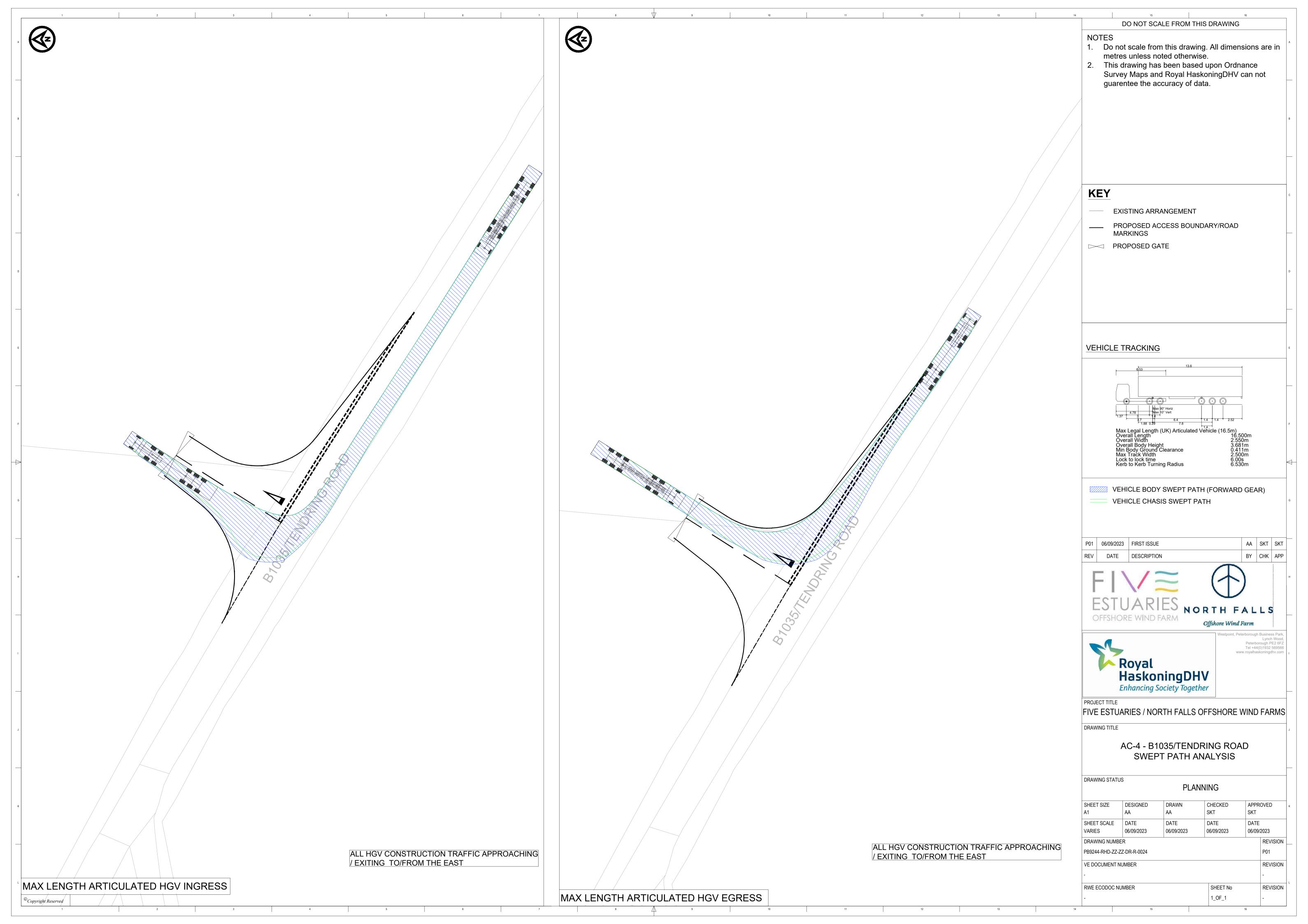


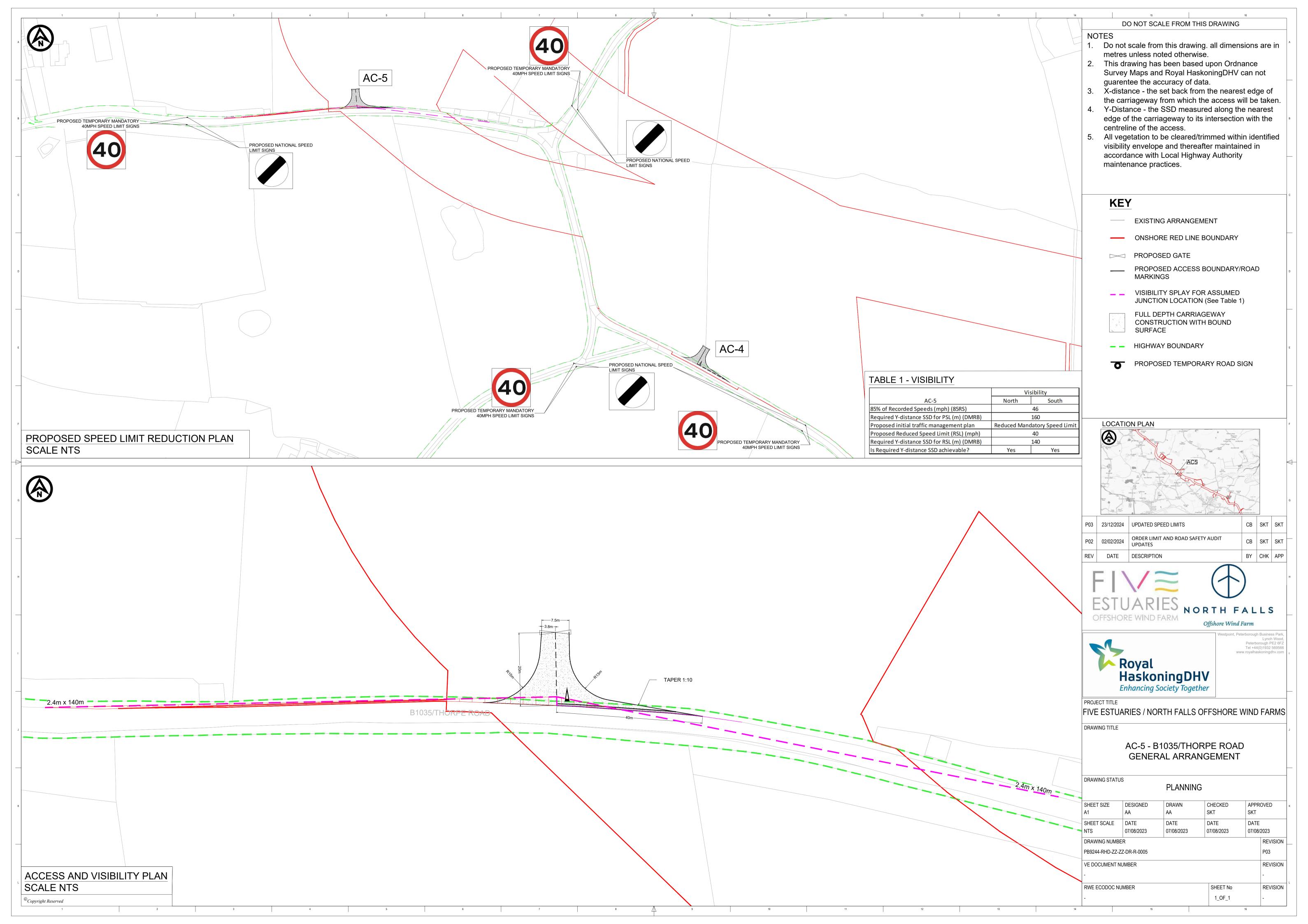


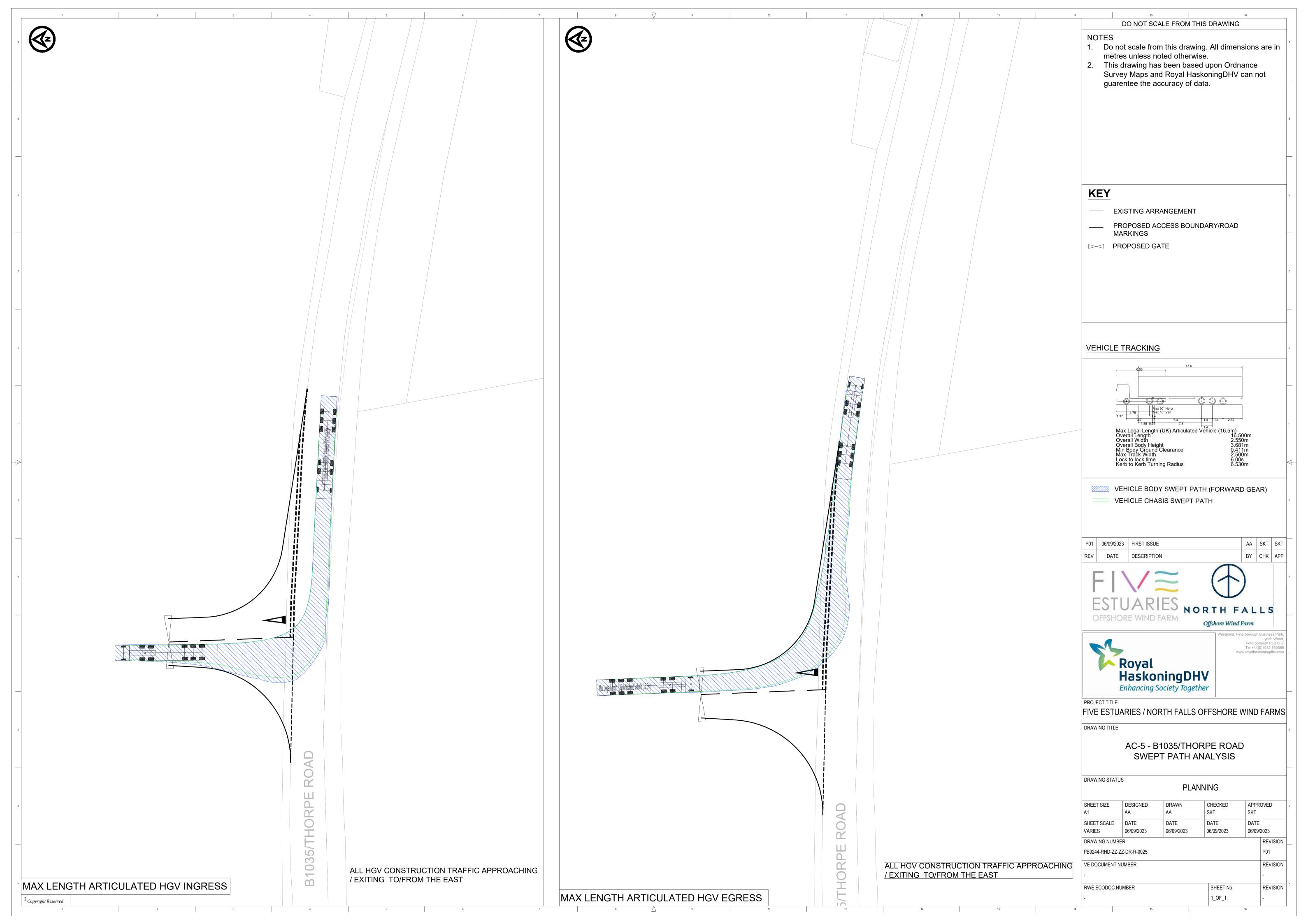


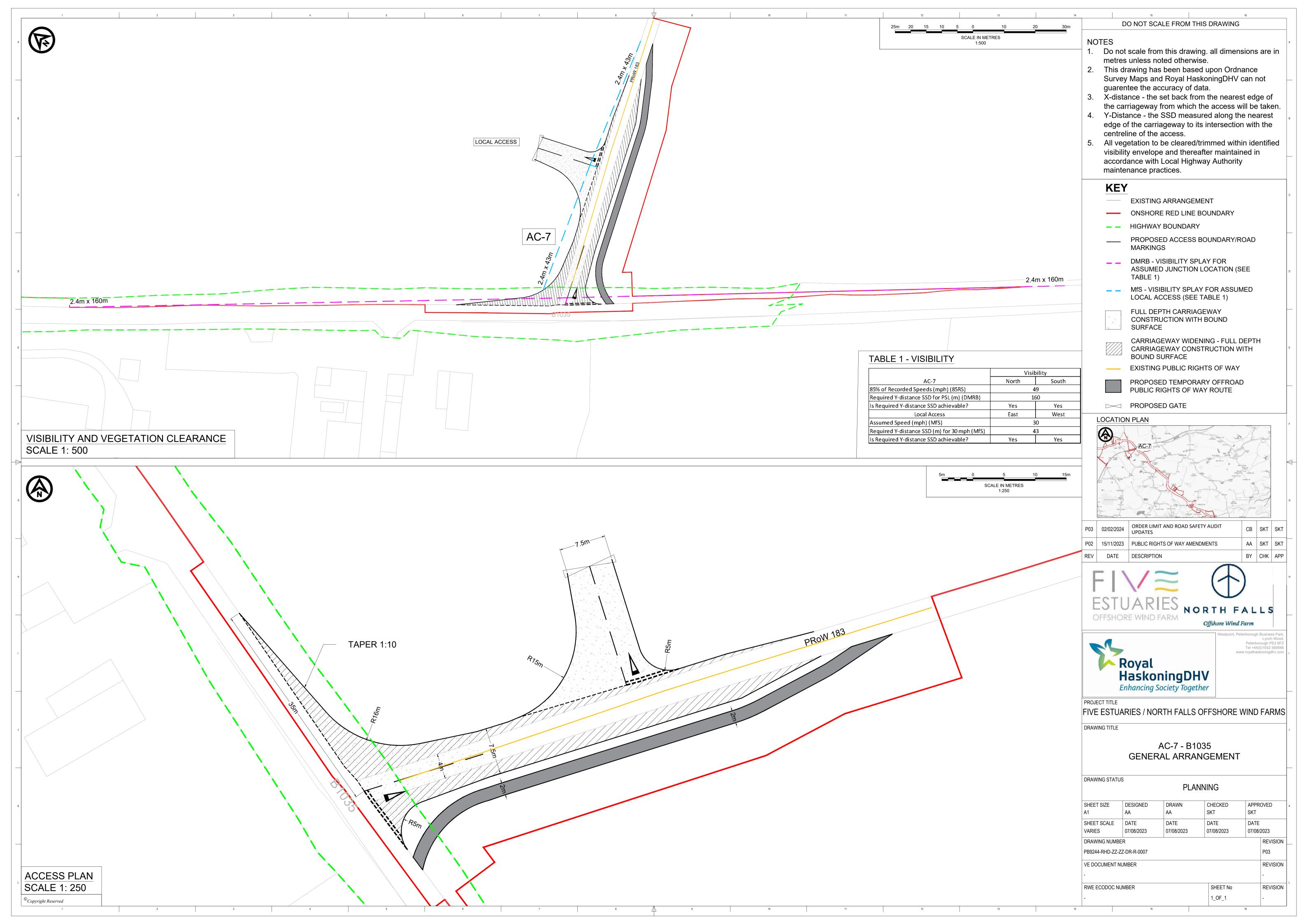


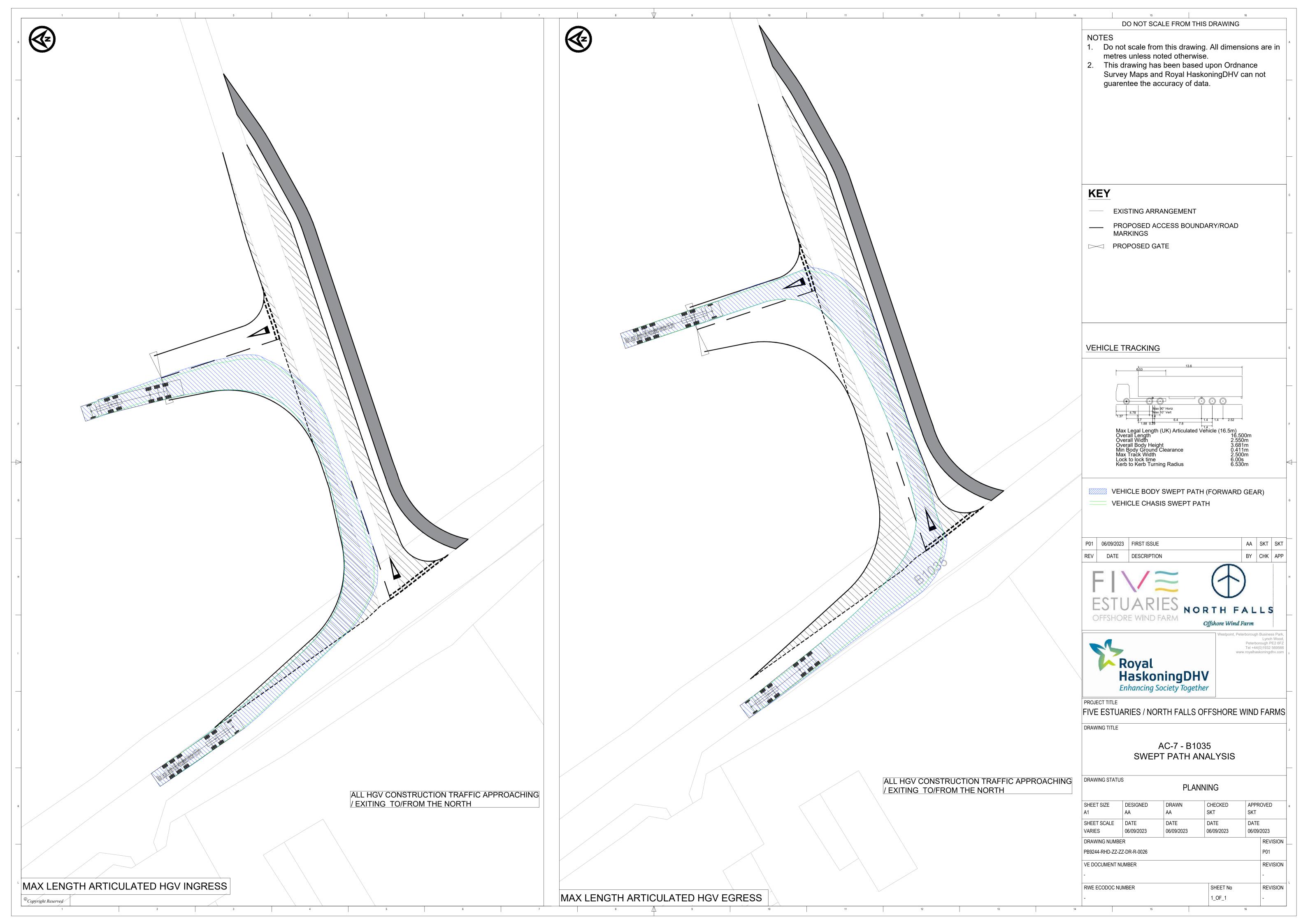


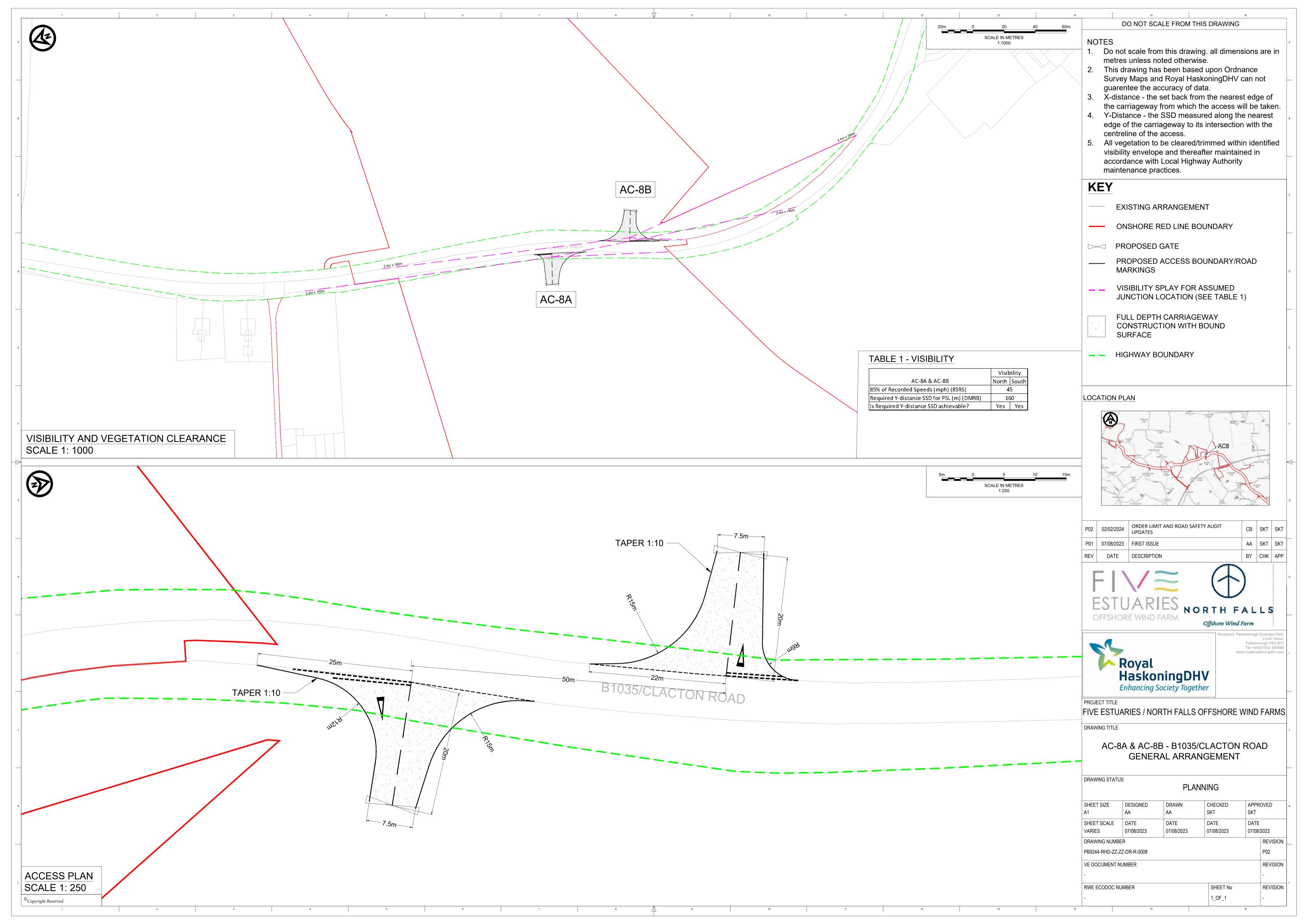


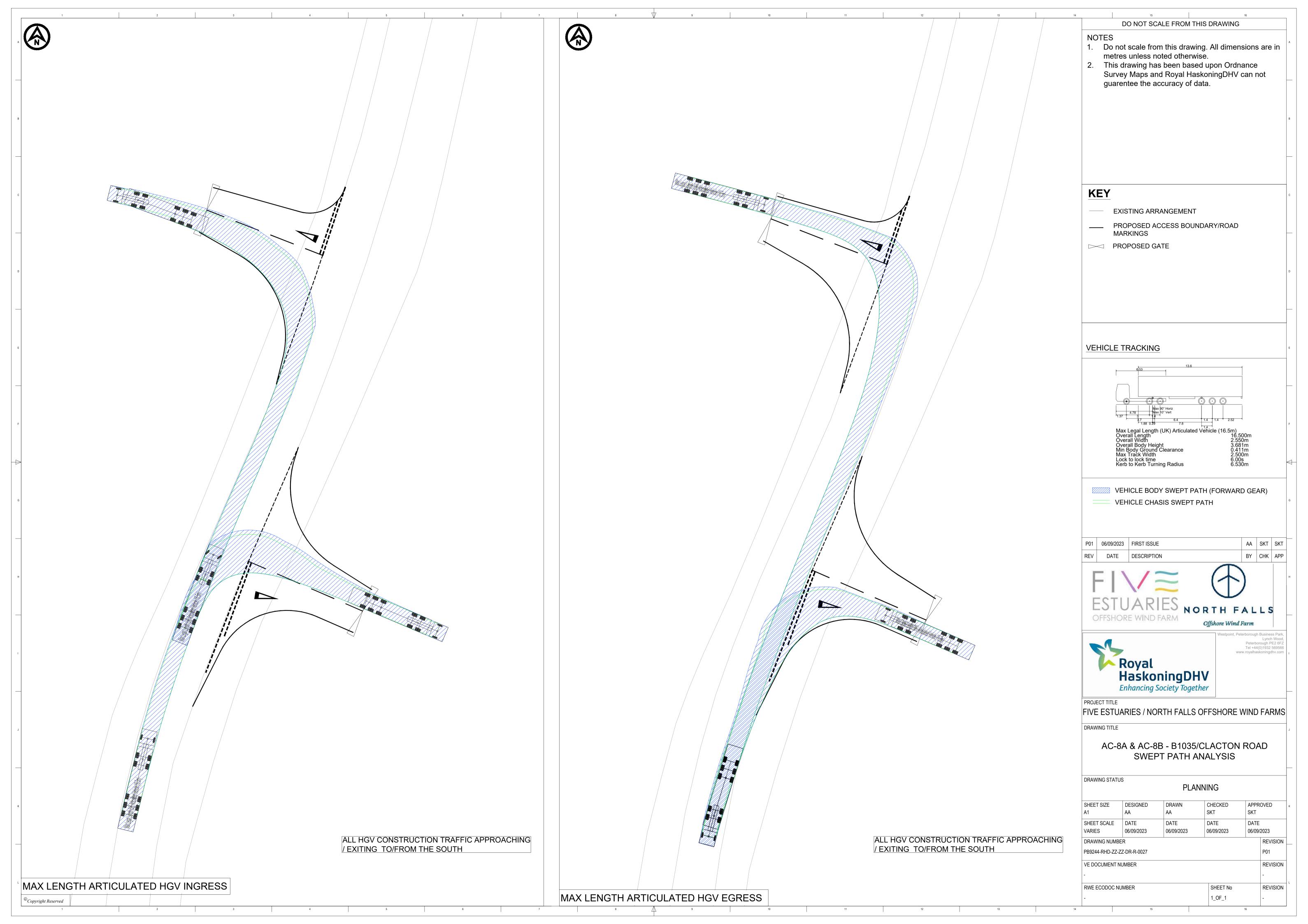




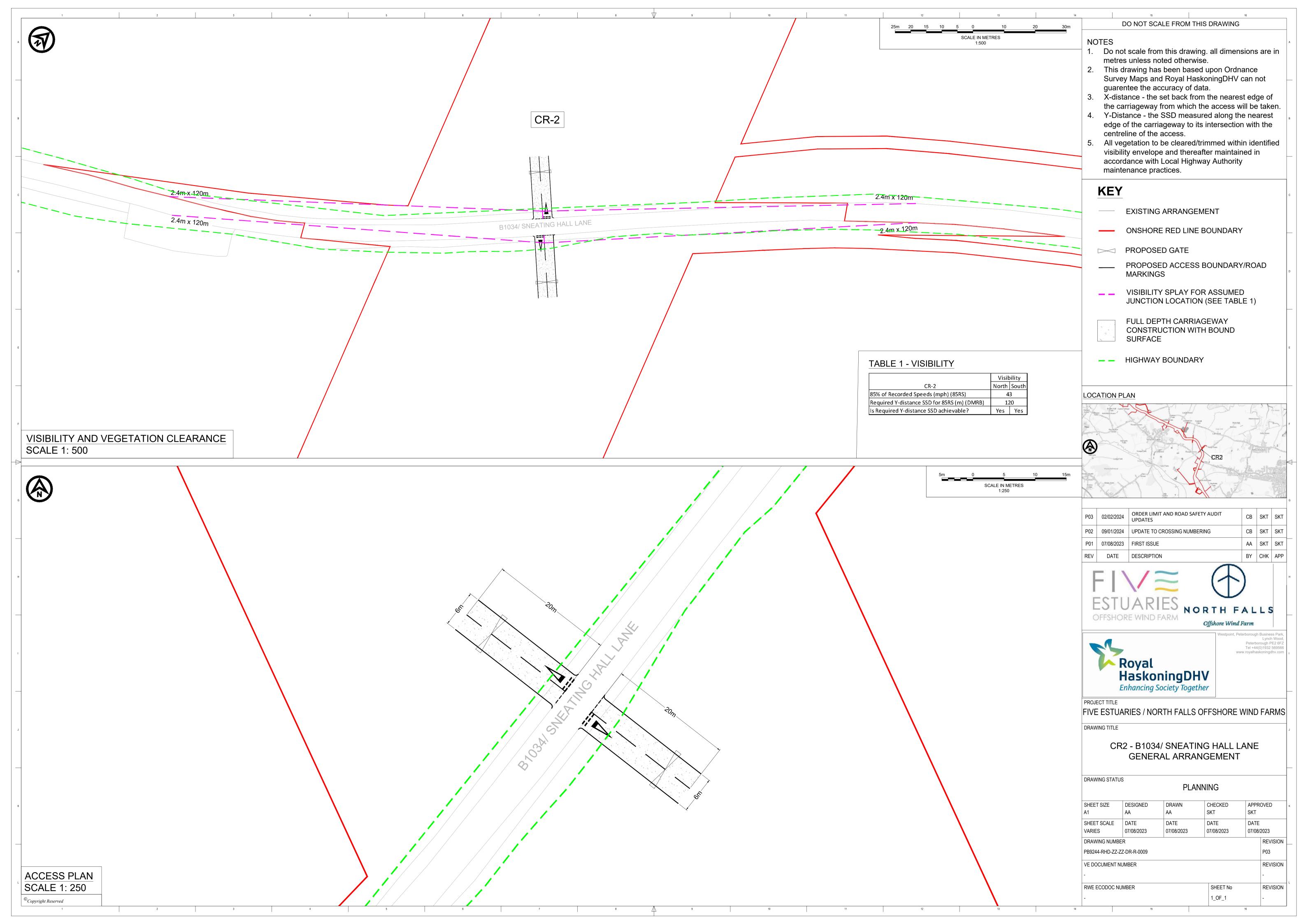


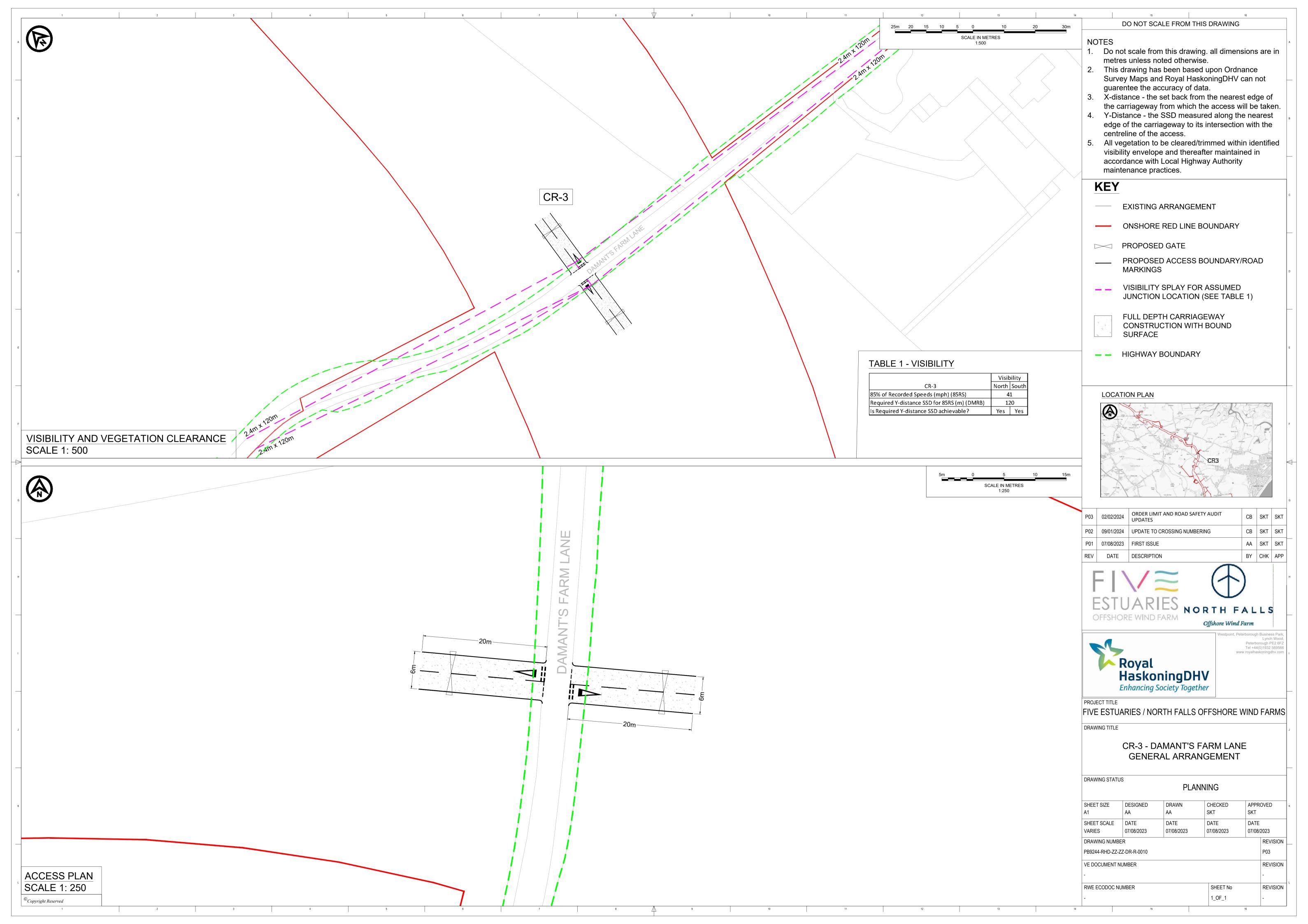


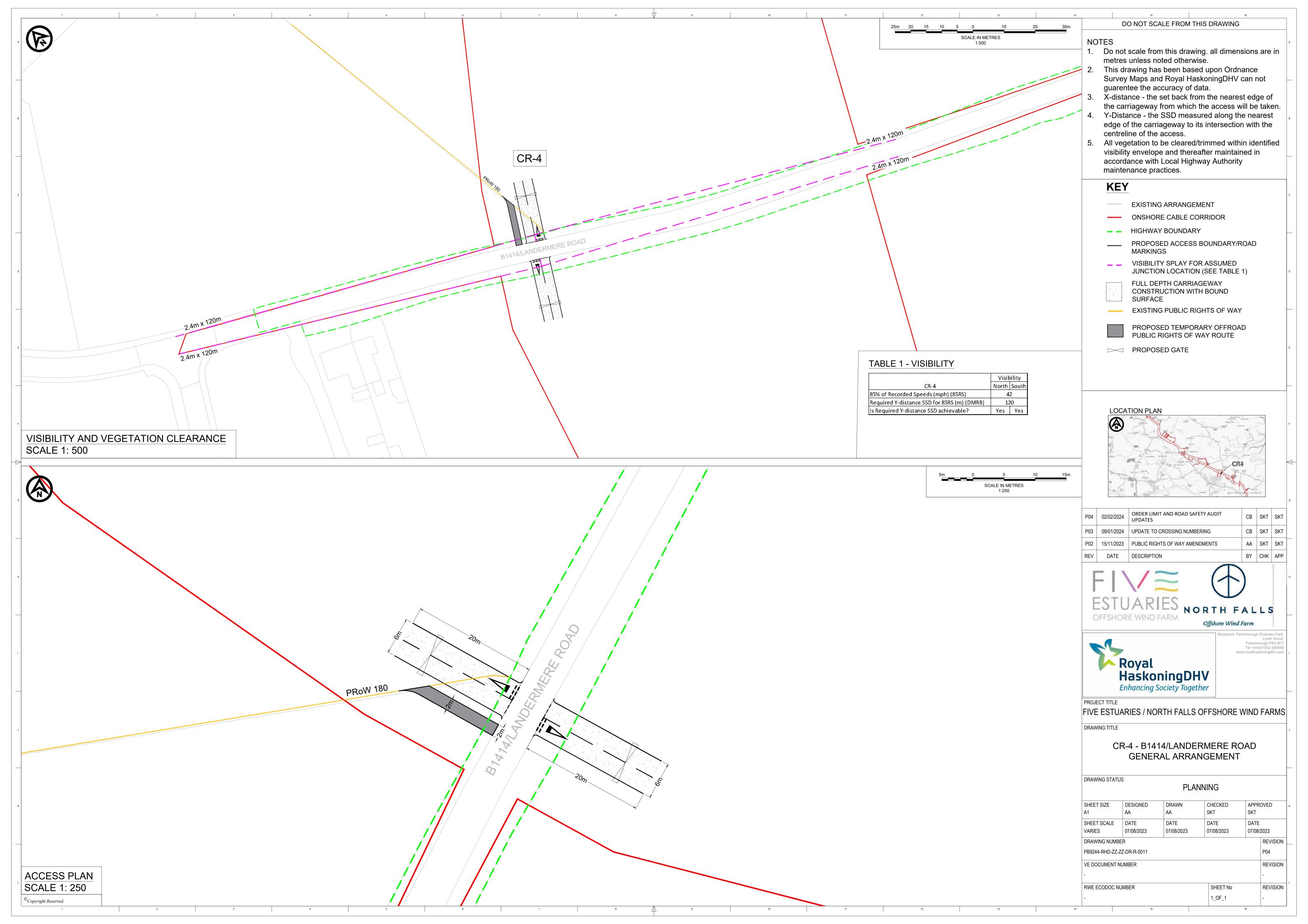


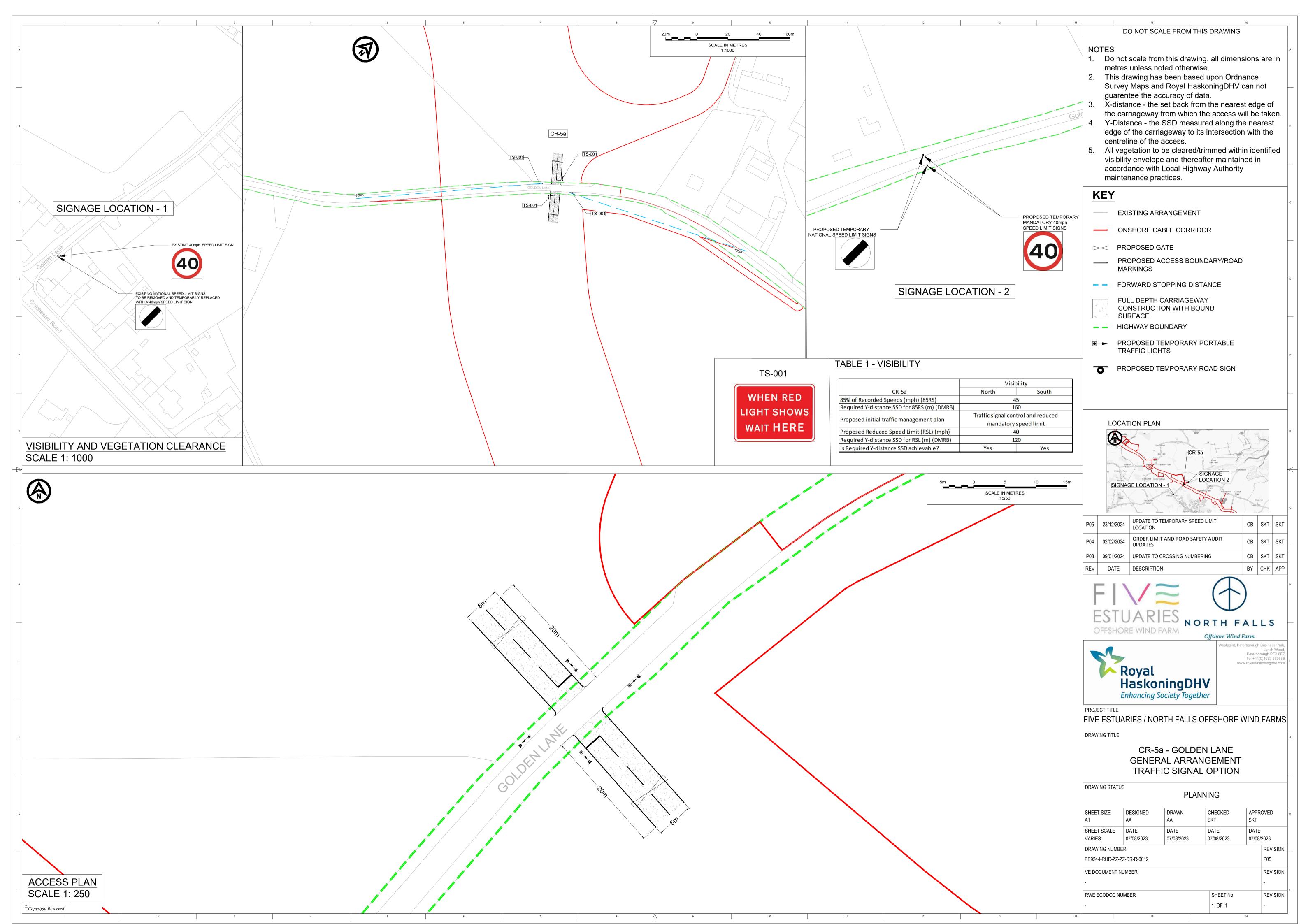


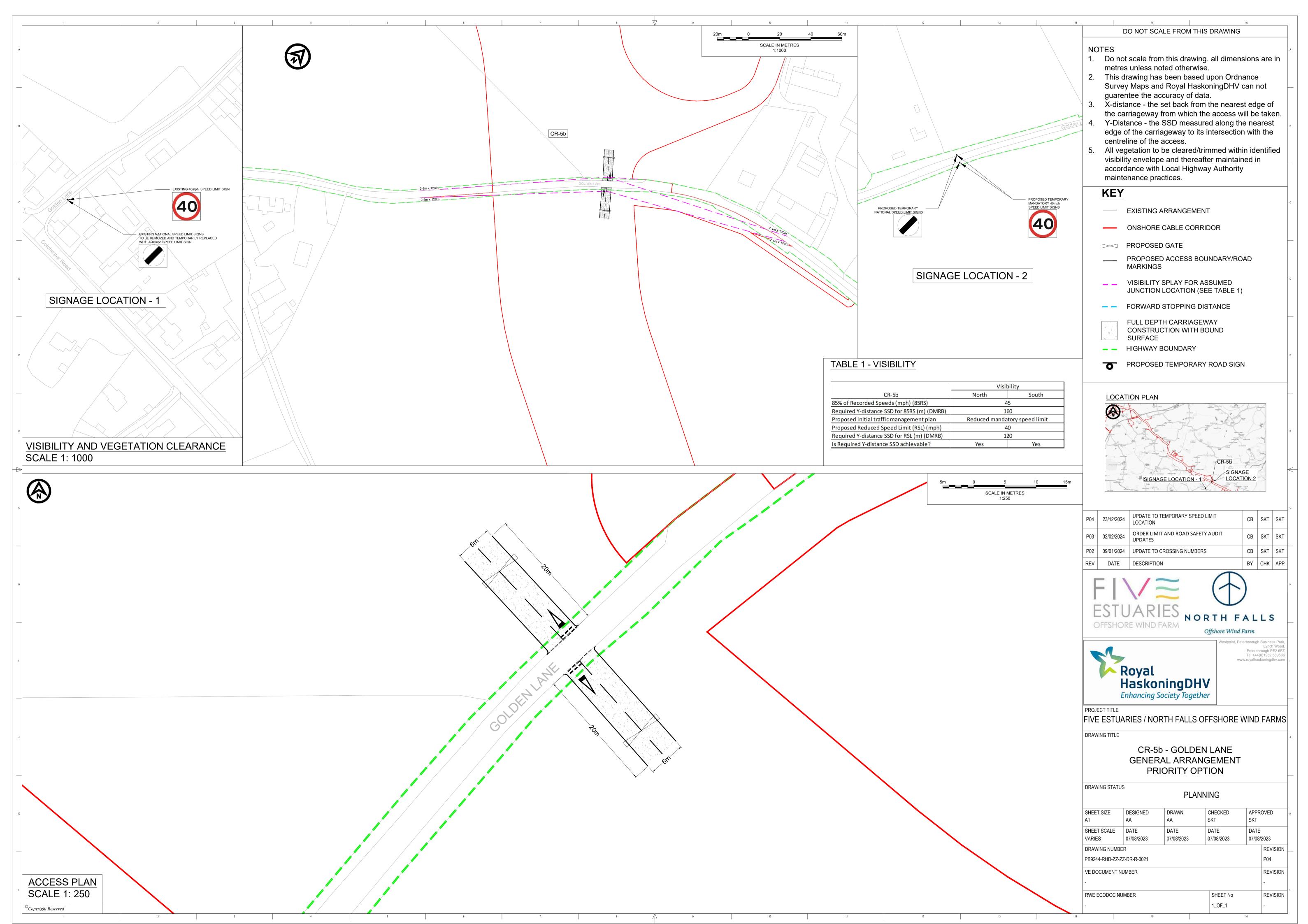


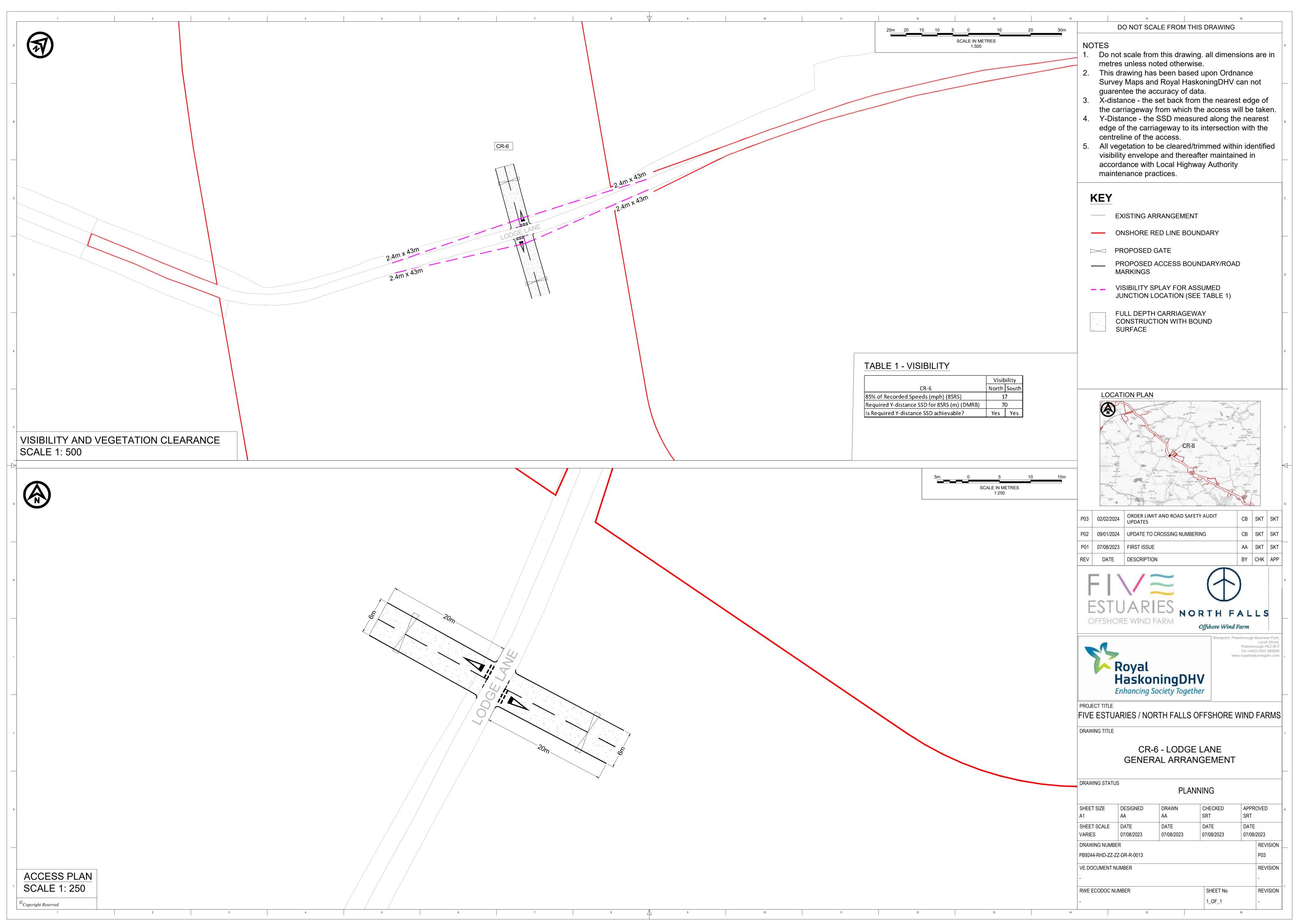


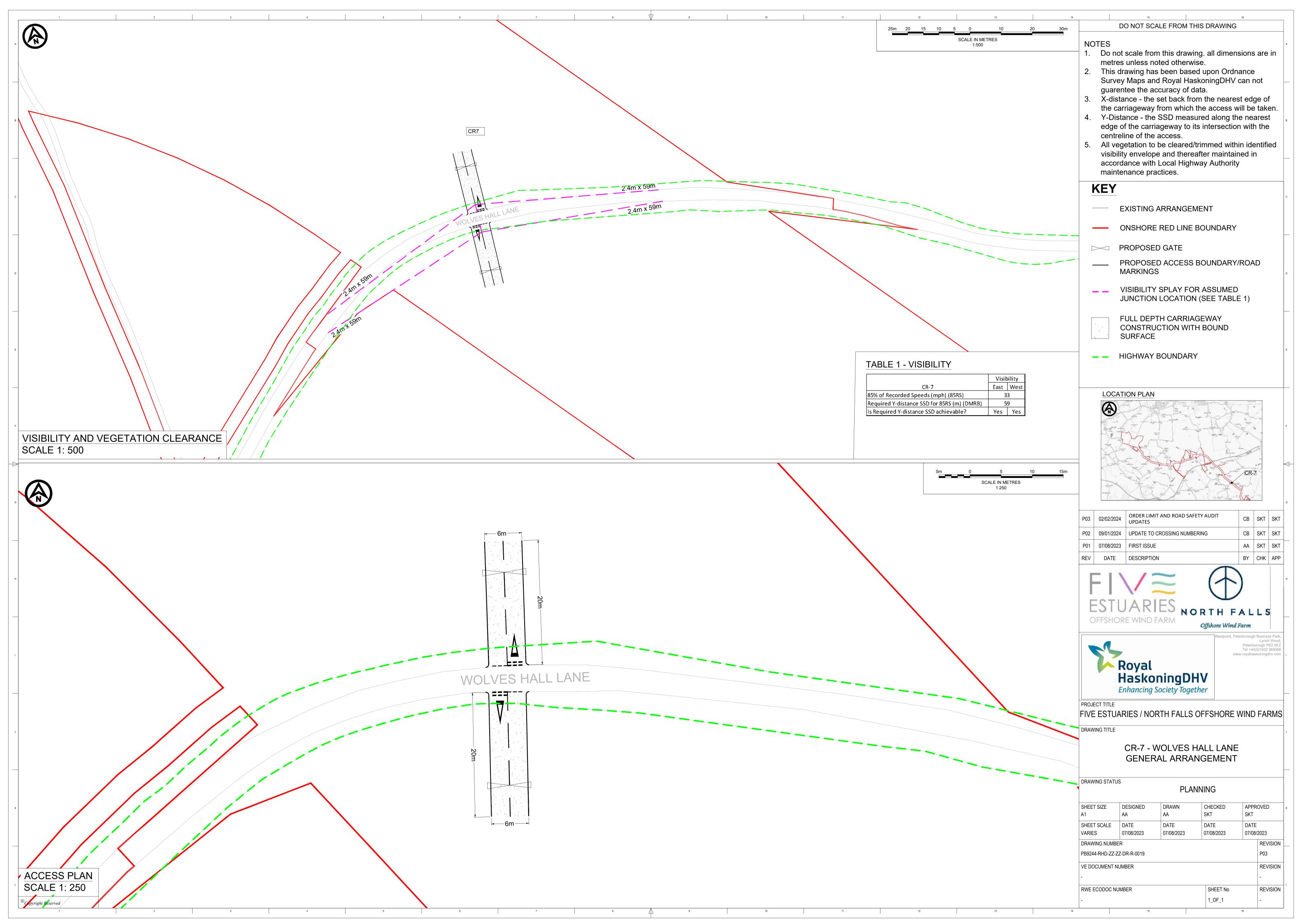


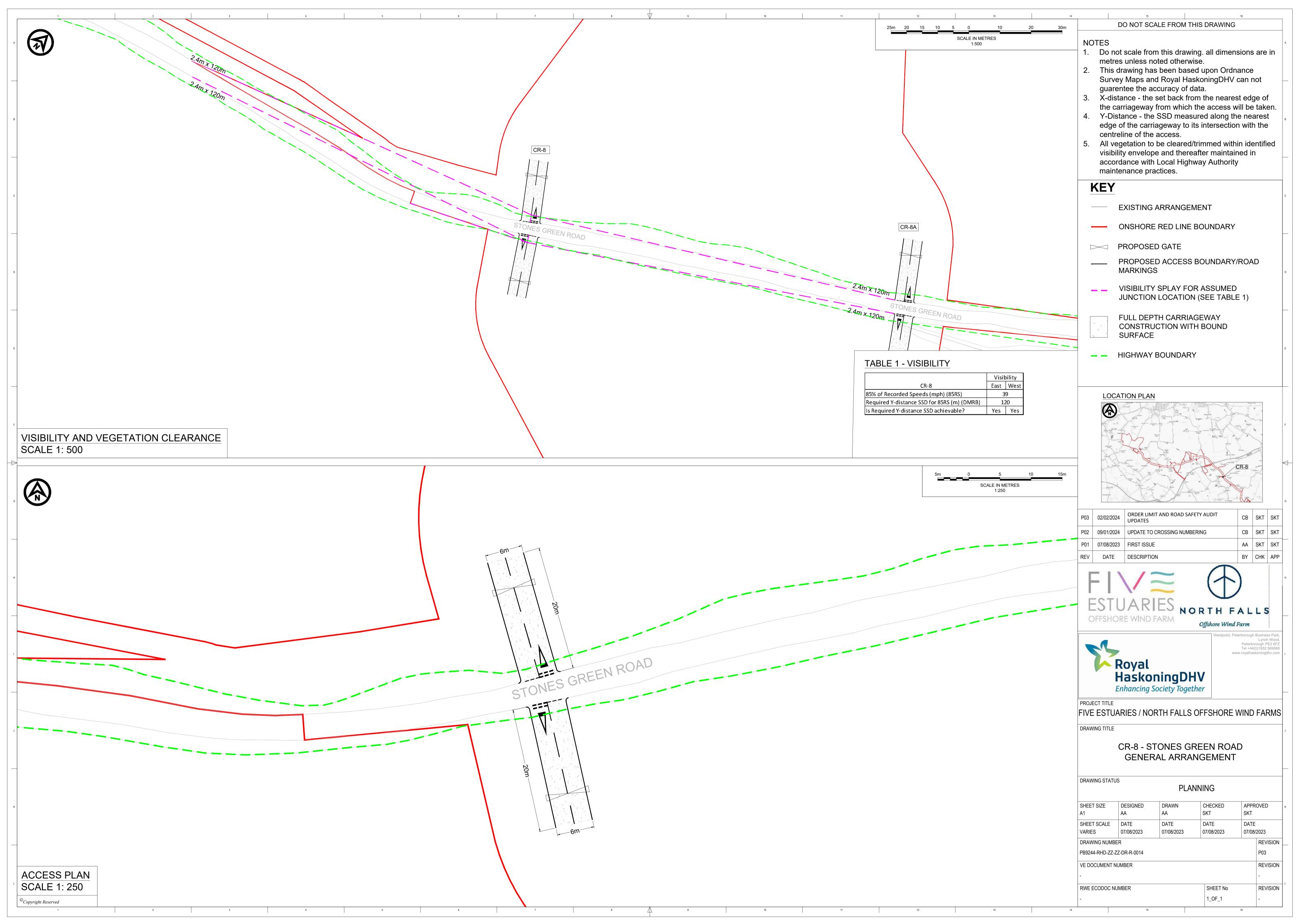


