Outer Dowsing Offshore Wind

Outline Documents

Document 8.15

Outline Construction Traffic

Management Plan

Dare: Feltinary 2025

Downment Reference: 8.1.5

Pursuant to APFP Regulation: 5(2)/s

Rev: 3.0 (Tracked)



					1		OFF	-SHORE WIND
Company:		Outer Dowsing Offshore Wind			Asset:		Whole Asset	
Project:		WI	hole Wind Farm	Sub Project/Package: Whole		Asset		
Document Title or Description:		8.1	8.15 Outline Construction Traffic Management Plan					
Internal Document P Number:		PP	1-ODOW-DEV-CS-PLA-00	3 rd Party Doc No (If applicable):		N/A		
Rev No. Date			Status / Reason for Issue	Author	Checked by	Reviewed by		Approved by
1.0	March 2024		DCO Application	SLR	SLR	Shepherd and Wedderburn		Outer Dowsing Offshore Wind
2.0	December 2024		Deadline 3	SLR	SLR	Shepherd & Wedderburn		Outer Dowsing
3.0 February 2025		ry	Examination Update: updates to reflect, where relevant: clarifications to date in Examination; correcting errata; additional commitments made through Examination; and changes to status of or addition of cumulative projects.	SLR	SLR	Shepherd & Wedderburn		Outer Dowsing



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Acronyms & Terminology

Abbreviations / Acronyms

ADAS Advanced Driver Assistance AIL Abnormal Indivisible Load ALAR Abnormal Load Assessment Report BOAT Byway open to all traffic CoCP Outline Code of Construction Practice CTMP Construction Traffic Management Plan DCO Development Consent Order DfT Department for Transport DMS Driver Monitoring System ECC Export Cable Corridor EIA Environmental Impact Assessment ES Environmental Statement ESDAL Electronic Service Delivery for Abnormal Loads ETGs Expert Topic Groups FCW Forward Collision Warning GA General Arrangement GPS Global Positioning System HDD Horizontal Directional Drilling HGV Heavy Goods Vehicle HRA Habitats Regulations Assessment HVAC High Voltage Alternating Current LCC Lincolnshire County Council LDW Lane Departure Warning LGV Light Goods Vehicle LRN Local Road Network MLWS Mean Low Water Spring NGSS National Grid Substation NH National Highways NISP Nationally Significant Infrastructure Project OBC On Board Computer ODOW Outer Dowsing Offshore Wind O&M Operations and Maintenance OnsS Onshore Substation OWF Offshore Windfarm Farm PAMP Public Access Management Plan PEIR Preliminary Environmental Information Report PLG PROW Public Right of Way RSA Road Safety Audit SRN Strategic Road Network TIB Transition Joint Bay	Abbreviation / Acronym	Description		
AIL Abnormal Indivisible Load ALAR Abnormal Load Assessment Report BOAT Byway open to all traffic CoCP Outline Code of Construction Practice CTMP Construction Traffic Management Plan DCO Development Consent Order DfT Department for Transport DMS Driver Monitoring System ECC Export Cable Corridor EIA Environmental Impact Assessment ES Environmental Statement ESDAL Electronic Service Delivery for Abnormal Loads ETGS Expert Topic Groups FCW Forward Collision Warning GA General Arrangement GPS Global Positioning System HDD Horizontal Directional Drilling HGV Heavy Goods Vehicle HRA Habitats Regulations Assessment LCC Lincolnshire County Council LDW Lane Departure Warning LGV Light Goods Vehicle LRN Local Road Network MLWS Mean Low Water Spring NGSS National Grid Substation NH National Highways NSIP Nationally Significant Infrastructure Project OBC On Board Computer ODOW Outer Downing Officer Forward DOM Operations and Maintenance OnSS Onshore Substation OMF Public Access Management Plan PEIR Preliminary Environmental Information Report PLG Project Liaison Group PROW Public Right of Way RSA Road Safety Audit SRN Strategic Road Network TIB Transition Joint Bay	•			
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SRN Strategic Road Network TCC Temporary Construction Compound TJB Transition Joint Bay	PRoW			
TCC Temporary Construction Compound TJB Transition Joint Bay	RSA			
TJB Transition Joint Bay	SRN	·		
,	TCC			
VCS Vahicle Camera System	TJB	Transition Joint Bay		
veilicle Carriera system	VCS	Vehicle Camera System		
WCH Walking, Cycling and horse rider	WCH	Walking, Cycling and horse rider		



Terminology

Term	Definition				
400kV cables	High-voltage cables linking the OnSS to the NGSS.				
400kV cable corridor	The 400kV cable corridor is the area within which the 400kV cables				
	connecting the onshore substation to the NGSS will be situated.				
Abnormal Indivisible Load	An abnormal indivisible load is defined as a load that cannot, without undue				
(AIL)	expense or risk of damage, be divided into two or more loads for the				
(,)	purpose of being carried on the road and that owing to its dimensions				
	and/or weight cannot be carried on a vehicle complying with the Road				
	Vehicles (Construction and Use) Regulations 1986 and the Road Vehicles				
	(Authorised Weight) Regulations 1998.				
The Applicant	GT R4 Ltd. The Applicant making the application for a DCO.				
The Applicant	G1 K4 Ltd. The Applicant making the application for a DCO.				
	The Applicant is GT P4 Limited (a joint venture between Corio Generation				
	The Applicant is GT R4 Limited (a joint venture between Corio Generation,				
	Tota Energies and Gulf Energy Development (GULF)), trading as Outer				
	Dowsing Offshore Wind. The Project is being developed by Corio Generation				
	(a wholly owned Green Investment Group portfolio company),				
	TotalEnergies and GULF.				
Development Consent	An order made under the Planning Act 2008 granting development consent				
Order (DCO)	for a Nationally Significant Infrastructure Project (NSIP).				
Environmental Statement	The suite of documents that detail the processes and results of the EIA.				
(ES)					
Evidence Plan	A voluntary process of stakeholder consultation with appropriate Expert				
	Topic Groups (ETGs) that discusses and, where possible, agrees the detailed				
	approach to the Environmental Impact Assessment (EIA) and information to				
	support Habitats Regulations Assessment (HRA) for those relevant topics				
	included in the process, undertaken during the pre-application period.				
Haul Road	The track within the onshore ECC which the construction traffic would use				
	to facilitate construction.				
Impact	An impact to the receiving environment is defined as any change to its				
-	baseline condition, either adverse or beneficial.				
Joint Bays	An excavation formed with a buried concrete slab at sufficient depth to				
•	enable the jointing of high voltage power cables.				
Landfall	The location at the land-sea interface where the offshore export cables and				
	fibre optic cables will come ashore.				
Mitigation	Mitigation measures are commitments made by the Project to reduce				
······································	and/or eliminate the potential for significant effects to arise as a result of				
	the Project. Mitigation measures can be embedded (part of the project				
	design) or secondarily added to reduce impacts in the case of potentially				
	significant effects.				
Onshave Evneut Cable					
Onshore Export Cable	The Onshore Export Cable Corridor (Onshore ECC) is the area within which,				
Corridor (ECC)	the export cables running from the landfall to the onshore substation will be				
A	situated.				
Onshore substation	The Project's onshore HVAC substation, containing electrical equipment,				
(OnSS)	control buildings, lightning protection masts, communications masts,				
	access, fencing and other associated equipment, structures, or buildings; to				
	enable connection to the National Grid.				
Outer Dowsing Offshore	The Project.				
Wind (ODOW)					



Term	Definition			
Order Limits	The area subject to the application for development consent, the limits			
	shown on the works plans within which the Project may be carried out.			
Preliminary	The PEIR was written in the style of a draft Environmental Statement (ES)			
Environmental	and provided information to support and inform the statutory consultation			
Information Report (PEIR)	process during the pre-application phase.			
The Project	Outer Dowsing Offshore Wind, an offshore wind generating station together with associated onshore and offshore infrastructure.			
Special Order AIL	AlLs exceeding the following:			
	Gross weight of vehicle carrying the load exceeding 150,000kgs (147.63			
	tons);			
	Width exceeding 6.1m (20ft); or			
	Maximum length exceeding 30.0m (98ft 5ins)			
	A Special Order application to National Highways (on behalf of the Secretary			
	of State) requires to be made for AILs exceeding the above.			
Study Area	Area(s) within which environmental impact may occur – to be defined on a			
	receptor-by-receptor basis by the relevant technical specialist.			
Transition Joint Bay (TJBs)	The offshore and onshore cable circuits are jointed on the landward side of			
	the sea defences/beach in a Transition Joint Bay (TJB). The TJB is an			
	underground chamber constructed of reinforced concrete which provides a			
	secure and stable environment for the cable.			
Trenchless Technique	Trenching is a construction excavation technique that involves digging a			
	trench in the ground for the installation, maintenance, or inspection of			
	pipelines, conduits, or cables.			



Reference Documentation

Document Number	Title	
6.1.27	Traffic and Transport	
6.3.27.1	Transport Assessment	
8.1.2	Outline Air Quality Management Plan	
8.17	Outline Public Access Management Plan	



1 Introduction

1.1 Purpose of this Outline CTMP

- 1. This Outline Construction Traffic Management Plan (Outline CTMP) has been prepared as part of the Outline Code of Construction Practice (CoCP) submitted alongside the Environmental Statement (ES) for Outer Dowsing Offshore Wind (the Project).
- 2. This is an outline document that, by reference to the assessments reported in Volume 1, Chapter 27: Traffic and Transport (document reference 6.1.27) of the Environmental statement (ES), sets out the key elements that would be secured in the Final CTMP which requires to be submitted to and approved by the relevant highway authority in consultation with the relevant planning authority under the requirements of the Development Consent Order (DCO). This Outline CTMP has been updated since the version submitted with the Preliminary Environmental Information Report (PEIR).
- 3. This Outline CTMP sets out the approach that would 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 Project construction traffic (Chapter 27 (document reference 6.1.27)).
- 4. There may be more than one Contractor working on the Project. The Final CTMP(s)¹ would be produced by the Principal Contractor(s) appointed to undertake the construction works, should the DCO application be consented.

1.2 Scope of this Outline CTMP

- 5. For the avoidance of doubt, this Outline CTMP relates to construction traffic associated with the onshore elements of the Project comprising:
 - Enabling accesses and associated enabling works;
 - Onshore export cable installation from the landfall location to the transition joint bays (TJBs) for HDD (Horizontal Directional Drilling) or other trenchless technique works;
 - Temporary works associated with the landfall HDD and TJB excavation;
 - Cable installation along the Onshore ECC including trenching, joint bays and potential trenchless crossings and associated works;
 - Temporary works associated with the Onshore ECC and Onshore substation (OnSS) including establishment of haul roads and Temporary Construction Compounds (TCCs). These comprise Principal Construction Compounds (PCC), smaller Secondary Construction Compounds (SCC), and short-term Cable Installation Compounds (CIC), either side of obstructions being crossed by trenchless techniques;
 - OnSS, and permanent access to the OnSS;
 - 400kV Cables to National Grid substation (NGSS); and
 - Reinstatement and mitigation works enacted during the construction phase.

¹ There is potential to be more than one Final CTMP, with such documents being prepared for different work areas (such as the Onshore ECC and the OnSS).



- 6. This document does not consider construction traffic associated with offshore works seaward of Mean Low Water Spring (MLWS), that are principally marine activities.
- 7. Whilst the Final CTMP(s) would need to be approved and discharged by the relevant planning authority, is intended to be a working document that may evolve during the construction period and therefore many need to be updated, with further approval from the relevant planning authority. The CTMP does not apply to the decommissioning of the Project.

1.3 Key Considerations

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

Table 1.1 Structure of this Outline CTMP

Section	Topic		
Section 2	Responsibilities, Notifications and Monitoring		
Section 3	Key Construction Details and On-Site Control Measures		
Section 4	Vehicle Routeing and Off-Site Control Measures		
Section 5	Anticipated Construction Vehicle Movements		
Section 6	Highway Mitigation Proposals		
Section 7	Abnormal Indivisible Loads		
Section 8	Complaints and Enquiries Procedure		



2 Responsibilities, Notifications and Monitoring

2.1 Responsibilities

- 9. The Principal Contractor(s) would be responsible for the implementation of the CTMP, to monitor the application of measures within the CTMP and to propose and make modifications to the CTMP during the planning and construction process, if required. Monitoring of the CTMP would be undertaken by the Principal Contractor(s) and any necessary amendments would be made in consultation with Lincolnshire County Council (LCC) as the local highway authority.
- 10. The Applicant would nominate a person to be responsible for the co-ordination of all elements of traffic and transport during the construction process (a community liaison officer). This person would liaise with the local community so that the community have a direct point of contact within the developer organisation who they may contact for information purposes or to discuss matters pertaining to traffic management or site operation, as set out in the Community Liaison and Public Relations Procedure within the CoCP.
- 11. The Principal Contractor(s) would review and update the number of site personnel, traffic numbers, and the construction programme as the Project progresses. Regular updates would be provided to LCC and Lincolnshire Police. Any significant changes would be discussed and agreed with LCC. Regular meetings, where required, would be organised for monitoring purposes.

2.1.1 Notification of Stakeholders

12. The Final CTMP shall be made available on the ODOW website and electronic copies provided to LCC, National Highways (NH) (for details of Abnormal Indivisible Loads (AILs) where they use the Strategic Road Network (SRN)) and Local Planning Authorities where necessary. The Applicant is committed to putting in place effective communication channels, and record and act, where appropriate, on comments, complaints, or queries during the construction of the Project, such as on the measures included in the Final CTMP, raised by interested parties.

2.1.2 Local Residents

- 13. The appointed community liaison officer would engage with the residents and community council or parish council prior to construction starting and ensure that local residents are kept fully informed of details in relation to the timing of the delivery of AILs. During the delivery of AILs, the Applicant would communicate, where appropriate, information via one or more of the following methods:
 - Local notice boards;
 - The Project specific website;
 - The local press; and
 - Notification letters.
- 14. Notification letters would contain the following information:
 - Contact details for the community liaison officer;
 - 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).

2.1.3 Local Business

15. In addition to notifications issued to the press, local businesses would be approached directly to ensure they are fully informed.

2.1.4 Local Stakeholders

- 16. The Applicant would make every effort to work with local stakeholders to ensure disruption caused by construction traffic is minimised. Groups of particular relevance include, but are not limited to:
 - Parish or Community Councils;
 - Schools;
 - Local buses, including school buses;
 - Local doctors, surgeries, or health providers;
 - Holiday accommodation developments;
 - Leisure Centres; and
 - Churches.
- 17. Contact with these service providers would be made in advance of planned deliveries.

2.1.5 Emergency Services

18. The Police, Fire and Ambulance service shall be given written notice of the Abnormal Indivisible Load (AIL) deliveries and kept fully informed throughout the delivery period with details as per Section 7.

2.1.6 Planned Engineering Works

19. The Applicant would work with LCC and NH (where appropriate) to identify any planned engineering works that conflict with the Project construction traffic. Discussions would then be made to minimise disruption to the local community and the planned engineering works.

2.1.7 Community Events

20. The community liaison officer would ensure the Applicant is aware of planned and notified community events when scheduling deliveries.



3 Key Construction Details and On-Site Control Measures

- 21. In accordance with good construction practice, opportunities would be sought to reduce the overall number of Heavy Goods Vehicle (HGV) movements by consolidating loads and using the largest feasible vehicles, considering any other environmental constraints that may affect HGV routes and the size of vehicles.
- 22. Also, the Applicant may plan for maintaining stockpiles of critical path items such as aggregate. These stockpiles would facilitate advanced planning of deliveries, maximise payloads, and enable a smooth import profile to be maintained.

3.1 Enabling Access Locations

- 23. In advance of the commencement of construction, and before the construction accesses have been formed, it will be necessary to take access to the ECC to carry out enabling works, also known as preparatory or early works (as described in Volume 1, Chapter 6.1.3). Access from the highway, for enabling works, will be taken from existing access points, typically using farm tracks, and will be used until the construction accesses have been formed. The enabling accesses are all existing access points and minimal or no improvements are required to make them suitable for use. The enabling accesses will be used for a range of pre-construction activities including:
 - Ground Investigations;
 - Facilitating construction access and fencing;
 - Pre-construction drainage;
 - Hedgerow / vegetation clearance;
 - Ecological mitigation;
 - Archaeological investigations; and
 - Landscape planting.
- 24. At the end of the construction period, following the reinstatement of the construction accesses, it may be necessary to use the enabling accesses again for reinstatement works, including hedgerow and landscape planting and for plant used for reinstatement.
- 25. The use of the enabling accesses will be intermittent, short term, and will only be required when the construction accesses are not in place. The type of vehicles will typically be pickups, light farm vehicles and light construction plant, which would not breach thresholds for formal assessment under EIA Regulations. Therefore, these accesses are not assessed .in this chapter.
- 26. The proposed enabling access locations are shown on Figure 3.4 of Volume 2, Chapter 3 (reference 6.2.3.4). Alternative enabling access locations will only be used subject to the agreement of LCC.
- 27. <u>Table 3.1 Table 3.1</u> outlines the maximum number of enabling accesses identified and the maximum duration that these would be utilised by the Project.



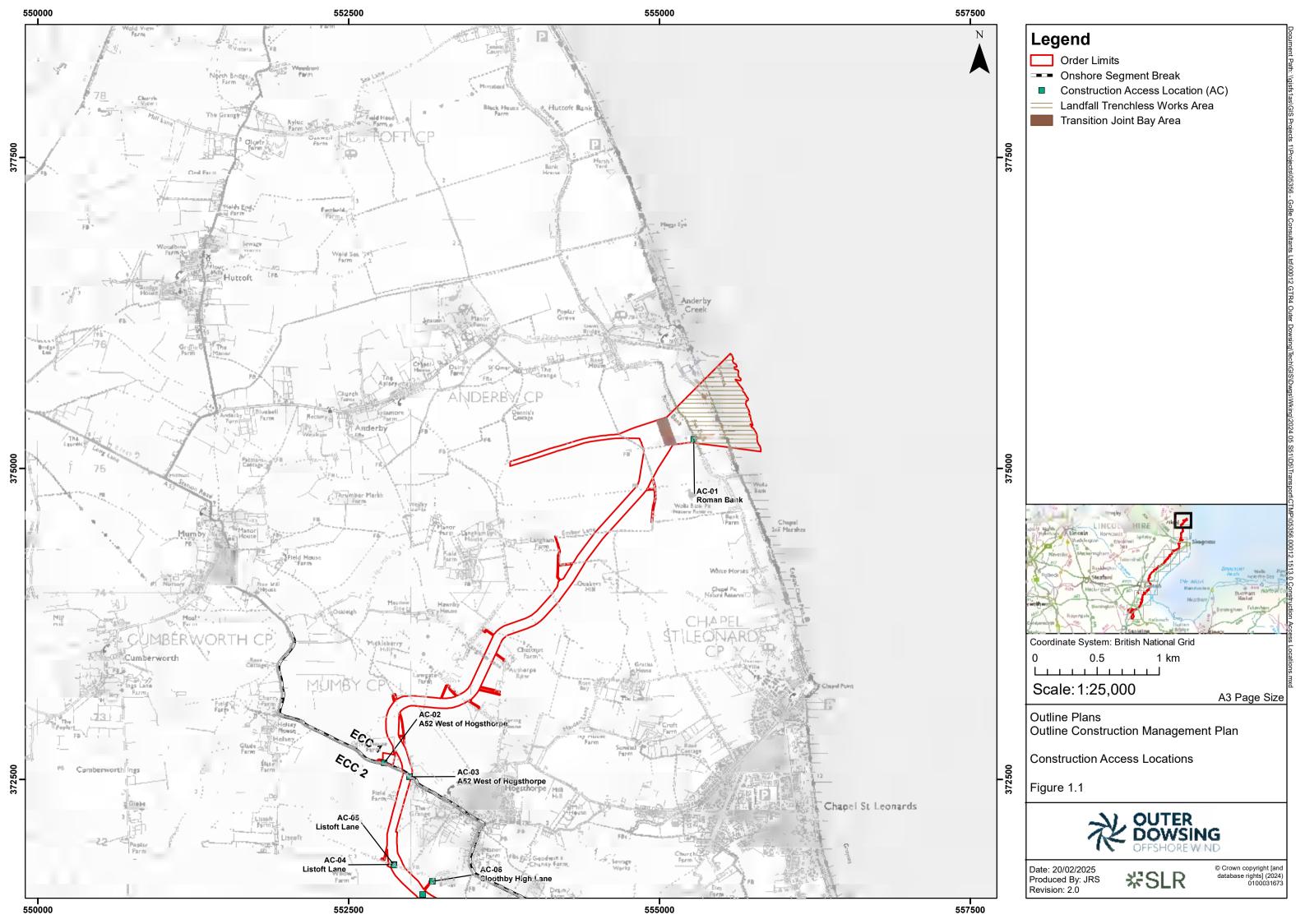
28. Following completion of construction and demobilisation, it may also be necessary to take access at the same points for vehicles required for reinstatement and planting works after the construction accesses have been removed. The type of vehicles involved would typically be four-wheel drive pickup trucks or ATVs and works would be expected to take place over one or two days at any location.

