FIVE ESTUARIES OFFSHORE WIND FARM

6.6.8.2 TRAFFIC AND TRANSPORT BASELINE REPORT - PART 5

Application Reference	EN010115
Application Document Number	6.6.8.2
Revision	B
Pursuant to	Deadline 1
Ecodoc Number	005024281-02
Date	October 2024

In preparation of this document Five Estuaries Wind Farm Ltd has made reasonable efforts to ensure that the content is accurate, up to date and complete for purpose.

Revision	Date	Status/Reason for Issue	Originator	Checked	Approved
B	Oct-24	Deadline 1	SLR	GoBe	VE OWFL

Appendix P Construction Accesses – General Arrangement Drawings

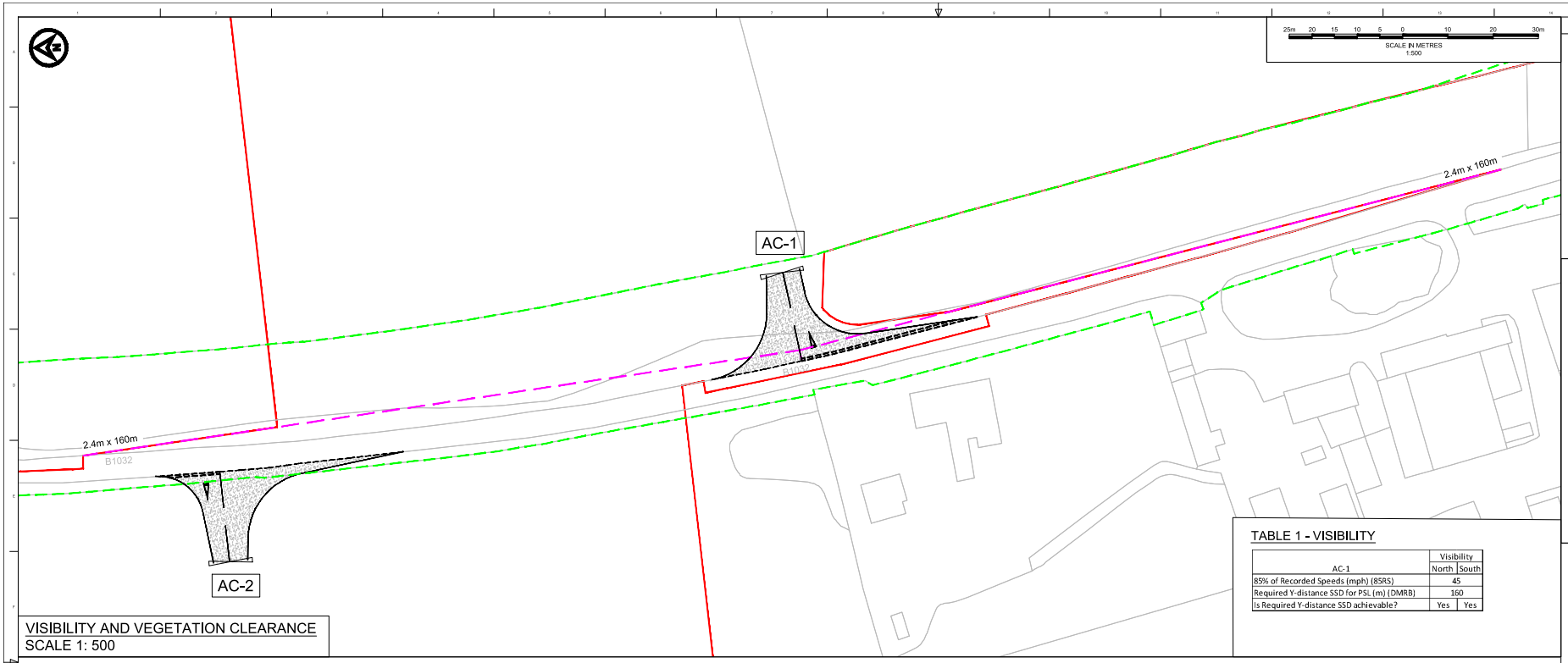
Volume 6, Part 6, Annex 8.1 Transport Assessment (Onshore)

Five Estuaries Offshore Wind Farm

Five Estuaries Wind Farm Ltd

SLR Project No.: 404.V05356.00010

23 September 2024

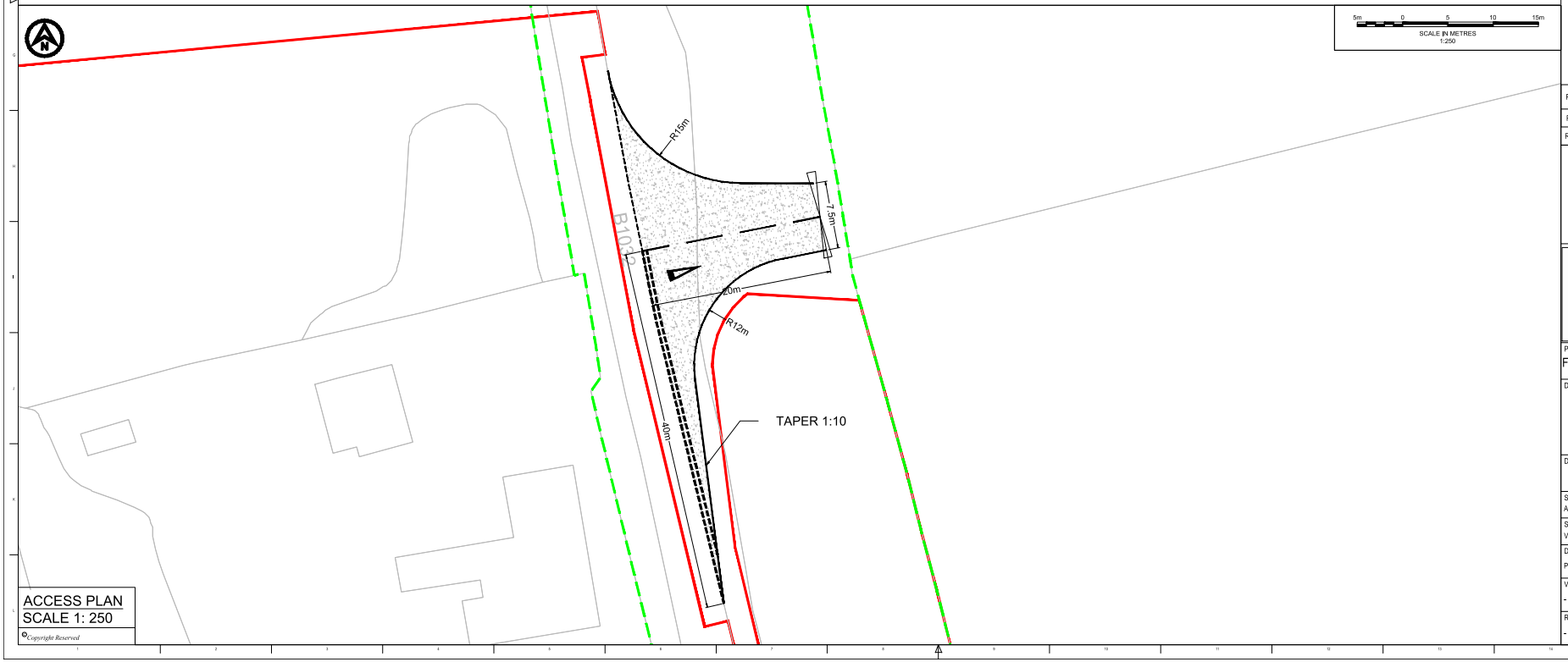


VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500

25m 20 15 10 5 0 10 20 30m
SCALE IN METRES
1:500

TABLE 1 - VISIBILITY

AC-1	Visibility North	Visibility South
85% of Recorded Speeds (mph) (85RS)	45	
Required Y-distance SSD for PSL (m) (DMRB)	160	
Is Required Y-distance SSD achievable?	Yes	Yes



ACCESS PLAN
SCALE 1: 250

5m 0 5 10 15m
SCALE IN METRES
1:250

DO NOT SCALE FROM THIS DRAWING

NOTES
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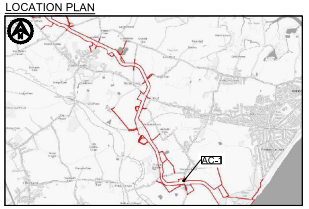
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.

KEY

- EXISTING ARRANGEMENT
- ONSHORE RED LINE BOUNDARY
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P02	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

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Tel +44(0)1932 569546
www.royalhaskoningdhv.com

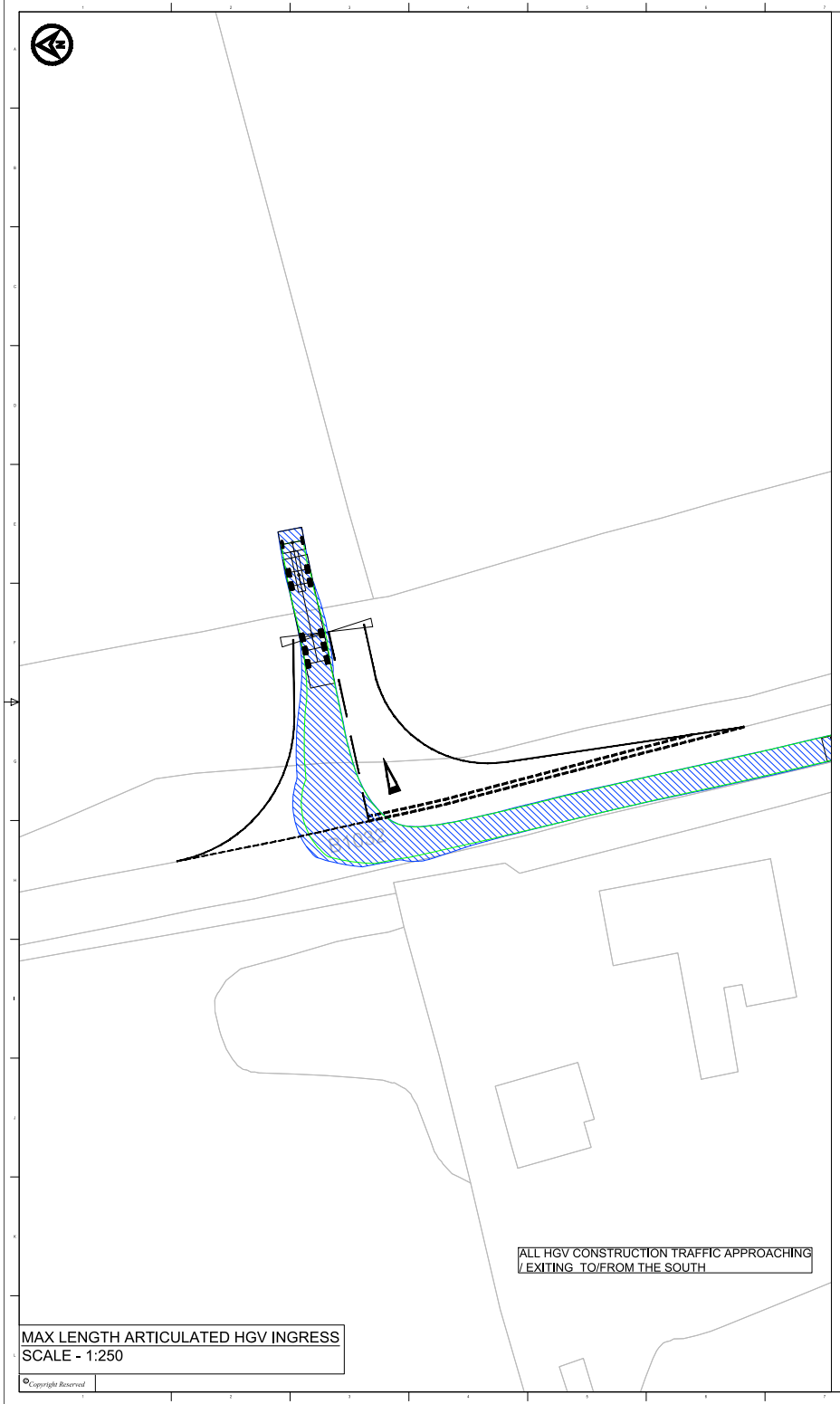
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
AC-1 - B1032
GENERAL ARRANGEMENT