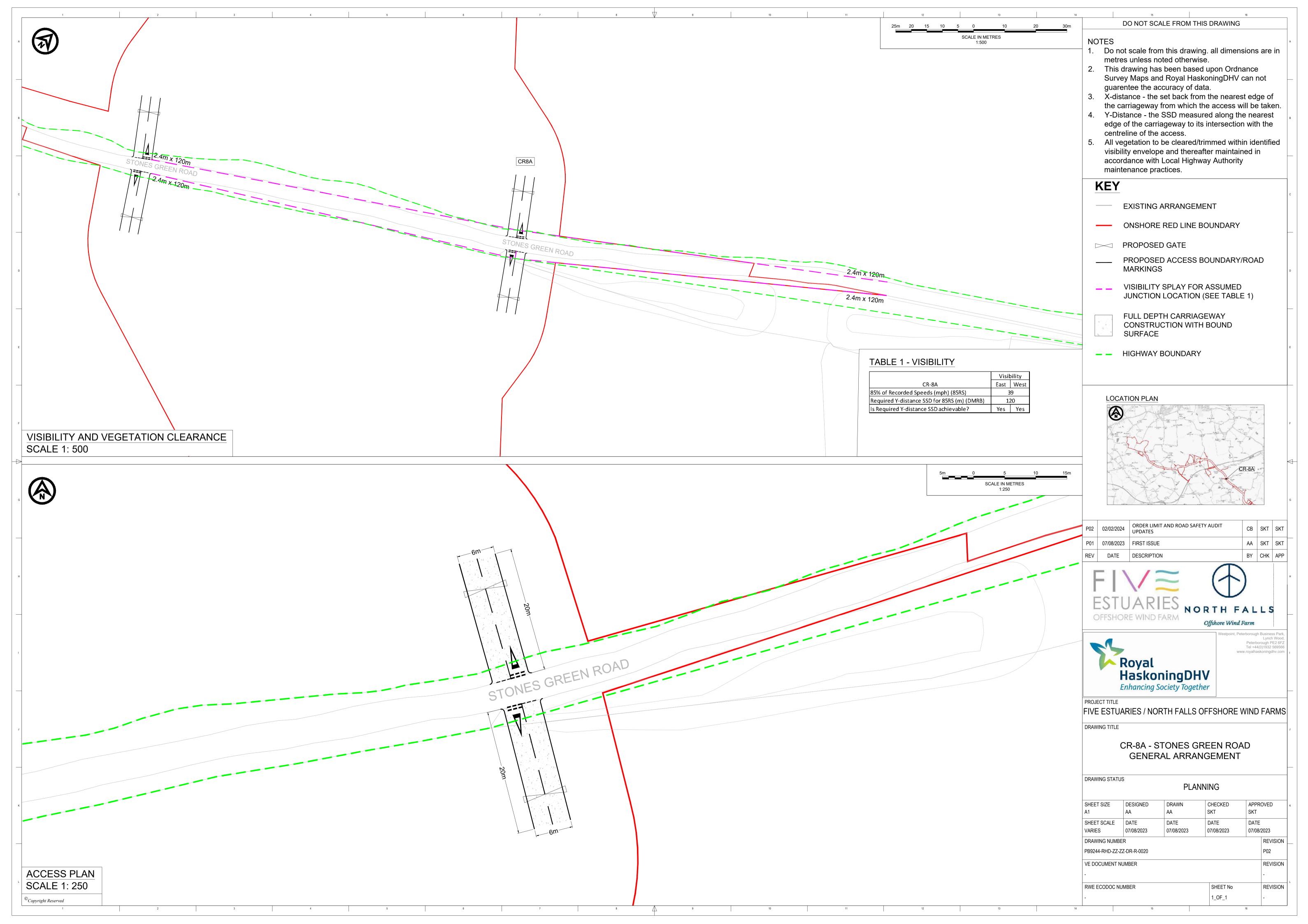


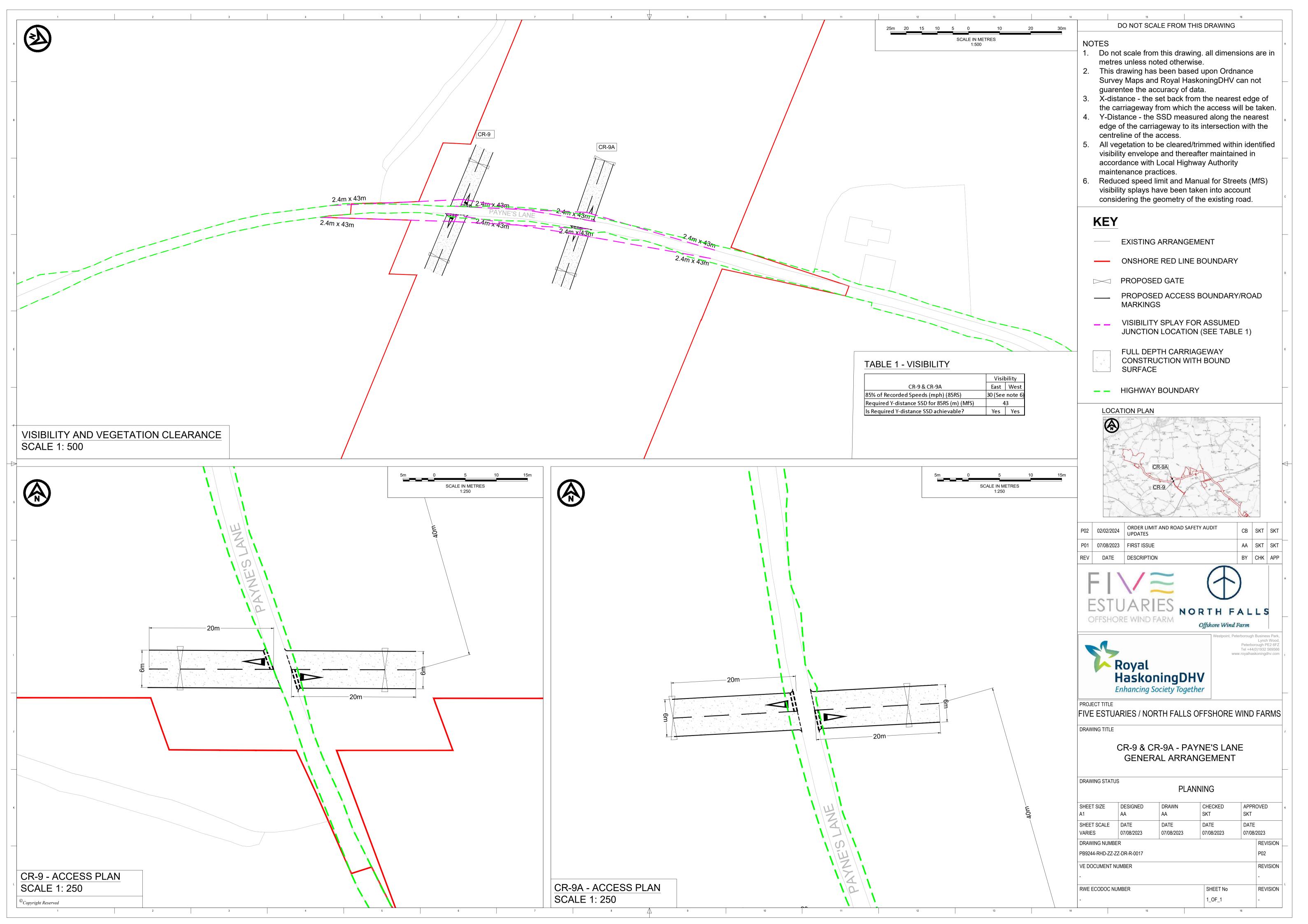


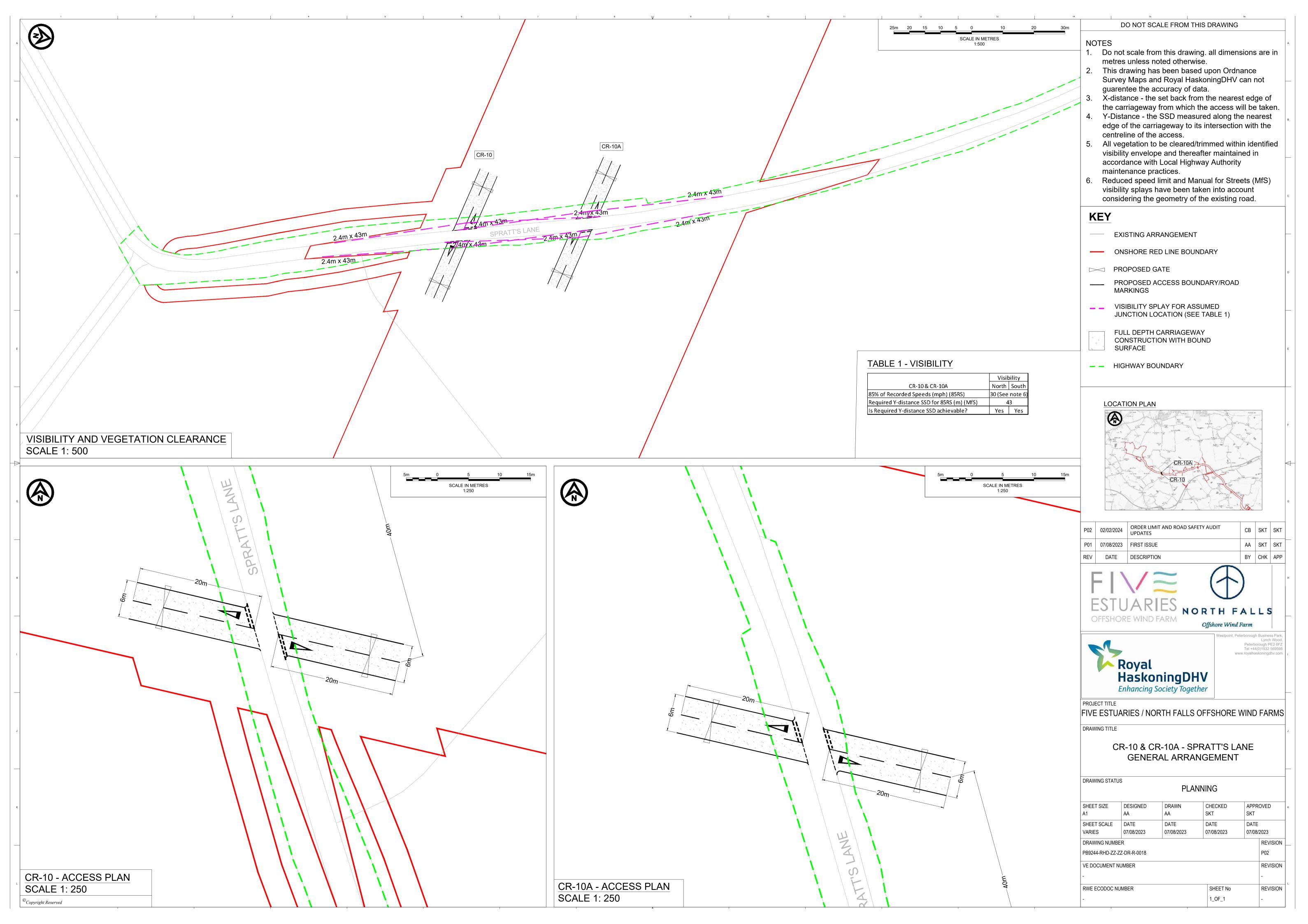


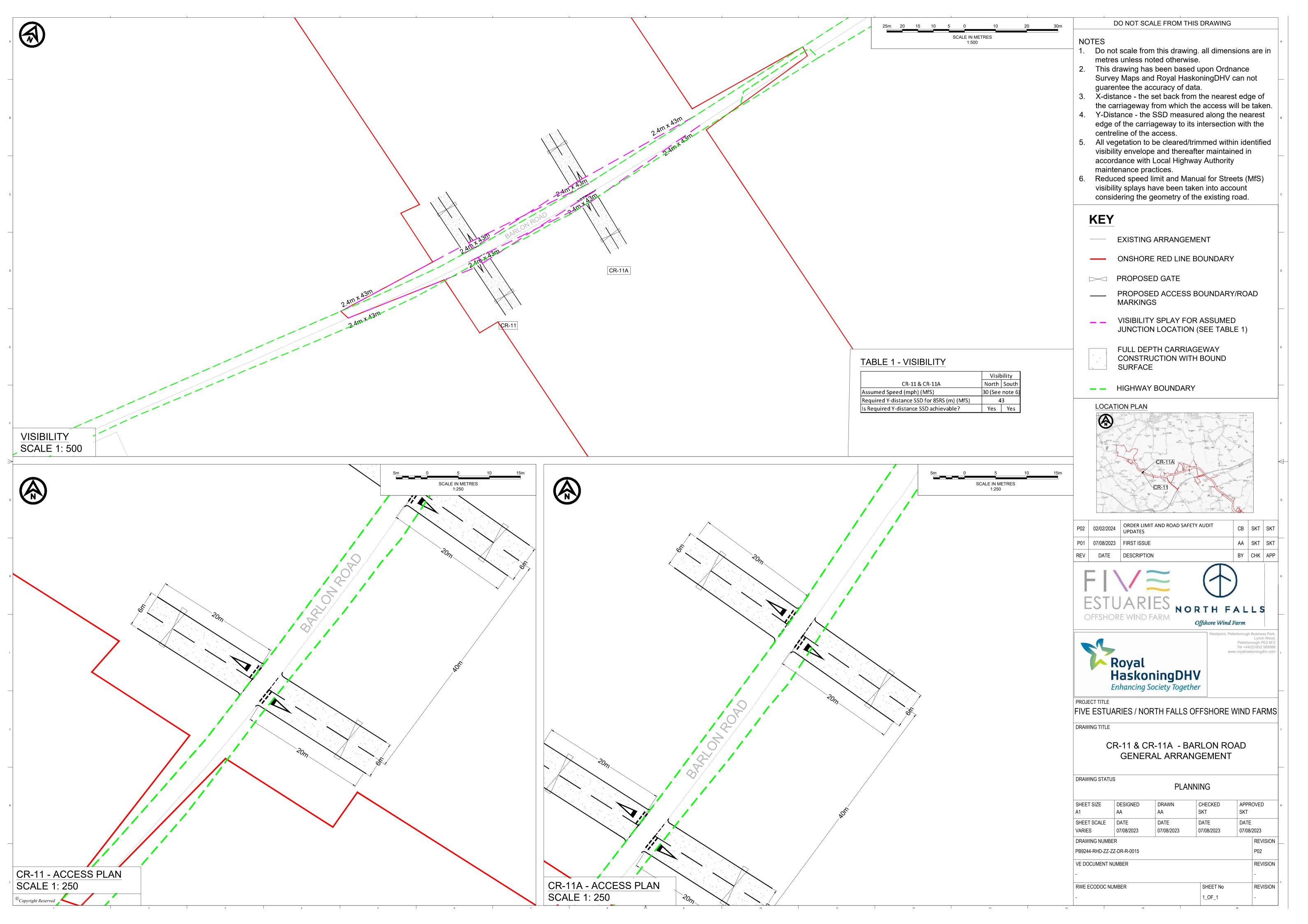








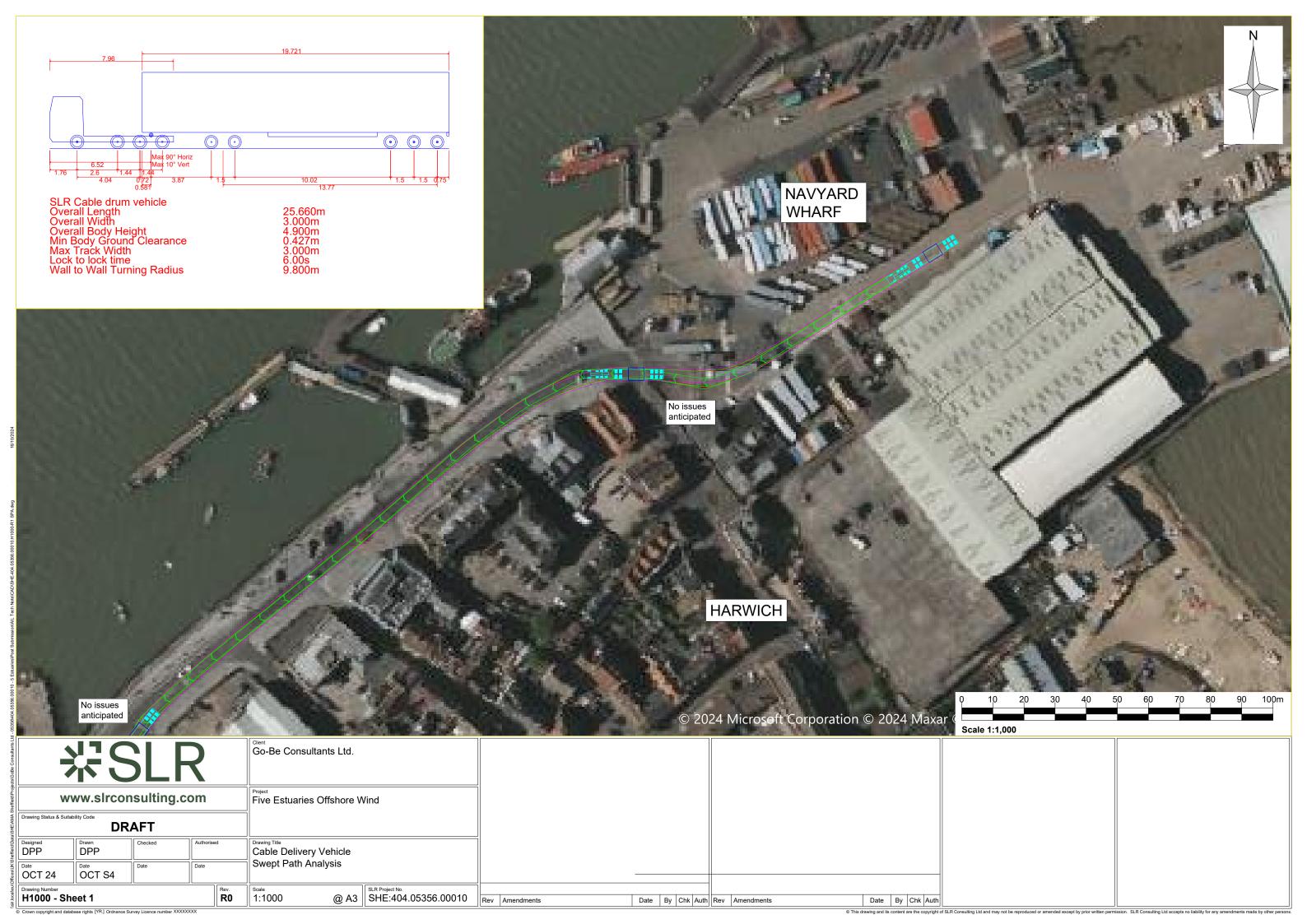


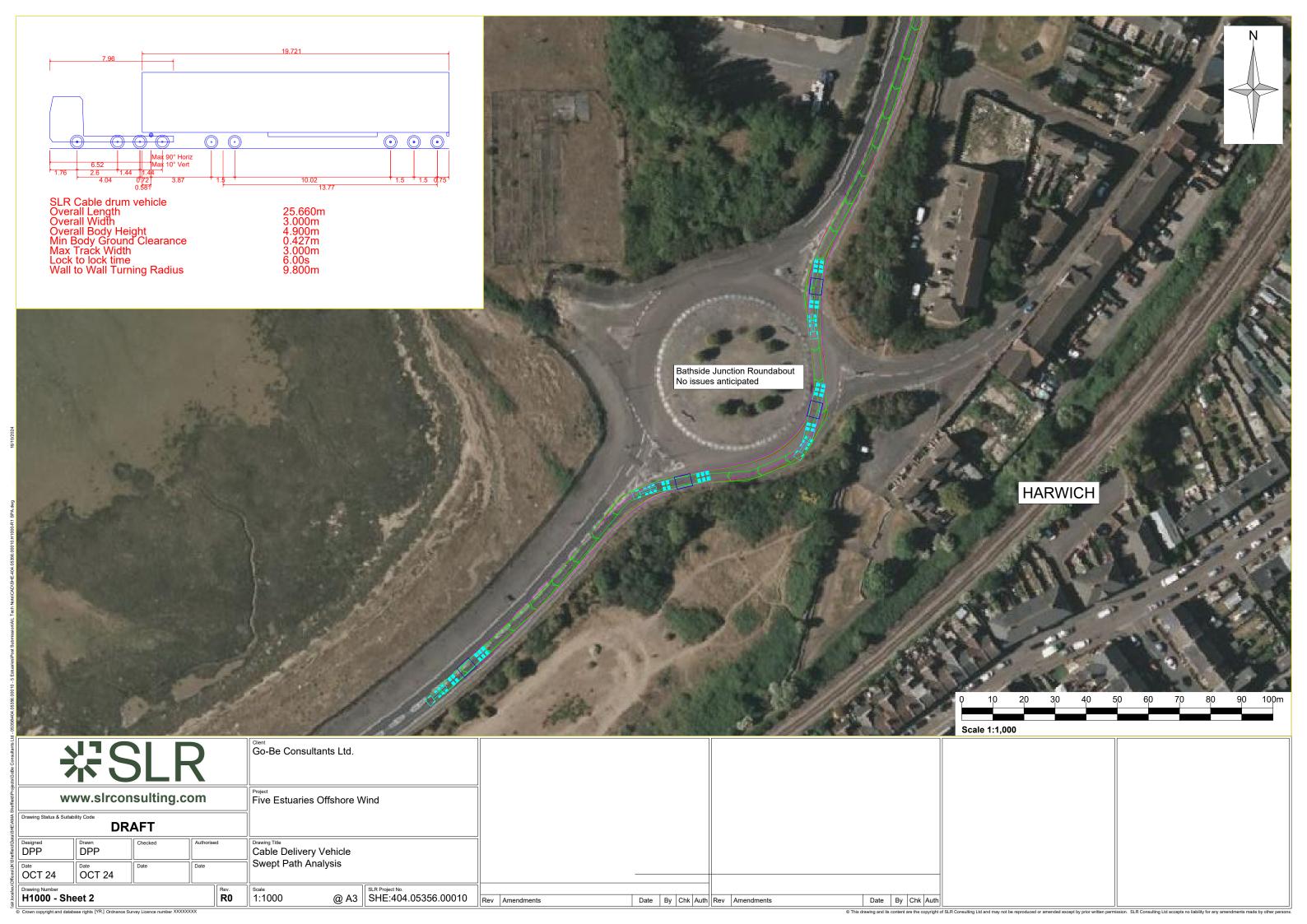


APPENDIX 2: MAXIMUM VEHICLE MOVEMENTS (VE + NF DUCTS)

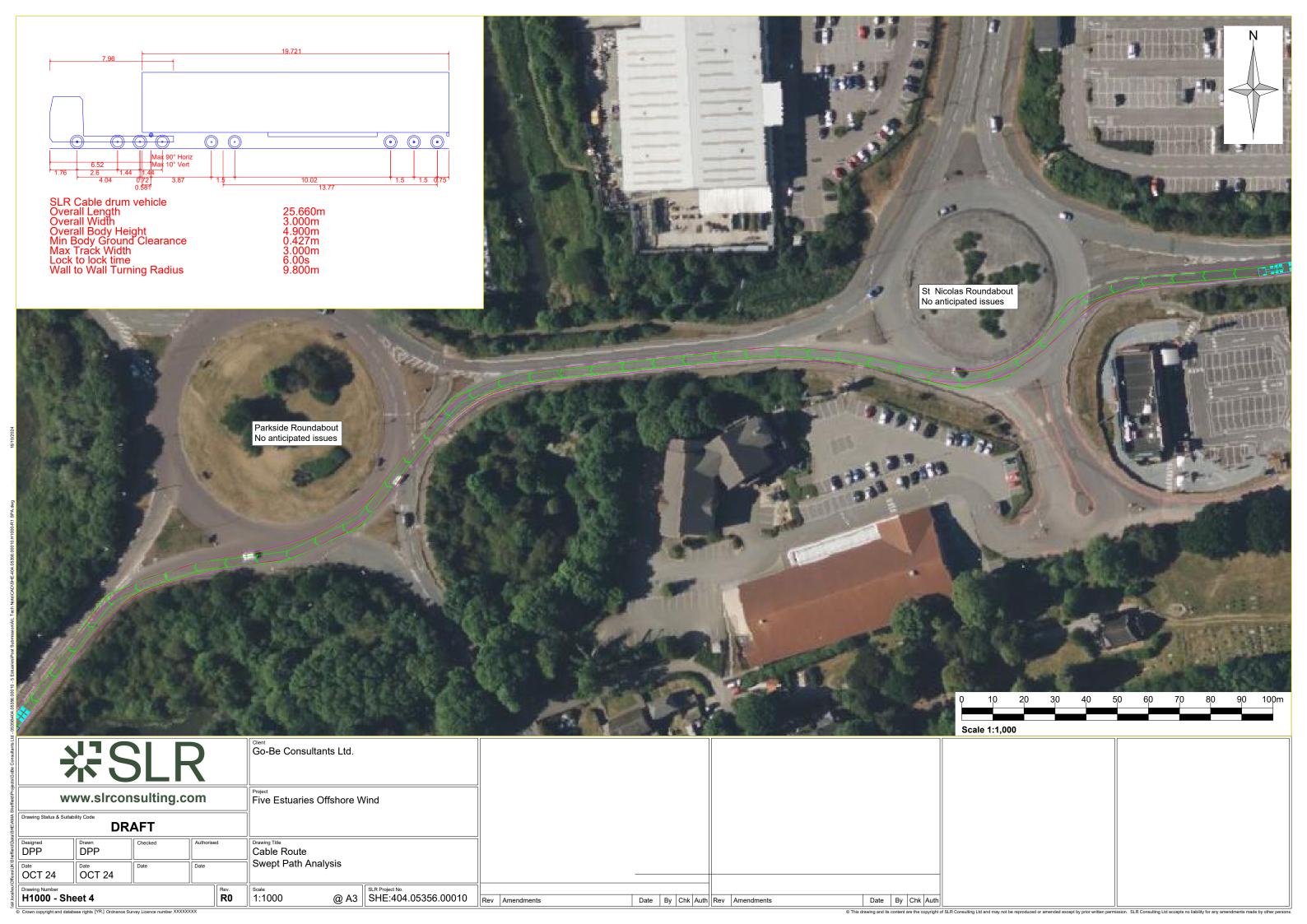
Link ID	Link	Maximum Daily Vehicle Movements		
		Total	HGV	Car/LGV
1	A12 (N)	393	242	151
2	A12 (5)	388	242	146
6	A12 (N) offslip at J29 Roundabout	197	121	76
7	A12 (N) onslip at J29 Roundabout	197	121	76
8	A120 (E) offslip at J29 Roundabout	270	194	76