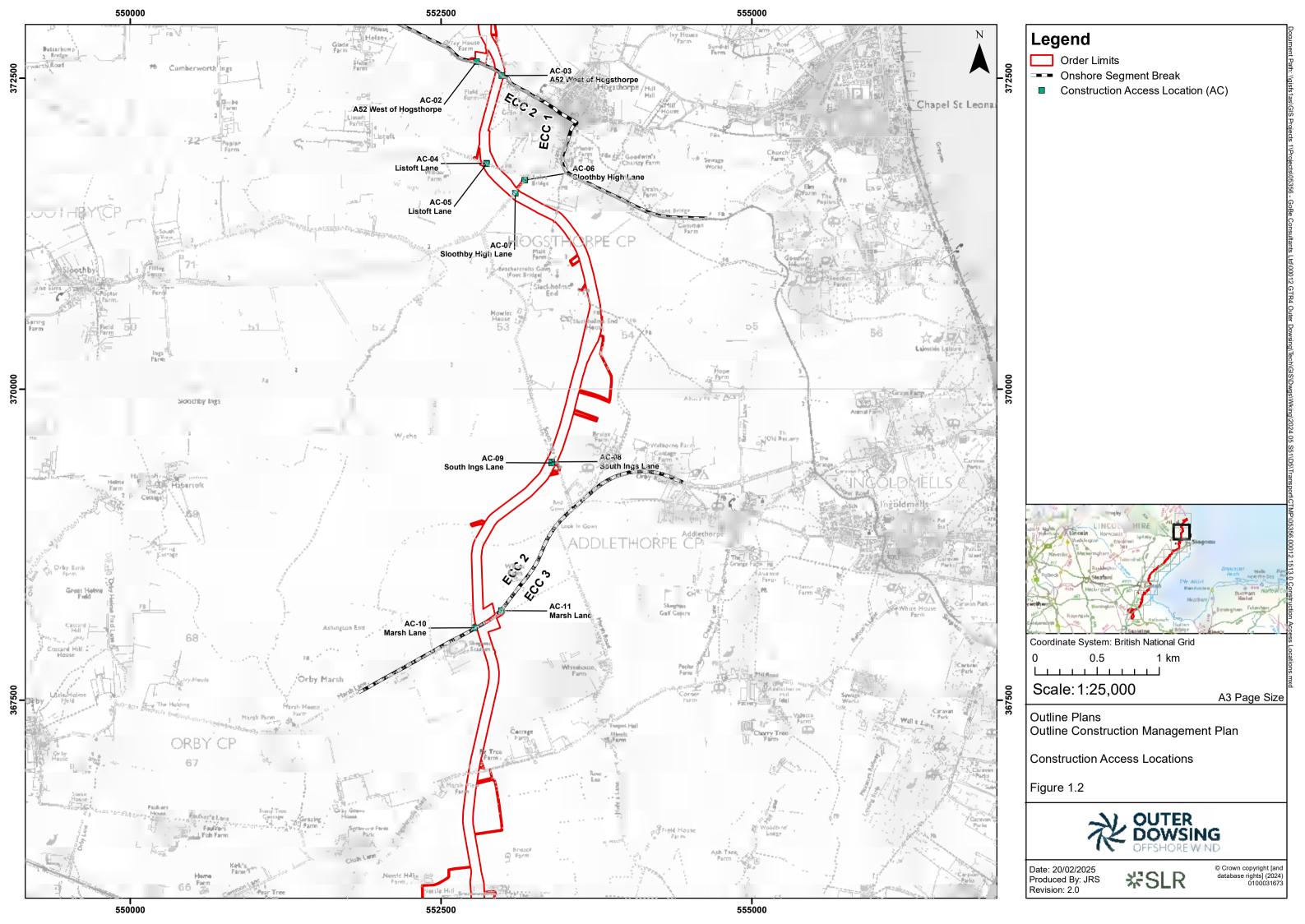
Table 3.1 Enabling Accesses

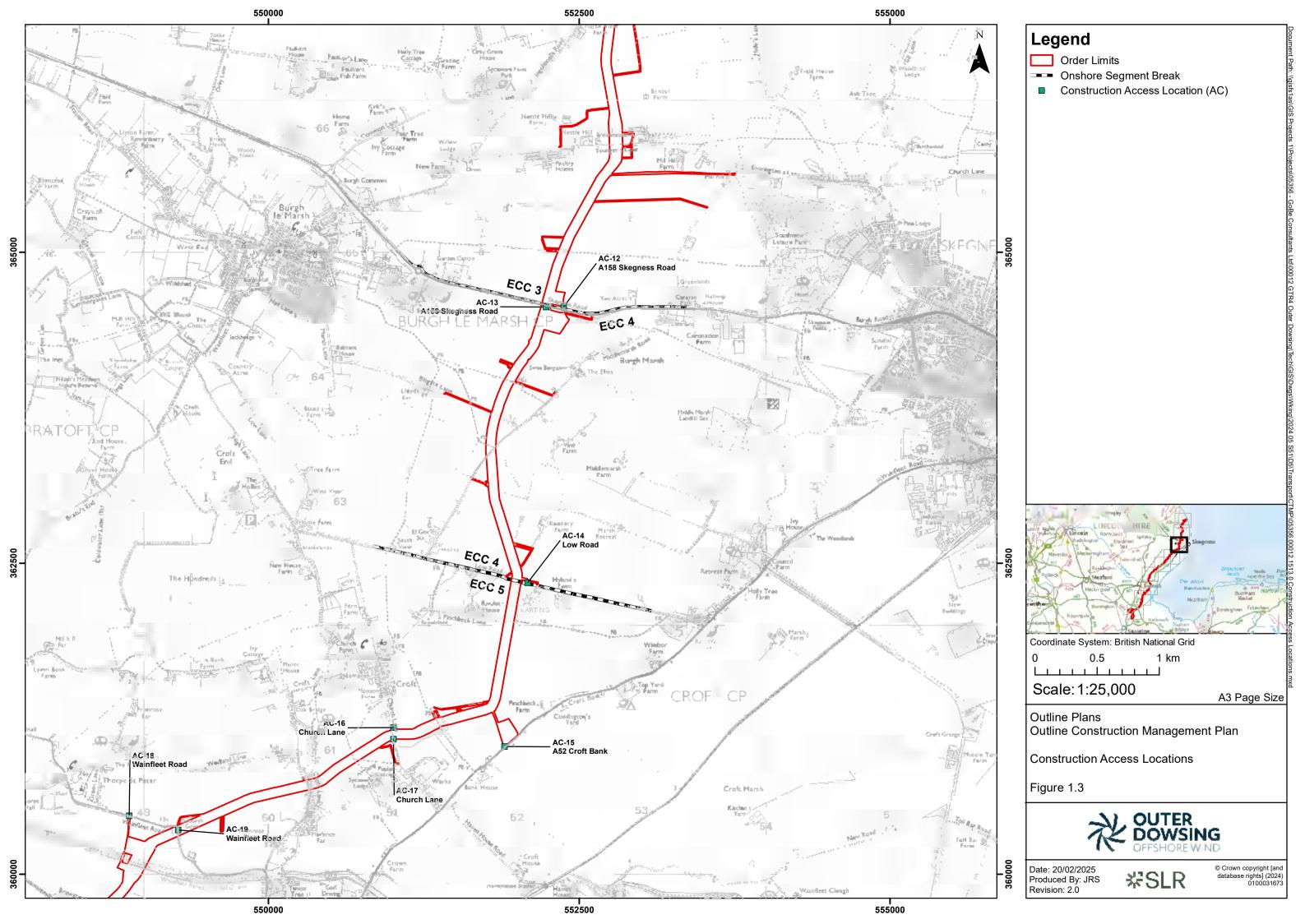
Parameters	Design Envelope
Maximum number of Enabling Accesses	Approximately 100 - 150
Maximum Duration (months)	2

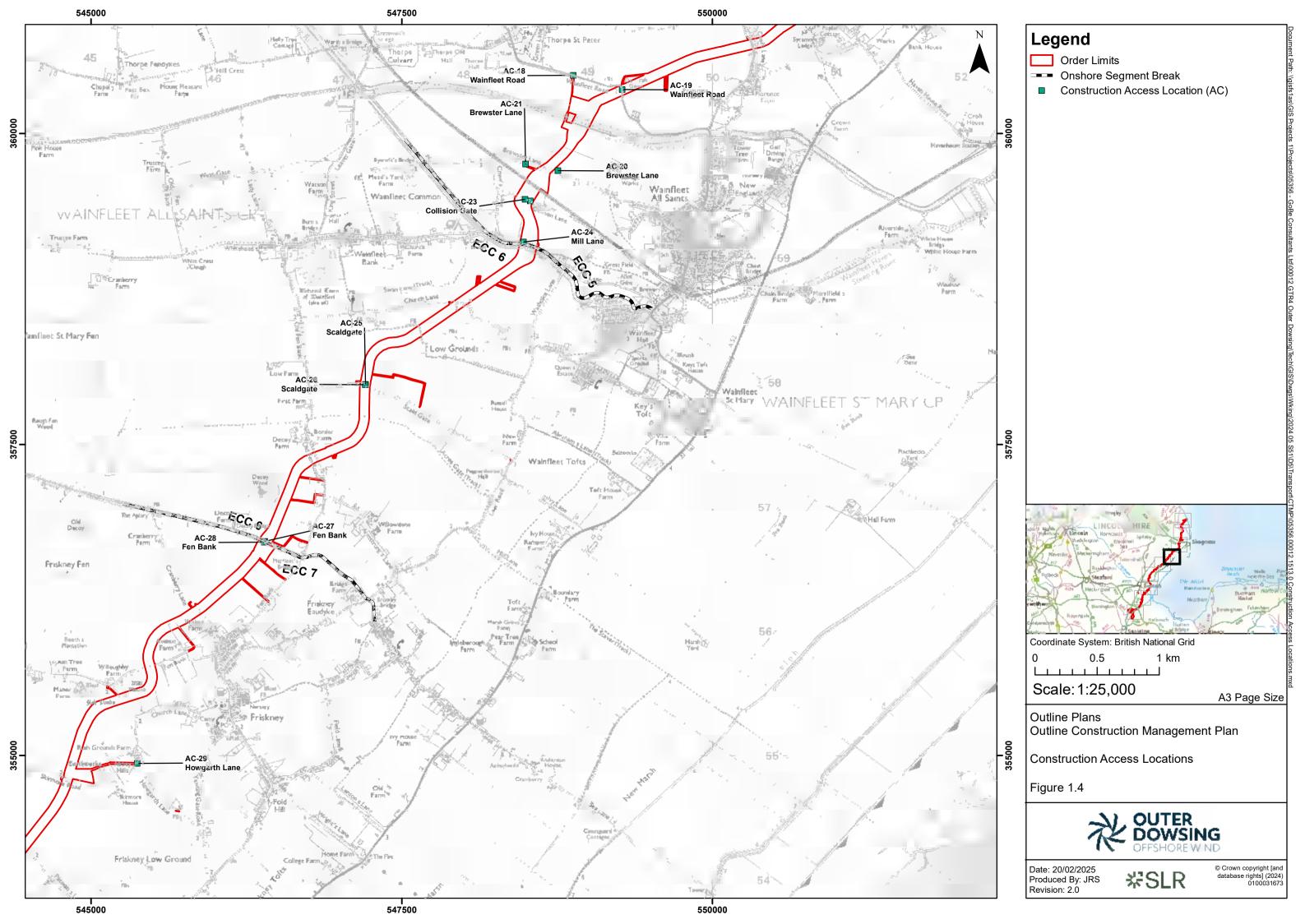
3.2 Construction Access Locations

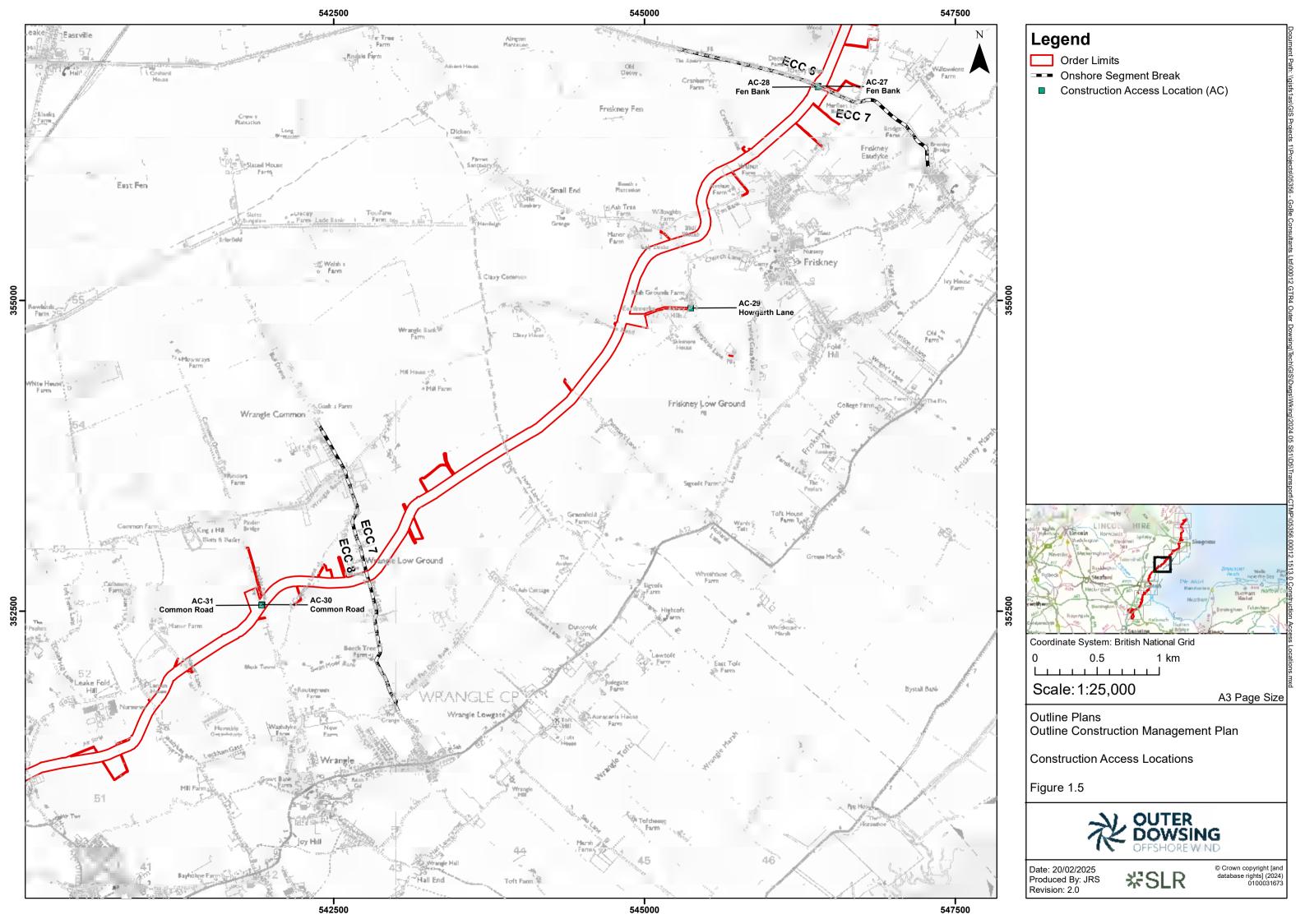
- 29. The proposed construction access locations for the Onshore ECC route are shown on Figure 1 and set out in Table 3.2, which provides the relevant General Arrangement (GA) (preliminary design, suitable for the DCO application) drawing numbers. The GA drawings are provided in Annex F of Volume 3, Appendix 27.1 Transport Assessment (document reference 6.3.27.1).
- 30. At each construction access location, there would be access towards the OnSS (Positive Onshore ECC direction) or towards landfall (negative Onshore ECC direction). The exception of this is at AC-46 where there would be an access to the OnSS only and at AC-47, for the grid connection, where there would be an access towards the OnSS and an access towards the National Grid substation (NGSS).
- 31. It is proposed that all construction accesses would be temporary and following completion of construction works will be removed. Where accesses are located opposite each other, they would also allow construction traffic to cross from one side of the public highway to the other i.e. to traverse along the temporary haul road and minimise trips included on the local highway network. The exception will be AC-01 and AC-48 which will be retained to provide operational access to the TJB and OnSS.