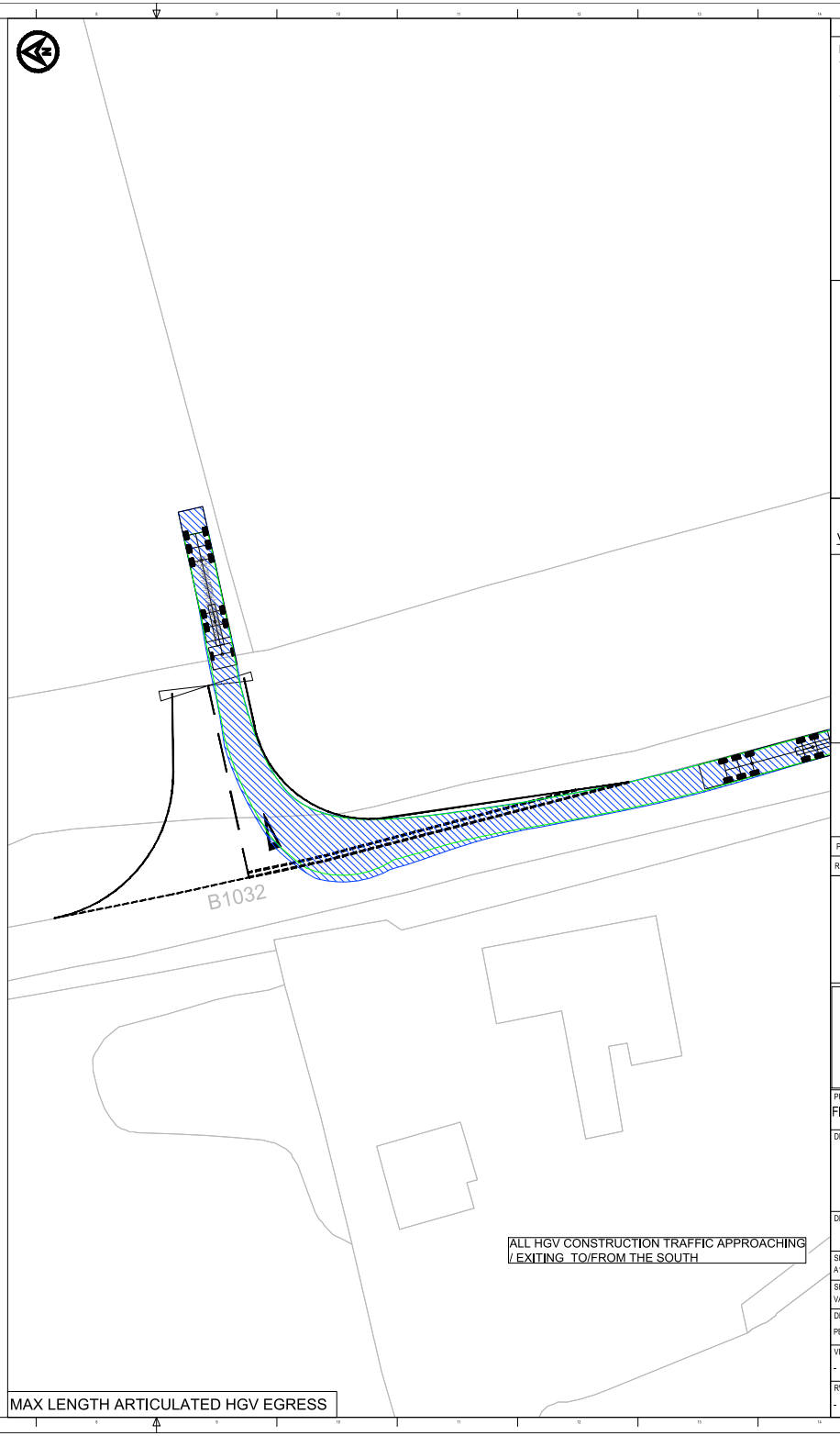
DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0001	P02
VE DOCUMENT NUMBER	REVISION
-	-
RWE ECODOC NUMBER	SHEET No / REVISION
-	1_OF_1 / -



MAX LENGTH ARTICULATED HGV INGRESS
SCALE - 1:250



MAX LENGTH ARTICULATED HGV EGRESS

DO NOT SCALE FROM THIS DRAWING

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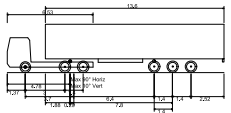
KEY

- EXISTING ARRANGEMENT
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- PROPOSED GATE

VEHICLE TRACKING



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

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

- VEHICLE BODY SWEPT PATH (FORWARD GEAR)
- VEHICLE CHASIS SWEPT PATH

REV	DATE	DESCRIPTION	BY	CHK	APP
P01	31/08/2023	FIRST ISSUE	AA	SKT	SKT

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www.royalhaskoningdhv.com

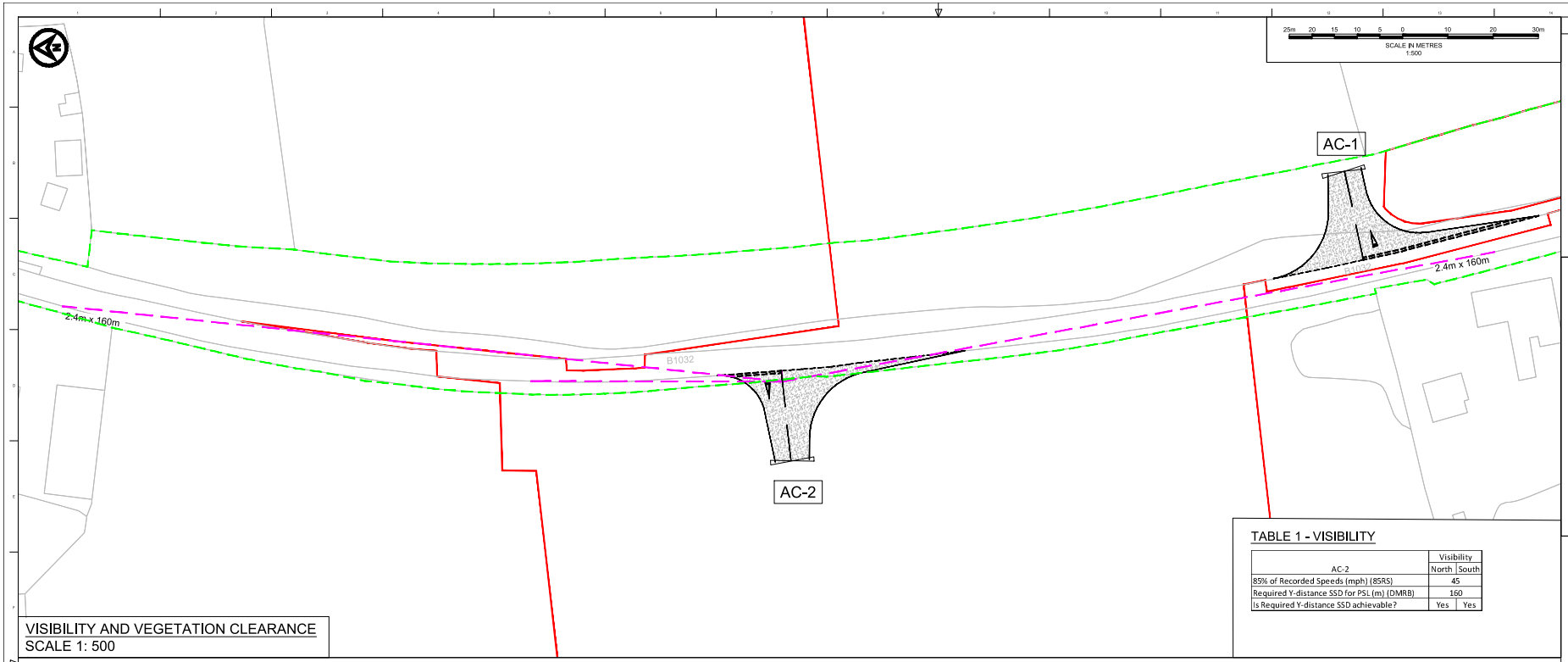
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
AC1 - B1032
SWEPT PATH ANALYSIS

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	31/08/2023	31/08/2023	31/08/2023	31/08/2023

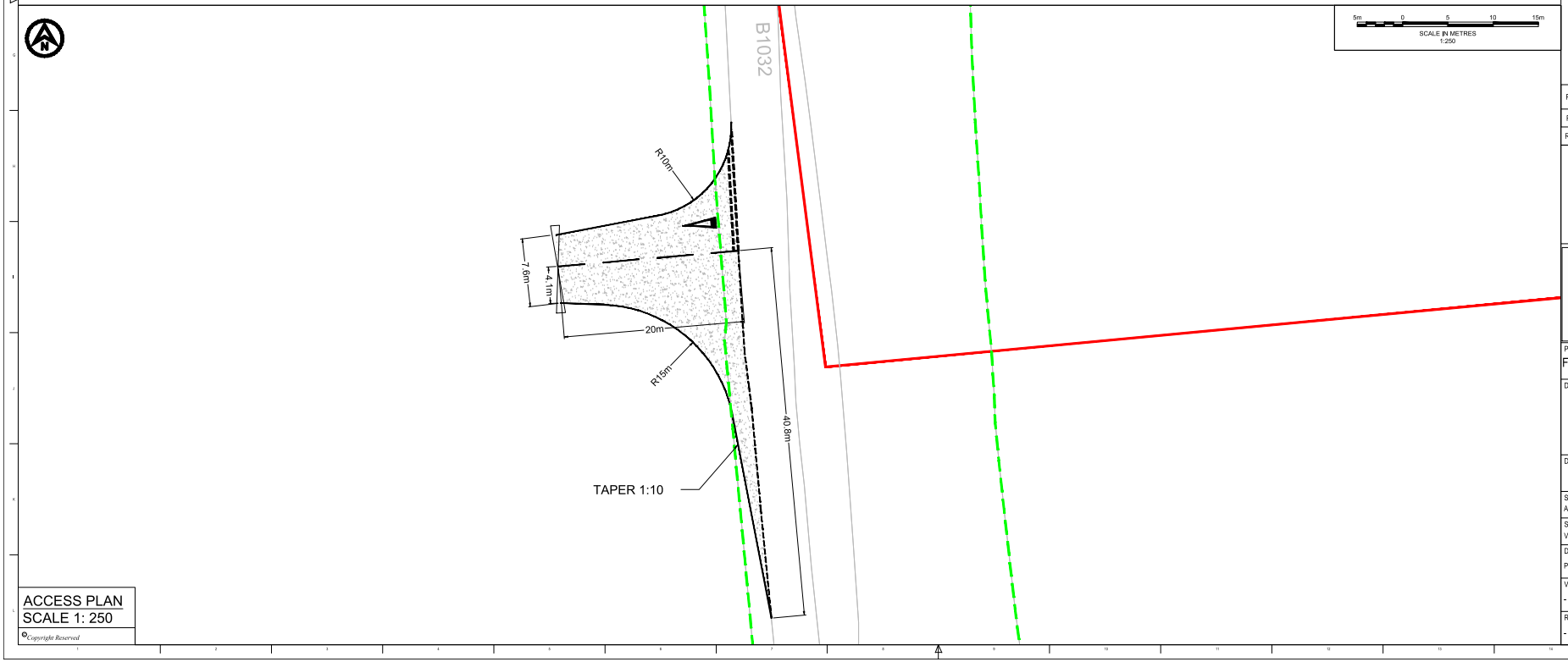
DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0021	P01
VE DOCUMENT NUMBER	REVISION
-	-
RWE ECODOC NUMBER	SHEET No / REVISION
-	1_OF_1 / -



VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500

TABLE 1 - VISIBILITY

AC-2	Visibility North	Visibility South
85% of Recorded Speeds (mph) (85RS)	45	
Required Y-distance SSD for PSL (m) (DMRB)	160	
Is Required Y-distance SSD achievable?	Yes	Yes



ACCESS PLAN
SCALE 1: 250

DO NOT SCALE FROM THIS DRAWING

NOTES
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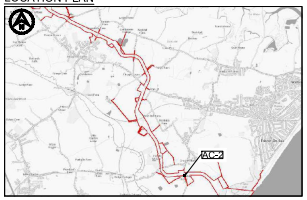
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.

KEY
- EXISTING ARRANGEMENT
- ONSHORE RED LINE BOUNDARY
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P02	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

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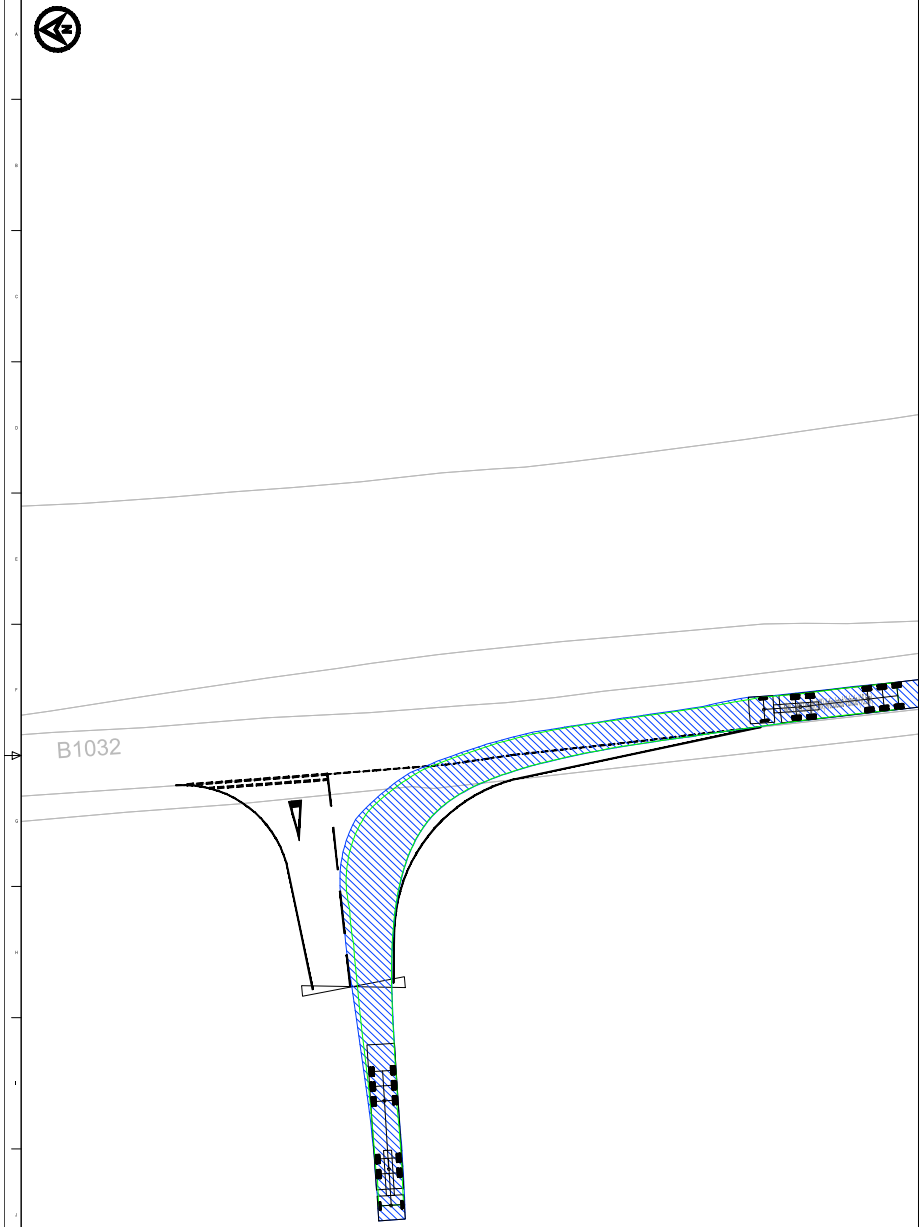
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
AC-2 - B1032
GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