9	A120 (E) onslip at J29 Roundabout	270	194	76
10	A120 between J29 and A133	781	484	297
11	A120 between A133 and Harwich Road	448	290	158
12	A120 between Harwich Road and Bentley Road	911	410	500
13	A120 between Bentley Road and B1035	880	410	469
14	A120 East of B1035	640	484	156
15	A120 at Harwich	640	484	156
16	A133 between A120 and A133 Main Road	349	194	154
17	A133 between A133 Main Road and B1033	525	194	330
18	A133 between B1033 and B1027	321	78	243
19	A133 Clacton Road (Elmstead Market)	206	0	206
20	A133 Main Road	233	0	233
21	B1027 St John's Road (west of Clacton)	87	0	87
22	B1027 Colchester Road (St Osyth Park)	16	0	16
23	B1027 Valley Road (Clacton)	329	106	223
24	B1032 Frinton Road	371	106	265
25	B1032 Clacton Road	374	106	268
26	B1033 Colchester Road (west of B1441)	368	159	209
27	B1441 Clacton Road	188	77	111
28	B1414 Harwich Road	189	77	113
29	B1033 Frinton Road	249	77	172
30	B1033 Colchester Road (east of B1441)	204	83	122
31	B1035 Tendring Road	317	83	235
32	B1035 Thorpe Road	224	39	185
33	B1035 south of A120	273	72	201
34	B1035 Clacton Road	76	29	48
35	Bentley Road	603	216	387
45	Waterhouse Lane	158	0	158
	Little Bromley Road / Ardleigh Road	200	42	158

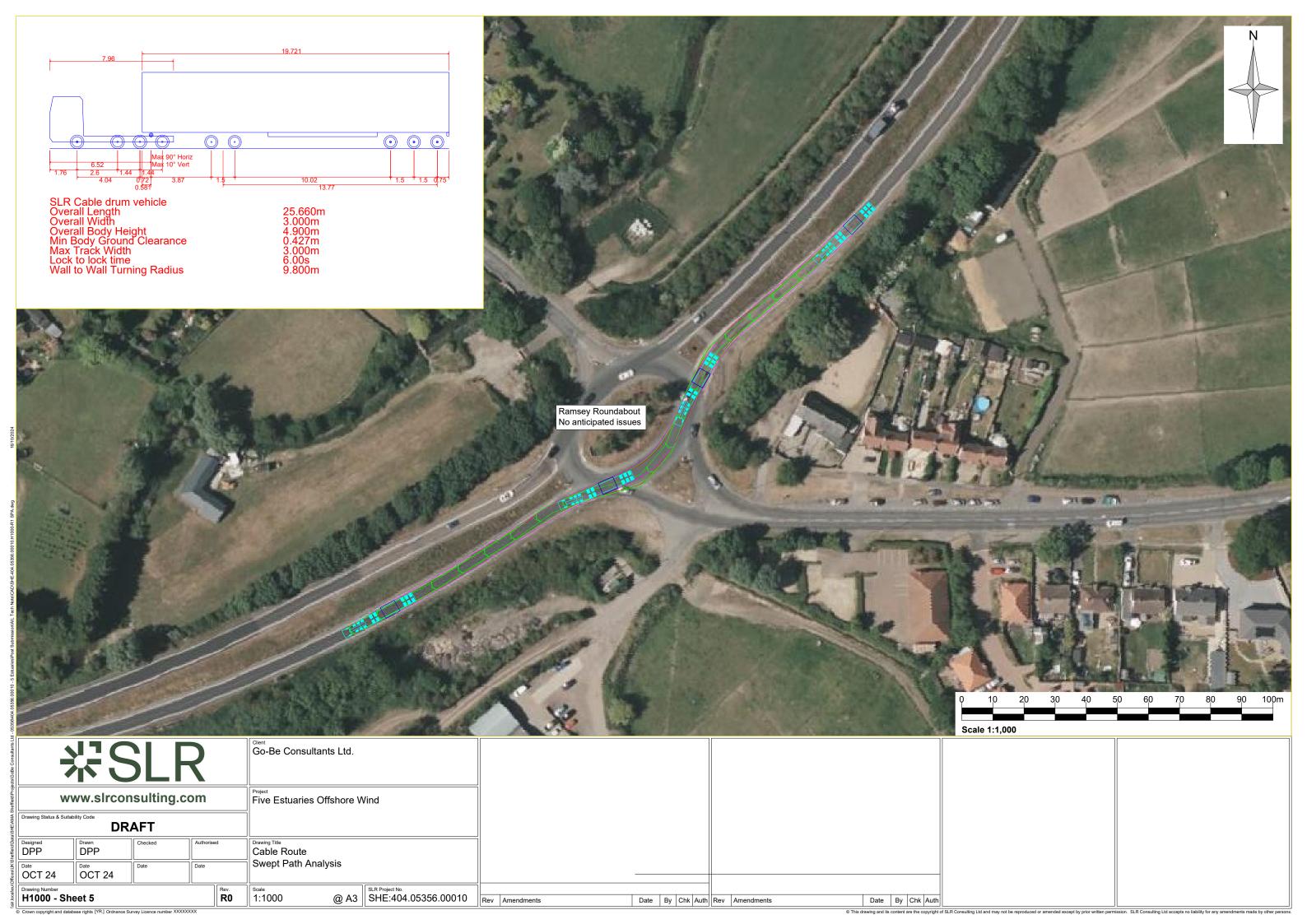
APPENDIX 3: A120/ BENTLEY ROAD SWEPT PATH ANALYSIS