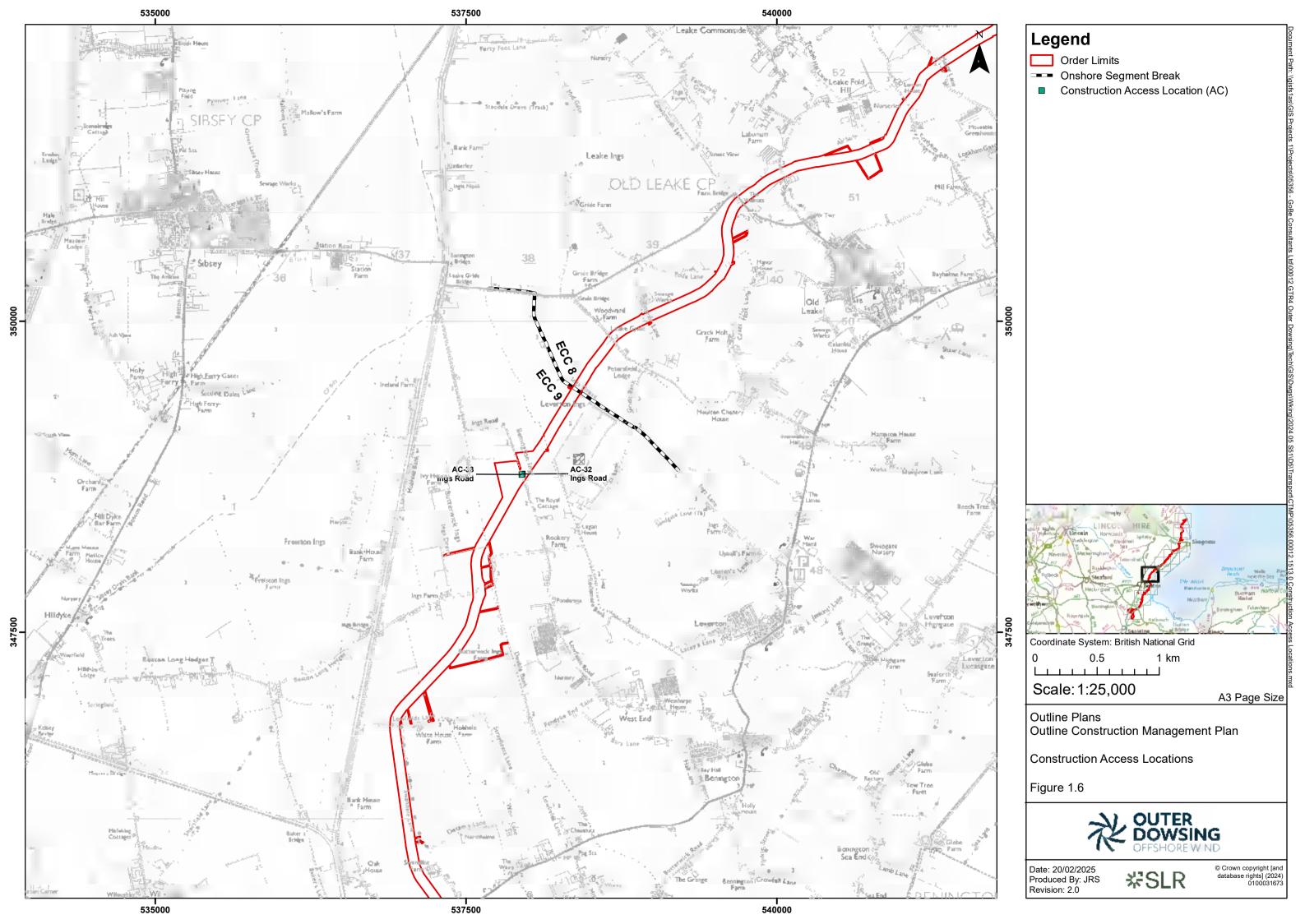


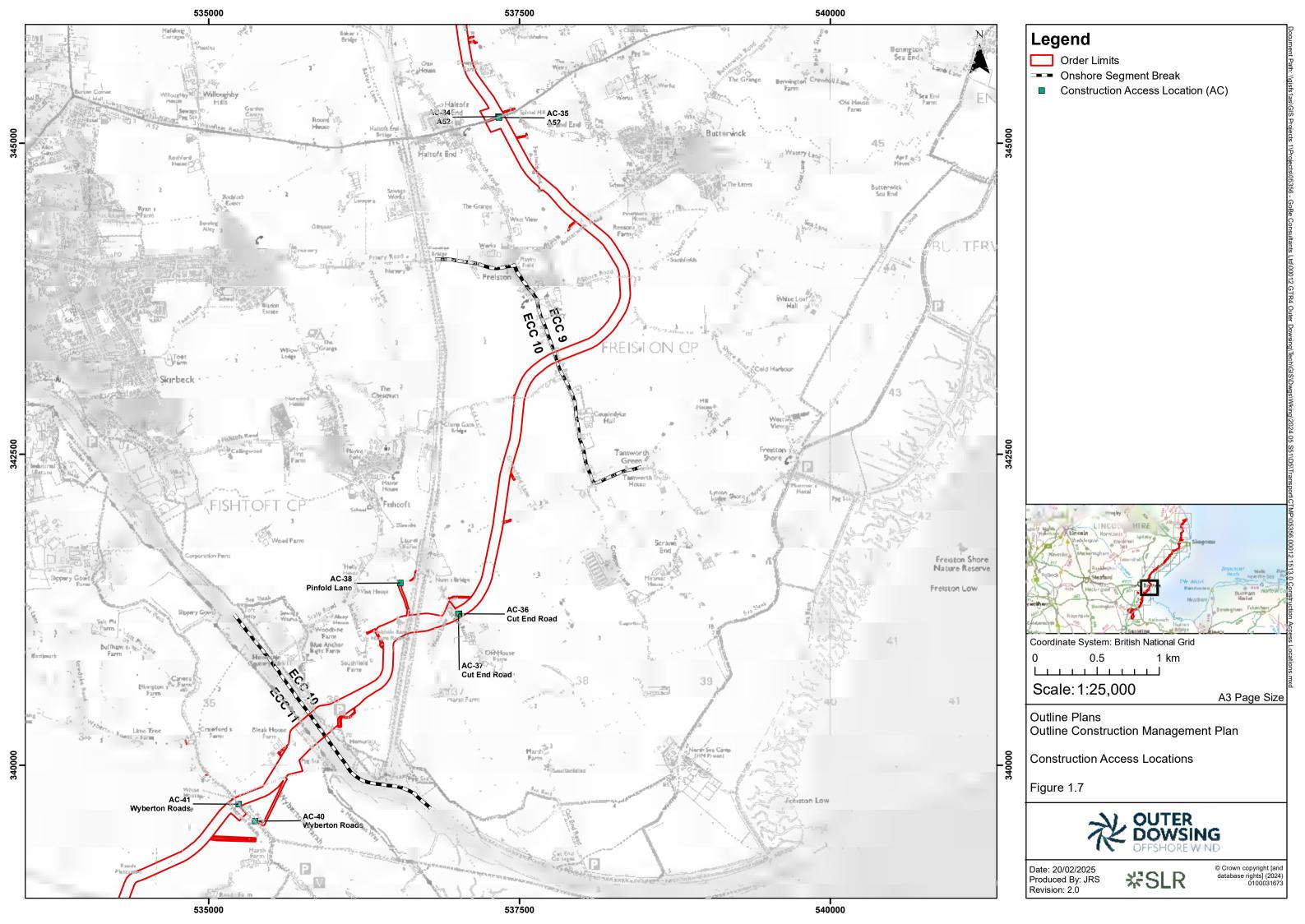


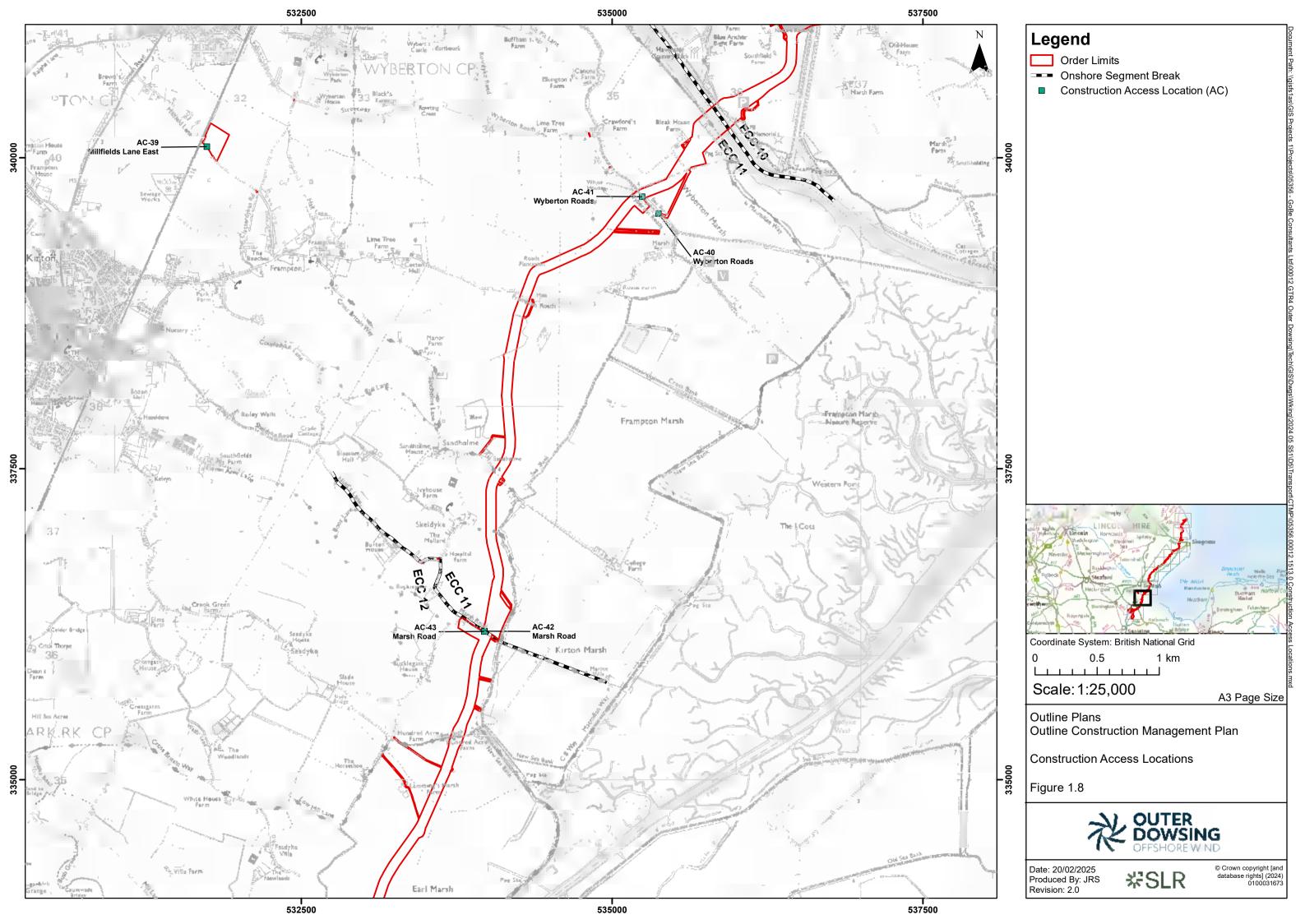












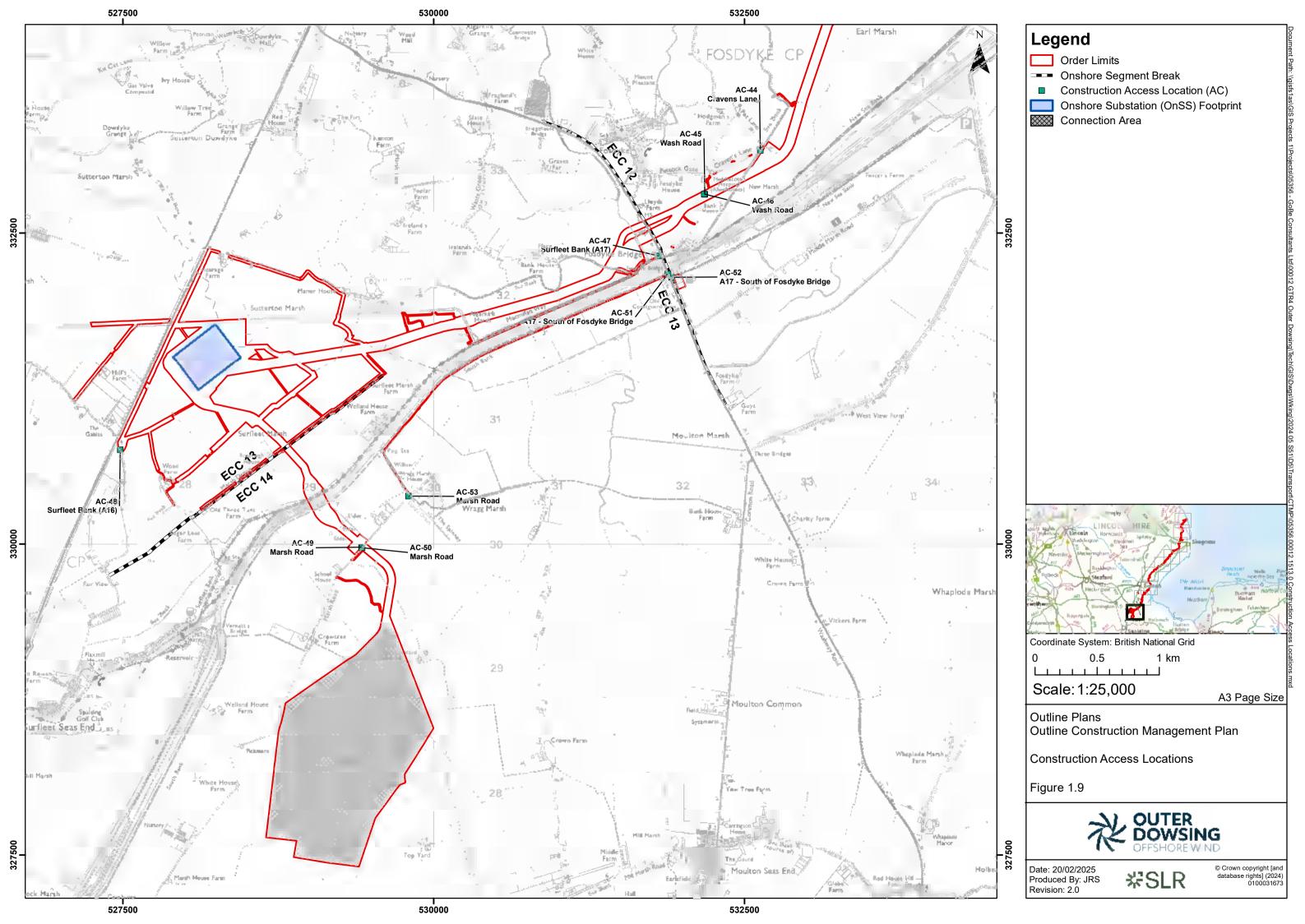




Table 3.2: Construction Access Locations

Access Reference	Drawing	Location Segment		Direction	
	Number				
AC-01	VD23907- VEC-XXX- XXX-DR-CH- 1001	Roman Bank	1	Positive (enabling and reinstatement works only during construction. Retained as a permanent operations and maintenance (O&M) access)	
AC-02		A52 West of	1	Negative	
AC-03		Hogsthorpe	2	Positive	
AC-04	VD23907-	Listoft Lane	2	Negative	
AC-05	VEC-XXX-	LISTOIT Lane	2	Positive	
AC-06	XXX-DR-CH-	Sloothby	2	Negative	
AC-07	1002	High Lane	2	Positive	
AC-08	VD23907-	South Ings	2	Negative	
AC-09	VEC-XXX-	Lane	2	Positive	
AC-10	XXX-DR-CH-	NA	2	Negative	
AC-11	1003	Marsh Lane	3	Positive	
AC-12	VD23907-	A158 (west	3	Negative	
AC-13	VEC-XXX-	of Skegness)	4	Positive	
AC-14	XXX-DR-CH- 1004	Low Road	42	Negative	
AC-15	VD23907- VEC-XXX-	A52 (East of Croft)	5	Positive and Negative	
AC-16	XXX-DR-CH-	Charach Lara	5	Negative	
AC-17	1005	Church Lane	5	Positive	
AC-18	VD23907-	B1195	5	Negative	
AC-19	VEC-XXX- XXX-DR-CH- 1006	Wainfleet Road	5	Positive	
AC-20	VD23907-	Brewster	5	Negative	
AC-21	VEC-XXX-	Lane	5	Positive	
AC-22	XXX-DR-CH-	Collision	5	Negative	
AC-23	1007	Gate	5	Positive	
AC-24	VD23907- VEC-XXX-	Mill Lane	5	Negative (Light Goods Vehicle) LGV only)	
AC-25	XXX-DR-CH-	Coold Coto	6	Negative (LGV only)	
AC-26	1008_	Scald Gate	6	Positive (LGV only)	
AC-27	VD23907-	Fon Pank	7	Negative	
AC-28	VEC-XXX-	Fen Bank	7	Positive	

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² and form part of a route (with a section of haul road) between the A52 and A158 to avoid Skegness.



Access Reference	Drawing Number	Location	Segment	Direction
AC-29	XXX-DR-CH- 1009	Howgarth Lane	7	Positive and Negative
AC-30	VD23907-	Common	7	Negative
AC-31	VEC-XXX-	Road	8	Positive
AC-32	XXX-DR-CH-		8	Negative
AC-33	1010	Ings Road	9	Positive
AC-34	VD23907-	_	9	Negative
AC-35	VEC-XXX-	A52	9/10	Positive
AC-36	XXX-DR-CH- 1011	Cut End	10	Negative
AC-37	VD23907-	Road	10	Positive
AC-38	VEC-XXX-	Pinfold Lane	10	Positive and Negative
AC-39	XXX-DR-CH- 1012	Millfield Lane East	TCC only	n/a
AC-40	VD23907-	Wyberton	11	Negative
AC-41	VEC-XXX-	Roads	11	Positive
AC-42	XXX-DR-CH-	NA lo D l	11	Negative
AC-43	1013	Marsh Road	12	Positive
AC-44	VD23907- VEC-XXX-	Craven's Lane	12	Negative and Positive
AC-45	XXX-DR-CH-	Marie Desert	12	Negative
AC-46	1014	Wash Road	12	Positive
AC-47	VD23907- VEC-XXX-	Surfleet Bank (A17)	13	Positive
AC-48	XXX-DR-CH- 1015	Surfleet Bank (A16)	OnSS	OnSS only (Retained as the permanent O&M access)
AC-49	VD23907-			Towards the OnSS and
AC-50	VEC-XXX- XXX-DR-CH- 1016	Marsh Road	Grid Connection	towards the National Grid OnSS
AC-51	n/a	A17 (private track access)	14	n/a
AC-52		A17 (TCC)	13	n/a
AC-53		Marsh Road ((private track access)	14	n/a



- 32. Whilst the location of each of the construction accesses has been identified as the optimum location within the Onshore ECC, through the detailed design process, details of the final location within the Onshore ECC including the layout and control measures that would be required at each access would be discussed and agreed with LCC post DCO consent.
- 33. The Applicant would submit the detailed design and specifications for the construction access locations to LCC prior to works commencing on site as part of the Access Plan, as per Requirement 11 of the DCO. The detailed designs would also be subject to a Road Safety Audit (RSA).
- 34. All traffic management measures adopted would 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).
- 35. TCCs would be constructed to provide site and welfare facilities for the workforce and also to allow plant and materials to be stored safely and securely near the works.
- 36. Each TCC would provide the following:
 - Laydown areas;
 - Car parking for small to medium vehicles;
 - Parking and unloading areas for HGVs;
 - Waste storage facilities; and
 - Welfare facilities.
- 37. Each TCC located at the key construction sites would provide similar facilities, though with greater provision for car parking and HGV unloading areas where appropriate. In addition, they may include offices which would not only serve the adjoining construction activities but also as an administration area for the cable route. The larger TCCs are referred to as Principal Construction Compounds (PCCs) supported by smaller Secondary Construction Compounds (SCC) and Cable Installation Compounds (CICs) set up for the specific period of the trenchless works at any location.
- 38. All TCCs would have sufficient areas available at all times for all vehicles to manoeuvre safely and segregated from foot traffic.

3.2.1 Parking

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

3.2.2 On-Site Haul Roads

40. Access tracks would be monitored on a daily basis to identify any deterioration of the track condition. Non-emergency remedial works to the track would be carried out at times outside peak times of usage and significant emergency repairs would be undertaken immediately and adjacent track sections would be restricted from use as required to safely accommodate works.