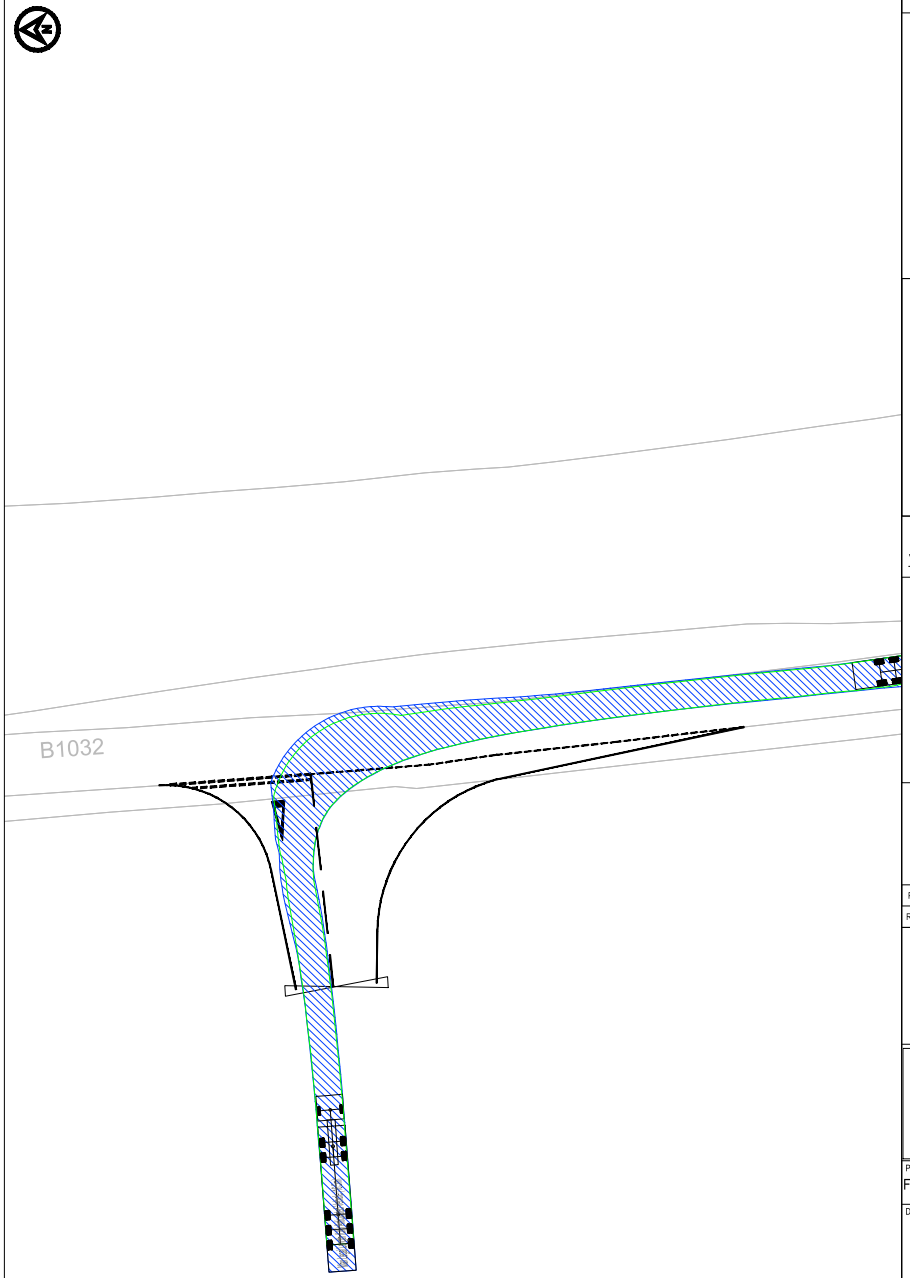
SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0002	P02
VE DOCUMENT NUMBER	REVISION
-	-
RWE ECODOC NUMBER	SHEET No / REVISION
-	1_OF_1 / -



ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE SOUTH

MAX LENGTH ARTICULATED HGV INGRESS



ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE SOUTH

MAX LENGTH ARTICULATED HGV EGRESS

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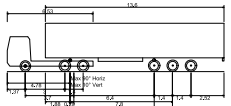
KEY

- EXISTING ARRANGEMENT
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- PROPOSED GATE

VEHICLE TRACKING



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

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

- VEHICLE BODY SWEPT PATH (FORWARD GEAR)
- VEHICLE CHASIS SWEPT PATH

REV	DATE	DESCRIPTION	BY	CHK	APP
P01	31/08/2023	FIRST ISSUE	AA	SKT	SKT

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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
AC-2 - B1032
SWEPT PATH ANALYSIS

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	31/08/2023	31/08/2023	31/08/2023	31/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0022	P01
VE DOCUMENT NUMBER	REVISION
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RWE ECODOC NUMBER	SHEET No / REVISION
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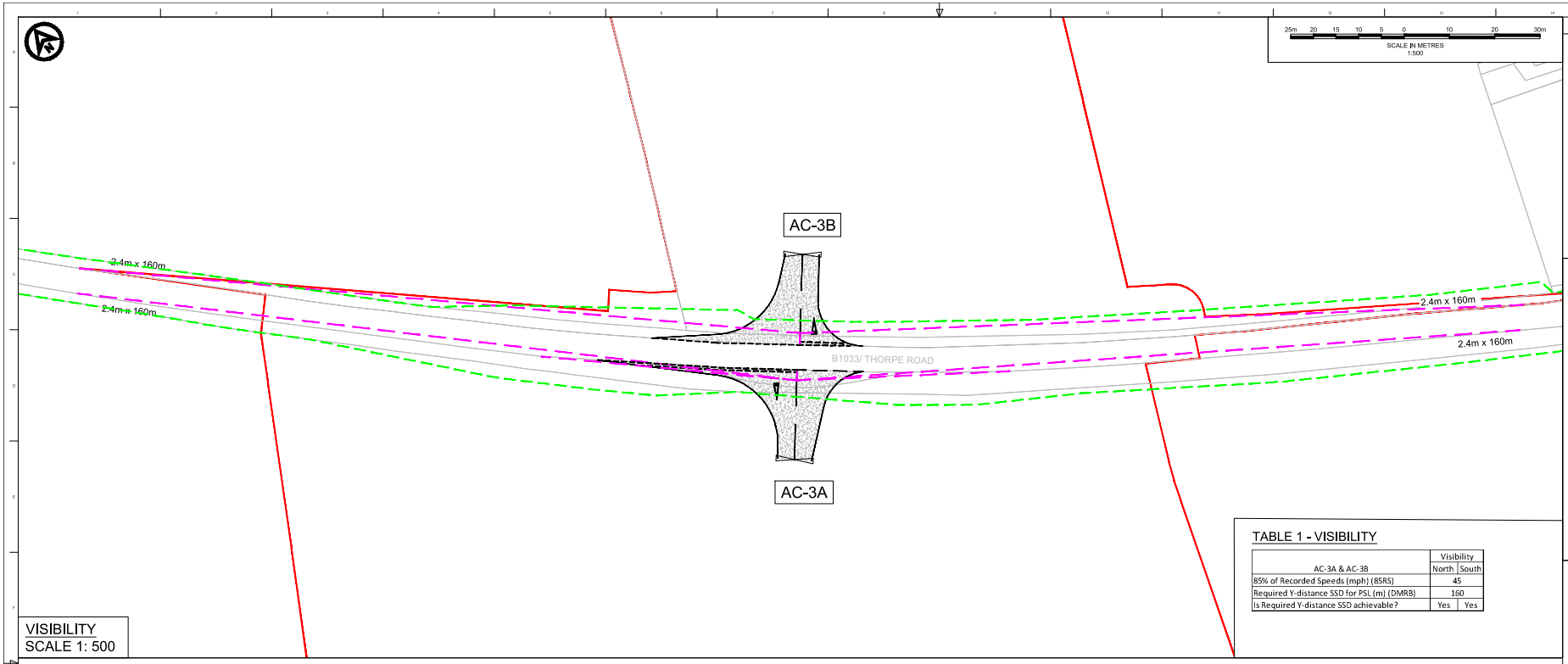
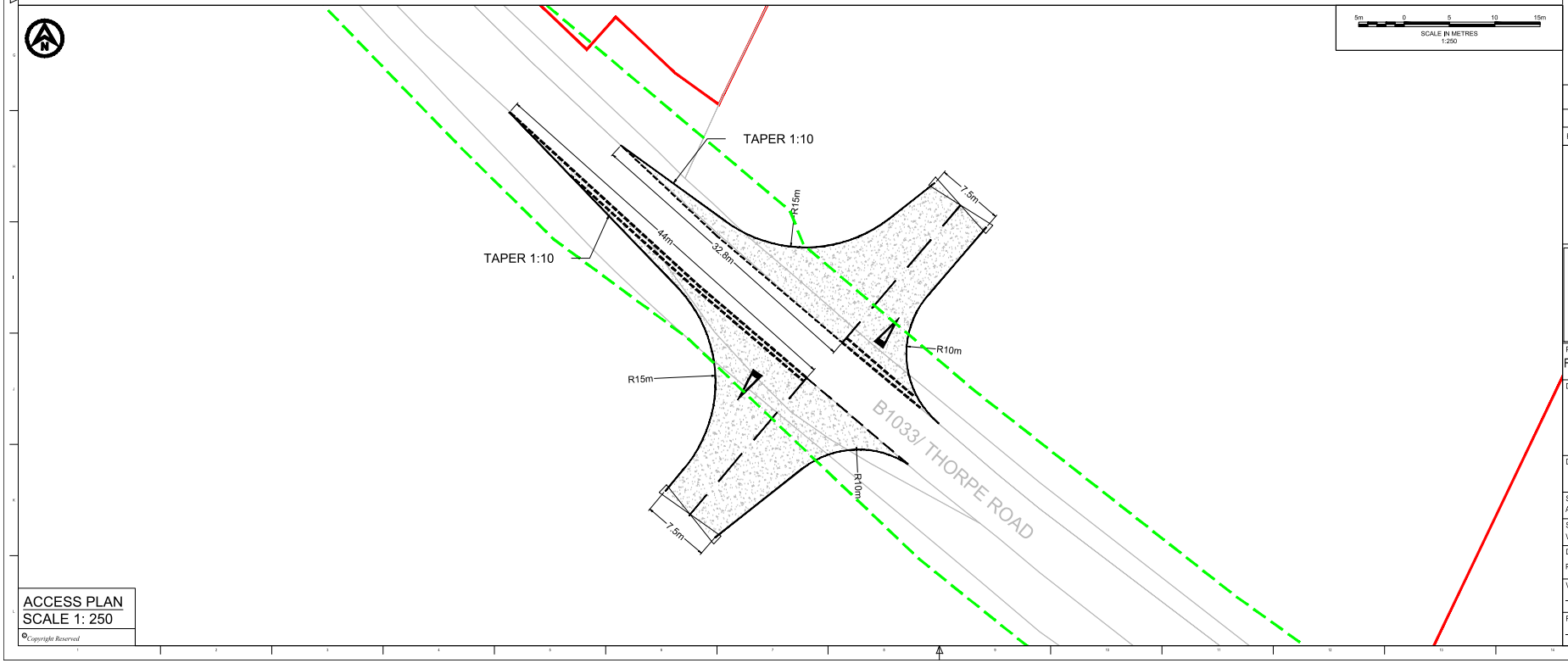


VISIBILITY
SCALE 1: 500

TABLE 1 - VISIBILITY

AC-3A & AC-3B	Visibility North	Visibility South
85% of Recorded Speeds (mph) (85RS)	45	
Required Y-distance SSD for PSL (m) (DMRB)	160	
Is Required Y-distance SSD achievable?	Yes	Yes