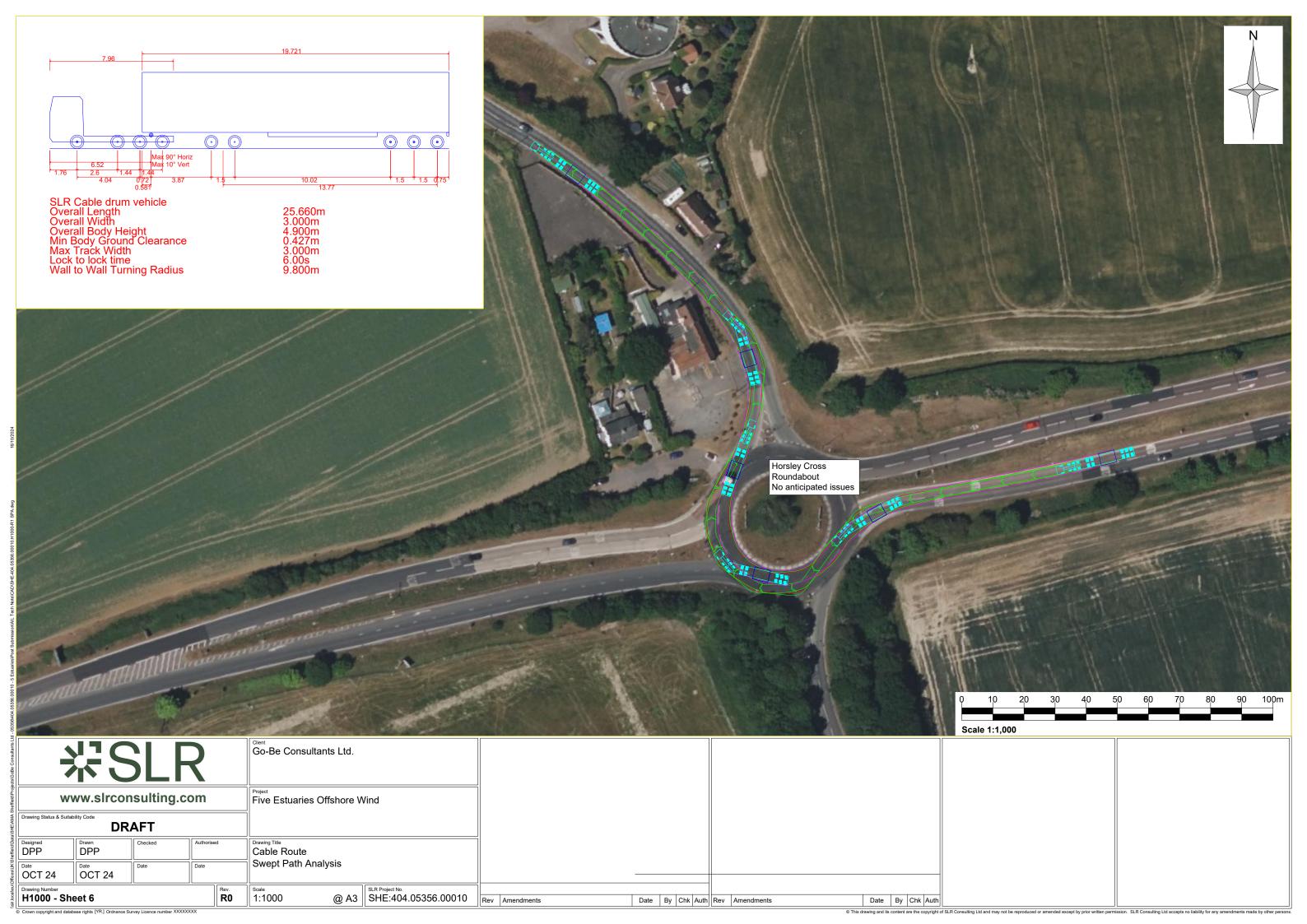


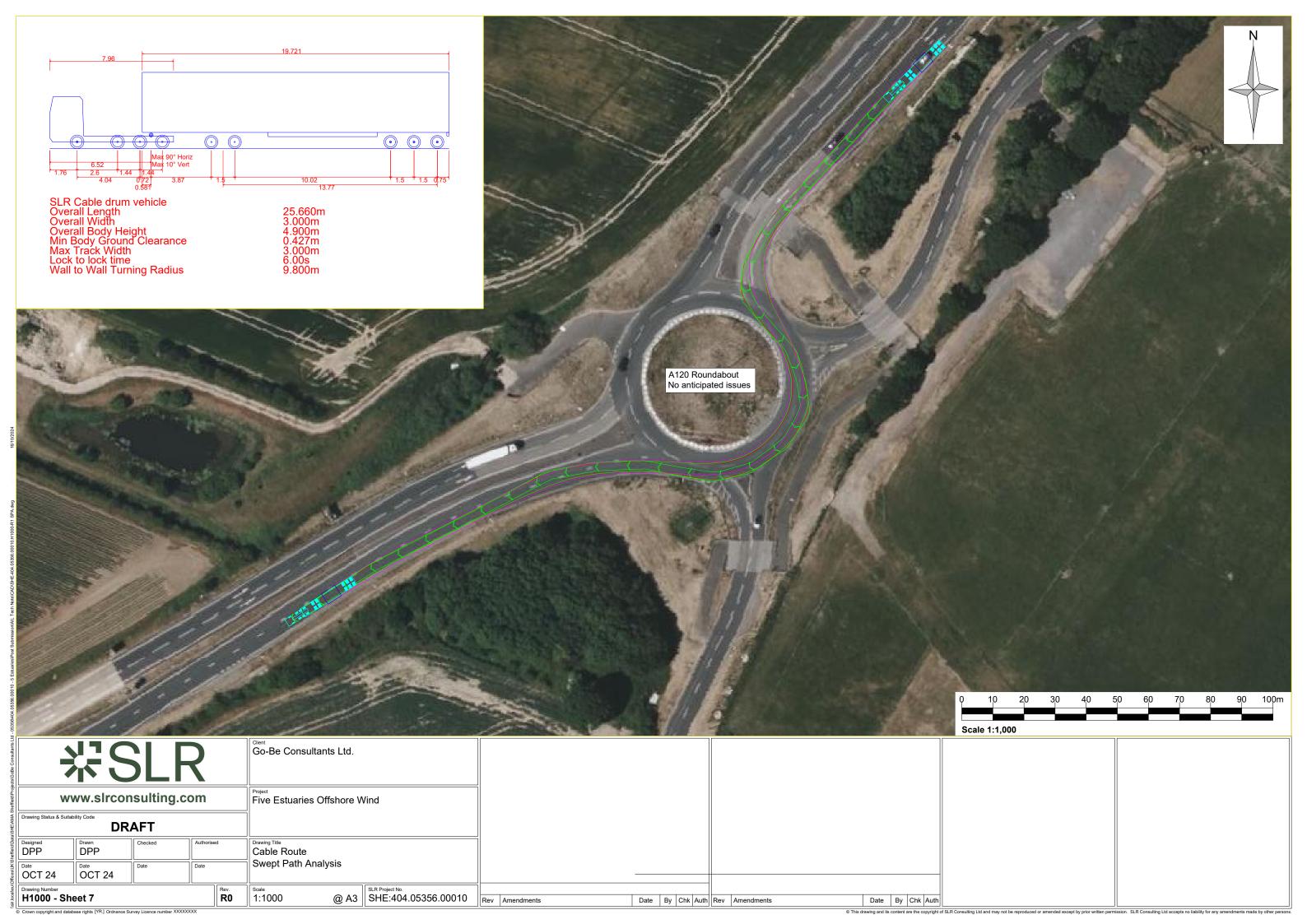


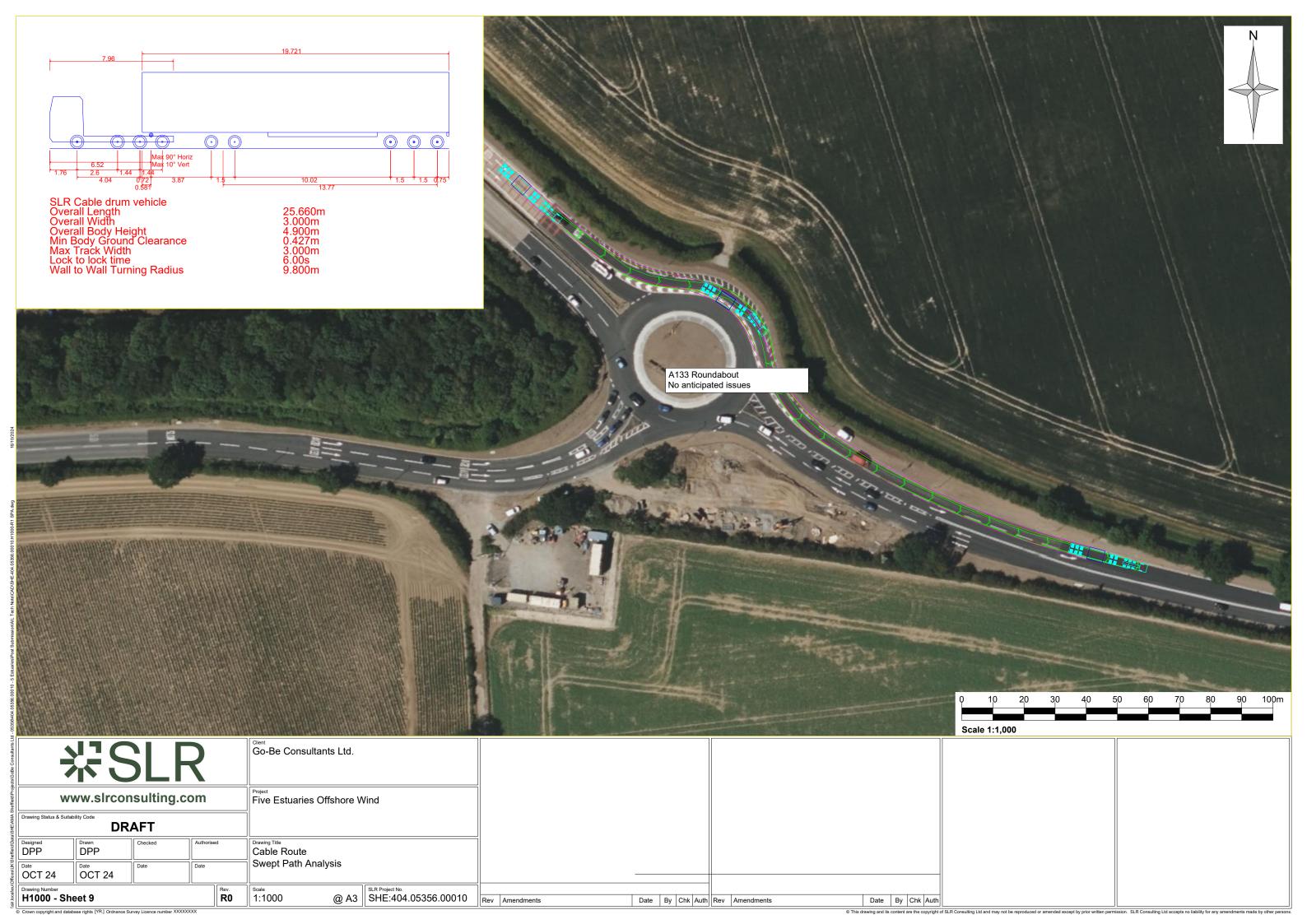


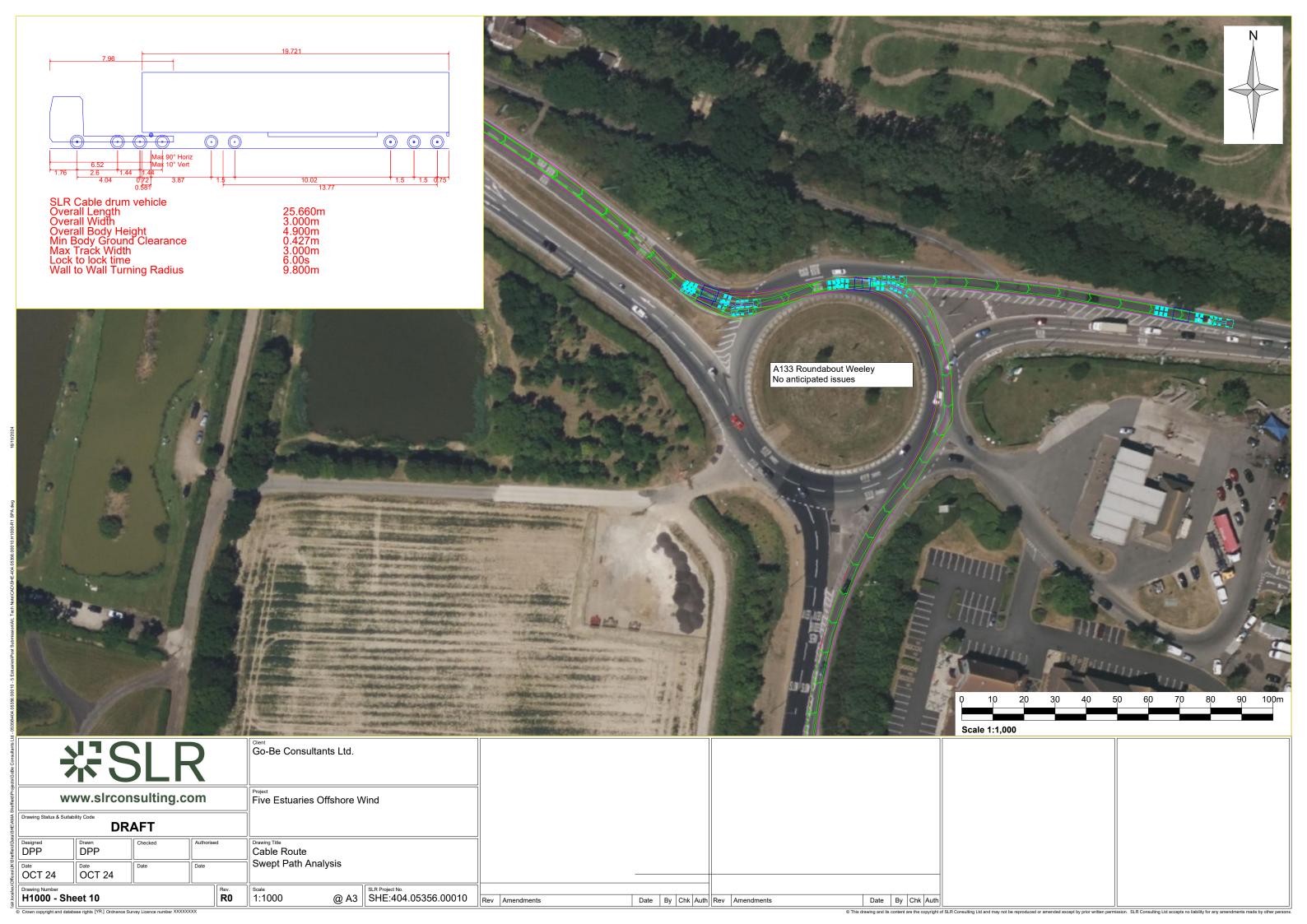




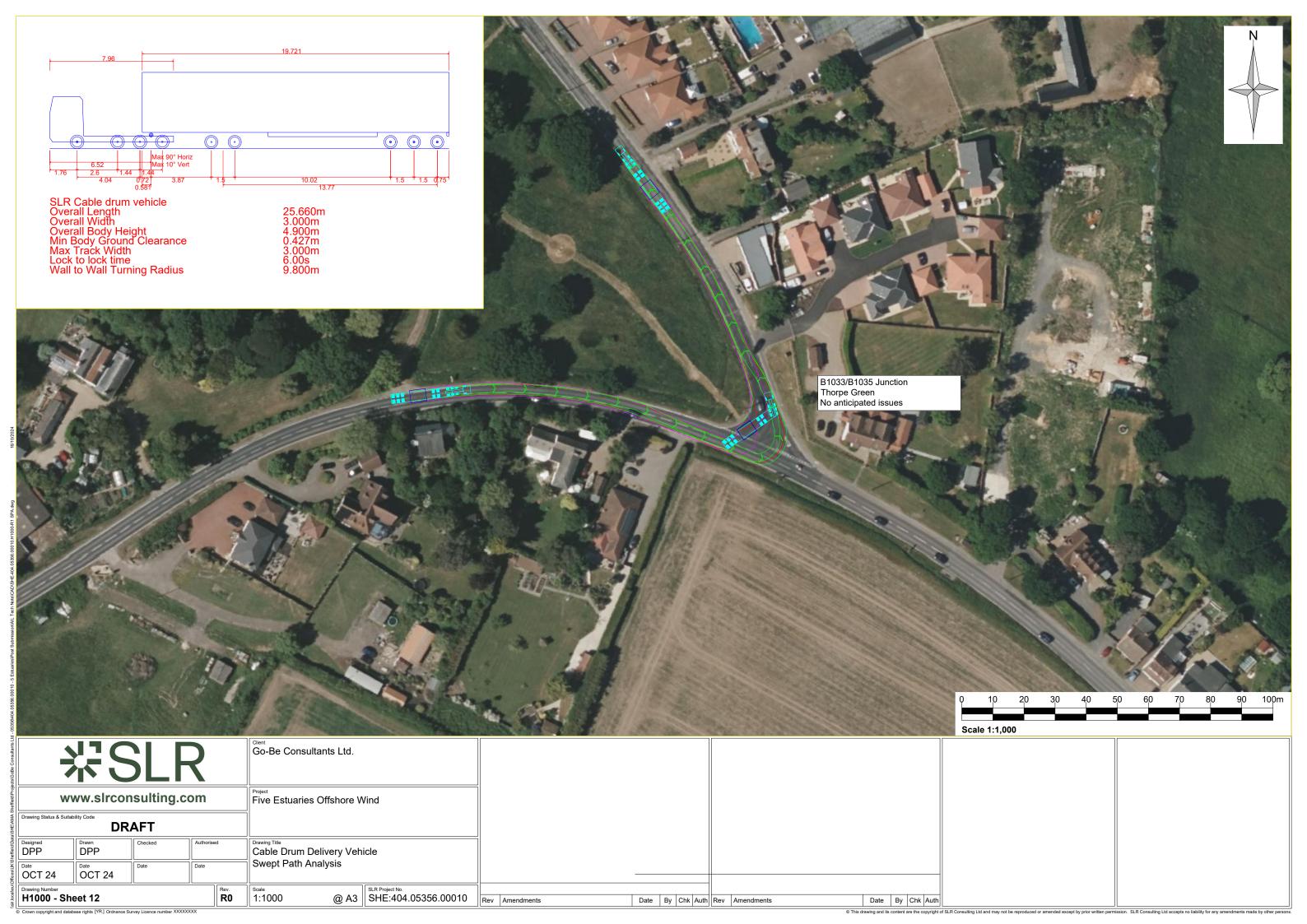


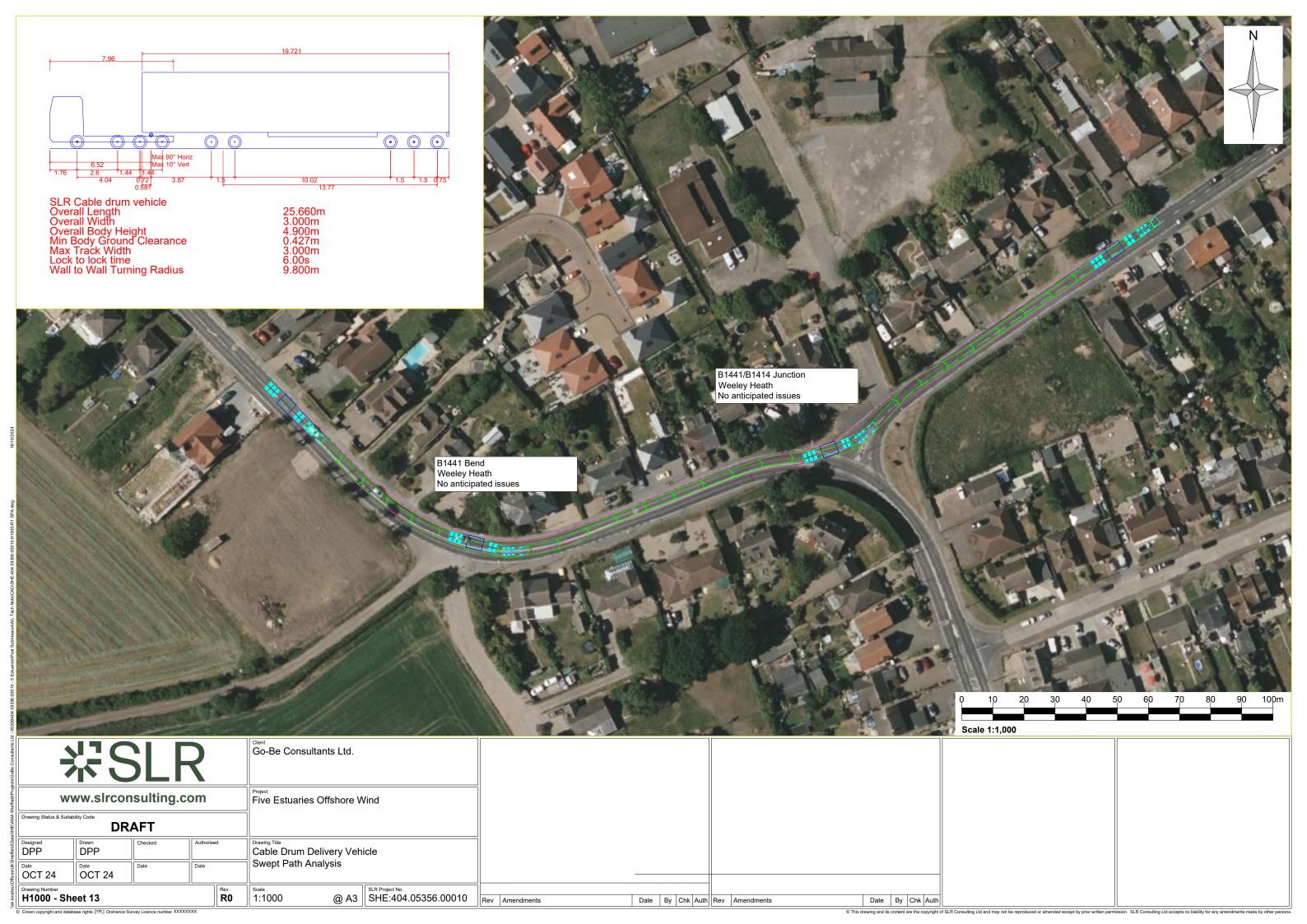