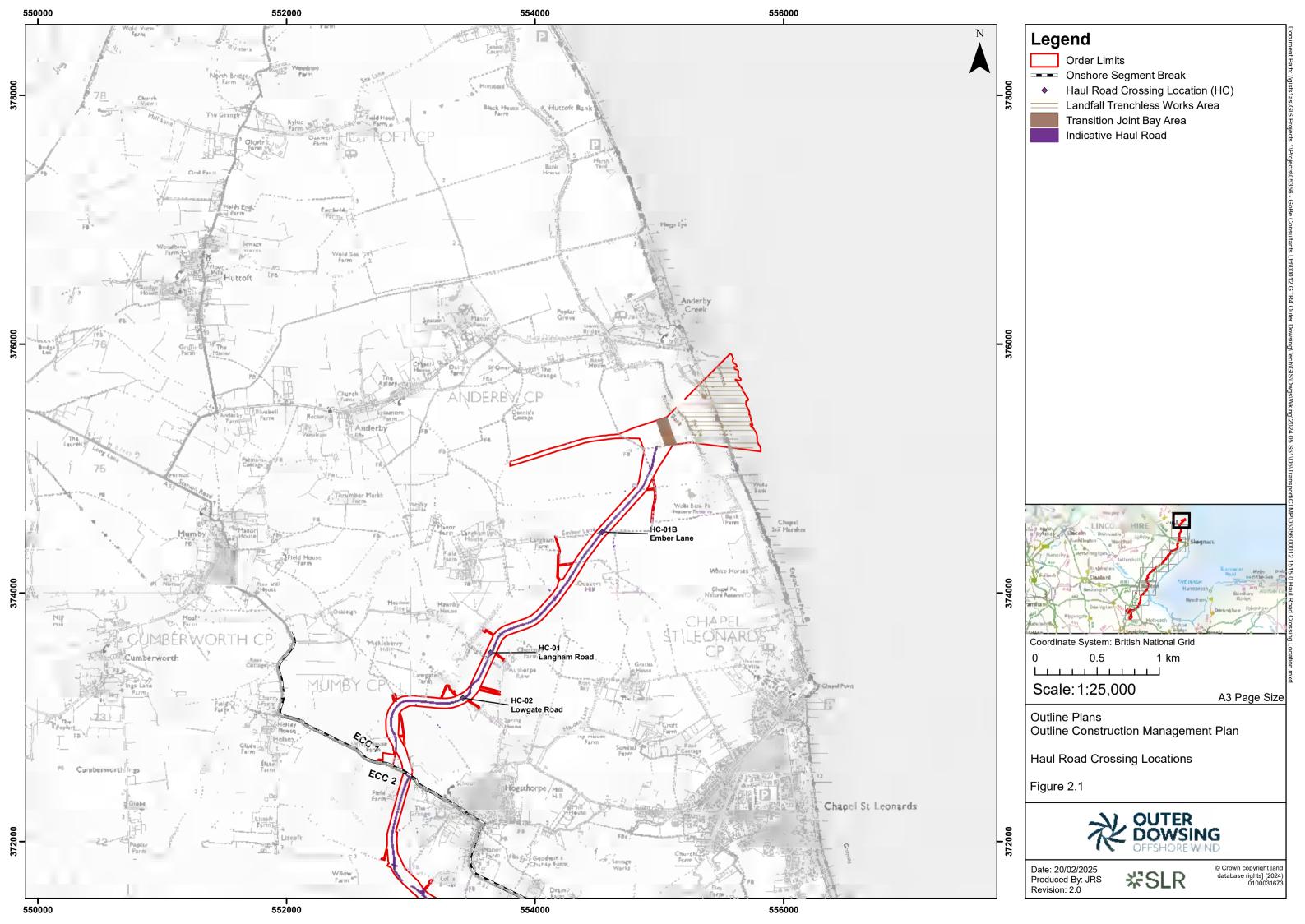


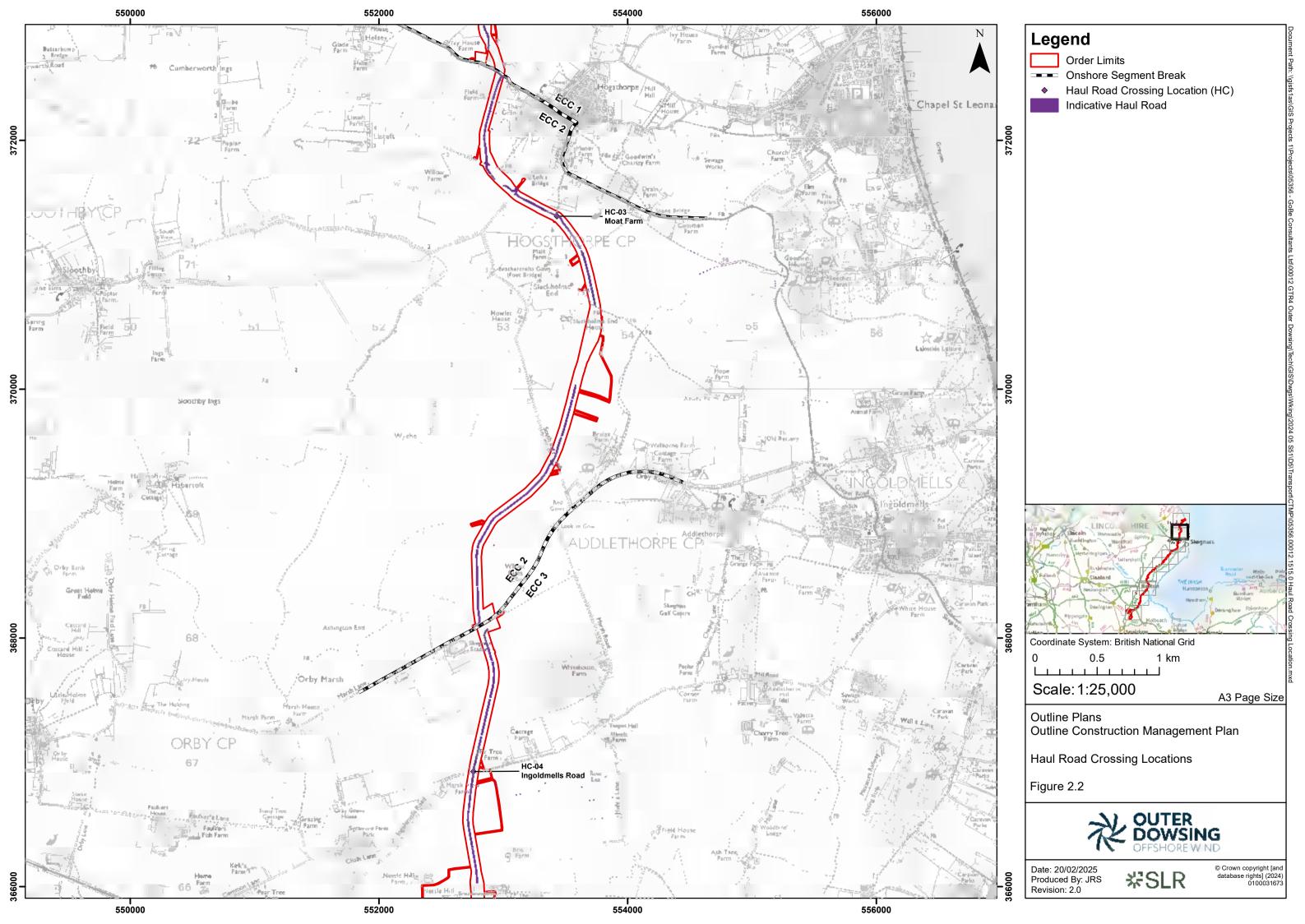
41. All routes would be monitored for dust and control, or suppression methods would be deployed as appropriate through the use of dust suppression water bowsers, or other methods set out in Document 8.1.2 Air Quality Management Plan (AQMP).

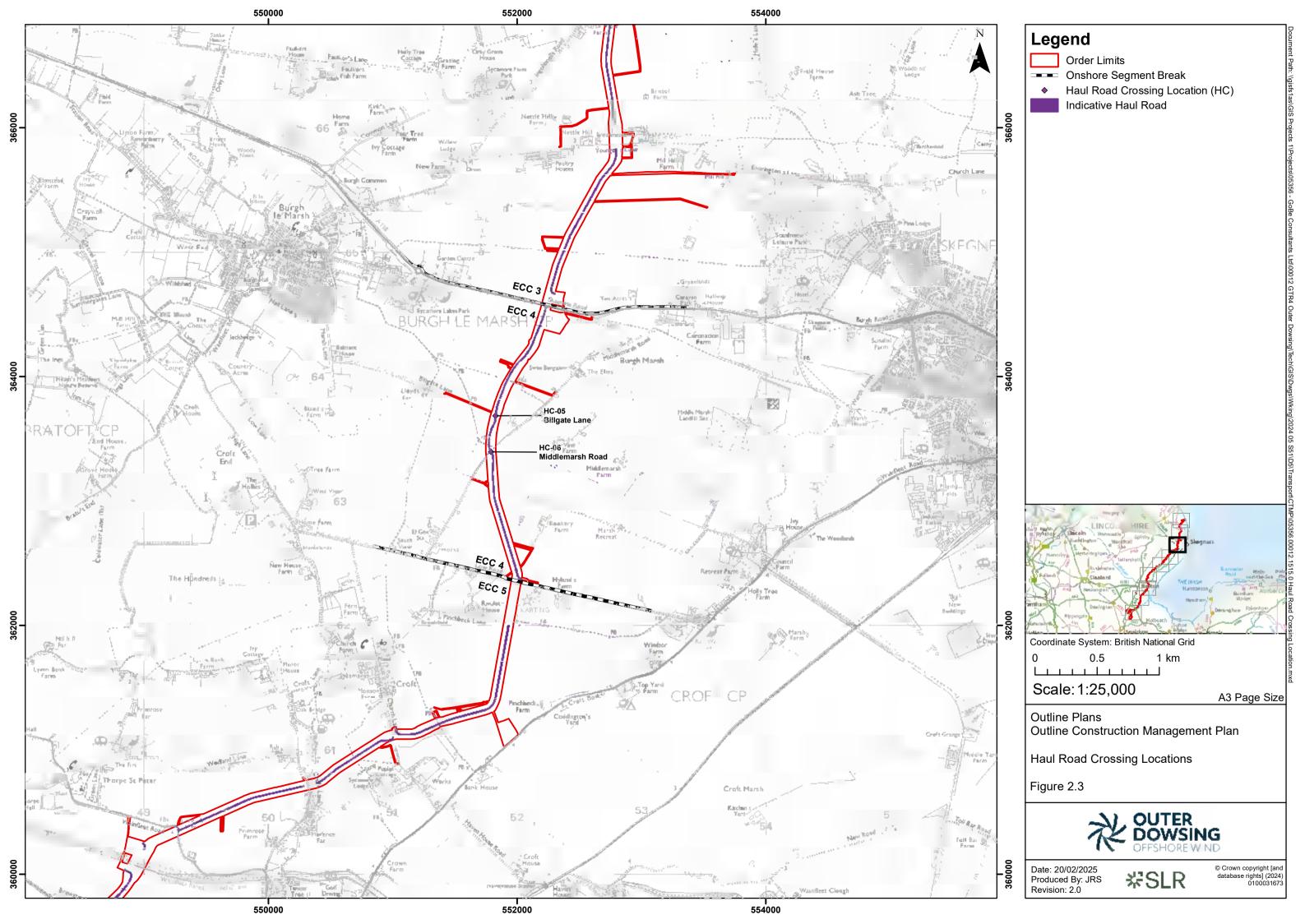
3.2.3 Haul Road Crossings

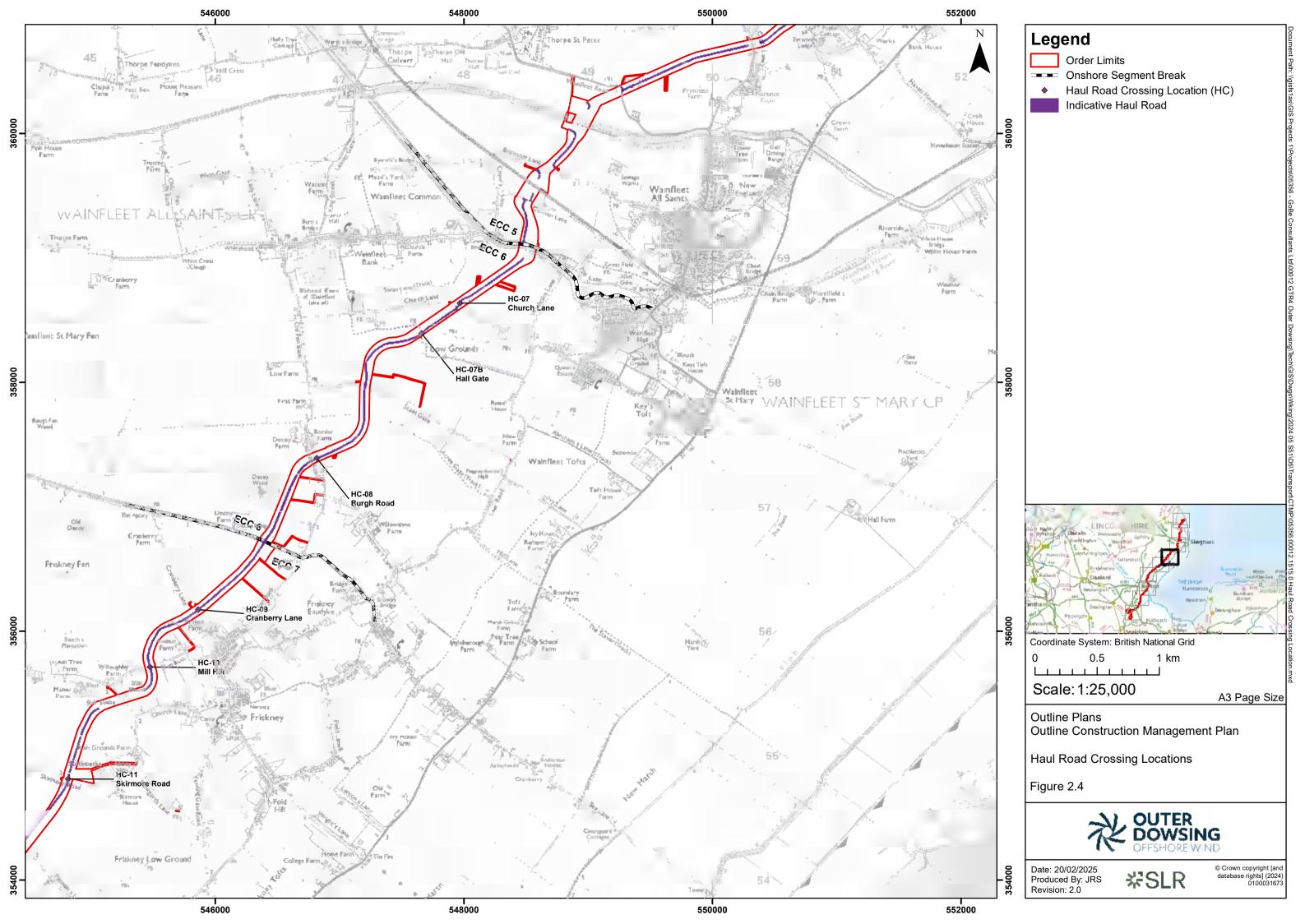
3.2.4 Construction Vehicles

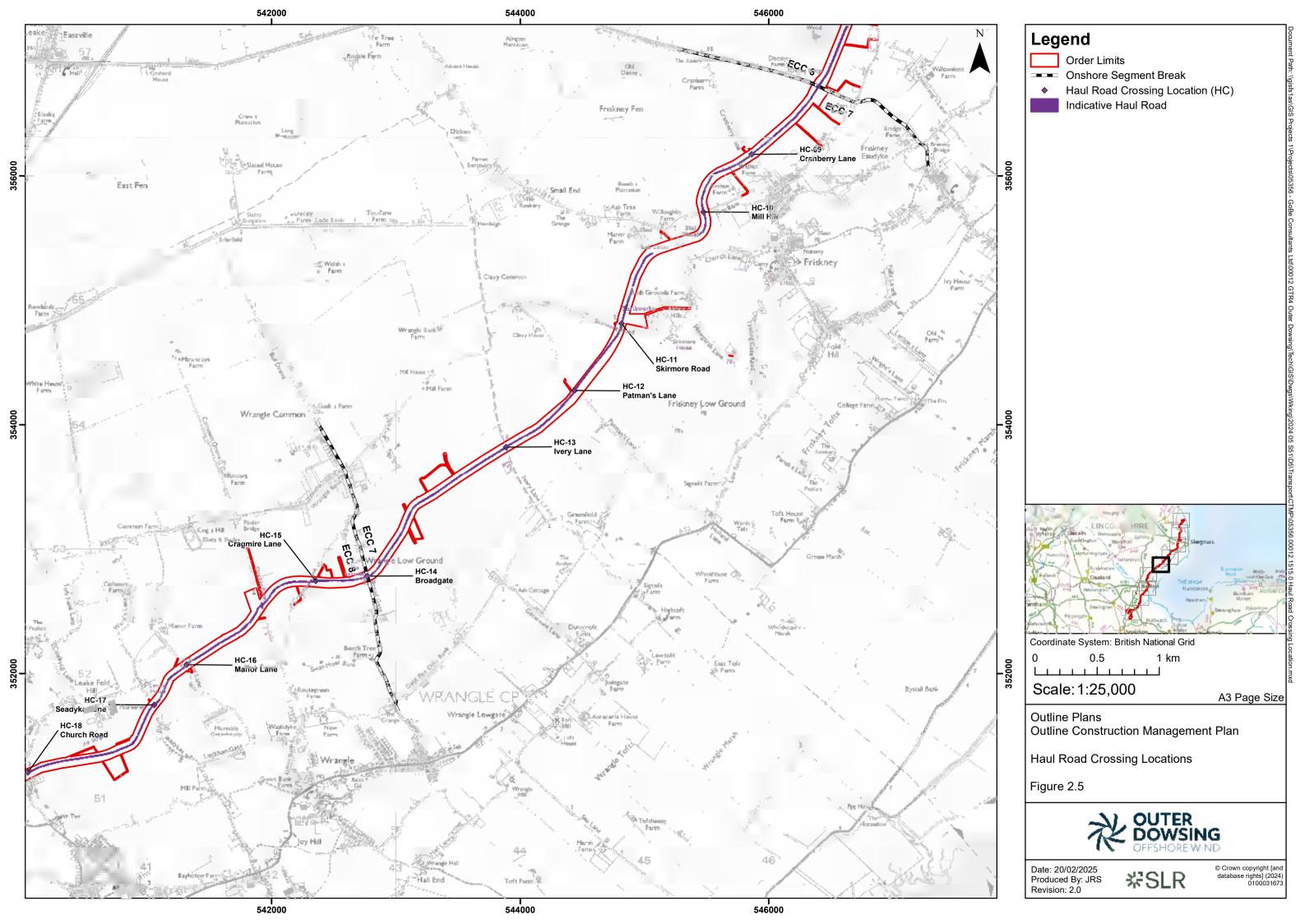
- 42. As a primary control measure for minimising vehicle movements on the highway network, contractors would be required to minimise the requirement to travel along the public highway between different sections of the haul road. This would be achieved where possible through the construction of haul road crossings with entry and exit points directly opposite each other.
- 43. Where accesses are located opposite each other, they would also allow construction traffic to cross from one side of the public highway to the other i.e. to traverse along the temporary haul road and minimise trips included on the local highway network.
- 44. The proposed haul road crossing locations for the Onshore ECC route are shown in Figure 2 and set out in Table 3.3, which provides the relevant General Arrangement (GA) (preliminary design, suitable for the DCO application) drawing number. The GA drawings are provided in Annex H of Appendix 27.1 (document reference 6.3.27.1).