ACCESS PLAN
SCALE 1: 250

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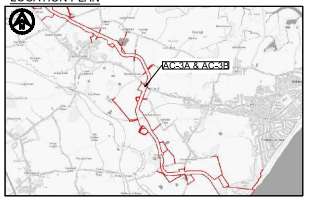
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P02	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
AC-3A & AC-3B - B1033/THORPE ROAD GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0003	P02
VE DOCUMENT NUMBER	REVISION
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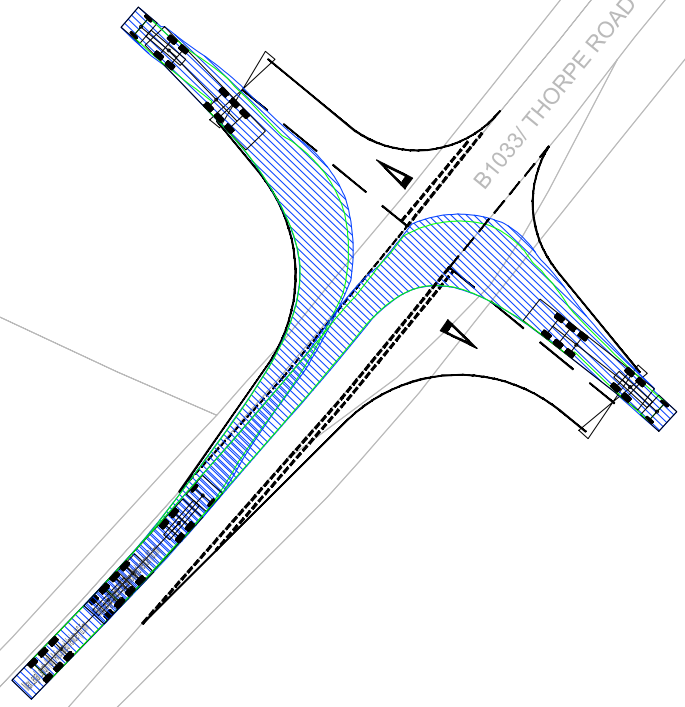
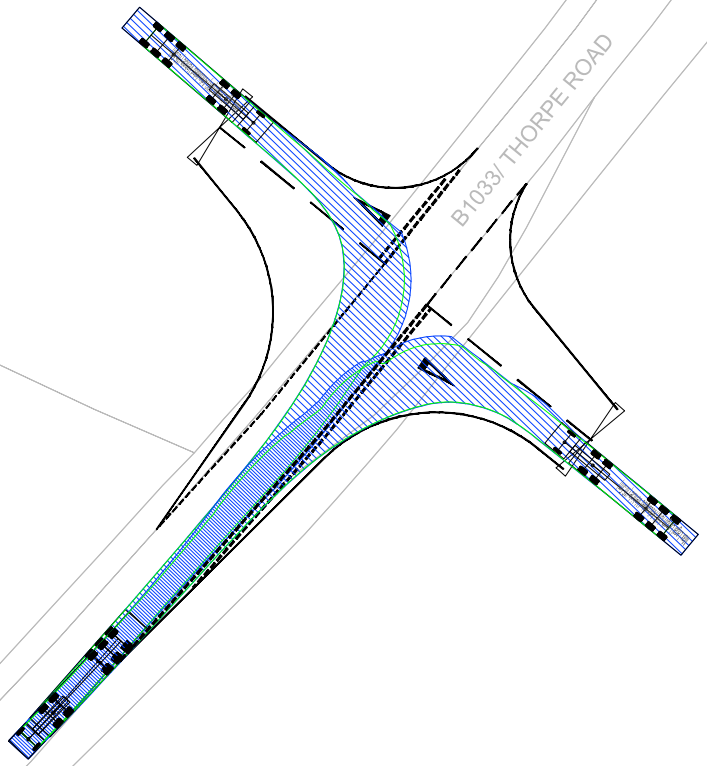
RWE ECODOC NUMBER	SHEET No / REVISION
-	1_OF_1 / -



ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE WEST

MAX LENGTH ARTICULATED HGV INGRESS



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MAX LENGTH ARTICULATED HGV EGRESS

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KEY

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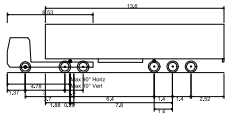
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- PROPOSED GATE

VEHICLE TRACKING



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

VEHICLE BODY SWEPT PATH (FORWARD GEAR)

VEHICLE CHASIS SWEPT PATH

REV	DATE	DESCRIPTION	BY	CHK	APP
P01	31/08/2023	FIRST ISSUE	AA	SKT	SKT

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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
AC-3A & AC-3B - B1033/THORPE ROAD SWEPT PATH ANALYSIS

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	31/08/2023	31/08/2023	31/08/2023	31/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0023	P01
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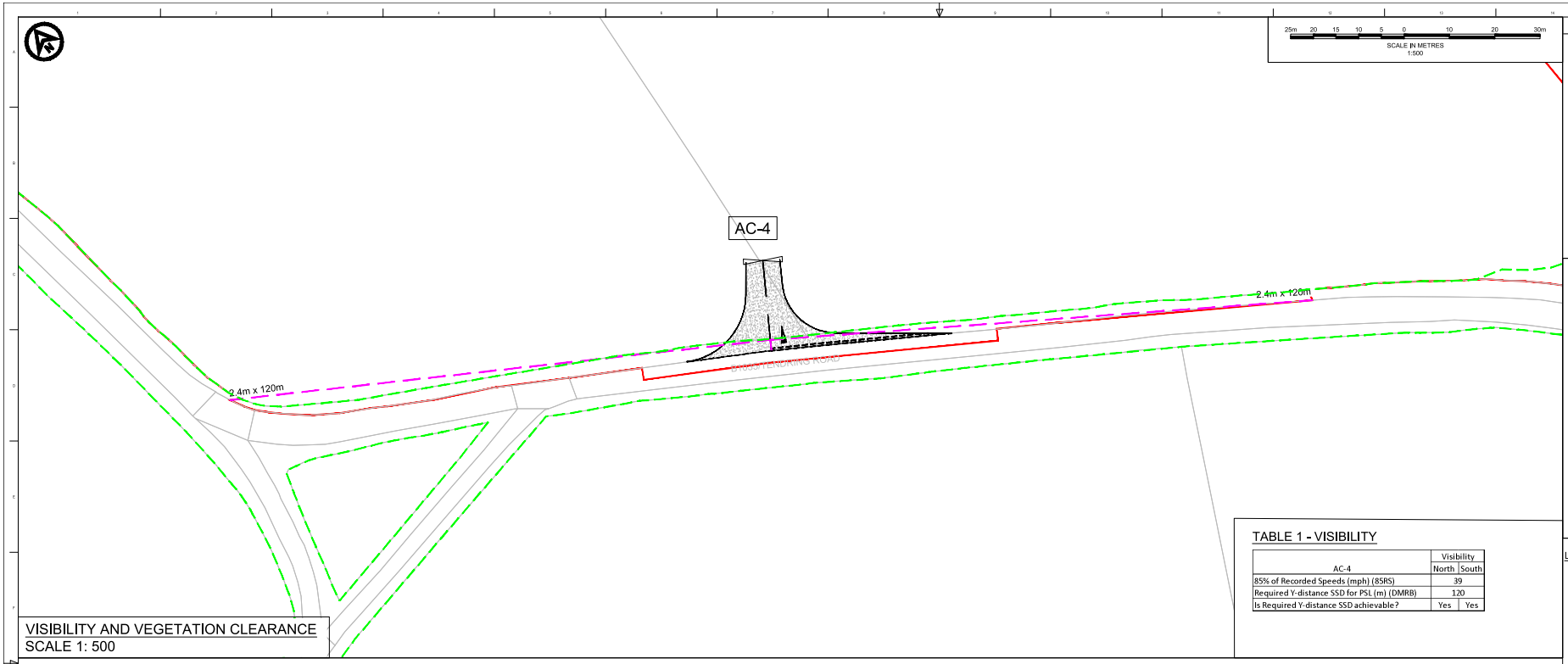
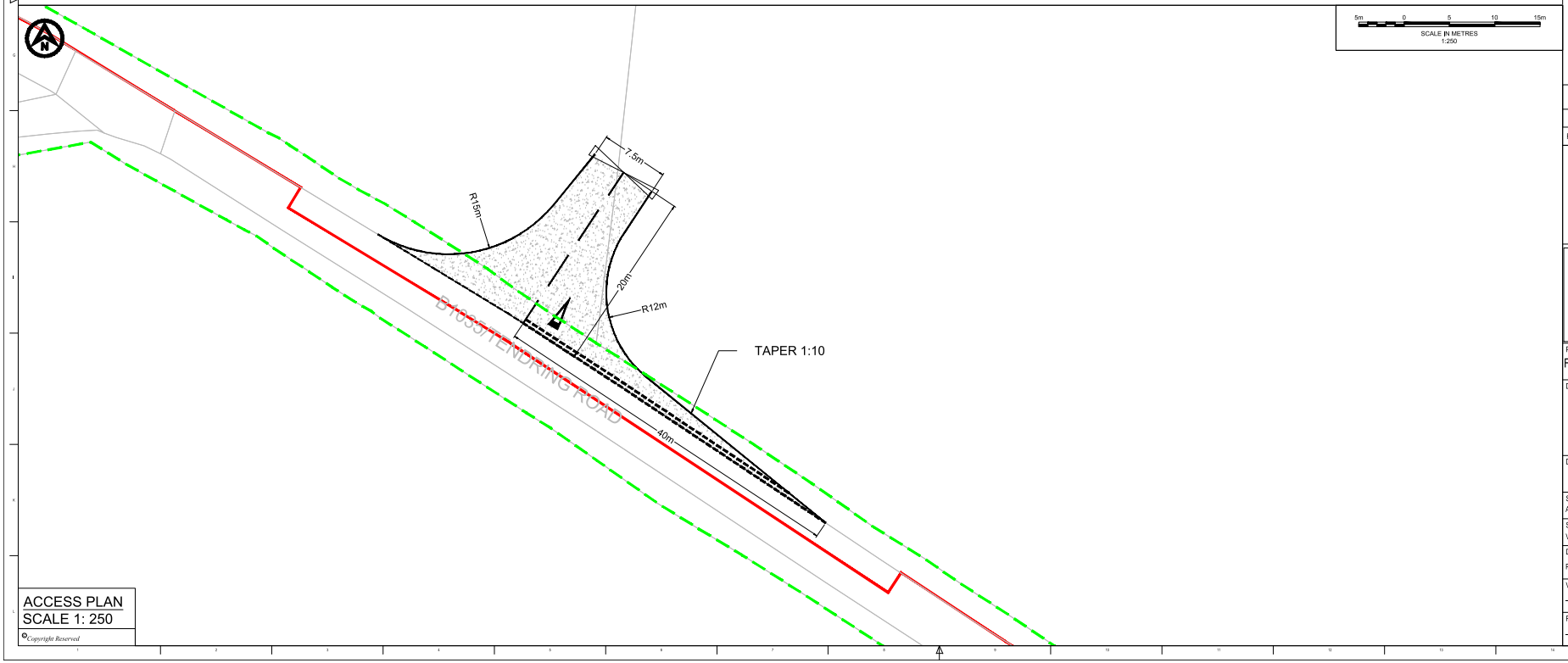


VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500

SCALE IN METRES
1:500

TABLE 1 - VISIBILITY

AC-4	Visibility North	Visibility South
85% of Recorded Speeds (mph) (85RS)	39	
Required Y-distance SSD for PSL (m) (DMRB)	120	
Is Required Y-distance SSD achievable?	Yes	Yes



ACCESS PLAN
SCALE 1: 250

SCALE IN METRES
1:250

DO NOT SCALE FROM THIS DRAWING

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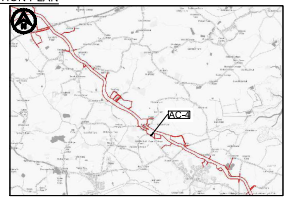
- HIGHWAY BOUNDARY

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P02	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
AC-4 - B1035/TENDRING ROAD
GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

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PB9244-RHD-ZZ-ZZ-DR-R-0004	P02
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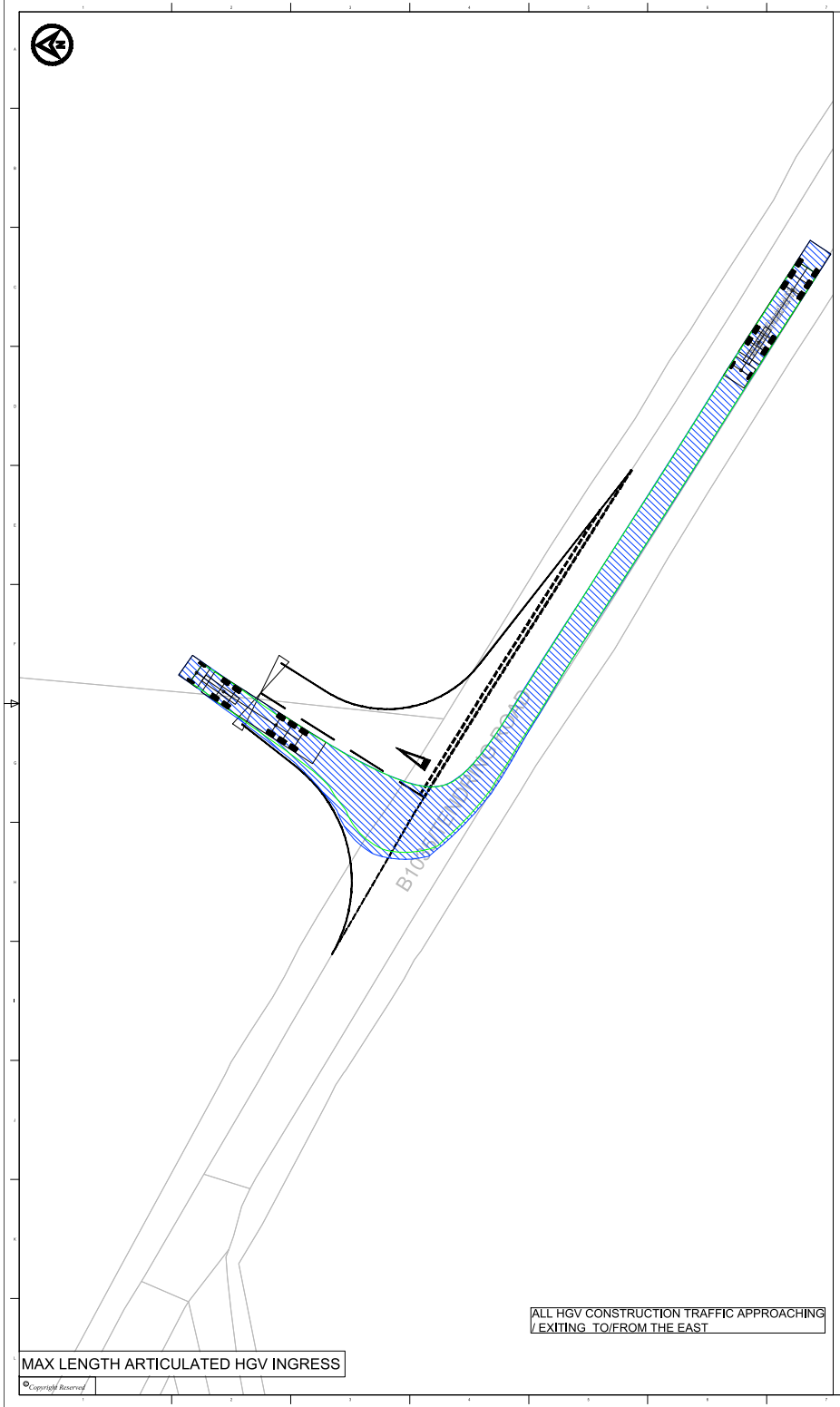