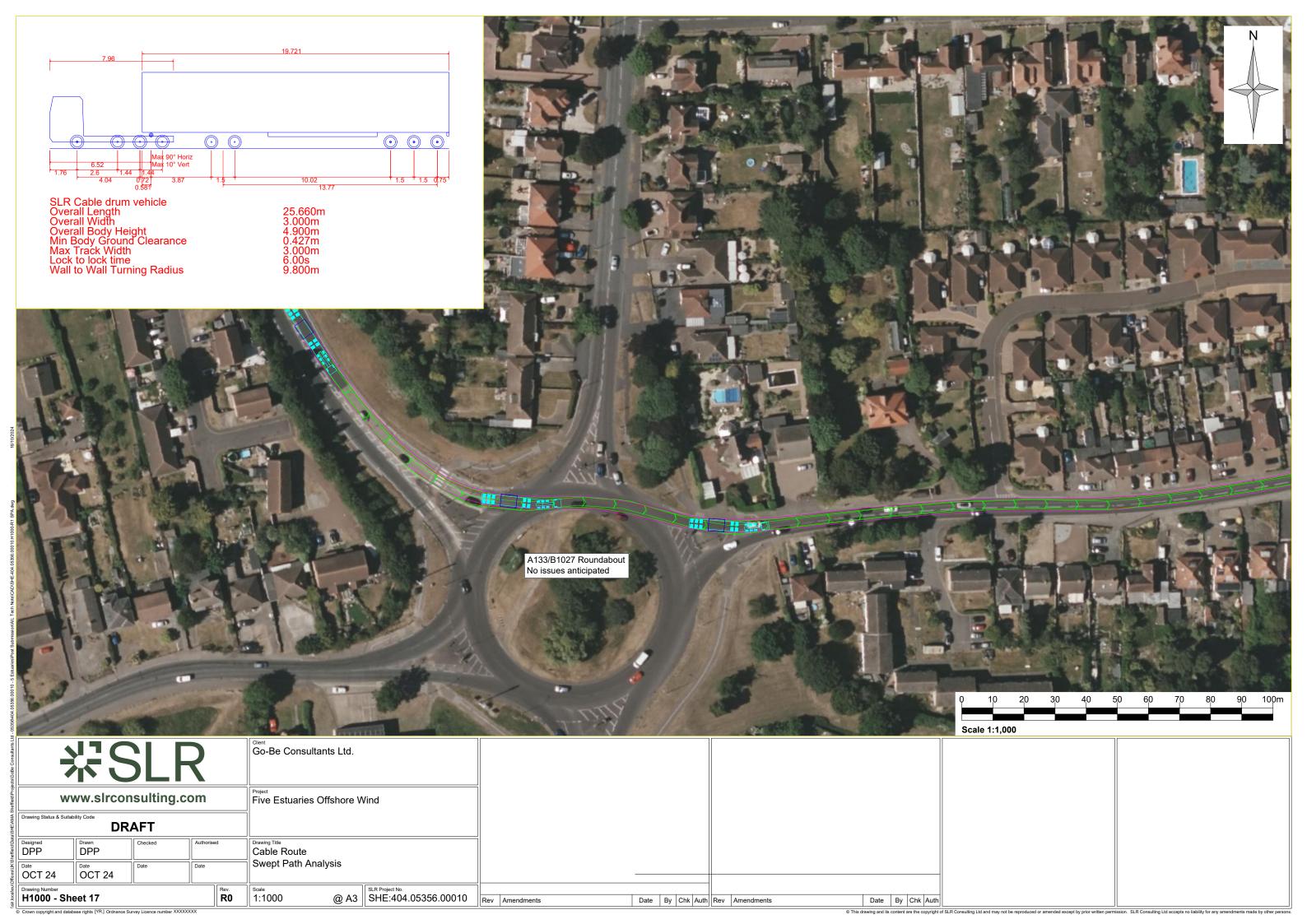




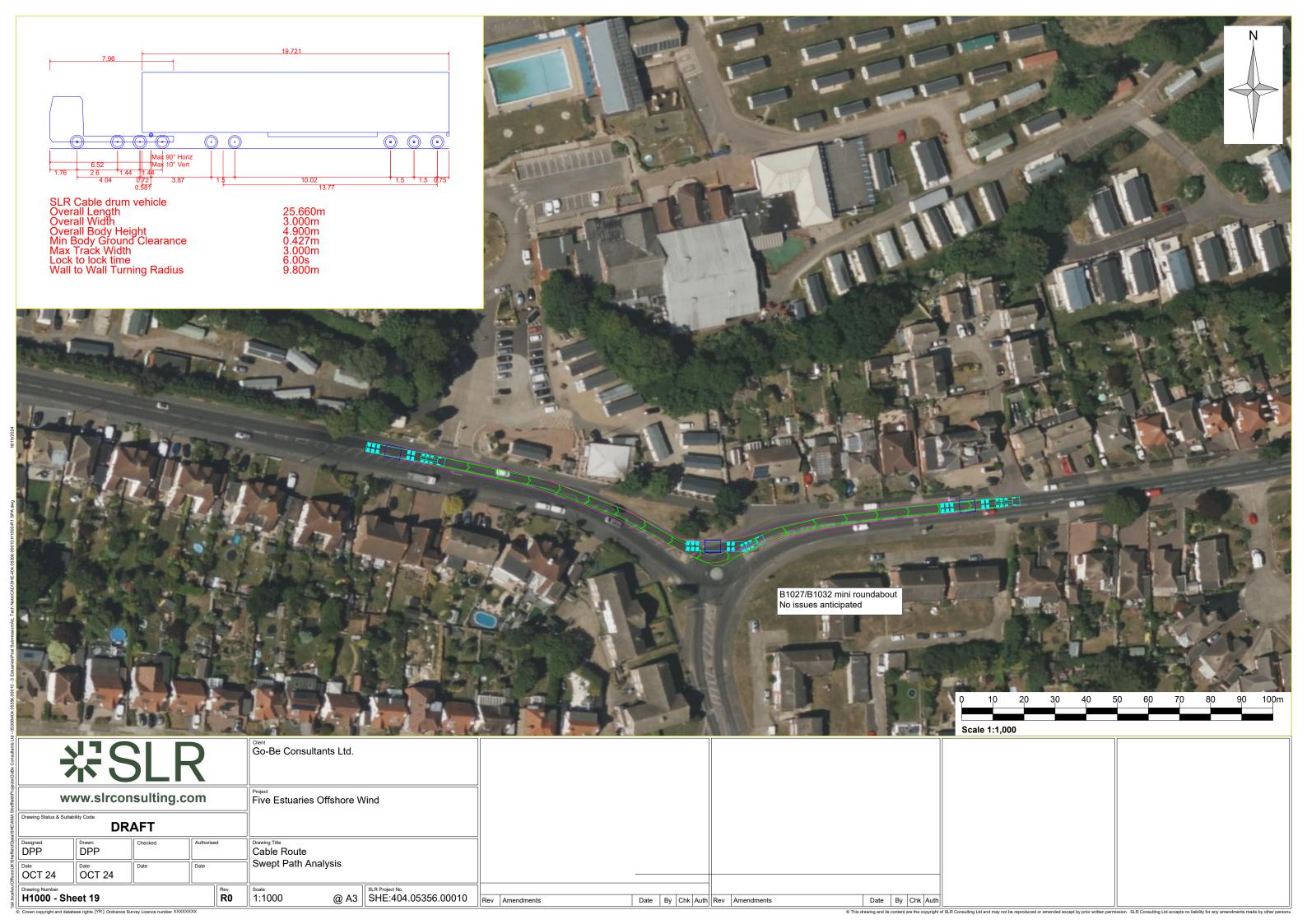


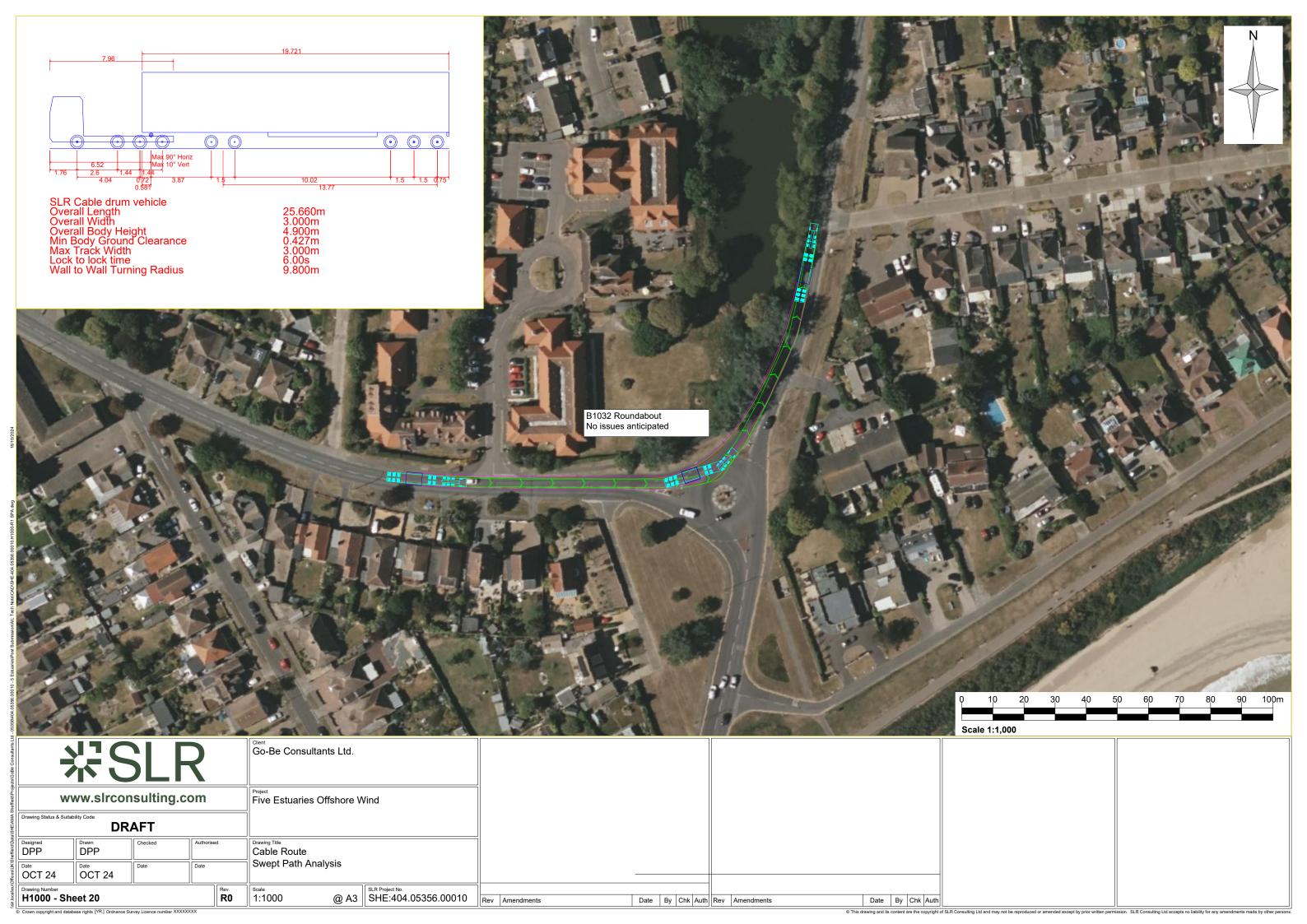




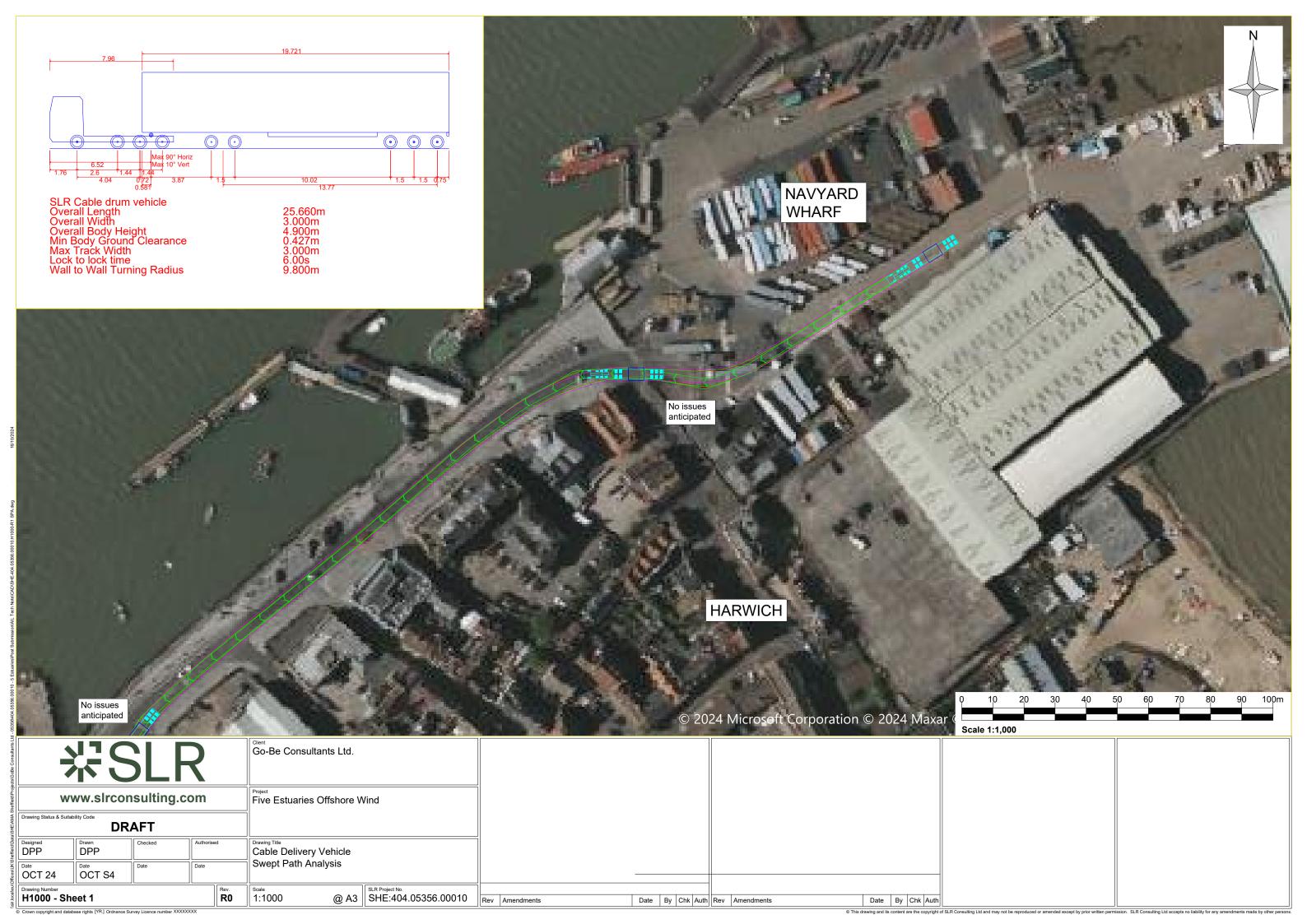


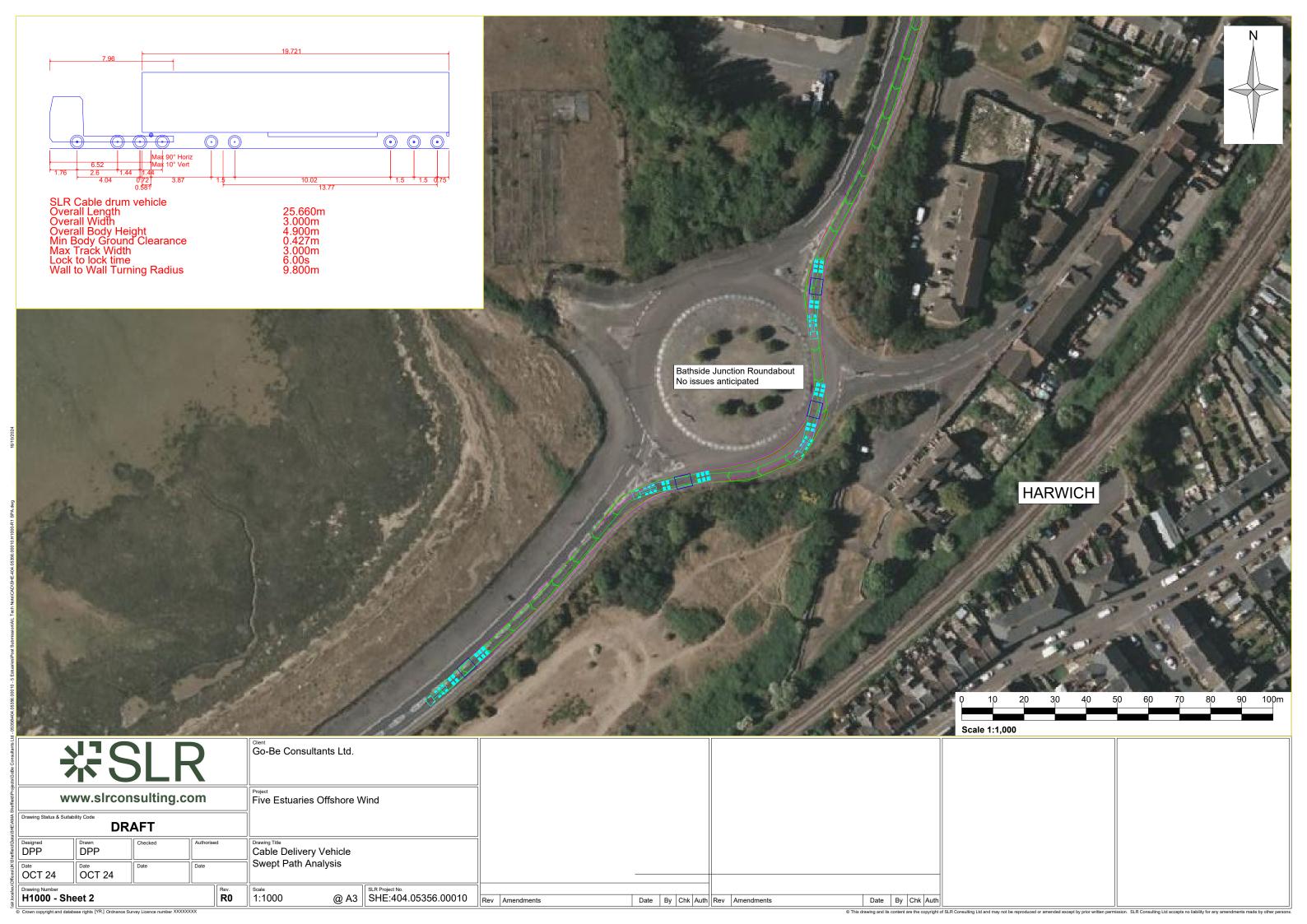




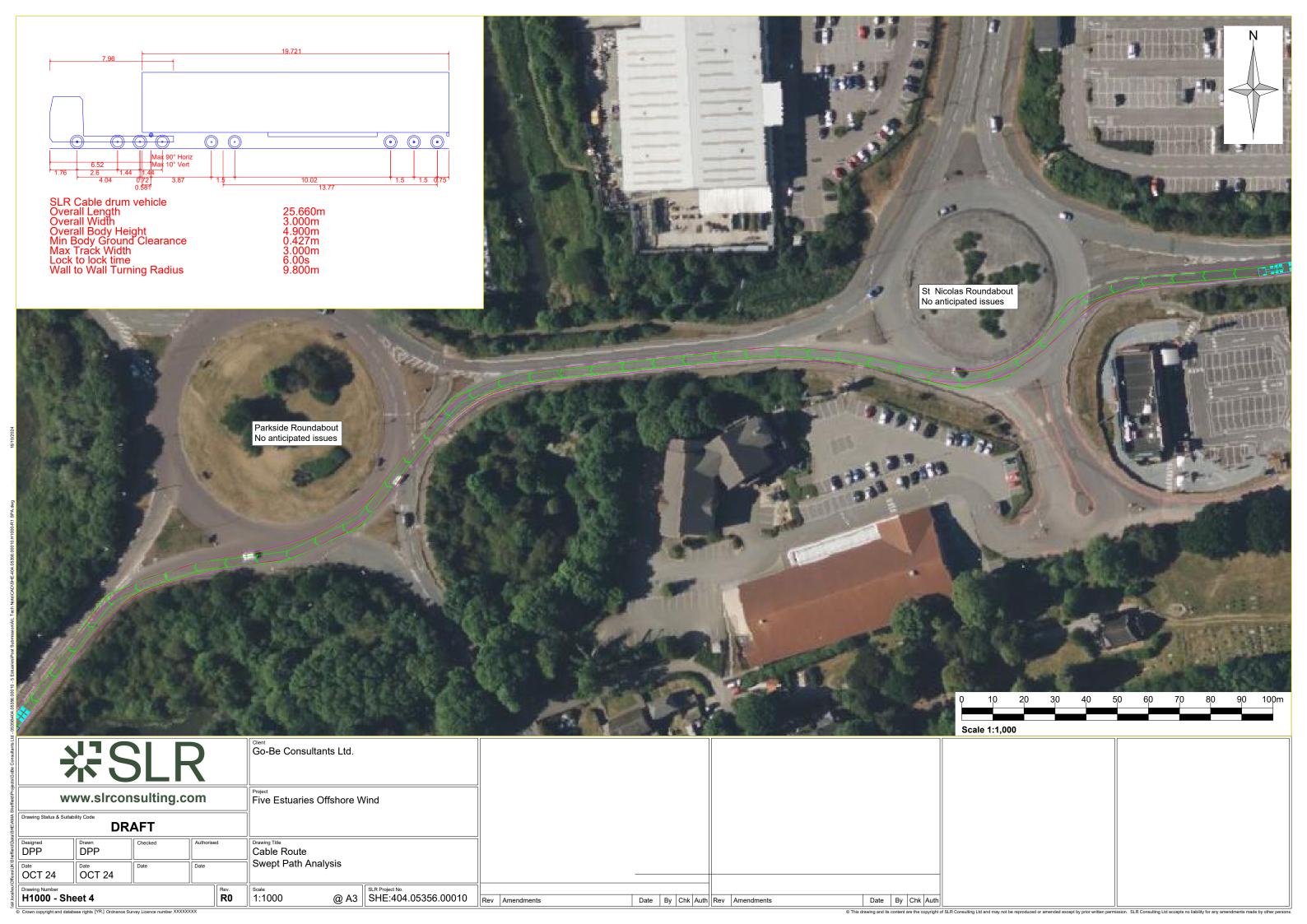


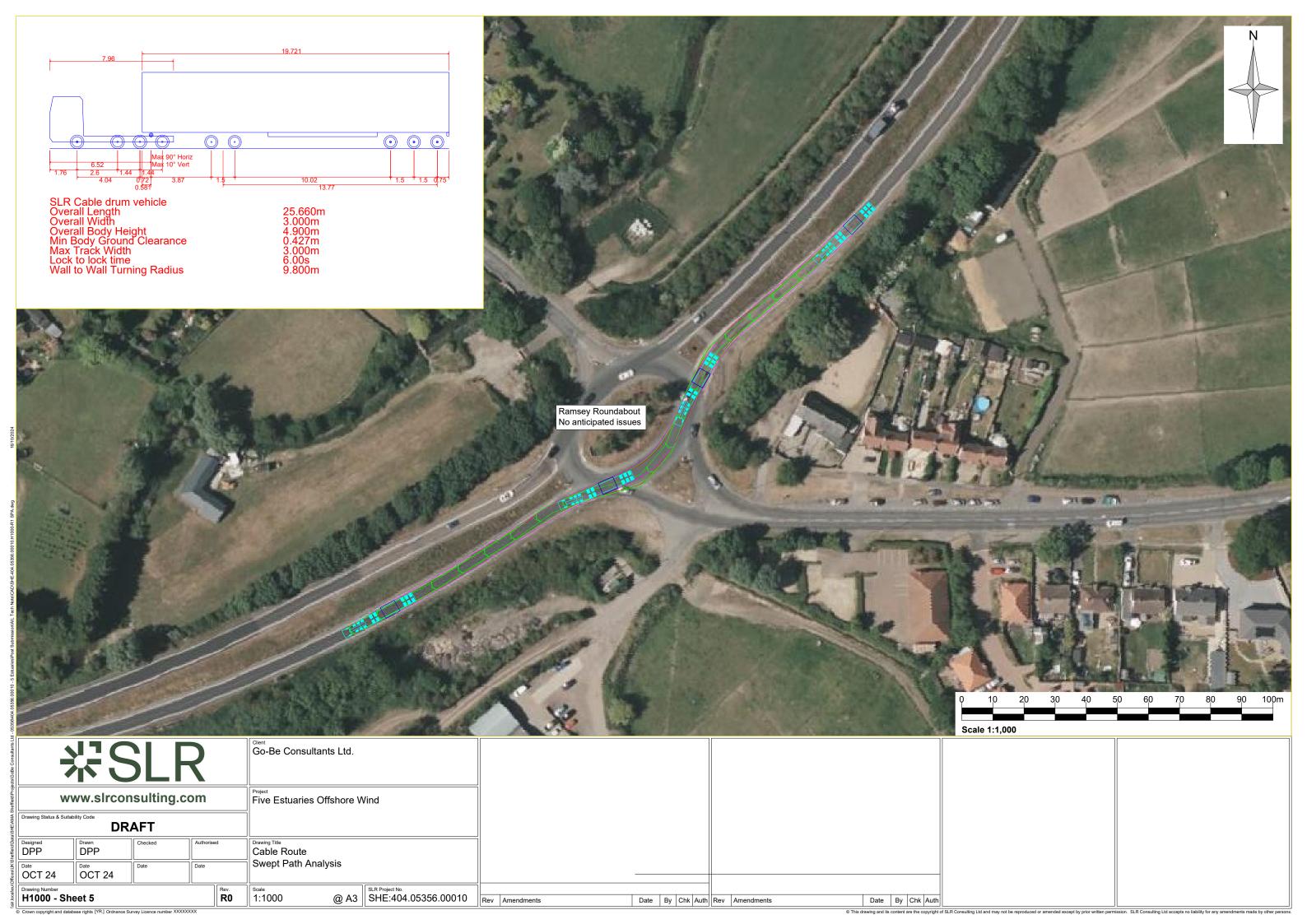