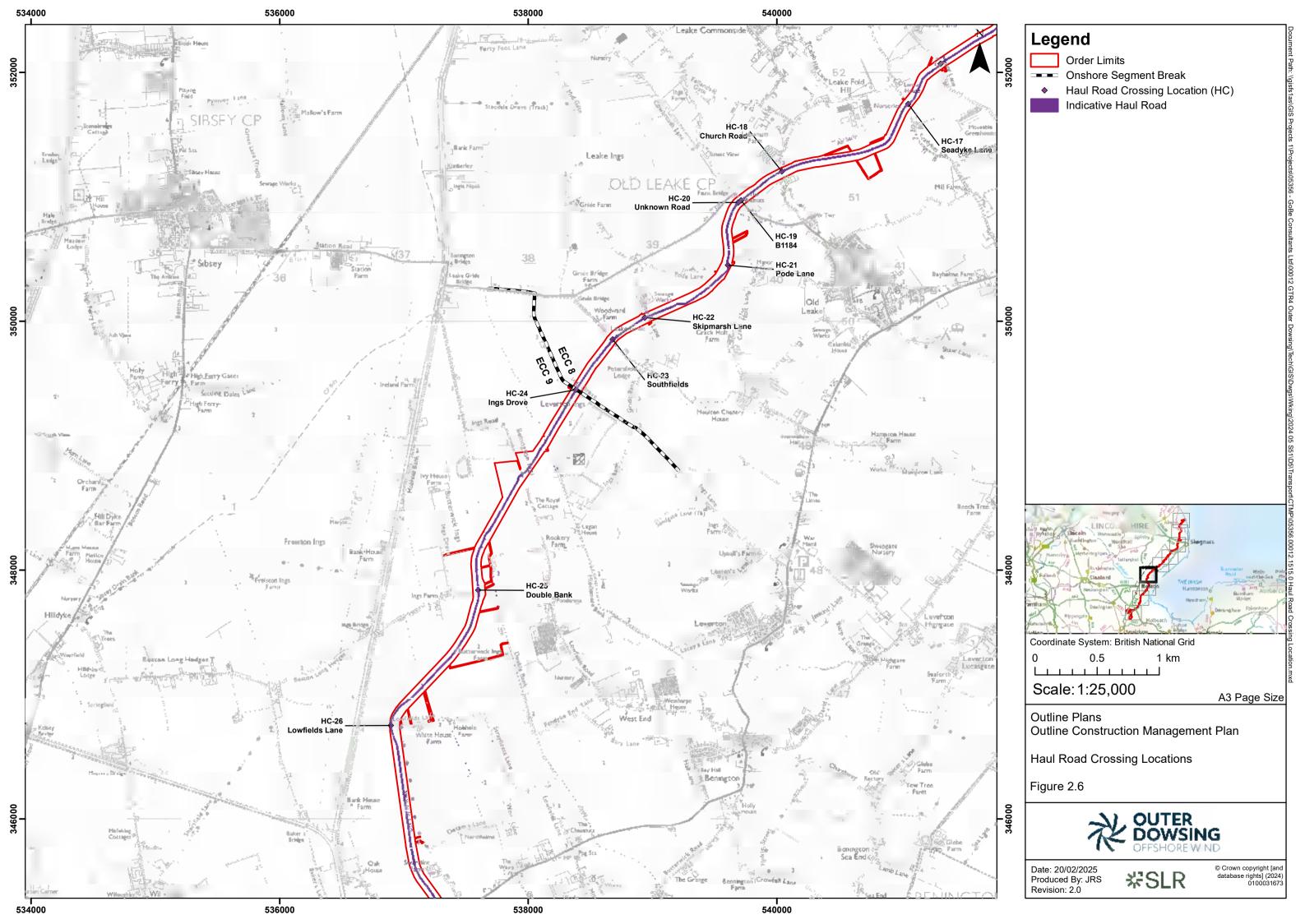


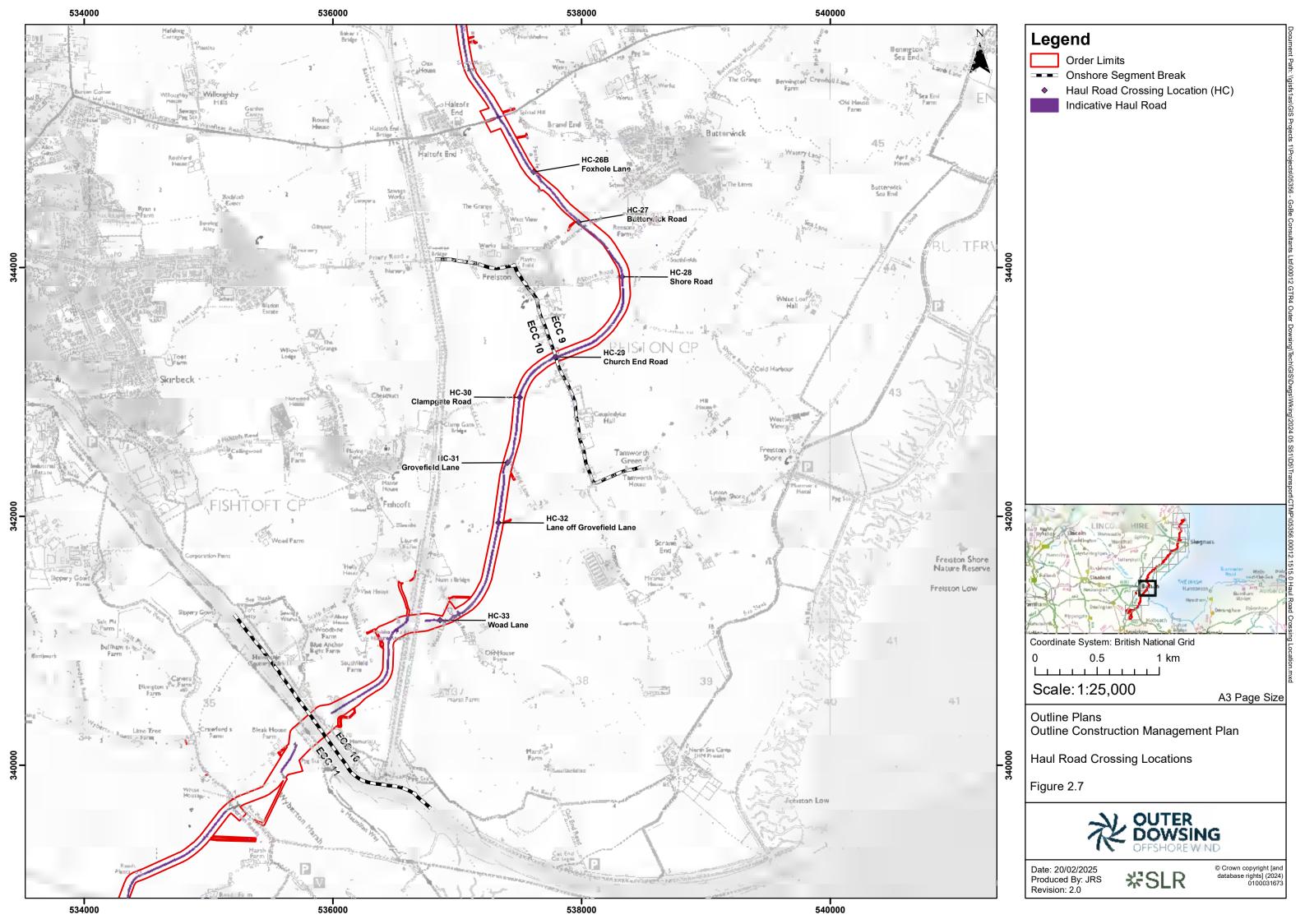


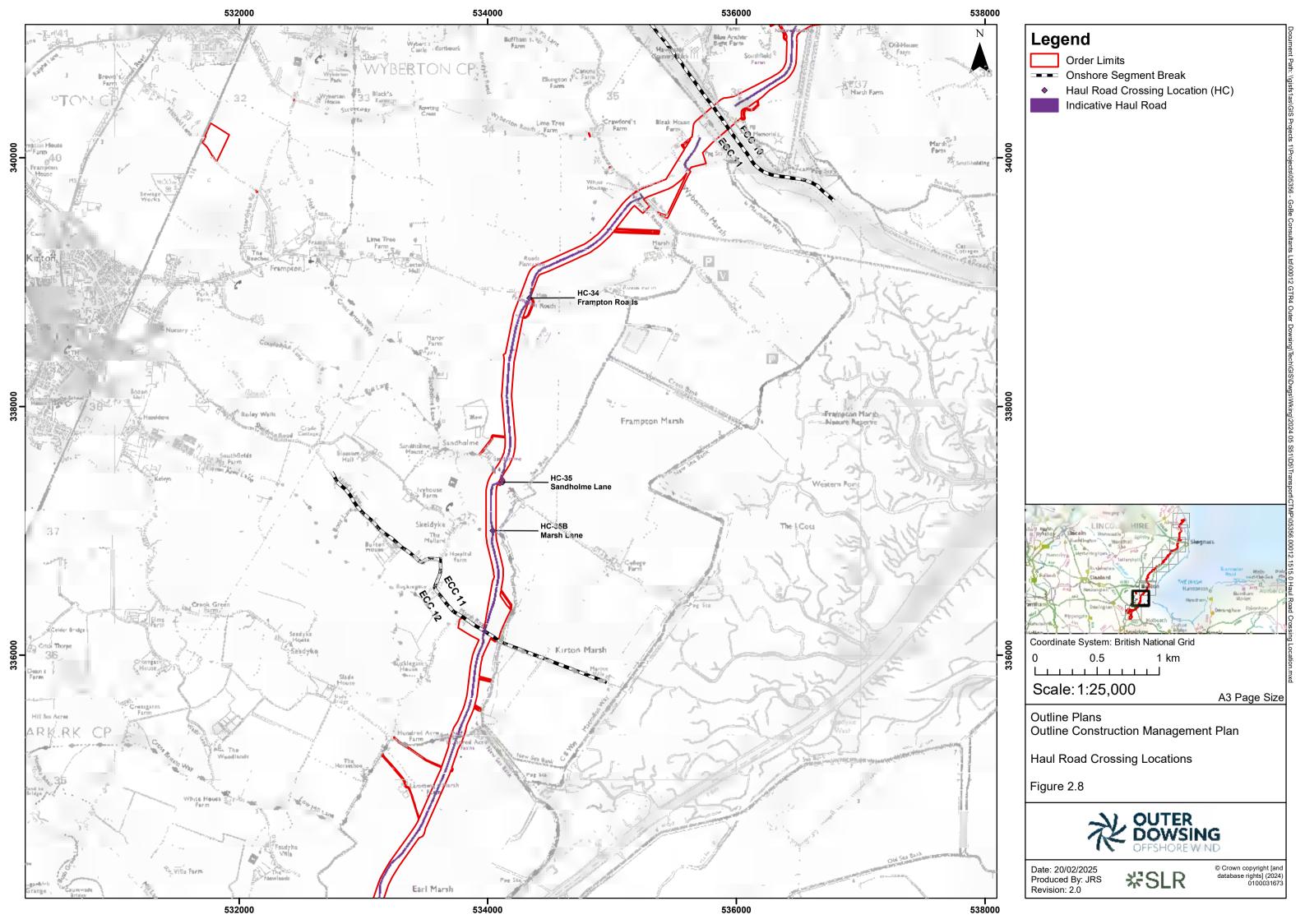


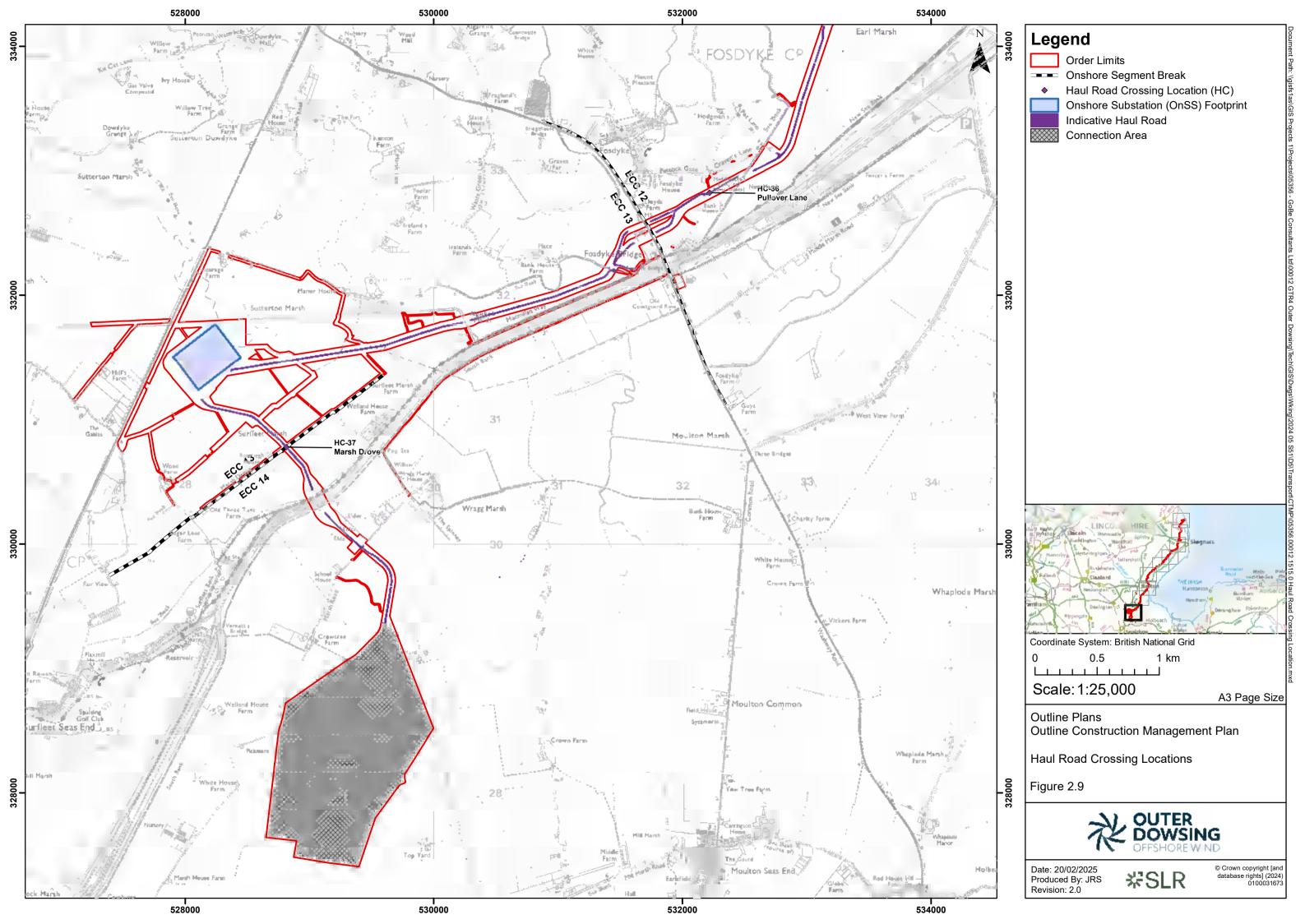












- 45. All haul road crossings would be temporary and following completion of construction works will be removed with verges or footways reinstated.
- 46. Whilst the location of each of the haul road crossings have been identified as the optimum location within the Onshore ECC, the final locations and details of the haul road crossings would be discussed and agreed with LCC before commencement of construction as part of the Final CTMP(s).
- 47. Road crossings would 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.
- 48. The Final CTMP would include details of such measures which would 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;
 - Maintenance of hedgerows for visibility splays;
 - Management processes for on-site personnel;
 - Banks person to facilitate safe egress from construction accesses and to temporarily halt traffic if required and is safe to do so; and
 - Frequency of monitoring of highway condition.

Table 3.3 Haul Road Crossings

Crossing Reference	Drawing Number	Highway link	Segme nt
HC-01b	VD23907-VEC-XXX-XXX-DR-CH-2001	Langham Road	1
HC-01		Ember Lane	1
HC-02	VD23907-VEC-XXX-XXX-DR-CH-2002	Lowgate Road	1
HC-03		Moat Farm	3
HC-04	VD23907-VEC-XXX-XXX-DR-CH-2003	Ingoldmells Road	4
HC-05		Billgate Lane	4
HC-06	VD23907-VEC-XXX-XXX-DR-CH-2004	Middlemarsh Road	6
HC-07		Church Lane	6
HC-07b	VD23907-VEC-XXX-XXX-DR-CH-2005	Burgh Road	7
HC-08		Hall Gate	7
HC-09	VD23907-VEC-XXX-XXX-DR-CH-2006	Cranberry Lane	7
HC-10		Mill Hill	7
HC-11	VD23907-VEC-XXX-XXX-DR-CH-2007	Skirmore Road	7
HC-12		Patman's Lane	7/8
HC-13	VD23907-VEC-XXX-XXX-DR-CH-2008	Ivery Lane	8
HC-14		Broadgate	8
HC-15	VD23907-VEC-XXX-XXX-DR-CH-2009	Cragmire Lane	8
HC-16		Manor Lane	8
HC-17	VD23907-VEC-XXX-XXX-DR-CH-2010	Seadyke Lane	8
HC-18		Church Road	8



Crossing Reference	Drawing Number	Highway link	Segme nt
HC-19		B1184	8
HC-20	VD23907-VEC-XXX-XXX-DR-CH-2011	Unnamed Lane	8
HC-21		Pode Lane	8
HC-22	VD23907-VEC-XXX-XXX-DR-CH-2012	Skipmarsh Lane	8/9
HC-23		Southfields	9
HC-24	VD23907-VEC-XXX-XXX-DR-CH-2013	Ings Drove	9
HC-25		Double Bank	9
HC-26	VD23907-VEC-XXX-XXX-DR-CH-2014	Lowfields Lane	9
HC-26b		Foxhole Lane	9
HC-27	VD23907-VEC-XXX-XXX-DR-CH-2015	Butterwick Road	9
HC-28		Shore Road	9
HC-29	VD23907-VEC-XXX-XXX-DR-CH-2016	Church End Road	9/10
HC-20		Clampgate Road	10
HC-31	VD23907-VEC-XXX-XXX-DR-CH-2017	Grovefield Lane	10
HC-32		Unnamed Lane	10
HC-33	VD23907-VEC-XXX-XXX-DR-CH-2018	Woad Lane	12
HC-34		Frampton Roads	12
HC-35	VD23907-VEC-XXX-XXX-DR-CH-2019	Sandholme Lane	12
HC-35b		Marsh Lane Track	12
HC-36	VD23907-VEC-XXX-XXX-DR-CH-2020	Pullover Lane	12
HC-37		Marsh Drove	13/14

3.2.5 Cable Crossing

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

3.2.6 Temporary Lane Closures

- 51. Where feasible, for the roads where the open trenching method is to be adopted and can be kept open at all times to minimise disruption, it is proposed that:
 - The road crossings would be completed in two stages maintaining one traffic lane in each direction;
 - Traffic would be controlled through temporary traffic signals or manual STOP/GO boards;
 - A safe route would be maintained for pedestrians through the works areas;
 - Advanced signage would be implemented to assist drivers in finding alternative routes; and
 - The works would be staggered so that multiple roads would not be closed at the same time, minimising the potential impact to users of the highway network.



52. To ensure that one lane can be maintained in each direction the process would involve the installation of ducts halfway across the road, before swapping to install ducts on the other half of the road, thereby allowing the onshore cables to be pulled through at a later date. A minimum highway lane of 3.0m and a minimum lateral safety clearance of 0.5m would be maintained.

3.2.7 Temporary Road Closures

- 53. 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 would be a requirement for a temporary closure to through traffic. It is the Applicant's intention to avoid temporary road closures wherever practicable. The Police, Fire and Ambulance service will be given written notice of any temporary road closures.
- 54. The final design of any temporary road closure would be developed by the appointed contractor and agreed with LCC as the local highway authority.
- 55. For roads where there is an alternative route option, signage advising of the diversion would be provided.
- 56. For minor roads that provide access to a small number of uses 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. The Applicant would consult directly with residents in relation to the traffic management measures that would be adopted.

3.2.8 On-Site Traffic Safety

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



63. The final plan will assess transport risks associated with pedestrians, vulnerable road users such as cyclists, and other vehicles, to determine requirements for HGV driver assistance and collision avoidance systems, if any.

3.2.9 Vehicle Cleaning

- 64. A wheel and body wash would be operated at each construction access or haul road crossing, to ensure materials are not transferred onto the highway, and road cleaning would take place when required to remove any deposits that are carried from the site.
- 65. Vehicle cleaning would also be undertaken to avoid transfer from non-organic to organic land parcels. Vehicle cleaning and other procedures associated with avoiding transfer of material from non-organic to organic land parcels are set out in the Outline Organic Land Protocol (OLP) (document reference 8.1.7).