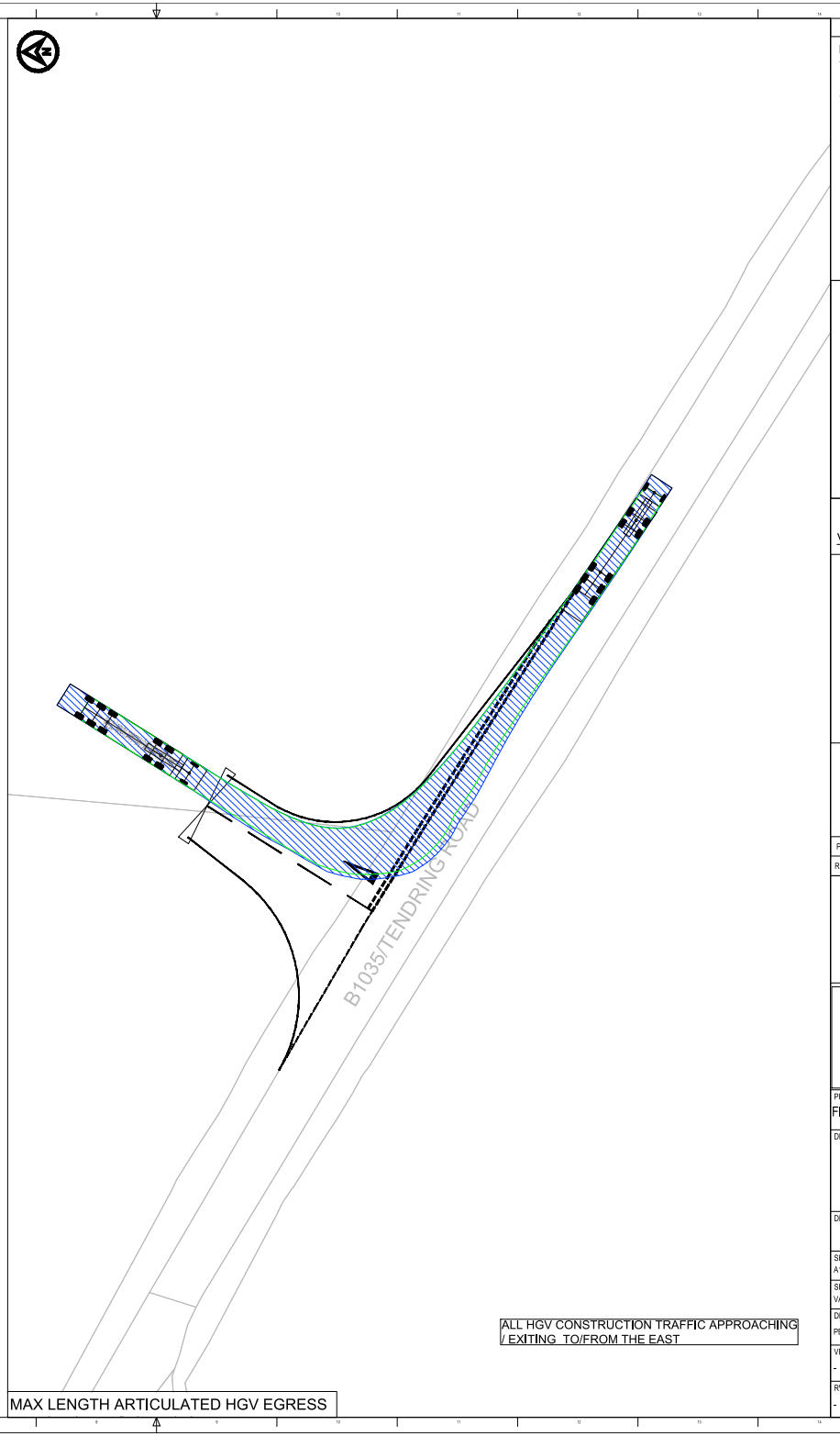

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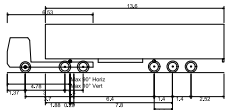
KEY

- EXISTING ARRANGEMENT
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- PROPOSED GATE

VEHICLE TRACKING



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

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

VEHICLE BODY SWEPT PATH (FORWARD GEAR)
VEHICLE CHASIS SWEPT PATH

REV	DATE	DESCRIPTION	BY	CHK	APP
P01	06/09/2023	FIRST ISSUE	AA	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm

Royal HaskoningDHV
Enhancing Society Together
Westpoint, Peterborough Business Park, Lynch Wood, Peterborough PE2 6FZ
Tel +44(0)1932 569586
www.royalhaskoningdhv.com

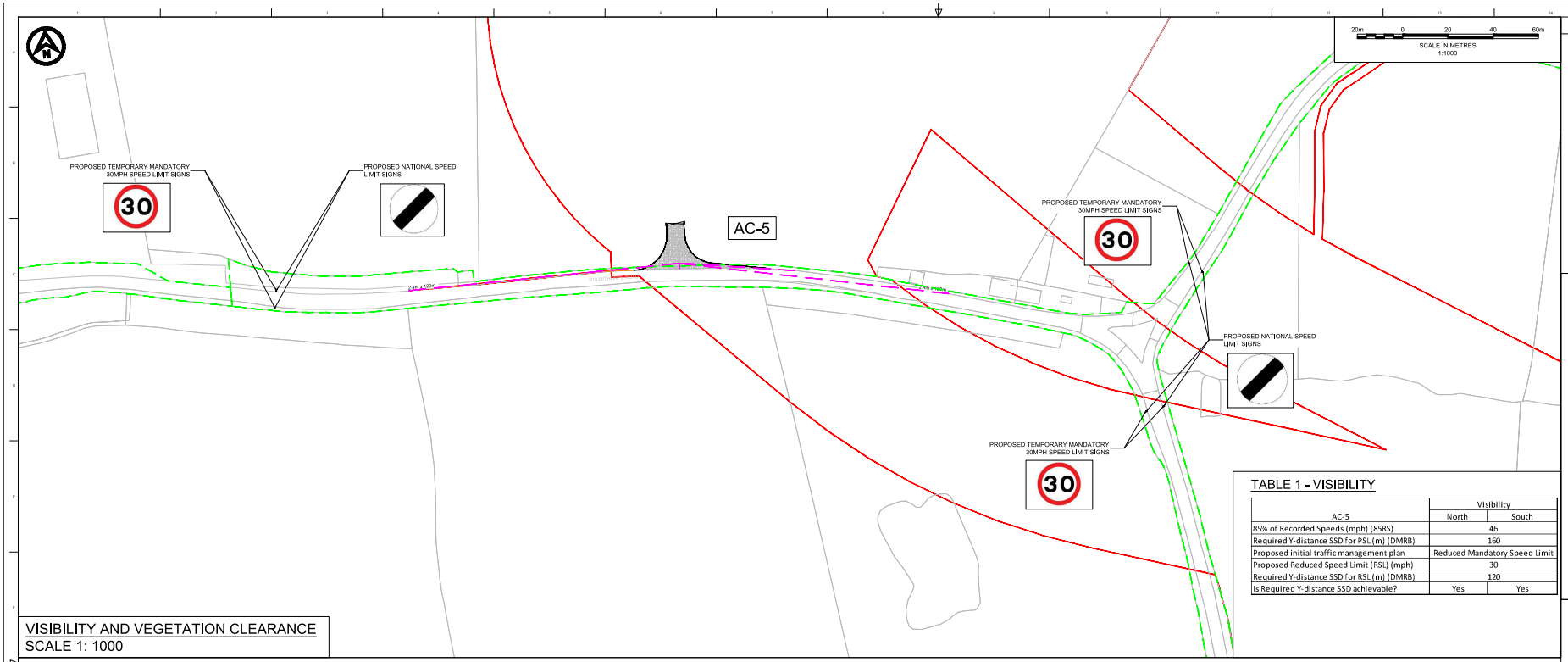
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
AC-4 - B1035/TENDRING ROAD
SWEPT PATH ANALYSIS

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	06/09/2023	06/09/2023	06/09/2023	06/09/2023

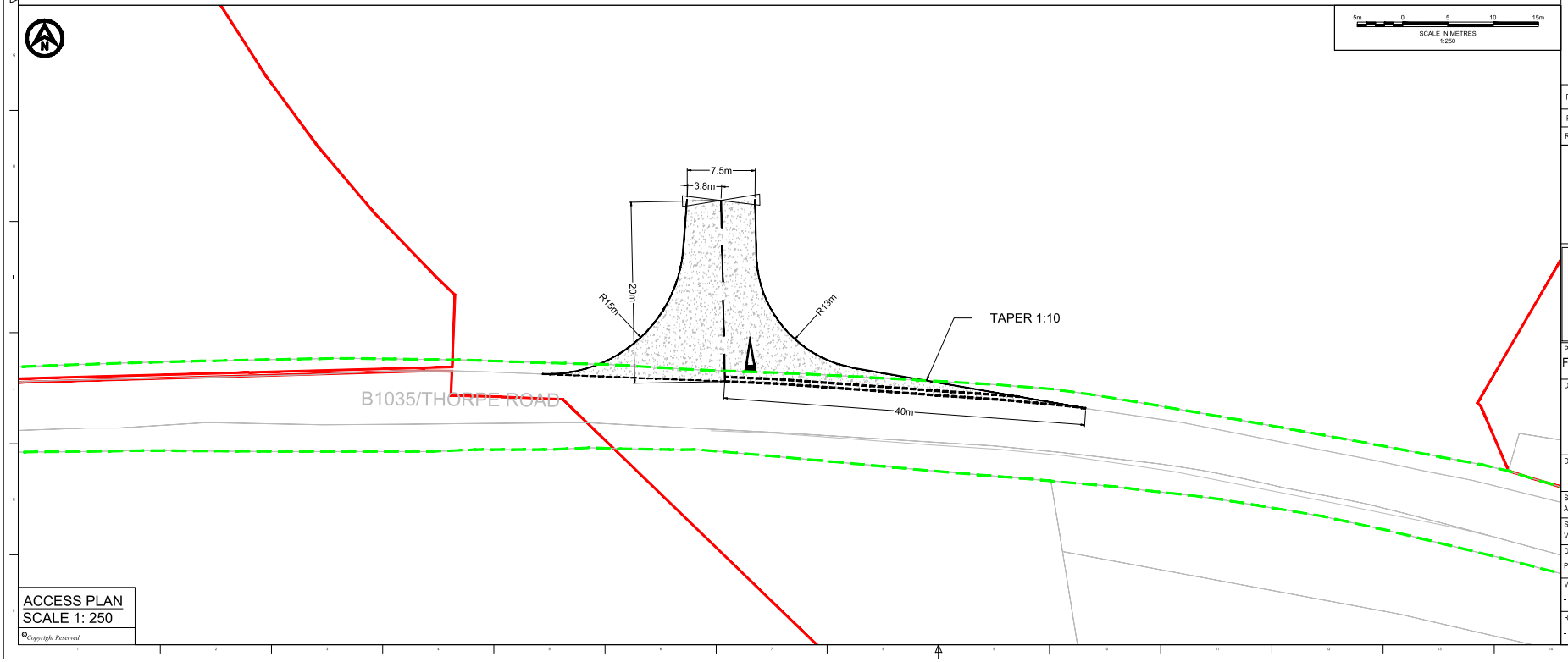
DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0024	P01
VE DOCUMENT NUMBER	REVISION
-	-
RWE ECODOC NUMBER	SHEET No / REVISION
-	1_OF_1 / -



VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 1000

TABLE 1 - VISIBILITY

AC-5	Visibility	
	North	South
85% of Recorded Speeds (mph) (85RS)	46	
Required Y-distance SSD for PSL (m) (DMRB)	160	
Proposed initial traffic management plan	Reduced Mandatory Speed Limit	
Proposed Reduced Speed Limit (RSL) (mph)	30	
Required Y-distance SSD for RSL (m) (DMRB)	120	
Is Required Y-distance SSD achievable?	Yes	Yes



ACCESS PLAN
SCALE 1: 250

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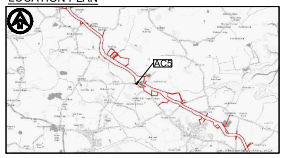
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.