APPENDIX 4: CABLE DRUM DELIVERY VEHICLE SWEPT PATH ANALYSIS

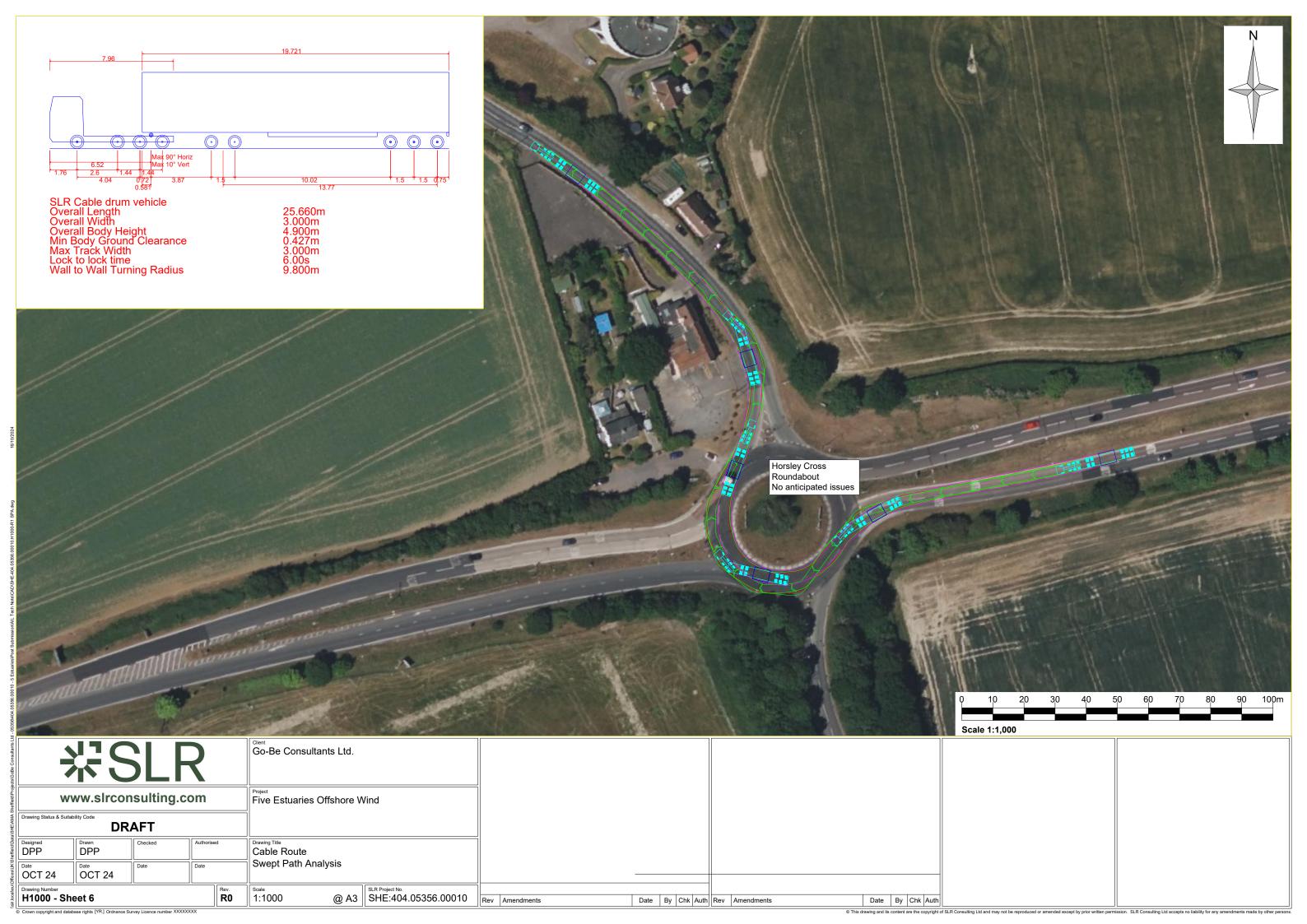


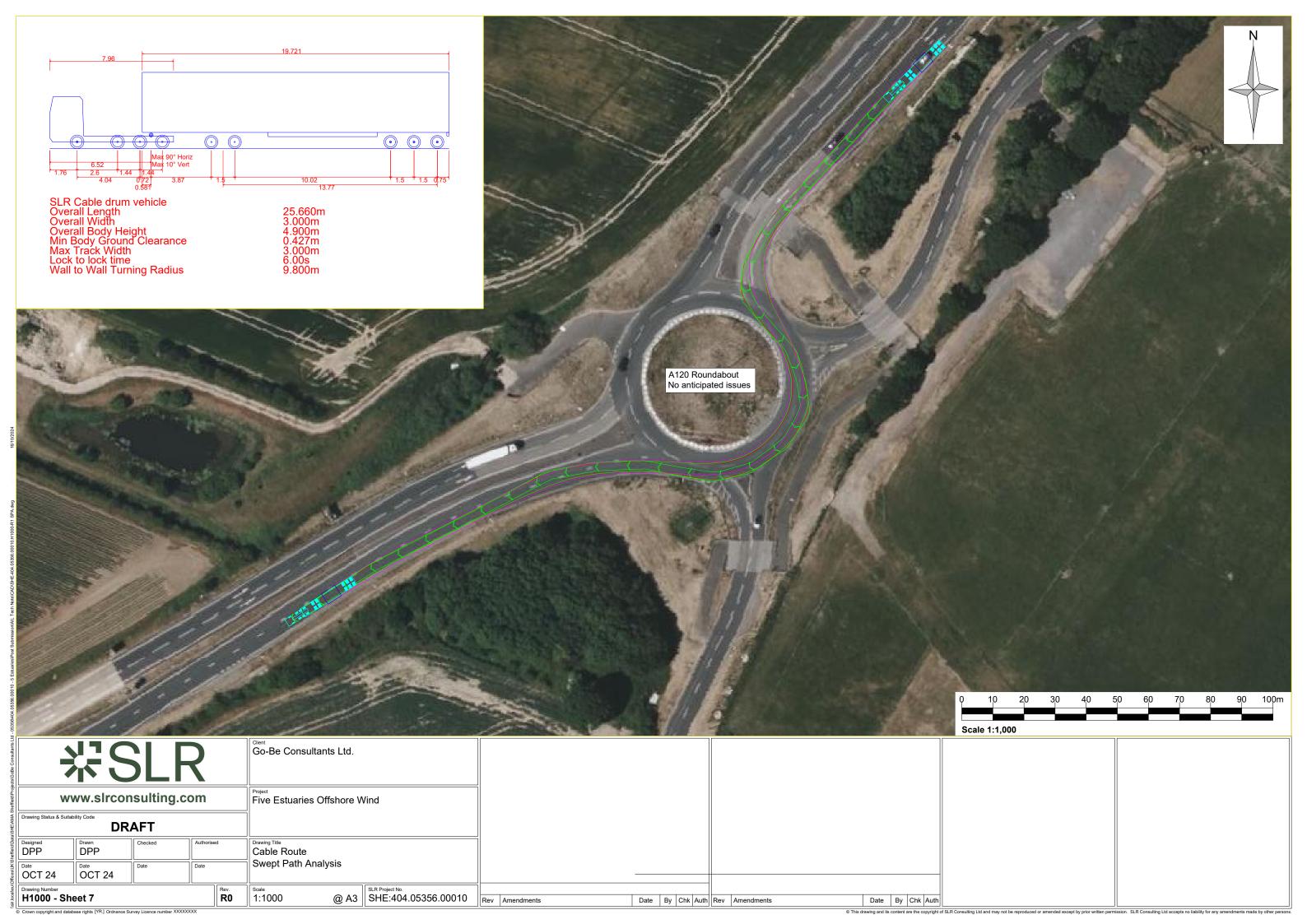


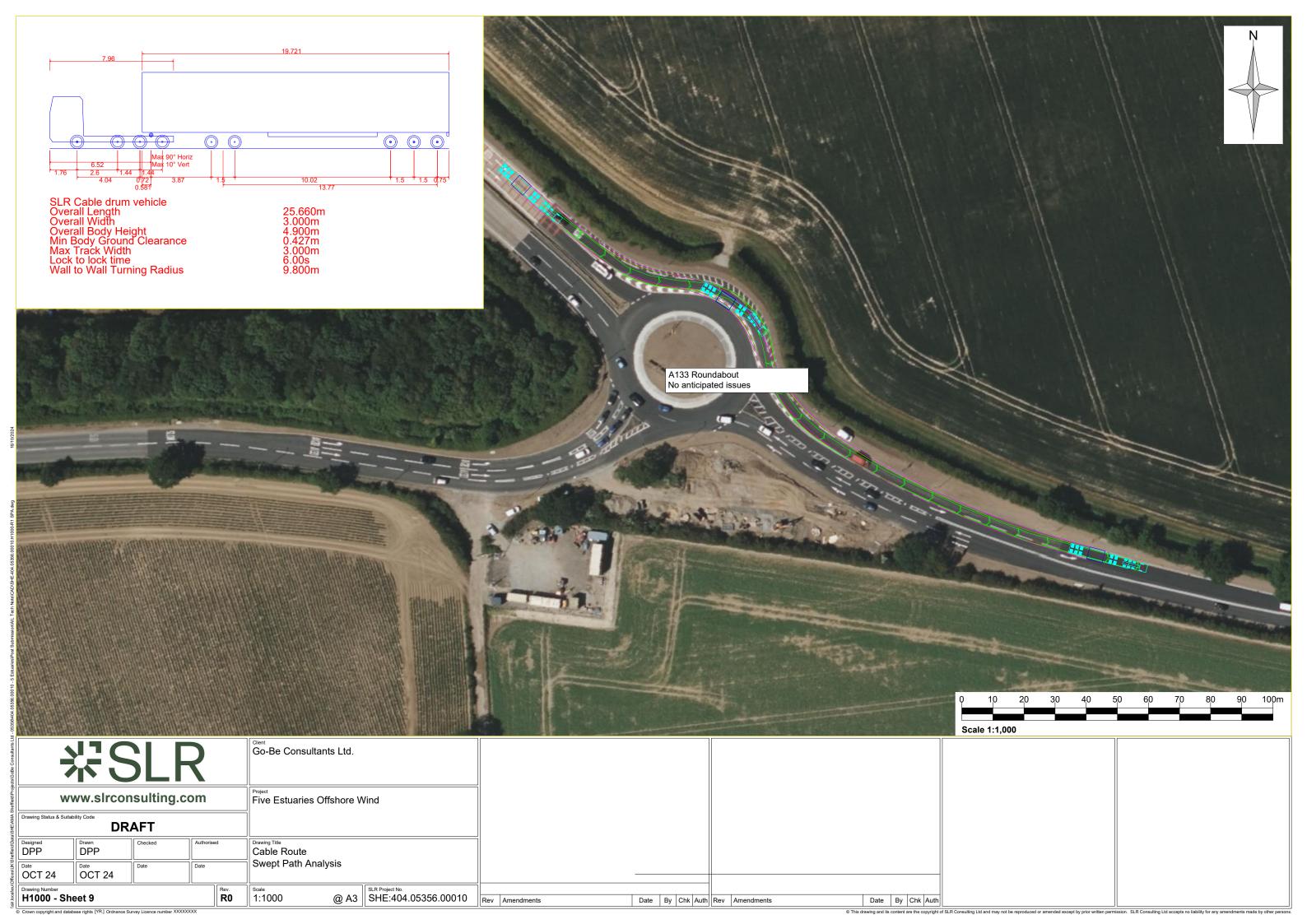


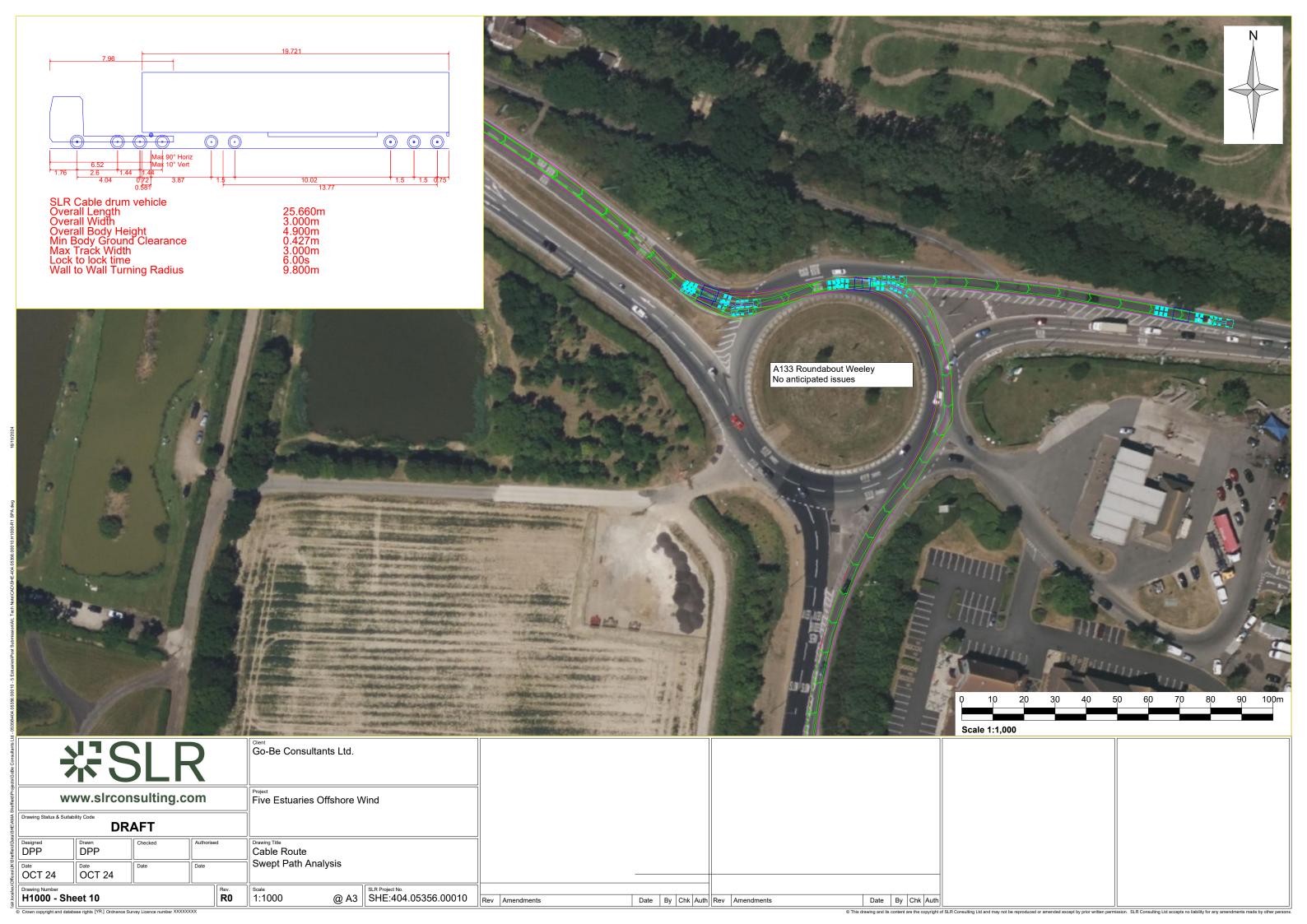




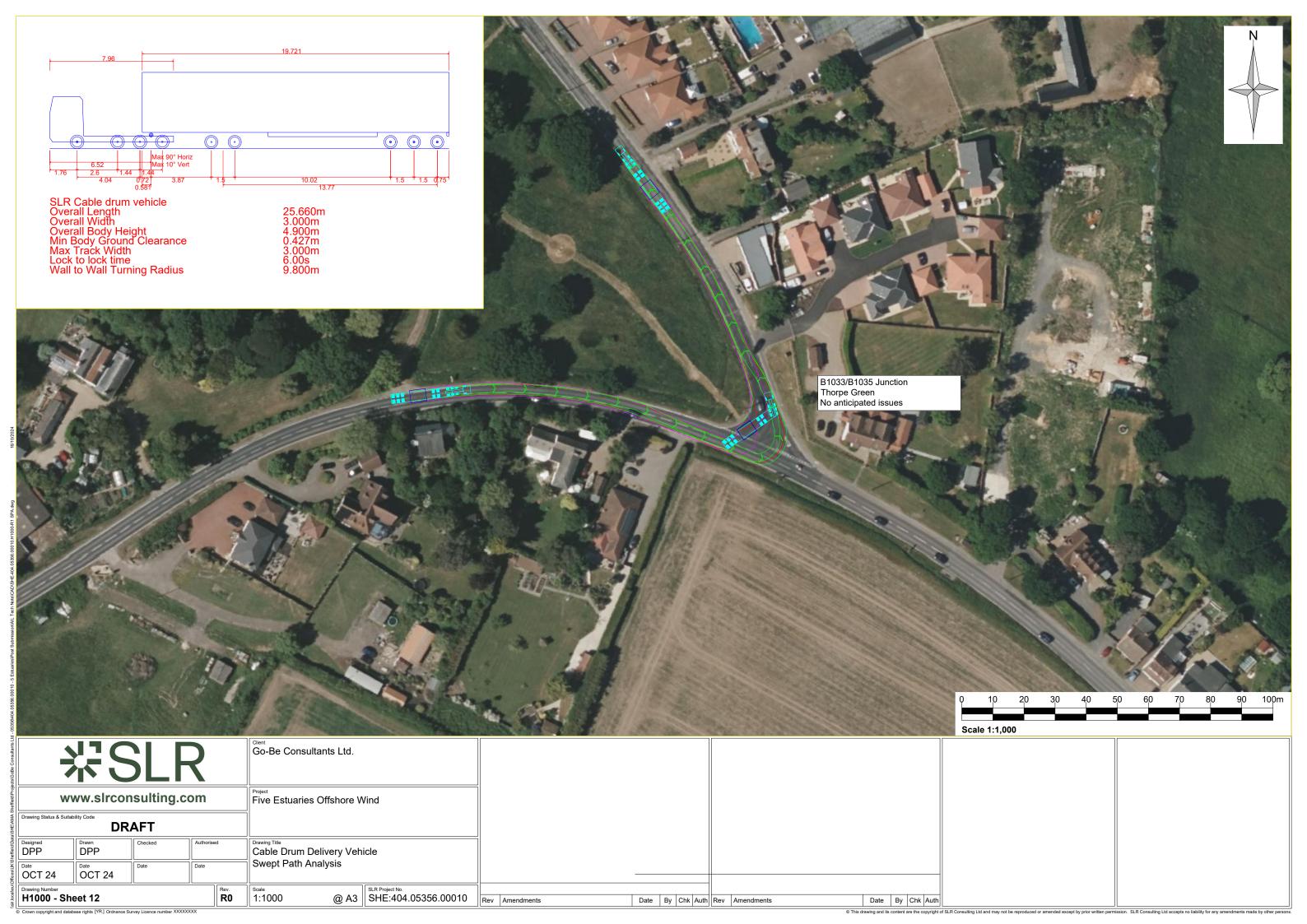