3.2.10 Banks Person

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

3.2.11 Public Access Management

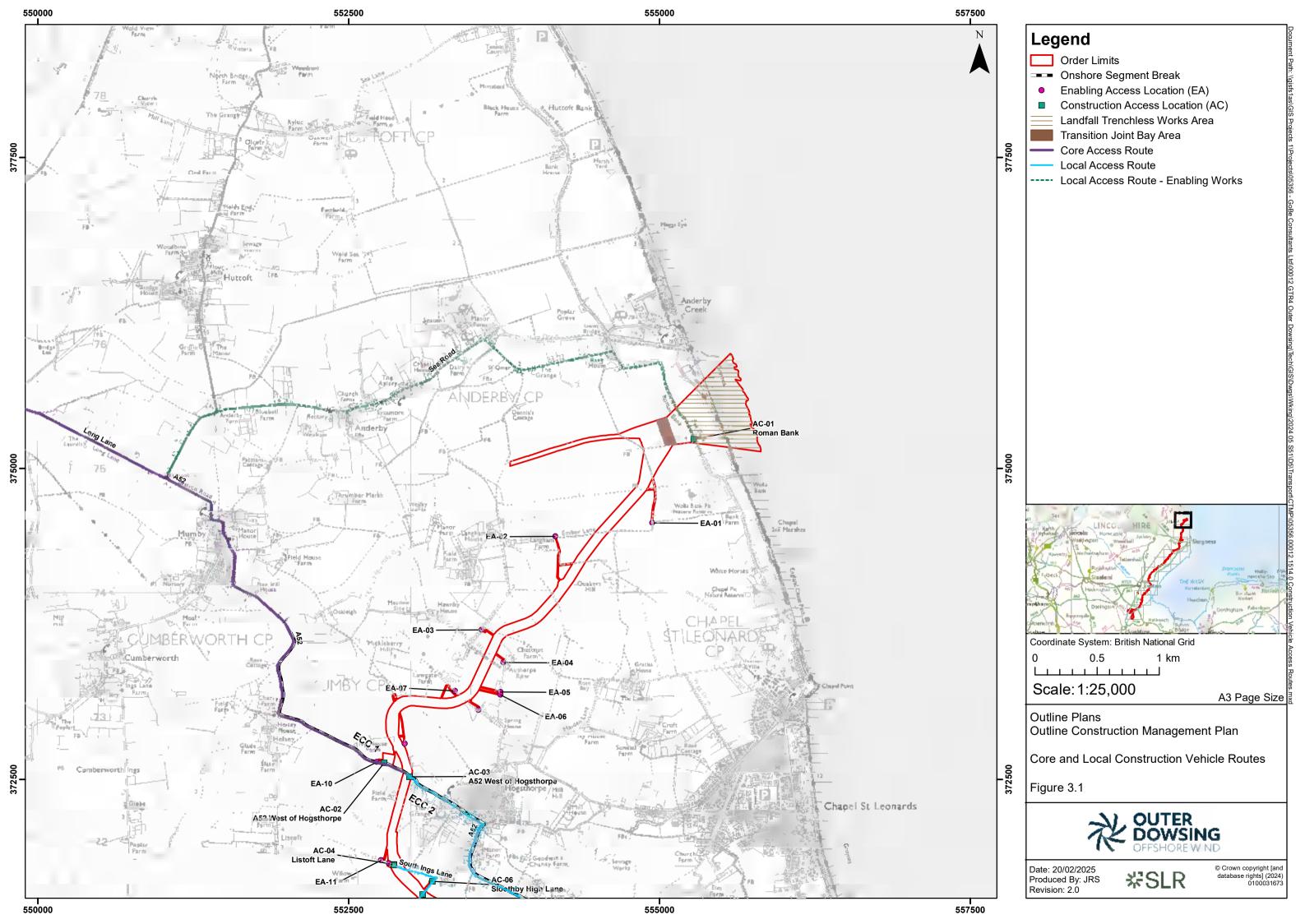
67. The specific location and measures for ensuring the safety of users of the Public Rights of Way (PRoW) that cross or are adjacent to the proposed construction works are set out in Document 8.17: Outline Public Access Management Plan (PAMP).

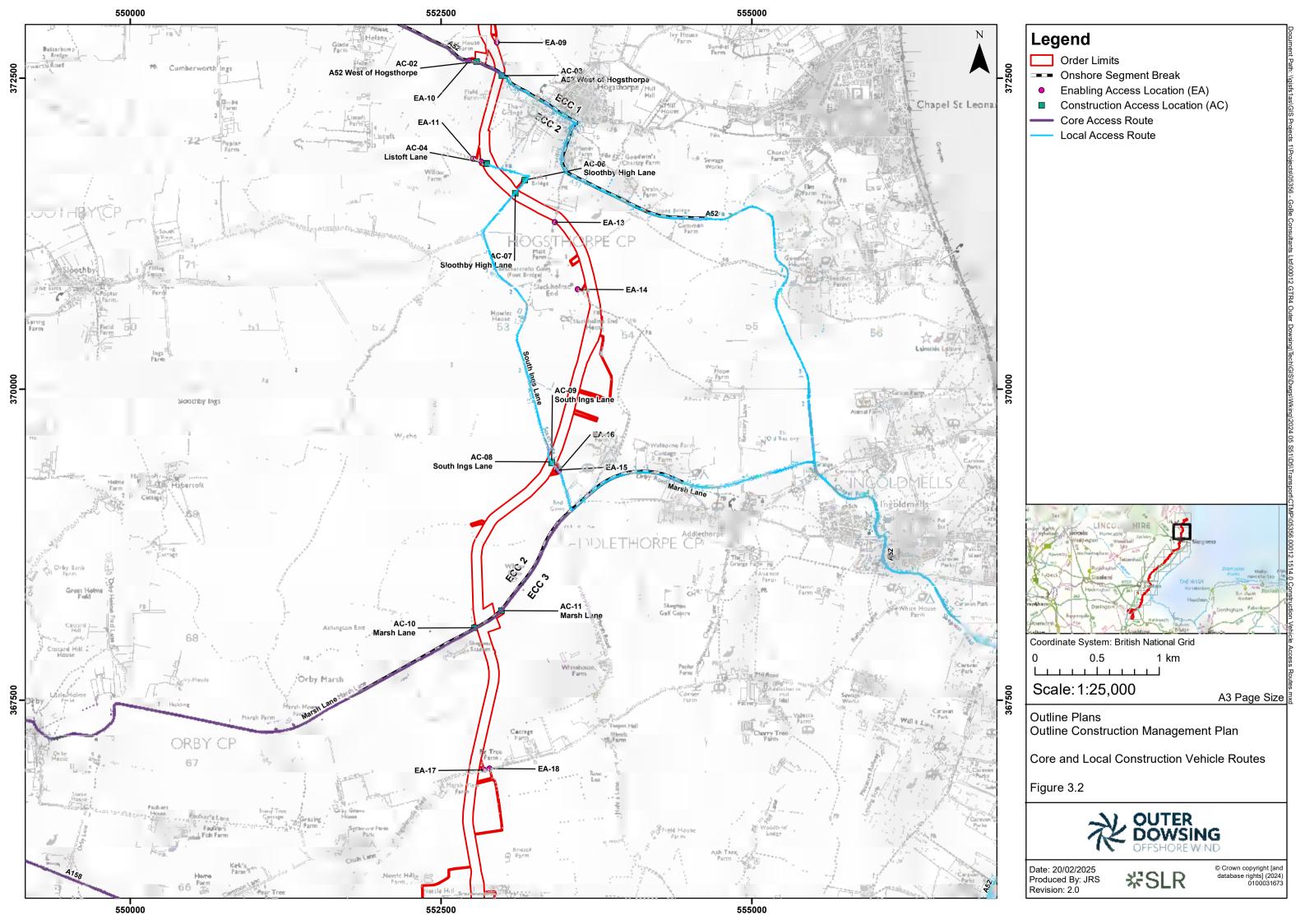


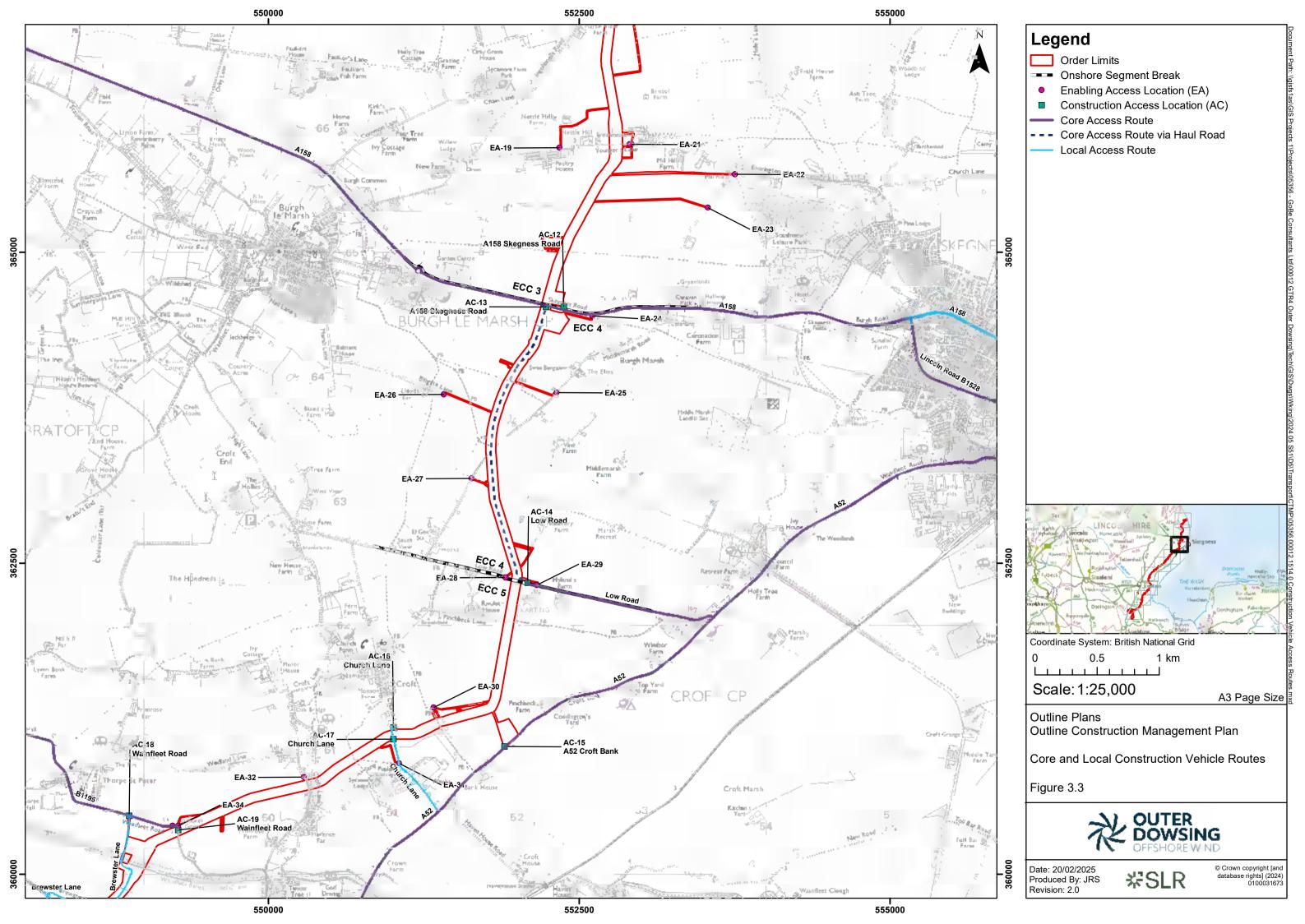
4 Vehicle Routeing and Off-Site Control Measures

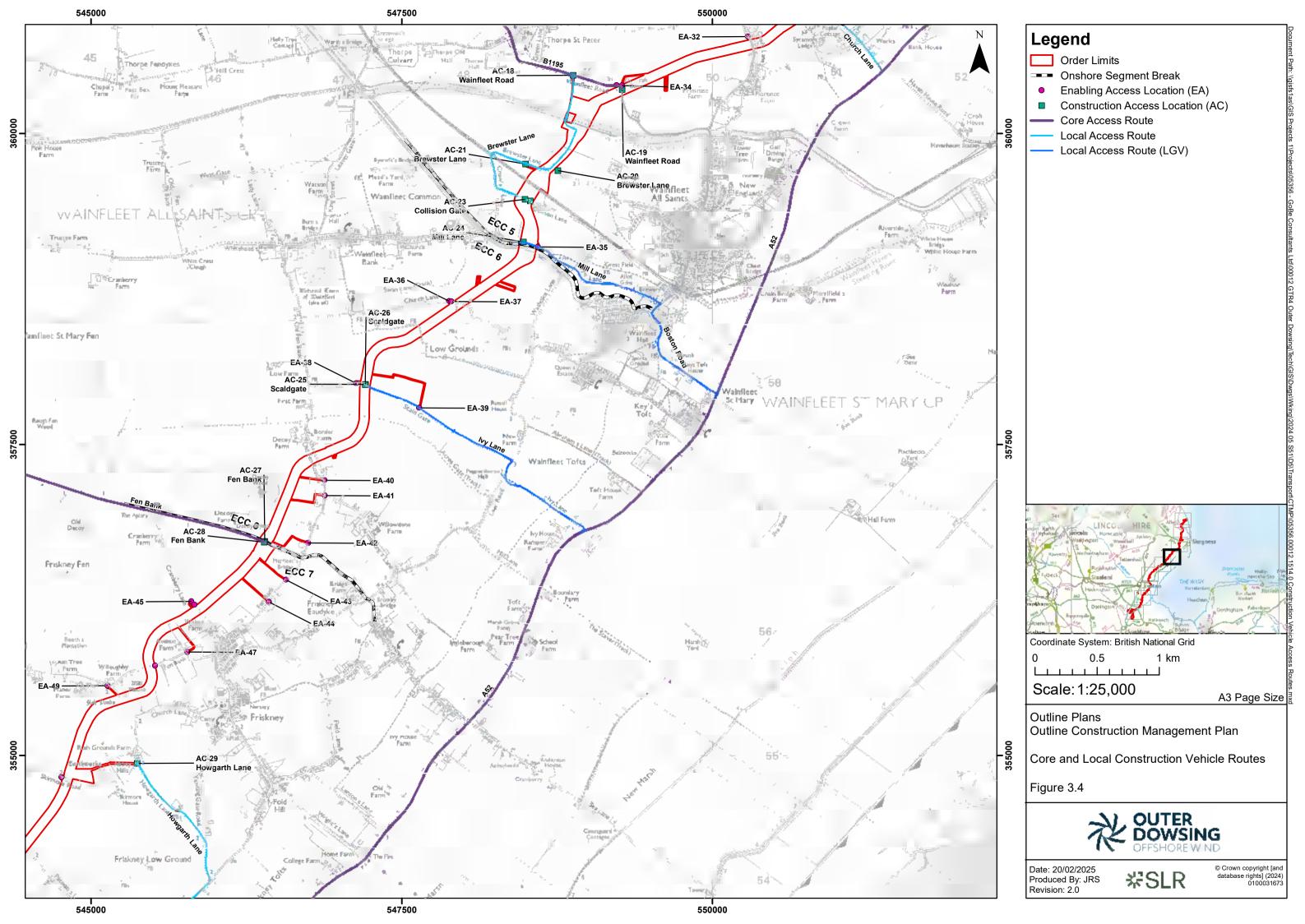
4.1 Vehicle Routeing

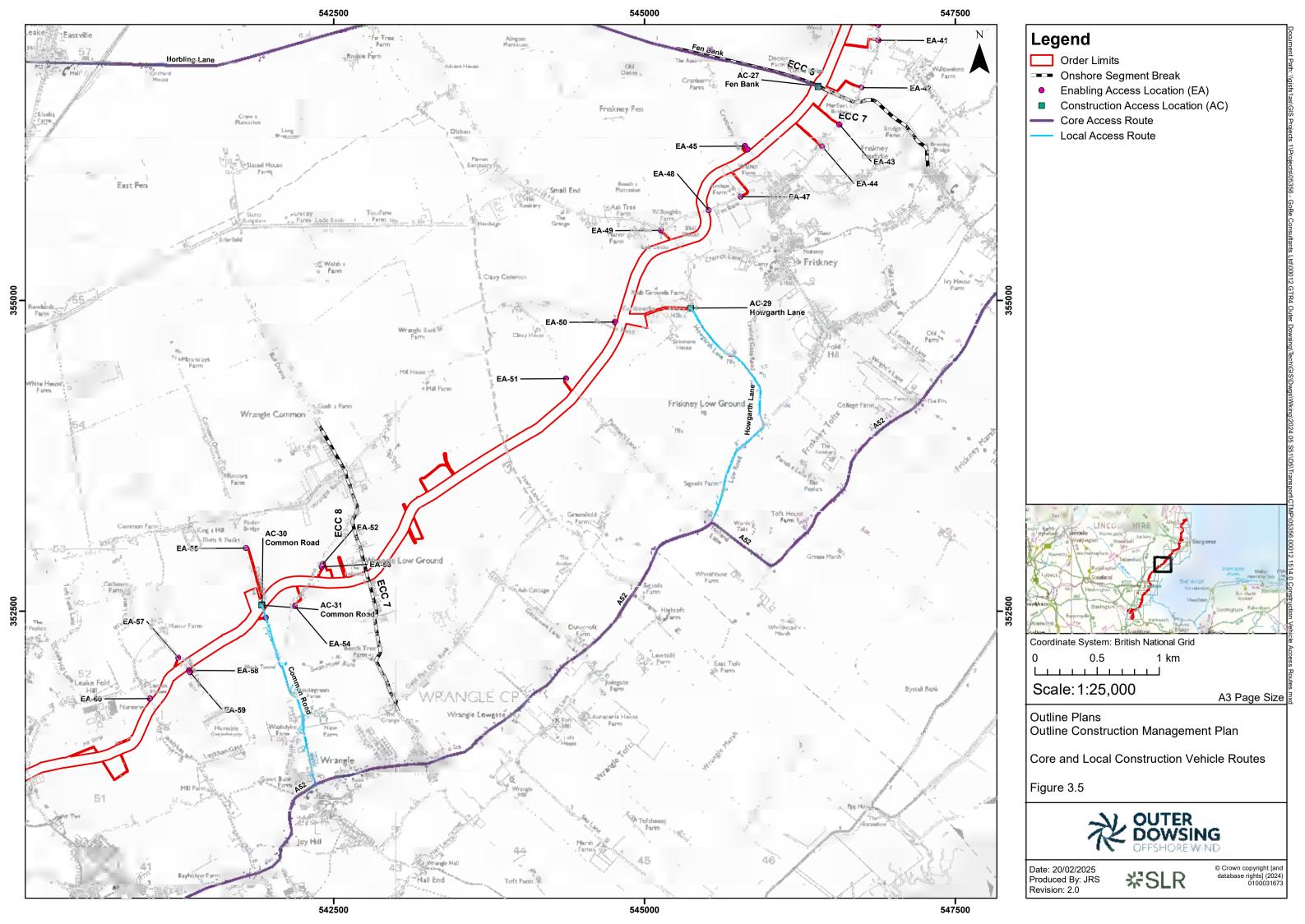
- 4.1.1 Routes for HGV Construction Traffic
- 68. The anticipated routes for HGV construction traffic to construction vehicle access locations for the Onshore ECC and Onshore OnSS are provided in Table 4.1 below and illustrated in Figure 3.