KEY
- EXISTING ARRANGEMENT
- ONSHORE RED LINE BOUNDARY
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY
- PROPOSED TEMPORARY ROAD SIGN

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P02	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

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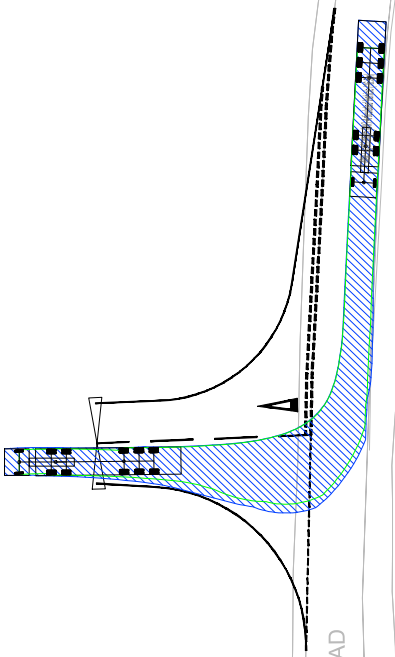
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
AC-5 - B1035/THORPE ROAD
GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

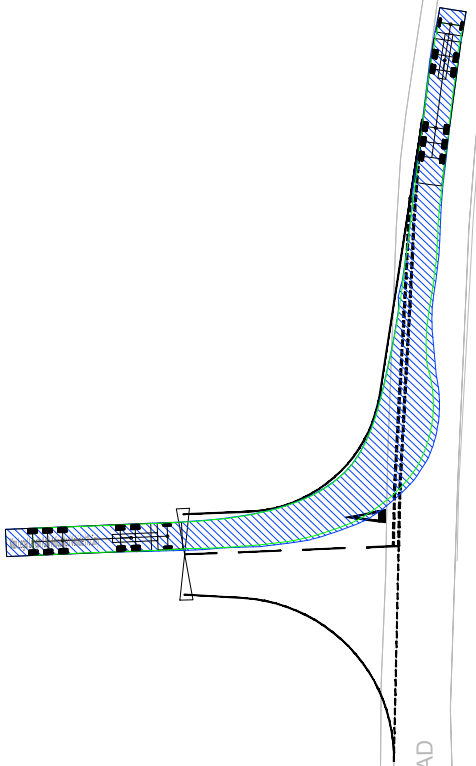
DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0005	P02
VE DOCUMENT NUMBER	REVISION
-	-
RWE ECODOC NUMBER	SHEET No / REVISION
-	1_OF_1 / -



B1035/THORPE ROAD

ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE EAST

MAX LENGTH ARTICULATED HGV INGRESS



B1035/THORPE ROAD

ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE EAST

MAX LENGTH ARTICULATED HGV EGRESS

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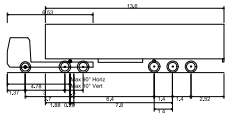
KEY

- EXISTING ARRANGEMENT
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- PROPOSED GATE

VEHICLE TRACKING



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

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

VEHICLE BODY SWEPT PATH (FORWARD GEAR)

VEHICLE CHASIS SWEPT PATH

REV	DATE	DESCRIPTION	BY	CHK	APP
P01	06/09/2023	FIRST ISSUE	AA	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM

NORTH FALLS Offshore Wind Farm

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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
AC-5 - B1035/THORPE ROAD
SWEPT PATH ANALYSIS

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	06/09/2023	06/09/2023	06/09/2023	06/09/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0025	P01
VE DOCUMENT NUMBER	REVISION
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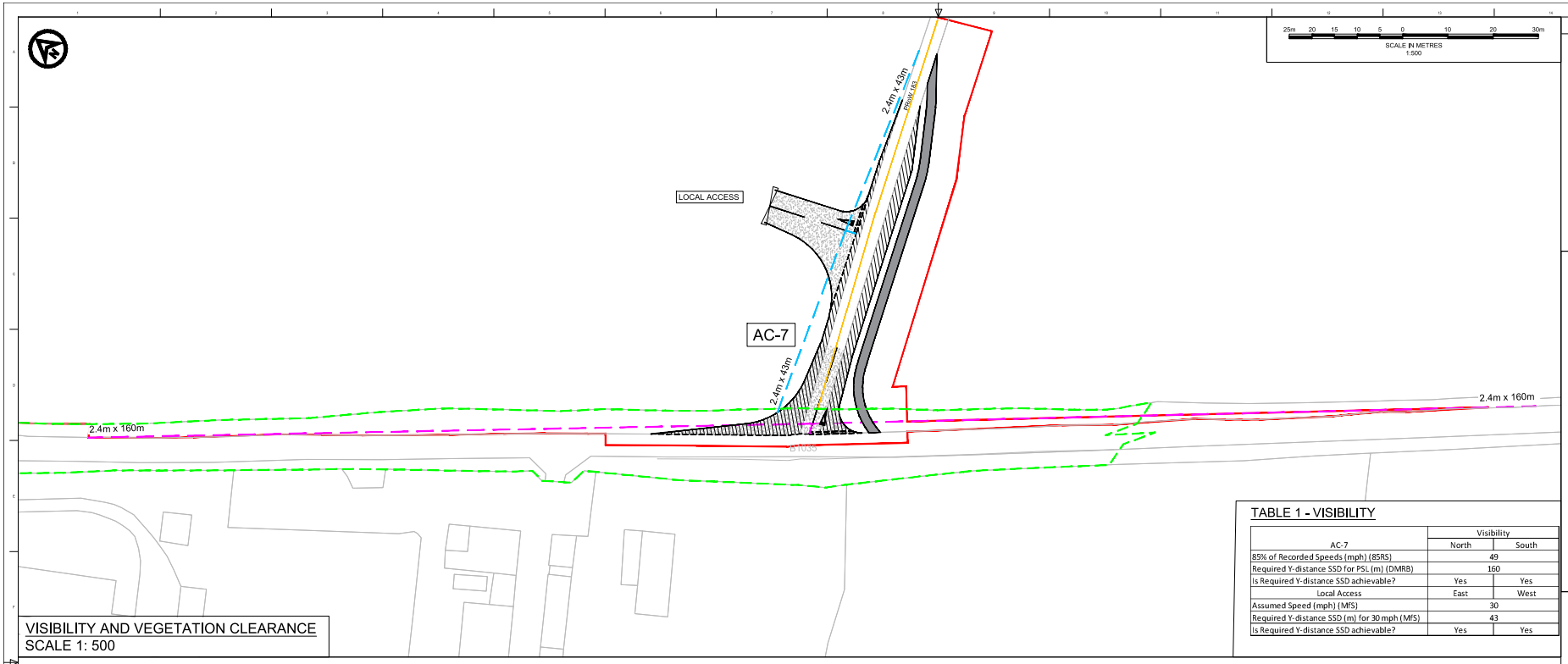
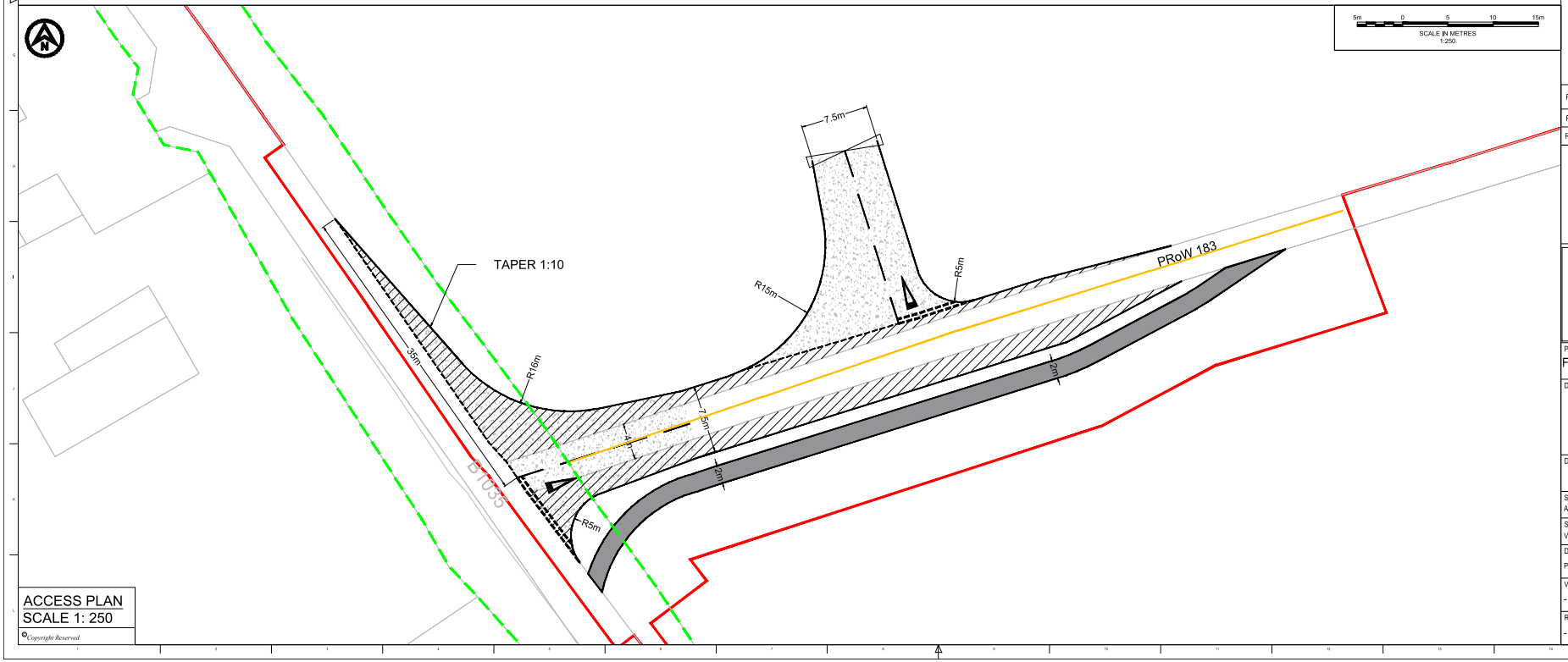
RWE ECODOC NUMBER	SHEET No / REVISION
-	1_OF_1 / -



VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500

SCALE IN METRES
1:500



ACCESS PLAN
SCALE 1: 250

SCALE IN METRES
1:250

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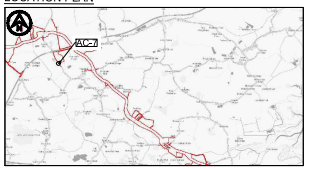
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.

TABLE 1 - VISIBILITY

AC-7	Visibility	
	North	South
85% of Recorded Speeds (mph) (85RS)	49	
Required Y-distance SSD for PSL (m) (DMRB)	160	
Is Required Y-distance SSD achievable?	Yes	Yes
Local Access	East	West
Assumed Speed (mph) (MfS)	30	
Required Y-distance SSD (m) for 30 mph (MfS)	43	
Is Required Y-distance SSD achievable?	Yes	Yes

KEY
- EXISTING ARRANGEMENT
- ONSHORE RED LINE BOUNDARY
- HIGHWAY BOUNDARY
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- DMRB - VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- MfS - VISIBILITY SPLAY FOR ASSUMED LOCAL ACCESS (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- CARRIAGEWAY WIDENING - FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- EXISTING PUBLIC RIGHTS OF WAY
- PROPOSED TEMPORARY OFFROAD PUBLIC RIGHTS OF WAY ROUTE
- PROPOSED GATE

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P03	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P02	15/11/2023	PUBLIC RIGHTS OF WAY AMENDMENTS	AA	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM
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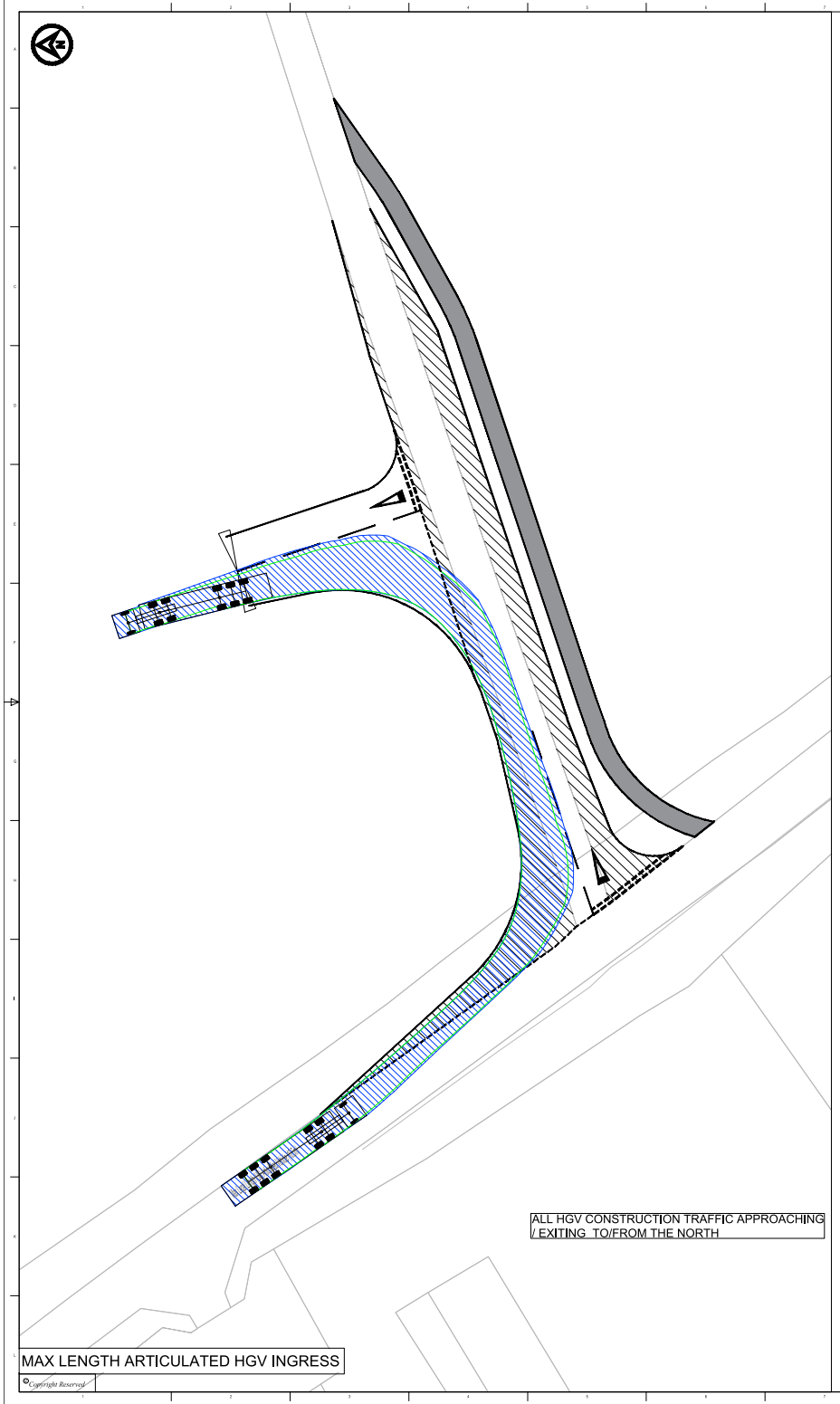
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
AC-7 - B1035
GENERAL ARRANGEMENT