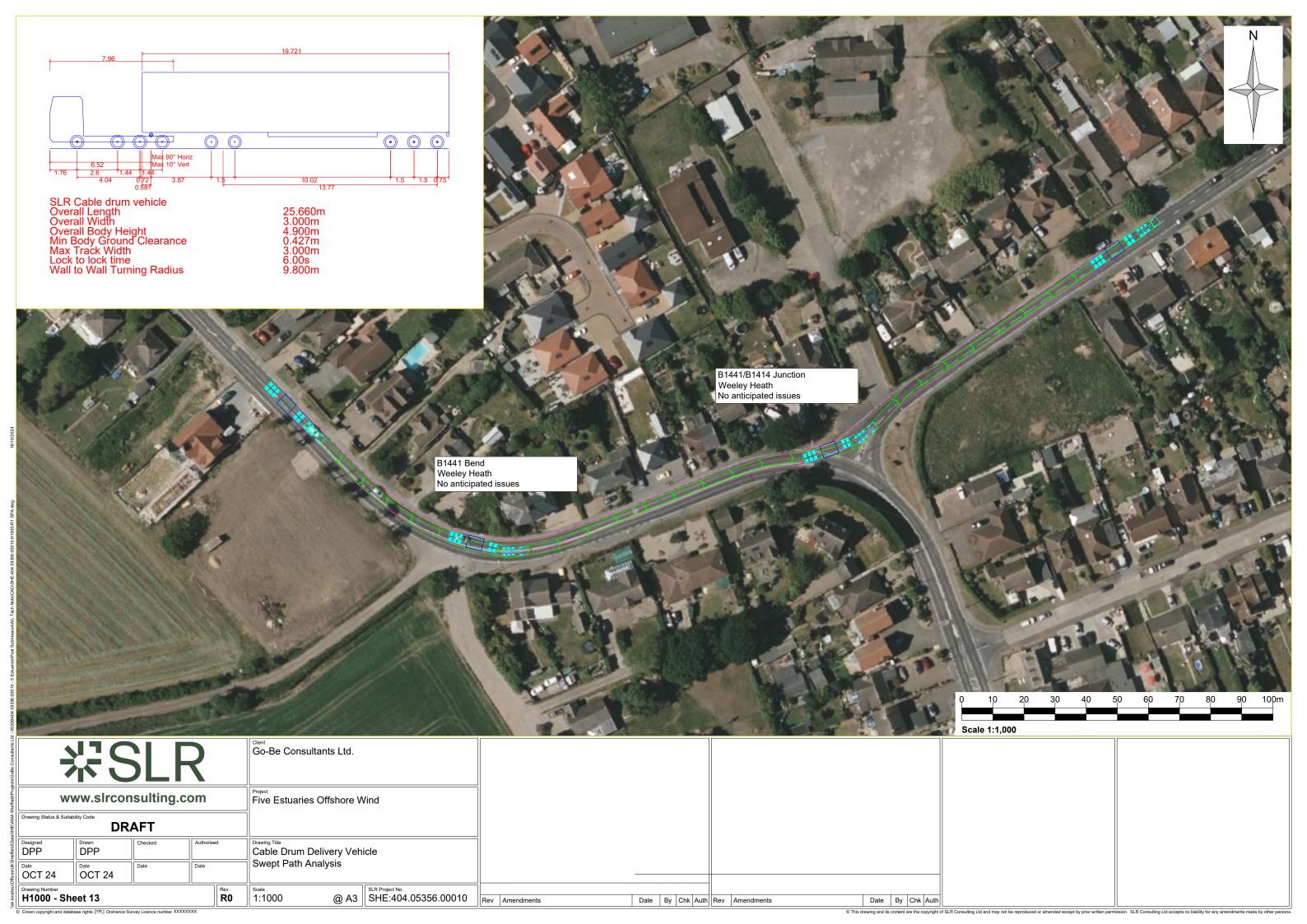


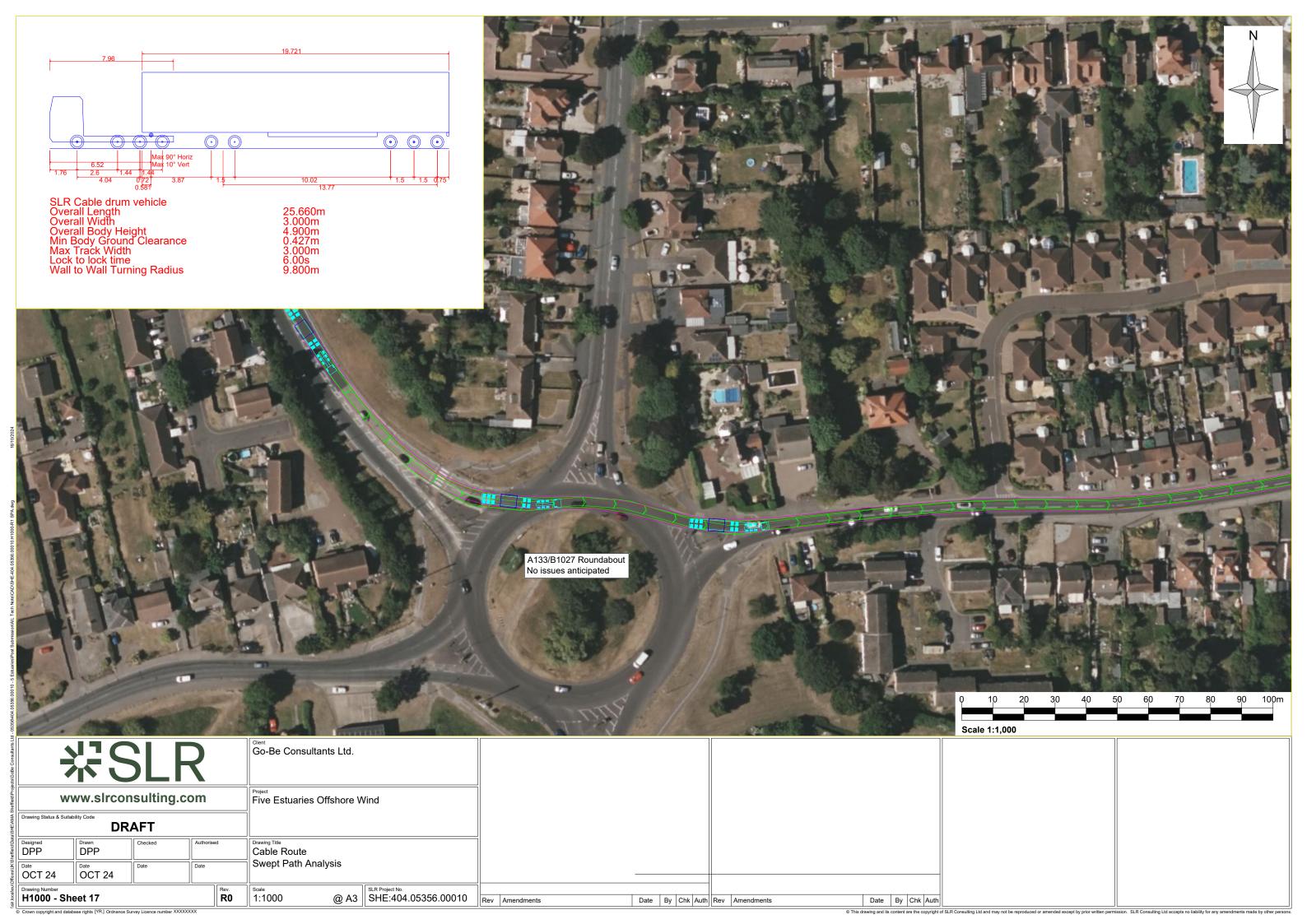




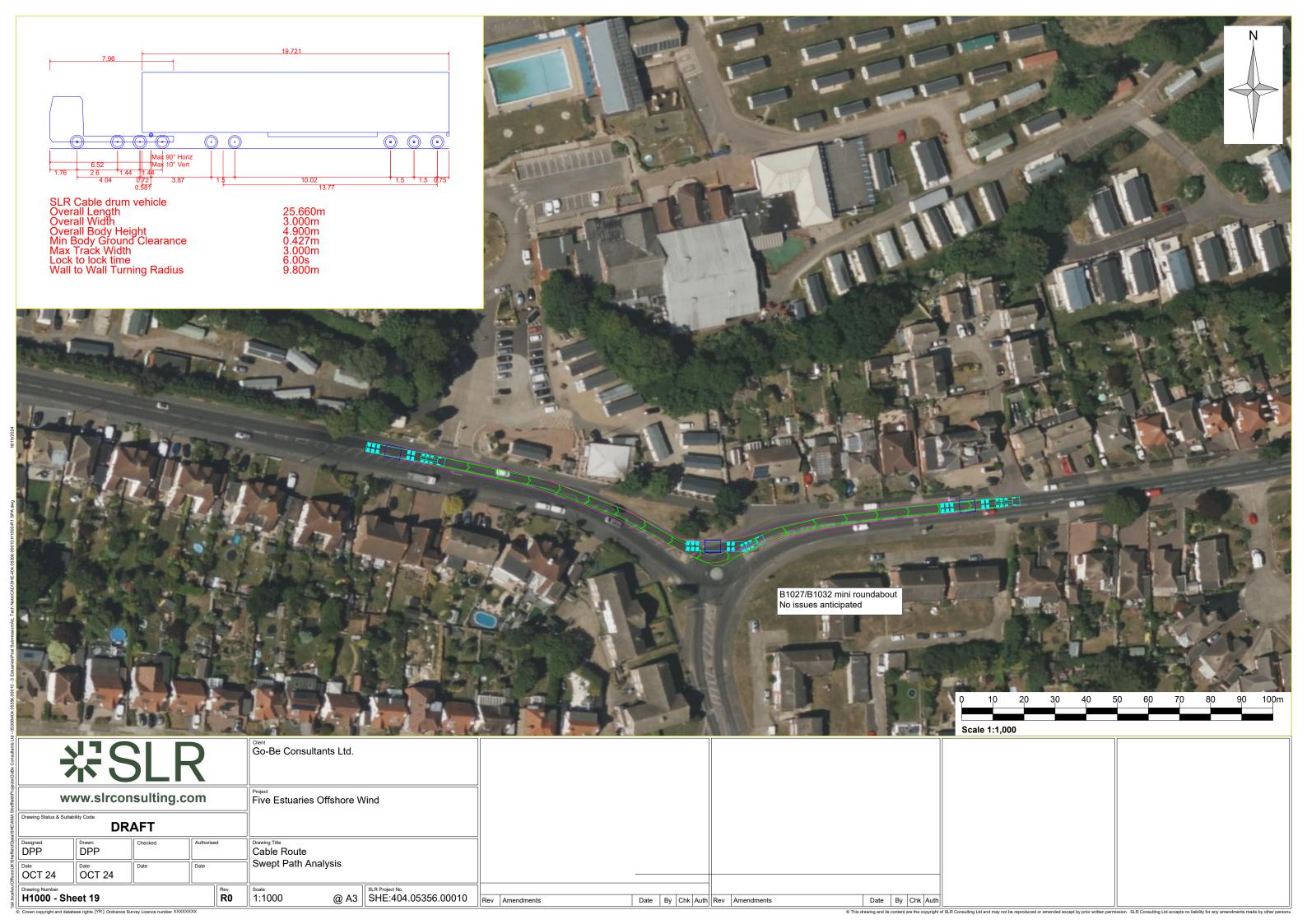


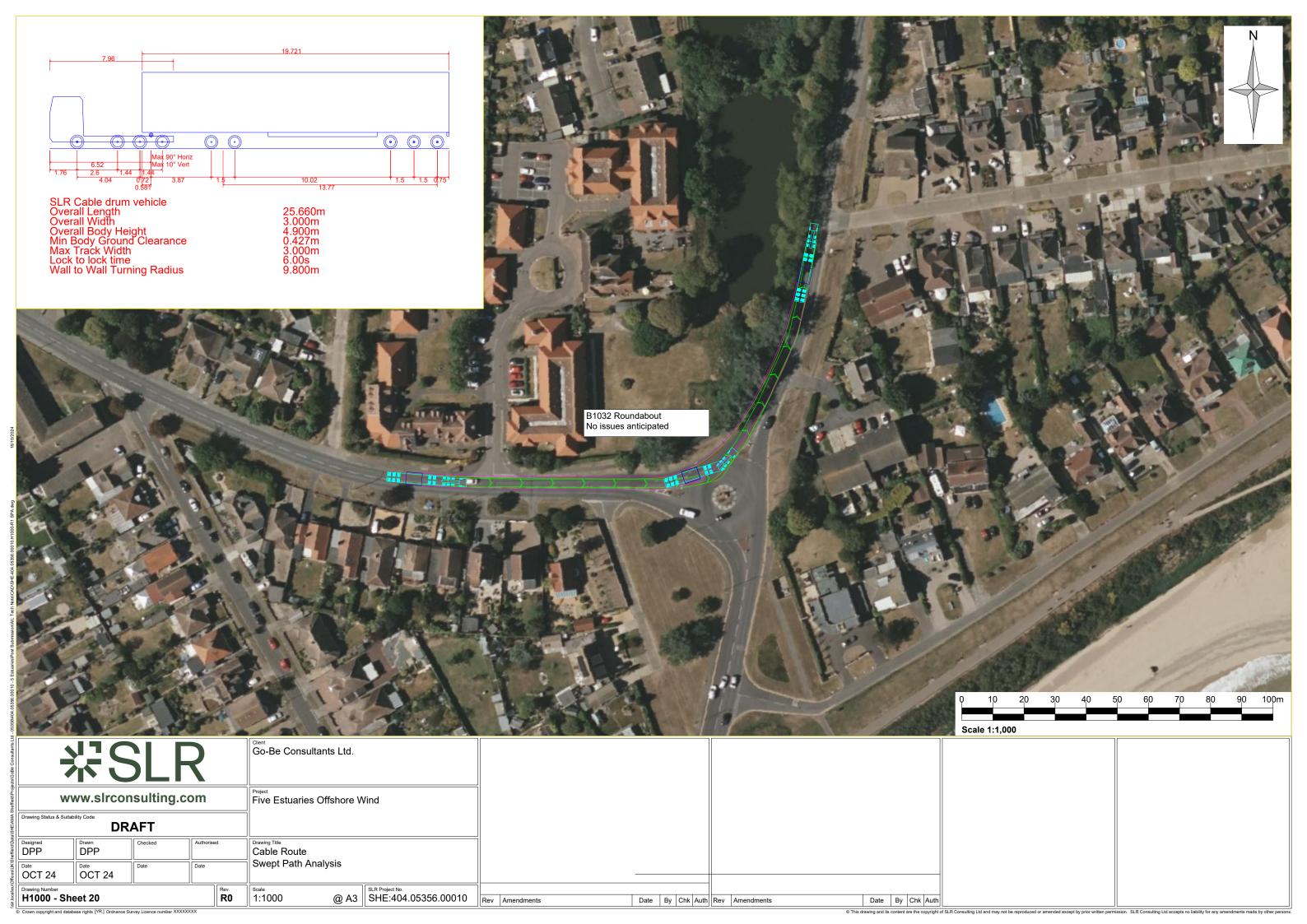


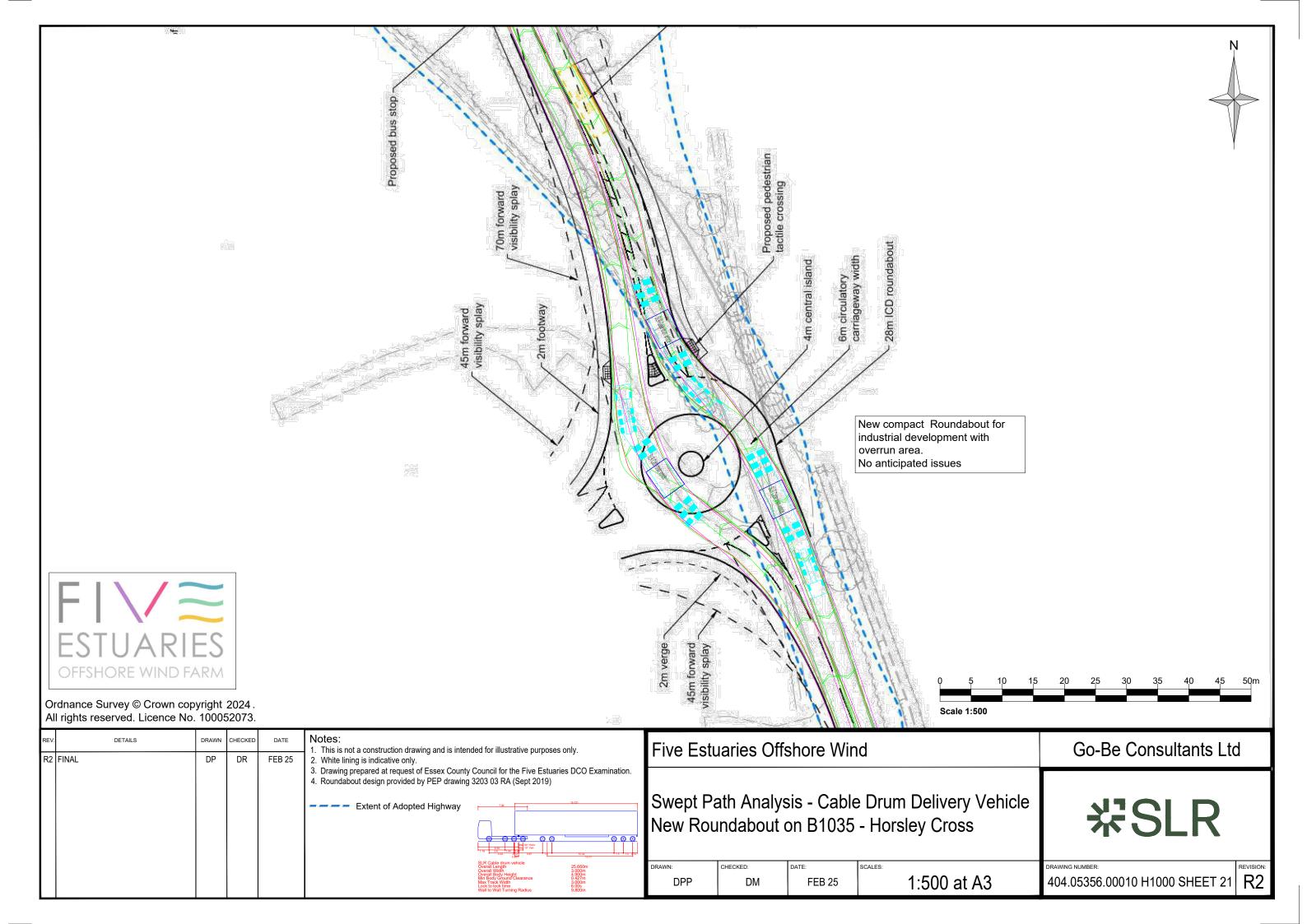














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