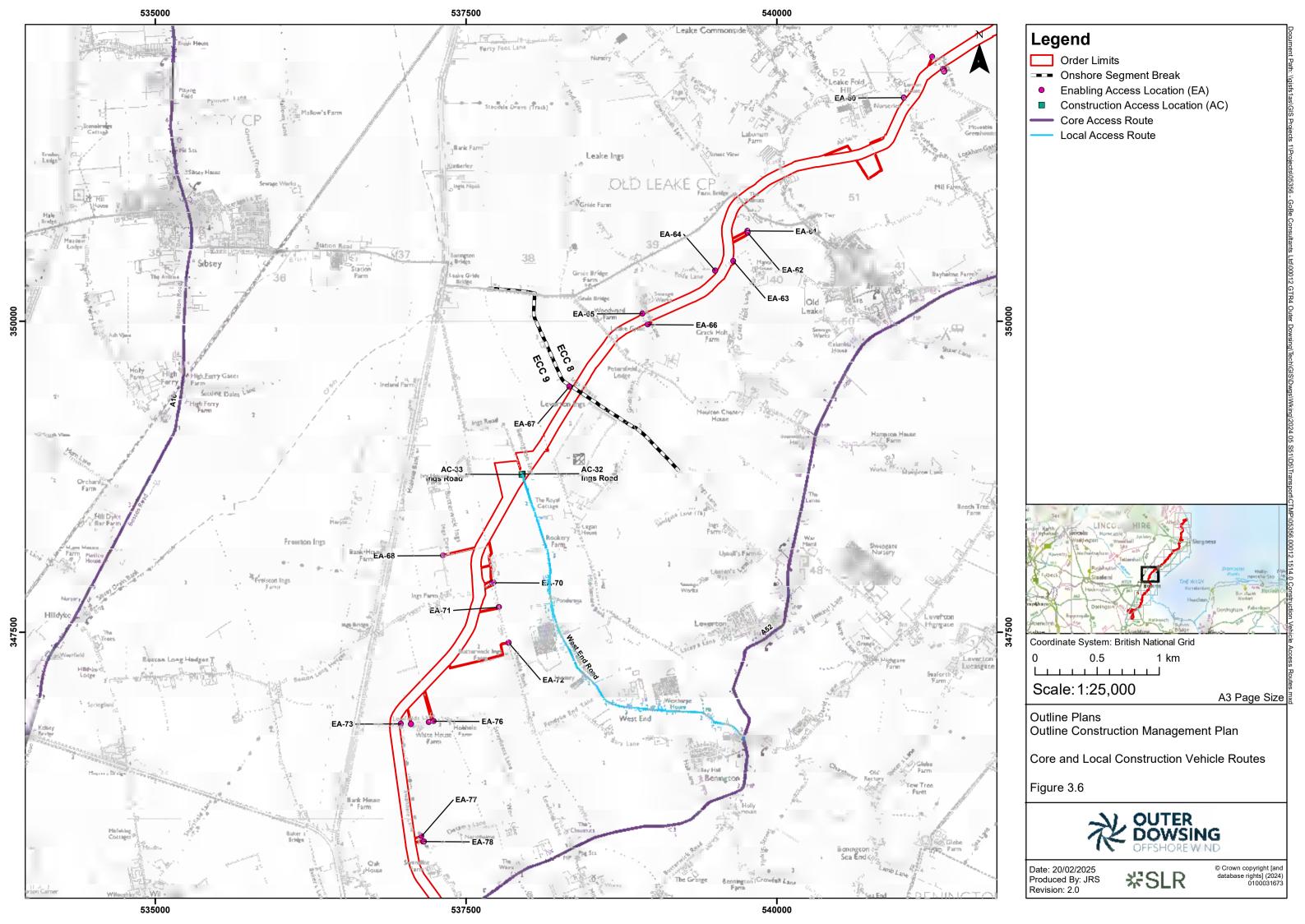


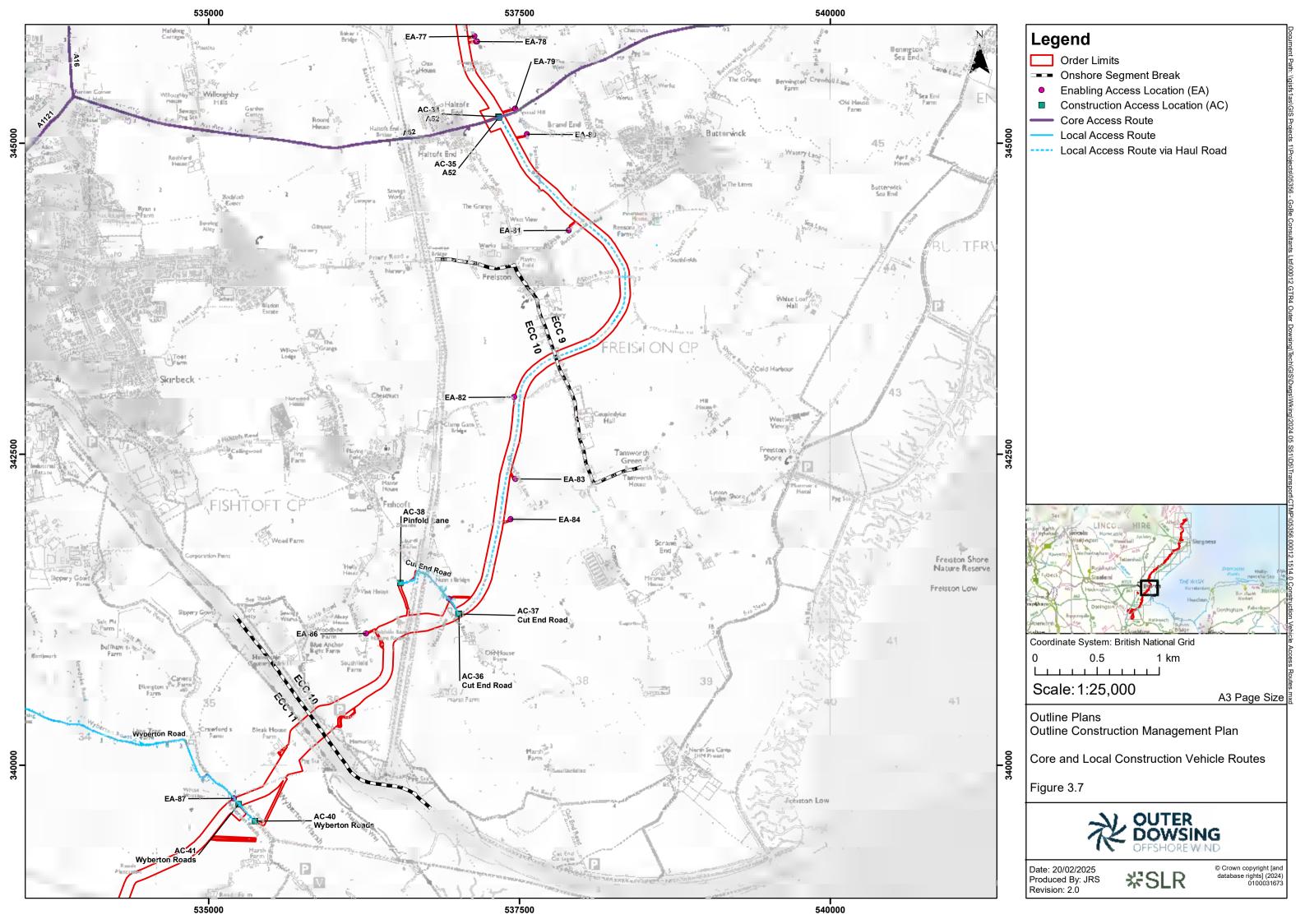


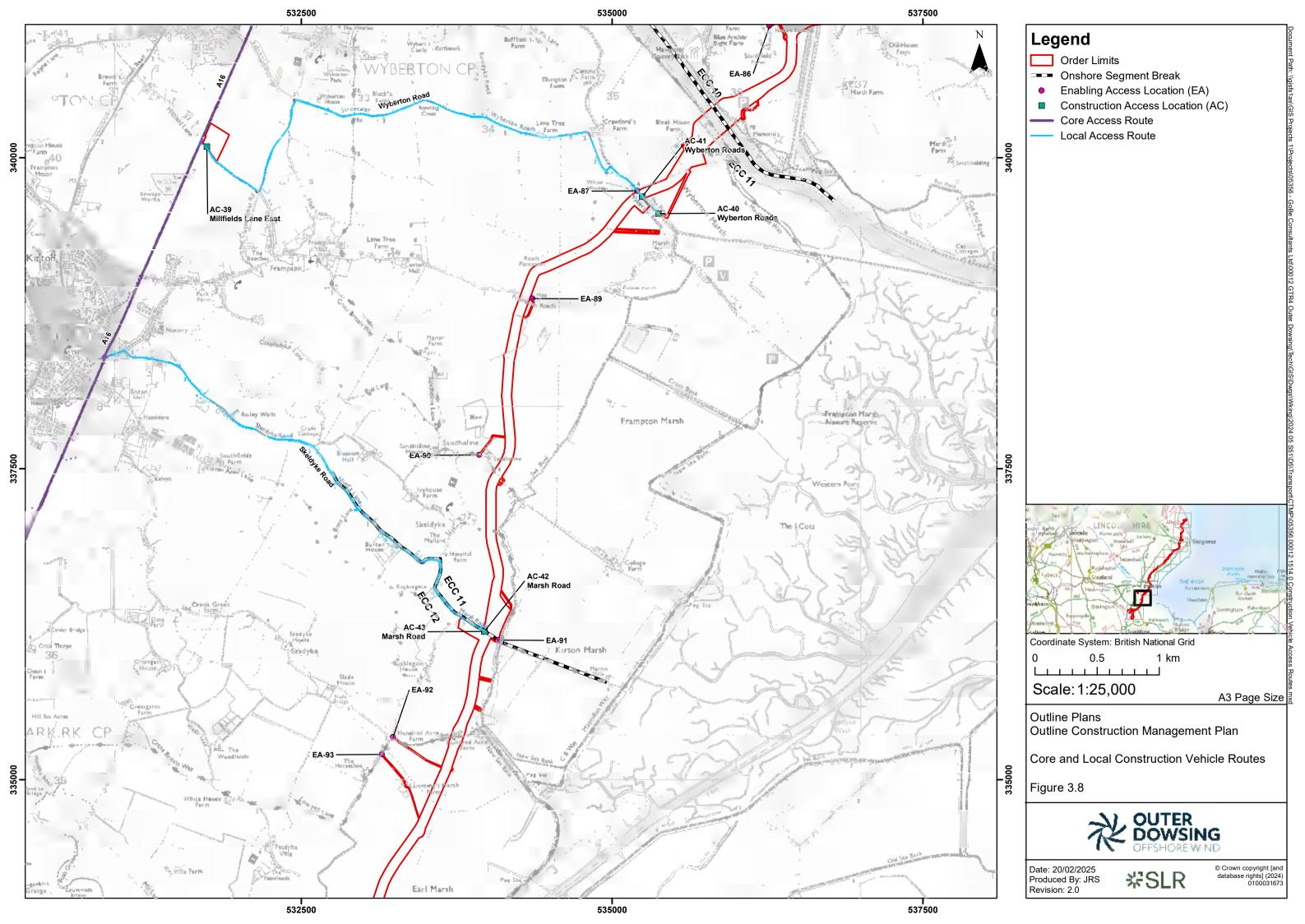












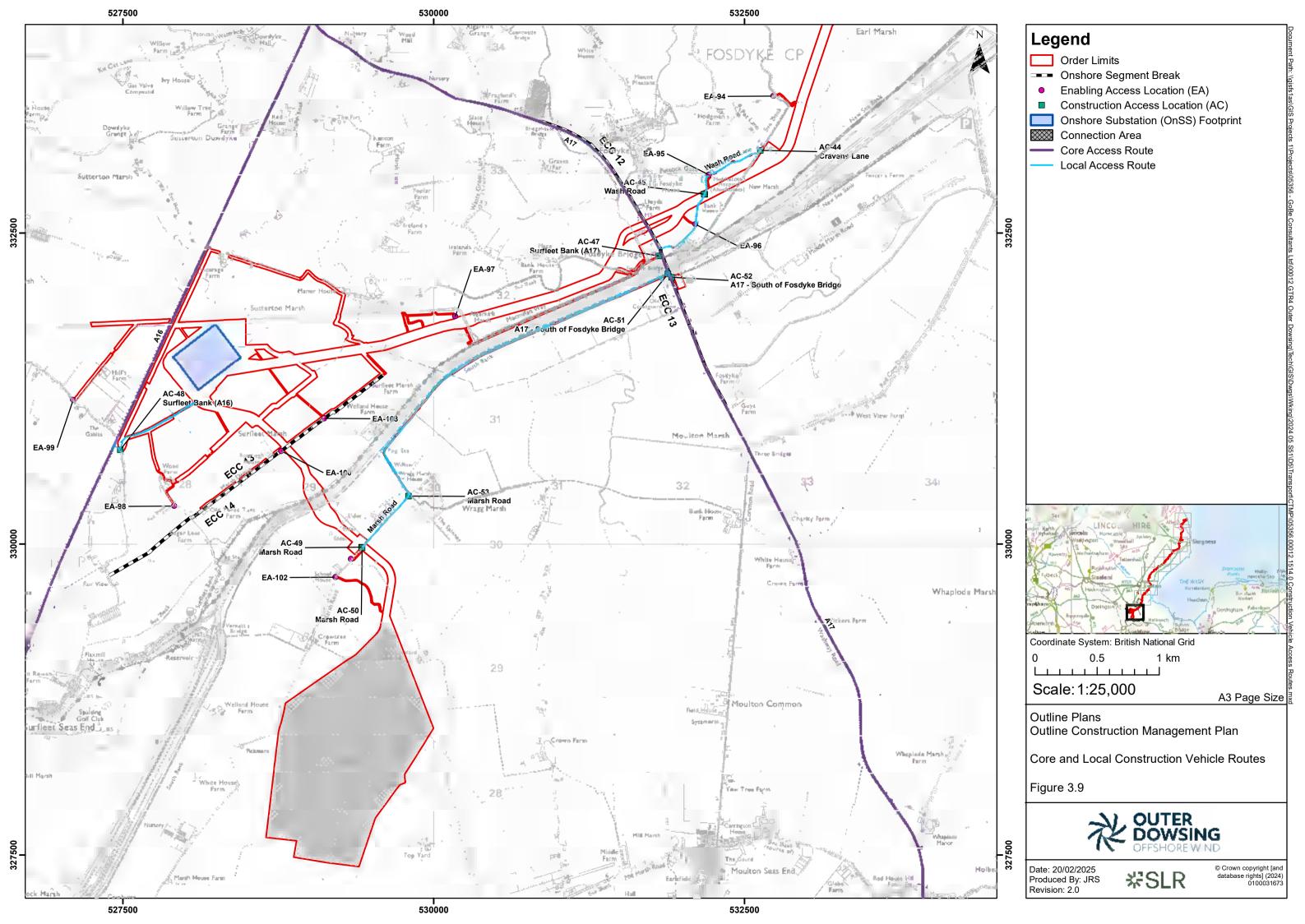


Table 4.1 Construction Vehicle Routes

Туре	Highway Links	Access reference	Segment	
Core construction vehicle	A1104, B1449	AC-01 to AC-03	1	
access routes	A52 (requiring use of a level	All accesses	2 to 14	
	crossing east of Croft), A16,			
	A17, A158, A1028, A1221	1004: 1044		
Local construction	Marsh Lane, South Ings Lane,	AC-04 to AC-11	3	
vehicle access routes	Sloothby High Lane, Listoft			
(from the A158)	Lane	10.101 10.00		
Local construction	Gunby Lane, Mill Lane,	AC-18 to AC-23	5	
vehicle access route	B1195			
(from the A158)		10.01	4 /5 11:	
Local construction	Rectory Road, Sea Road,	AC-01	1 (Enabling works	
vehicle access routes	Roman Bank		only)	
(from the A52)	Low Road (via the Onshore	AC-14 to AC-35	4/5 (providing a	
	ECC haul road)		route between	
			the A52 and A158	
			to avoid Skegness)	
	Boston Road, Mill Lane	AC-24	5 (LGV only)	
	Brewster Lane, Crow's Lane,	AC-20 to AC-23	5	
	Collision Gate, requiring use			
	of a level crossing on			
	Brewster Lane		2 (1 2) (1)	
	Ivy Lane, Low Road, Scald Gate	AC-25	6 (LGV only)	
	Low Road, Yawning Gate Road, Howgarth Lane	AC-26	7	
	Common Road	AC-30 and AC-31	7/8	
	West End Lane, Lowfields	AC-32 and AC-33 8/9		
	Road, Ings Road	AC-32 dilu AC-33	0/3	
	Cut End Road, Pinfold Lane	AC-36 to AC-38	10	
	(via the Onshore ECC haul			
	road from the A52)			
Local construction	Horbling Lane/Midville	AC-27 and AC-28	6/7	
vehicle access routes	Road/Fodderdyke			
(from the A16)	Lane/Station Road/Fen Bank			
	(requiring use of a level			
	crossing on Station Road)			
	Millfield Lane East, Low	AC-39 to AC-41	11	
	Road, Streetway,			
	Streetway/Wyberton Roads			



Туре	Highway Links	Access reference	Segment
	Station Road, Skeldyke Road,	AC-42 and AC-43	11/12
	Nidd's Lane, Marsh Road		
	Surfleet Bank	AC-48	13
Local construction vehicle access routes	Wash Road, Craven's Lane	AC-44 to AC-46	12
(from the A17)	Surfleet Bank	AC-47	13
	Private Track, Marsh Road	AC-49 and AC-50	14
		(via AC-51 and AC-	
		53)	

- 69. Final routeing arrangements would be discussed and agreed with LCC through the approval of the Final CTMP(s).
- 70. All delivery contractors and construction staff would be instructed to use the agreed construction access routes, with compliance with the Final CTMP(s) for each stage of the onshore works being a condition of supply contracts and a number of measures would be implemented to ensure compliance:
 - Construction access routes would 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 LCC. Where multiple access points use a common road to site, signage would be clearly distinguishable between access points;
 - Signage would also be placed at the exit of construction site access points to instruct construction traffic to follow the designated route and where there are particularly sensitive locations (such as the conservation area at Frampton Marsh) signage to state no HGVs, for example;
 - The delivery routes would be communicated by the Applicant to all companies and/or drivers involved in the transport of materials and plant to and from site by HGVs;
 - Data from HGV vehicles that are fitted with monitoring devices (such as Global Positioning System (GPS) tracking) to record the routes, timing, speed of vehicles when making deliveries, would be available to assist in auditing and complaint investigation; 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 breaches of the agreed delivery routes and allow enforcement action to be undertaken if required.

4.1.2 Driving and Speed Restrictions

- 71. Drivers of all Project vehicles (cars, LGVs, HGVs and AILs) would be encouraged to drive in a safe and defensive manner at all times within speed limits. A zero-tolerance policy would be adopted by all contractors, such that any infringement results in that person not returning to Site.
- 72. All cars and drivers of site operative vehicles used for commuting to and from site must be road worthy and legally compliant. All commercial vehicles and drivers must be road worthy and legally compliant.



4.1.3 Pre and Post Construction Surveys

- 73. Prior to the start, and following completion, for each stage of the onshore construction works, road condition surveys for minor roads would be undertaken and agreed with LCC. These surveys would inform any works that may be required to rectify specific damage to the road network as a direct result of construction work.
- 4.1.4 Walking, Cycling and Horse-Rider (WCH) Management
- 74. Where reasonably practicable and where it is safe to do so, the Applicant would aim to maintain access for WCHs along the public highway at locations such as construction accesses and haul road crossings.
- 75. Management measures may be considered at specific highway links where no safety measure already exist. For example, where the former National Cycle Network Route 1 is part of or crosses a construction vehicle access route, and where safety measures are not in place.
- 76. The highway links where management measures would be considered are:
 - Low Road (segment ECC 11);
 - Marsh Road (segment ECC 11/12); and
 - Wash Road (segment ECC 13).
- 77. The proposed temporary management measures for Public Rights of Way are set out in Document 8.17: Outline Public Access Management Plan (Outline PAMP) (document reference 8.17).

4.1.5 Coordination With Other Developments

78. The Applicant would facilitate liaison between the Principal Contractor(s) and LCC to ensure, where reasonably practicable, that where construction works would take place at the same time as other projects, coordination with those other projects would be undertaken.



5 Anticipated Construction Vehicle Movements

5.1 Local Highway Network

79. The anticipated maximum and average (across the 51-month construction period for the landfall works and a 42-month period for onshore cable duct, export cable and 400kV cable installation) daily vehicle movements associated with the construction of the Project on the core and local construction vehicle access routes is set out in Table 5.1

Table 5.1 Anticipated Maximum and Average Daily Two-Way Construction Traffic Flows

Location Reference	Highway Link	Maximun Way Traf		Average Two-Way Traffic Flow	
		Total Traffic	HGVs	Total Traffic	HGVs
1	B1449 Thurlby Road	195	174	61	40
2	B1449 Long Lane	195	174	61	40
3	A1104	195	174	61	40
5	A52 between Marsh Lane and Skegness	195	174	61	40
4	A52 (west of Hogsthorpe)	10	0	10	0
6	Listoft Lane	31	23	31	23
7	Sloothby High Lane	56	46	21	11
8	S Ings Lane	81	69	29	17
9	Marsh Lane (east of AC-10/AC-11)	3	0	3	0
10	Marsh Lane (west of AC-10/AC-11)	163	145	52	35
11	A158 Skegness Road (east of AC-12/AC-13)	147	147	33	33
12	A158 Skegness Road (west of AC-12/AC-13)	623	565	194	135
13	A52 (north of Low Road)	219	147	104	33
14	A52 (south of Low Road)	244	147	129	33
15	A52 (Holland Lane)	198	87	130	19
16	A52 (Wrangle)	243	87	176	19
17	A52 (Butterwick)	243	87	176	19
18	A52 Wainfleet Road (west of AC-34/AC-35)	574	434	193	53
19	A52 Wainfleet Road (east of AC-34/AC-35)	575	434	248	107
20	Church Lane	40	36	10	7
21	Gunby Lane	184	163	52	31
22	B1195 (Irby in the Marsh)	184	163	52	31
23	B1195 (Thorpe St Peter)	218	163	86	31
24	Boston Road (Wainfleet)	47	0	47	0
25	Brewster Lane	69	54	25	10
26	Collision Gate	30	27	30	27
27	Scald Gate	10	0	10	0
28	Horbling Lane	210	200	39	29
29	Fen Bank	210	200	39	29



Location	Highway Link	Maximur		Average Two-Way	
Reference		Way Traf	fic Flow	Traffic Flo	ow
		Total Traffic	HGVs	Total Traffic	HGVs
30	Mill Lane	10	0	10	0
31	Howgarth Lane	54	45	15	6
32	Low Road	54	45	16	6
33	Common Road	192	164	61	33
34	Common Road (near A52)	192	164	61	33
35	Ings Road	187	157	65	34
36	West End Road	187	157	65	34
37	Cut End Road	38	33	13	8
38	Pinfold Lane	38	33	38	33
39	Millfield Lane East to Wyberton Roads	89	77	28	16
40	Station Road to Marsh Road	177	153	55	31
41	Wash Road/Craven's Lane	89	77	27	15
42	A16 (north of AC-39)	183	64	135	16
43	A16 (south of AC-39)	420	305	189	74
44	A17 (south of River Welland)	238	220	77	59
45	A17 (north of River Welland)	227	175	99	48
46	A17 (between A16 and A1121)	314	294	102	82
47	A17 (west of A1221)	381	353	124	96
48	A16 (south of A17)	315	175	187	48
49	A1121 between Boston and A17	124	116	37	28
50	A16 between A52 (Boston) and A155	531	447	184	100
51	A16 between A155 and A158	521	447	174	100
52	A16 between A158 and A1028	687	653	185	150
53	A16 north of A1028/A1104	684	653	182	150
54	A1028 between A158 and A16	462	462	104	104
55	A158 between A1028 and A16	499	462	141	104
56	A158 west of A16	680	653	178	150
58	A16 Boston	508	241	322	56
59	A52 Boston	210	121	117	28
60	Lincoln Road Skegness	182	177	38	33
61	Low Road	244	147	129	33
62	Marsh Road	56	51	16	11

80. The anticipated maximum peak hour vehicle movements associated with the construction of the Project on the core and local construction vehicle access routes is set out in Table 5.2.