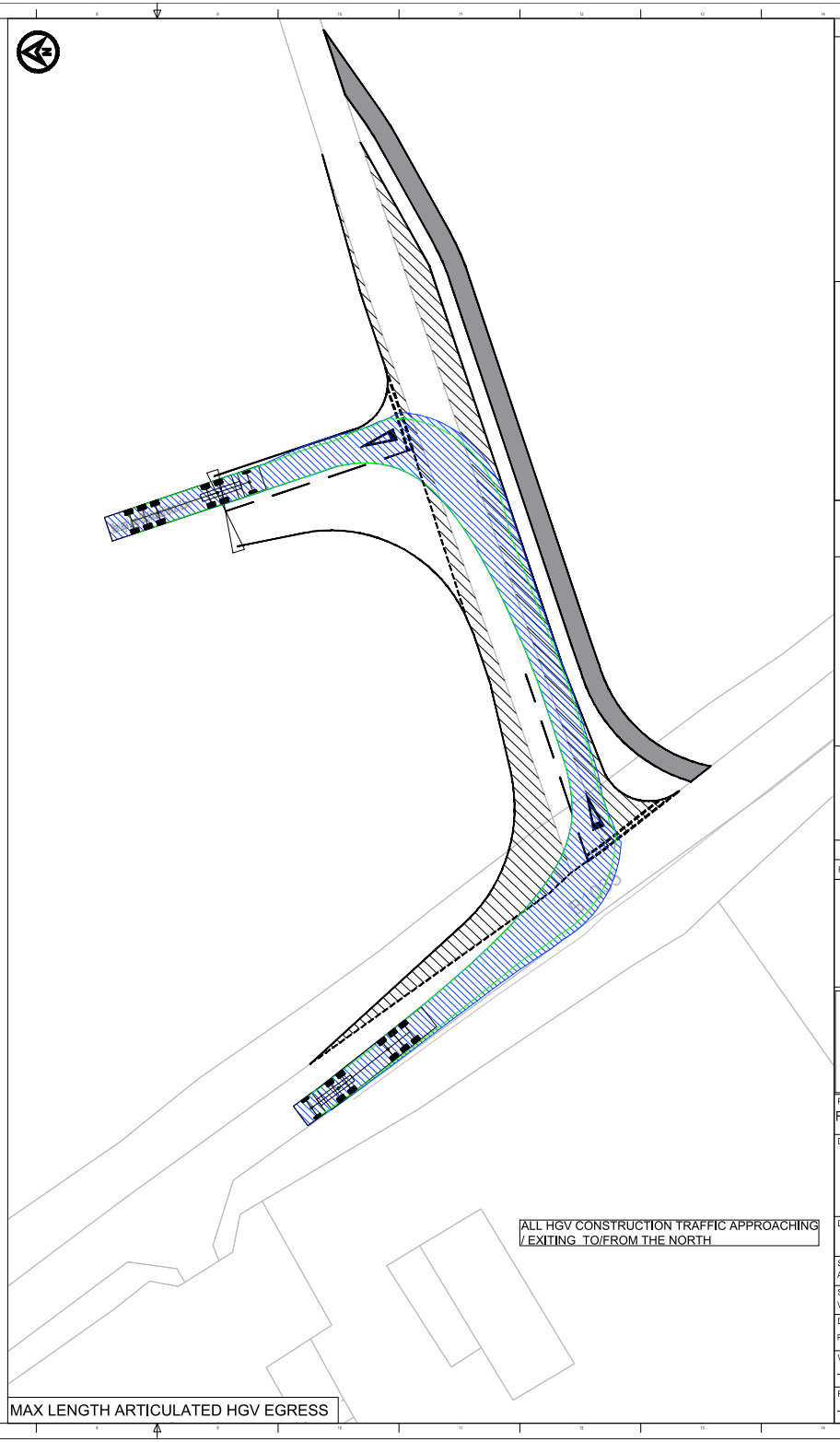
DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0007	P03
VE DOCUMENT NUMBER	REVISION
-	-
RWE ECODOC NUMBER	SHEET No / REVISION
-	1_OF_1 / -



MAX LENGTH ARTICULATED HGV INGRESS



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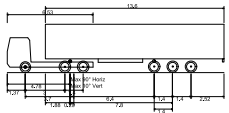
KEY

- EXISTING ARRANGEMENT
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- PROPOSED GATE

VEHICLE TRACKING



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

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

- VEHICLE BODY SWEPT PATH (FORWARD GEAR)
- VEHICLE CHASIS SWEPT PATH

REV	DATE	DESCRIPTION	BY	CHK	APP
P01	06/09/2023	FIRST ISSUE	AA	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM
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www.royalhaskoningdhv.com

PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
AC-7 - B1035
SWEPT PATH ANALYSIS

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	06/09/2023	06/09/2023	06/09/2023	06/09/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0026	P01
VE DOCUMENT NUMBER	REVISION
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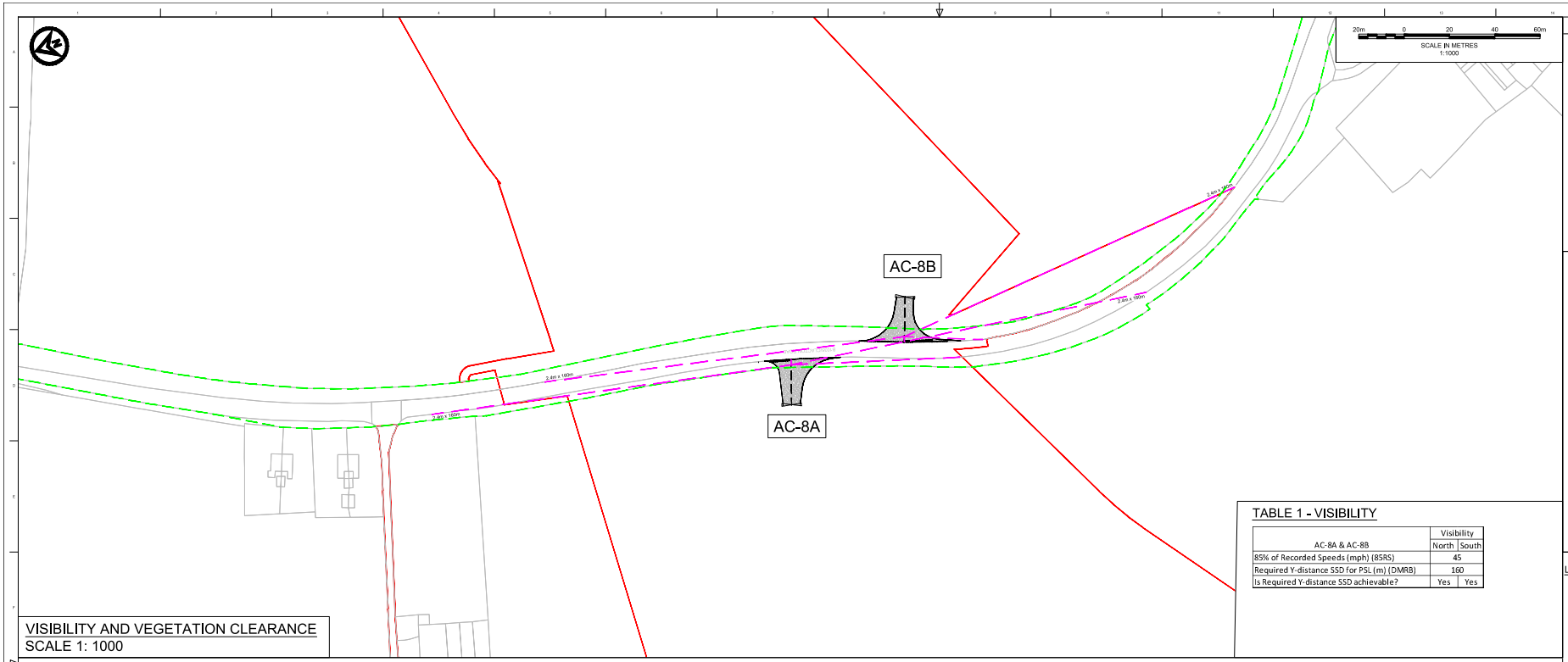
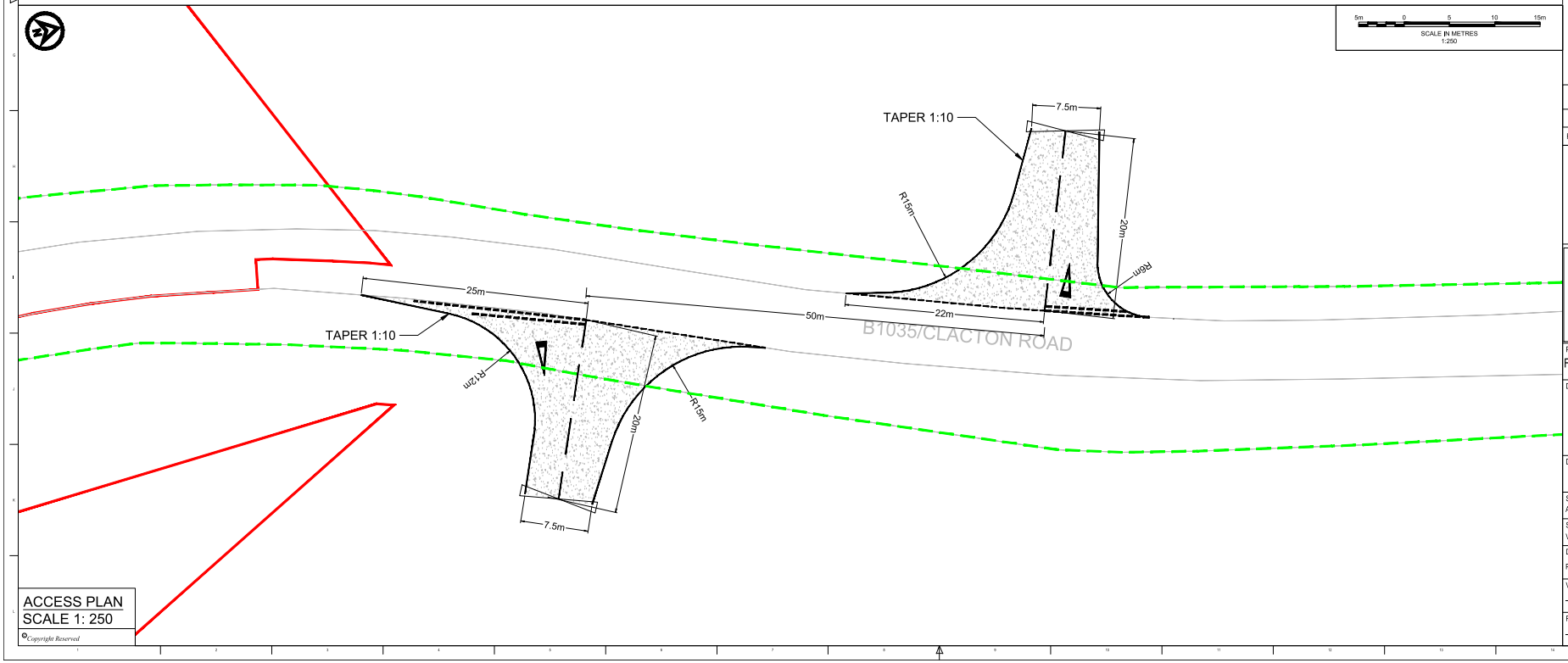
RWE ECODOC NUMBER	SHEET No / REVISION
-	1_OF_1 / -



VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 1000

TABLE 1 - VISIBILITY

AC-8A & AC-8B	Visibility	
	North	South
85% of Recorded Speeds (mph) (85RS)	45	
Required Y-distance SSD for PSL (m) (DMRB)	160	
Is Required Y-distance SSD achievable?	Yes	Yes