Table 5.2 Anticipated Maximum Peak Hour Two-Way Construction Traffic Flows

Location	Highway Link	Maximum Two-Way Traffic Flow		
Reference		Total Traffic	HGVs	
1	B1449 Thurlby Road	17	14	
2	B1449 Long Lane	17	14	
3	A1104	17	14	
4	A52 (west of Hogsthorpe)	17	14	
5 6 7	A52 between Marsh Lane and Skegness	1	0	
6	Listoft Lane	3	2	
7	Sloothby High Lane	5	4	
9	S Ings Lane	7	6	
9	Marsh Lane (east of AC-10/AC-11)	0	0	
10	Marsh Lane (west of AC-10/AC-11)	14	12	
11	A158 Skegness Road (east of AC-12/AC-13)	12	12	
12	A158 Skegness Road (west of AC-12/AC-13)	53	47	
13	A52 (north of Low Road)	19	12	
14	A52 (south of Low Road)	22	12	
15	A52 (Holland Lane)	18	7	
16	A52 (Wrangle)	23	7	
17	A52 (Butterwick)	23	7	
18	A52 Wainfleet Road (west of AC-32/AC-33)	32	18	
19	A52 Wainfleet Road (east of AC-32/AC-33)	50	36	
20	Church Lane	3	3	
21	Gunby Lane	16	14	
22	B1195 (Irby in the Marsh)	16	14	
23	B1195 (Thorpe St Peter)	19	14	
24	Boston Road (Wainfleet)	5	0	
25	Brewster Lane	6	5	
26	Collision Gate	3	2	
27	Scald Gate	1	0	
28	Horbling Lane	18	17	
29	Fen Bank	18	17	
30	Mill Lane	1	0	
31	Howgarth Lane	5	4	
32	Low Road	5	4	
33	Common Road	16	14	
34	Common Road (near A52)	16	14	
35	Ings Road	16	13	
36	West End Road	16	13	
37	Cut End Road	3	3	
38	Pinfold Lane	3	3	
39	Millfield Lane East to Wyberton Roads	8	6	
40	Station Road to Marsh Road	15	13	
41	Wash Road/Craven's Lane	8	6	



Location	Highway Link	Maximum Two-	-Way Traffic Flow
Reference		Total Traffic	HGVs
42	A16 (north of AC-39)	17	5
43	A16 (south of AC-39)	37	25
44	A17 (south of River Welland)	20	18
45	A17 (north of River Welland)	20	15
46	A17 (between A16 and A1121)	26	25
47	A17 (west of A1221)	32	29
48	A16 (south of A17)	29	15
49	A1121 between Boston and A17	10	10
50	A16 between A52 (Boston) and A155	46	37
51	A16 between A155 and A158	45	37
52	A16 between A158 and A1028	58	54
53	A16 north of A1028/A1104	58	54
54	A1028 between A158 and A16	38	38
55	A158 between A1028 and A16	42	38
56	A158 west of A16	57	54
57	A1104 north of B1149	0	0
58	A16 Boston	47	20
59	A52 Boston	19	10
60	Lincoln Road Skegness	15	15
61	Low Road	22	12
62	Marsh Road	5	4

5.2 Strategic Road Network (SRN)

- 81. Whilst the assessment of construction traffic associated with the Project on the SRN has not been assessed as part of Chapter 27 (document reference 6.1.27), during the evidence plan process, NH requested that the anticipated peak hour vehicle movements on the SRN are set out in the Outline CTMP submitted with the DCO application.
- 82. As the study area for the highway network considered in the assessment in Chapter 27 of the ES (document reference 6.1.27) is over 40 miles from the SRN, it is assumed that the vehicles utilising the SRN would predominantly be HGVs. As the HGV distribution identified in the Transport Assessment (document reference 6.3.27.1) was estimated based on a range of assumptions and professional judgement (rather than based on any confirmed origins of materials) and given the distance from the SRN, the maximum and average (over the 42-month core construction programme) daily and peak hour vehicle movements set out in Table 5.3 are estimates only. The estimates are based on the anticipated peak hour two-way HGV movements on the core construction vehicle access route which would connect to the relevant section of the SRN (100% of the HGVs, as a robust estimate).



Table 5.3 Estimates of Maximum and Average Peak Hour Two-Way Construction HGVs on the SRN

Highway Link	To/From	Peak Hour HGVs (Two-Way)		
		Maximum	Average	
M180/A180	A16 north of A1028/A1104	54	16	
A46	A158 west of A16	57	10	
A1	A6 south of A17 or A17 west of A1121	29	6	



6 Highway Mitigation Proposals

83. This section describes the highway mitigation works that have been identified to facilitate the forecast vehicular trip generation associated with the construction of the Project as set out in Section5. This Section excludes the Special Order Abnormal Indivisible Load (AIL) (the delivery of the transformer for the OnSS), which is described in Section 7.1.2..

6.1 Methodology

- 84. The following has been undertaken in order to identify the highway mitigation works:
 - A desk-top study of the local construction vehicle access routes to identify the likely pinch points that could require mitigation;
 - A visual inspection of the local construction vehicle access routes;
 - A series of swept path analysis checks of the sections of the local construction vehicle access routes identified as pinch points, to ascertain where widening is likely to be required for the following vehicle types:
 - A large tipper (10.2m);
 - Maximum legal articulated vehicle (16.5m); and
 - A large low loader (24m), which is a non-Special Order AIL;
 - A review of the existing passing places on the local construction vehicle access routes and identification of locations for additional passing places; and
 - A review of any locations on the construction vehicle access routes that interact with the railway (three level crossings).

6.1.1 Pinch Points

- 85. Based on the desk-top and visual inspection of the local construction vehicle access routes, the following have been identified as pinch points:
 - South Ings Lane, Sloothby High Lane and Listoft Lane;
 - Brewster Lane, Crow's Lane, and Collision Gate;
 - Low Road, Yawling Gate Road and Howgarth Lane;
 - Common Road and Double Bank;
 - West End Road, Lowfields Road and Ings Road;
 - Cut End Road and Pinfold Lane;
 - Millfield Lane East, Low Road, Streetways and Wyberton Roads;
 - Skelydyke Road, Nidd's Lane and Marsh Road; and
 - Wash Road and Craven Lane.



6.1.2 General Highway Widening

86. Drawings showing the swept path analysis checks on the sections of the local construction vehicle access routes identified in Section 4 are provided in Annex M of the Transport Assessment (document reference 6.3.27.1) and a summary of the findings is presented in Table 6.1.



Table 6.1 Summary of Highway Widening Requirements per Vehicle Type

Route	Improvement Requirement	Tipper	Articulated	Large Low- Loader	Drawing References	Additional Notes
South Ings Lane, Sloothby High Lane and Listoft Lane	Carriageway widening on Listoft Lane on the approach to the Sloothby High Lane junction. Carriageway widening at the Marsh Lane/Sloothby High Lane junction.	No	No	Yes	VD23907-VEC-XXX-001- DR-CH-0001 VD23907-VEC-XXX-001- DR-CH-0002 VD23907-VEC-XXX-001- DR-CH-0003	Detailed investigation required regarding the bridges at the approaches to the junctions.
	Carriageway widening on Listoft Lane on the approach to the Sloothby High Lane junction.	No	No	Yes		
	Minor carriageway widening on Listoft Lane.	Yes	Yes	Yes		May not be required based on detailed investigations using a topographic survey.
Mill Lane, Brewster	Carriageway widening on Brewster Lane and Crow's Lane	Yes	Yes	Yes	VD23907-VEC-XXX-002- DR-CH-0001	May not be required based on detailed
Lane, Crow's Lane, and Collision Gate	Widening at bend on Brewster Lane at the level crossing	Yes	Yes	Yes	VD23907-VEC-XXX-002- DR-CH-0002 VD23907-VEC-XXX-002- DR-CH-0003	investigations using a topographic survey.
	Widening at the Mill Lane junction	No	No	Yes		Manoeuvre is very tight for the tipper and articulated vehicle due to the location of the buildings at the junction at



Route	Improvement Requirement	Tipper	Articulated	Large Low- Loader	Drawing References	Additional Notes
						the edge of the carriageway.
Low Road, Yawling Gate Road and Howgarth Lane	Minor carriageway widening works at some sections along Howgarth Lane including its junction with Yawling Gate Road.	Yes	Yes	Yes	VD23907-VEC-XXX-004- DR-CH-0001 VD23907-VEC-XXX-004- DR-CH-0002 VD23907-VEC-XXX-004- DR-CH-0003	May not be required based on detailed investigations using a topographic survey.
Common Road and Double Bank	Minor carriageway widening may be required on some sections.	No	Yes	Yes	VD23907-VEC-XXX-006- DR-CH-0001 VD23907-VEC-XXX-006- DR-CH-0002 VD23907-VEC-XXX-006- DR-CH-0003	May not be required based on detailed investigations using a topographic survey.
West End Road, Lowfields Road and Ings Road	Minor carriageway widening may be required on some sections.	No	No	Yes	VD23907-VEC-XXX-007- DR-CH-0001 VD23907-VEC-XXX-007- DR-CH-0002 VD23907-VEC-XXX-007- DR-CH-0003	May not be required based on detailed investigations using a topographic survey.
Cut End Road and Pinfold Lane	Minor carriageway widening may be required for the majority of the route.	Yes	Yes	Yes	VD23907-VEC-XXX-010- DR-CH-0001 VD23907-VEC-XXX-010- DR-CH-0002 VD23907-VEC-XXX-010- DR-CH-0003	Detailed investigation regarding the bridge over Hobhole Drain. May not be required based on detailed investigations using a topographic survey.



Route	Improvement Requirement	Tipper	Articulated	Large Low- Loader	Drawing References	Additional Notes
Millfield Lane East, Low Road, Streetways	Minor carriageway widening may be required on some sections.	Yes	Yes	Yes	VD23907-VEC-XXX-011- DR-CH-0001 VD23907-VEC-XXX-011- DR-CH-0002	May not be required based on detailed investigations using a topographic survey.
and Wyberton Road	· ·					
	Widening at the Low Road/Streetways junction.	No	No	Yes		
Skelydyke Road, Nidd's Lane and Marsh Road	s sections of Nidd's Lane. DR-CH-0001 VD23907-VEC-XXX-012	VD23907-VEC-XXX-012- DR-CH-0001 VD23907-VEC-XXX-012- DR-CH-0002	May not be required based on detailed investigations using a topographic survey.			
Warsh Noda	Widening to the carriageway at the bend on Nidd's Lane adjacent to the residential properties.	Yes	Yes	Yes	VD23907-VEC-XXX-012- DR-CH-0003	May not be required for the articulated and tipper, based on detailed investigations using a topographic survey. Will be required for the large low loader.
	Widening at the Nidd's Lane/Marsh Road junction.	No	No	Yes		
	Minor carriageway widening on sections of Marsh Road.	Yes	Yes	Yes		May not be required based on detailed



Route	Improvement Requirement	Tipper	Articulated	Large Low- Loader	Drawing References	Additional Notes
						investigations using a topographic survey.
Wash Road and Craven Lane	Minor carriageway widening may be required on some sections.	Yes	Yes	Yes	VD23907-VEC-XXX-013- DR-CH-0001 VD23907-VEC-XXX-013- DR-CH-0002	May not be required based on detailed investigations using a topographic survey.
	Widening at the Wash Road/Craven's Lane junction.	No	No	Yes	VD23907-VEC-XXX-013- DR-CH-0003	



87. As Table 6.1 sets out, whilst there are a number of locations on the local construction vehicle access routes that have been identified as requiring improvements, detailed investigations would be undertaken post DCO consent once all construction vehicle types that are required to access each route have been confirmed, using a topographic survey and discussed and agreed with LCC.

6.1.3 Passing Places

- 88. In addition to the highway widening that has been identified (subject to more detailed investigations as set out above), given the width of the carriageway of the local construction vehicle access routes, a scheme of new passing places has been identified for each route, to enable two HGVs (maximum legal) to pass each other safely. The schemes have been developed using the following criteria, which have been taken from the High-Speed 2 Rural Road Design Criteria (July, 2012), as there is no specific design guidance for passing places:
 - Maximum distance between passing places of 200m;
 - Passing place length of 15m (exc. tapers); and
 - Minimum width of total carriageway at the passing place of 6m (suitable for two HGVs passing at slow speed).
- 89. The passing place schemes are provided in Annex N of Appendix 27.1 (document reference 6.3.27.1) as follows:
 - South Ings Lane, Sloothby High Lane and Listoft Lane VD23907-VEC-XXX-001-DR-CH-0010;
 - Low Road VD23907-VEC-XXX-004-DR-CH-0010;
 - Low Road, Yawling Gate Road and Howgarth Lane VD23907-VEC-XXX-004-DR-CH-0010;
 - Common Road and Double Bank VD23907-VEC-XXX-006-DR-CH-0010;
 - West End Road, Lowfields Road and Ings Road VD23907-VEC-XXX-007-DR-CH-0003;
 - Cut End Road and Pinfold Lane VD23907-VEC-XXX-010-DR-CH-0010;
 - Millfield Lane East, Low Road, Streetways and Wyberton Road VD23907-VEC-XXX-011-DR-CH-0010;
 - Skelydyke Road, Nidd's Lane and Marsh Road VD23907-VEC-XXX-012-DR-CH-0010;
 - Wash Road and Craven Lane VD23907-VEC-XXX-013-DR-CH-0010; and
 - Private track between the A17 and Marsh Road VD23907-VEC-XXX-XXX-DR-CH-0011 and VD23907-VEC-XXX-XXX-DR-CH-0012



7 Abnormal Indivisible Loads

7.1 Types of AIL

- 90. Two types of AILs would be required to be transported for the construction of the Project:
 - Cable Drums on a large low loader (non-Special Order); and
 - Transformers and shunt reactors for the OnSS (Special Order vehicles)

7.1.1 Non-Special Order AlLs

91. The cable drums would be delivered to TCCs along the Onshore ECC, or an alternative access subject to the approval of the Highways Authority and would require an escort/pilot vehicle on the local construction vehicle access routes due to the width of the majority of these routes. Since the passing places schemes have been designed for the maximum legal HGV only, given the cable drum delivery movements are minimal. In some cases, a smaller cable drum trailer would be used where the large low loader vehicle is unable to access the Onshore ECC haul road or alternative access (as above), which would be determined during the detailed design process, post DCO consent and in discussions with LCC.

7.1.2 Special Order AILs

- 92. The delivery of Special Order AILs will be small in number, though of a size that will require temporary works to accommodate the loads. All temporary works, such as removal of street furniture, will be subject to discussion with LCC and form part of a delivery plan for each AIL. Each delivery will be planned in advance, escorted, and managed such that any impacts are minimised. Such arrangements will be procured through standard processes with LCC at the appropriate time.
- 93. The delivery route is anticipated to be between Port Sutton Bridge and the OnSS location and Surfleet Marsh.
- <u>94.</u> An assessment of the anticipated vehicle type that would be used to transport the AIL between Port Sutton Bridge and the OnSS location is provided in Annex A of the Transport Assessment (document reference 6.3.27.1), using the following route <u>options</u>:

Route Option 1

- West Bank between the Port and Bridge Road;
- Bridge Road between West Bank and the A17;
- A17 between Bridge Road and the A16;
- A16 between the A17 and Surfleet Bank; and
- Surfleet Bank

Route Option 2

- West Bank between the Port and Bridge Road;
- Bridge Road between West Bank and the A17;
- A17 between Bridge Road and the A151 (Peppermint Roundabout);



- A151 between the A17 (Peppermint Roundabout) and the A16;
- A16 between the A151 and Surfleet Bank; and
- Surfleet Bank
- 94.95. Once the Port has been confirmed (post DCO consent), an Abnormal Load Assessment Report (ALAR) will be prepared which will set out the key points and issues associated with the selected route, to verify that the route is feasible for the delivery, subject to physical and operational mitigation works.
- 95.96. The ALAR will inform the traffic management measures that will need to be identified for the movement of the AIL. Prior to the movement of AIL, extensive public awareness is required to allow residents to plan and time their journeys to avoid disruption. The haulage Contractor shall remain responsible for obtaining all necessary permits from the relevant road and bridge authorities along the access route.
- 96.97. The movement of Special Order AILs would be outside of the restrictions (routes and times) contained within this Outline CTMP and would be subject to separate agreement with the relevant highway authorities and police through the Electronic Service Delivery for Abnormal Loads (ESDAL) system.
- 97.98. 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.
- 98.99. 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.
- 99.100. Due to the size of vehicles required to transport these loads, escorts will be required for the entire route to control oncoming and conflicting traffic.
- <u>100.</u>101. It is noted that the AIL deliveries are usually undertaken in convoys. The usual makeup of a convoy is three AIL vehicles accompanied by three 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.
- 101.102. 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.
- <u>102.</u>103. The Liaison Officer in consultation with the haulier will be responsible for disseminating AIL information to key stakeholders.



8 Complaints and Enquiries Procedure

8.1 Enquiries and Complaints

- 103.104. 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.
- <u>104.</u>105. Contact details of the community liaison officer (see Section 2.1) will be made available to the relevant authorities and local community for the duration of the construction period.
- <u>105.</u>106. All complaints and enquiries would be logged promptly by the Applicant and kept on site for review by LCC upon request.

8.2 Checking and Corrective Action

- 406.107. As outlined above, it is intended for the Final CTMP(s) to be a 'living document' which is updated periodically as and when required.
- <u>107.108.</u> Each contractor would be responsible for establishing a programme of monitoring and the results of which would be fed back for inclusion within the CTMP(s) if necessary.
- <u>108.109.</u> Any checking or corrective action required would also be monitored. This methodology would ensure that the construction activities are being undertaken in accordance with the CTMP.
- 109.110. The procedure for addressing non-conformance/compliance and ensuring that corrective actions are undertaken is outlined below:
 - Completion of a Non-Conformance Report this would record any traffic related incident and work that has not been carried out in accordance with the CTMP or Method Statement;
 - Completion of a Corrective Action Report this would record any identified deficiency as a result of monitoring, inspection, surveillance, and valid complaint; and
 - Action any necessary actions identified as a result of the above would be allocated to a responsible person, along with a timescale for the action to be undertaken.
- 110.111. Records of the above would be retained by the Applicant throughout the construction process. The records would be maintained either in hard copy or electronically in such a manner that they are readily identifiable, retrievable, and protected against damage, deterioration, or loss.



References

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