ACCESS PLAN
SCALE 1: 250

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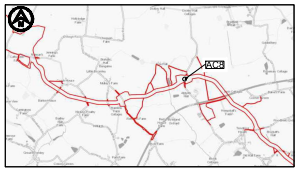
- ONSHORE RED LINE BOUNDARY
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P02	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
AC-8A & AC-8B - B1035/CLACTON ROAD GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0008	P02
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RWE ECODOC NUMBER	SHEET No / REVISION
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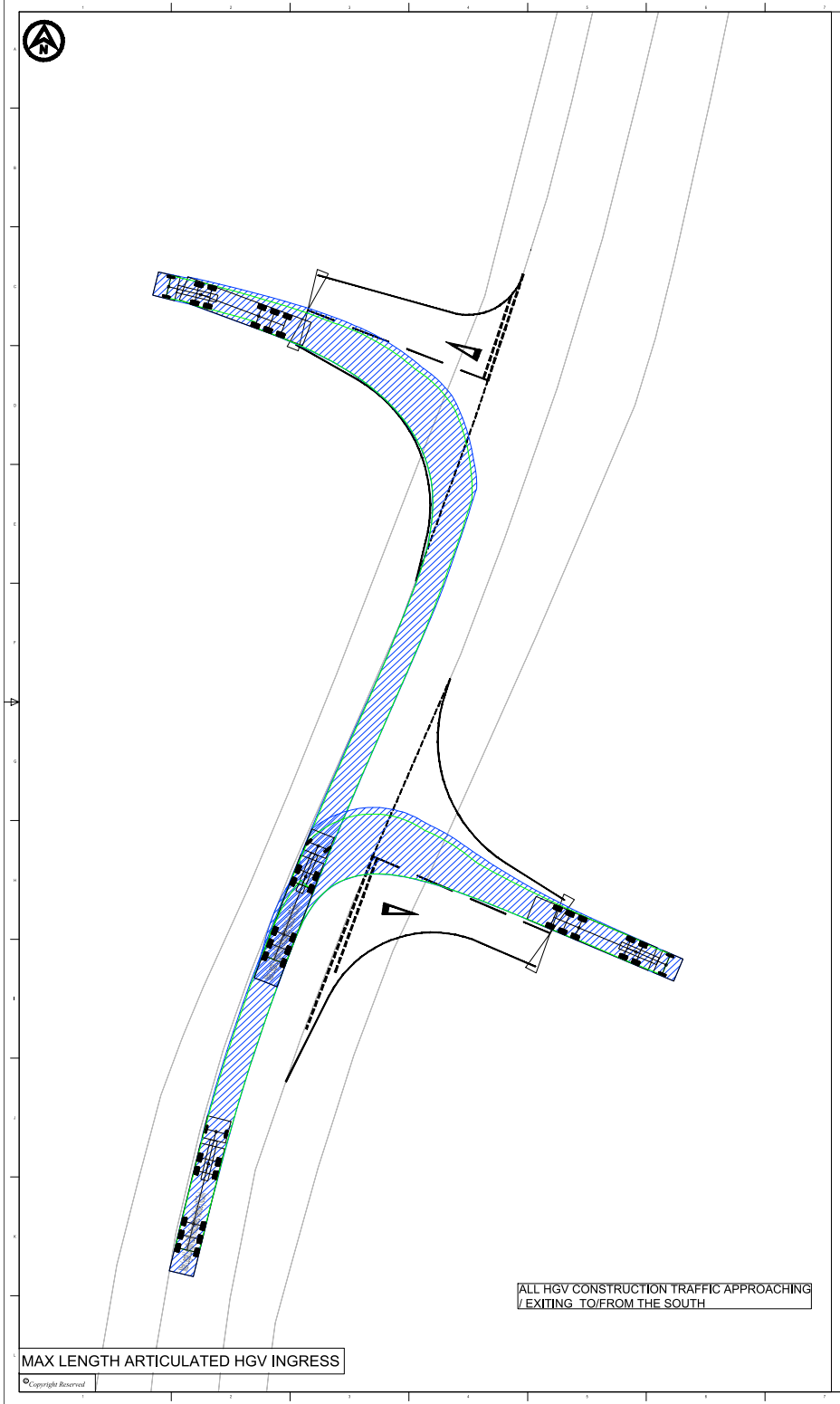
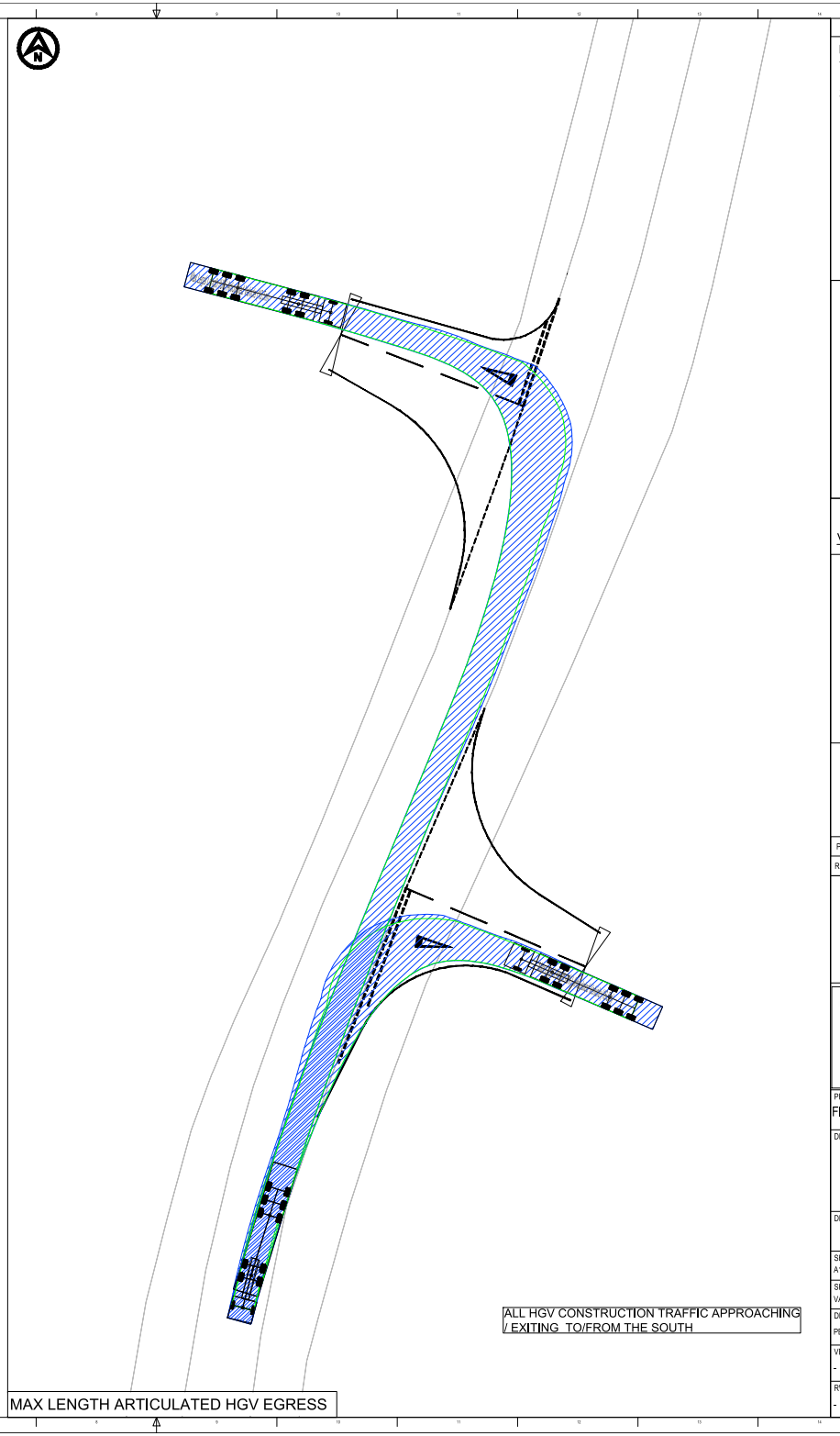


MAX LENGTH ARTICULATED HGV INGRESS



MAX LENGTH ARTICULATED HGV EGRESS

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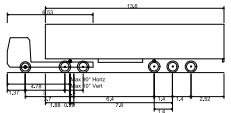
KEY

EXISTING ARRANGEMENT

PROPOSED ACCESS BOUNDARY/ROAD MARKINGS

PROPOSED GATE

VEHICLE TRACKING



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VEHICLE BODY SWEPT PATH (FORWARD GEAR)

VEHICLE CHASSIS SWEPT PATH

REV	DATE	DESCRIPTION	BY	CHK	APP
P01	06/09/2023	FIRST ISSUE	AA	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM

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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
AC-8A & AC-8B - B1035/CLACTON ROAD SWEPT PATH ANALYSIS

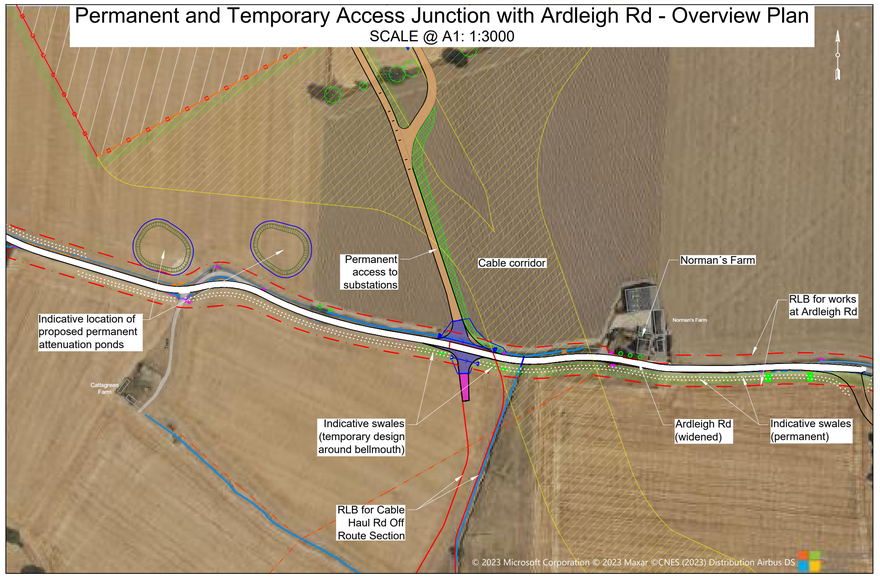
DRAWING STATUS
PLANNING

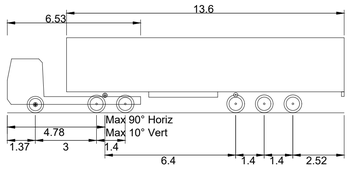
SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	06/09/2023	06/09/2023	06/09/2023	06/09/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0027	P01
VE DOCUMENT NUMBER	REVISION
-	-
RWE ECODOC NUMBER	SHEET No / REVISION
-	1_OF_1 / -

Permanent and Temporary Access Junction with Ardleigh Rd - Overview Plan

SCALE @ A1: 1:3000





MAX. LEGAL LENGTH (UK) ARTICULATED VEHICLE (16.5m)

Overall Length	16.500m
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Min Body Ground Clearance	0.411m
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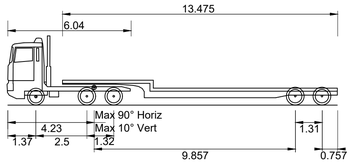
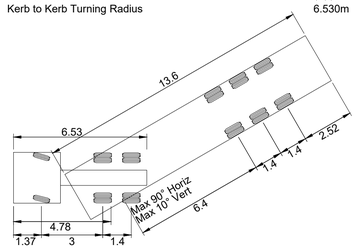
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m



LOW LOADER (16.154m)

Overall Length	16.154m
Overall Width	2.520m
Overall Body Height	3.393m
Min Body Ground Clearance	0.318m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.990m



Geometry has been checked against the bespoke vehicle models shown in the diagrams.
These models are generic and do not relate to any specific vehicle supplier's specification. All swept paths should be verified by the Contractor and their haulage supplier, once appointed, prior to detailed design and installation of the access.

Swept Path Analysis - Vehicles Details

Scale 1:150

Notes (continuation)

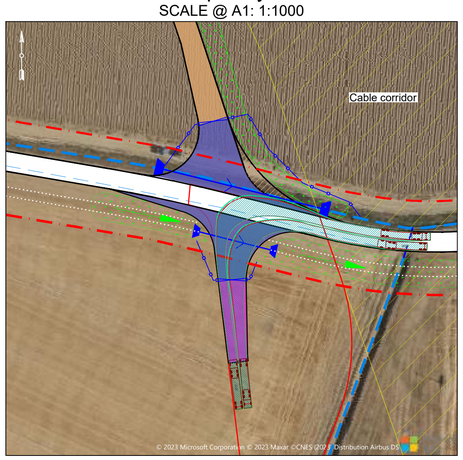
15. Alignment/specification of fencing and gates subject to site conditions and contractor requirements. Proposed fences to tie into existing fences/hedgerows.
16. Visibility splays and stopping sight distances (SSD) have been shown indicatively and have been determined in accordance with DMRB CD123 and CD109. The junctions is assumed to be simple priority. Minimum permissible setback (X) has been assumed to be 2.4m. Visibility for a setback of 9m has also been shown. Achievable road speed at this location is assumed to be < 60mph (national speed limit for single carriageway roads) due to its narrow width. However a conservative road speed value of 60mph was applied to determine the worst case scenario for vegetation clearance / crop growth limitation. The desirable SSD of 215m is currently achievable as there is only low vegetation on the affected land plots at the moment of analysis.
17. Vegetation clearance and groundwork may be required to facilitate any necessary sight distances.
18. A temporary 40mph speed limit is recommended for safety of all road users in the vicinity of the access.
19. Only partial utilities data has been provided for this indicative design. Full PAS128 utilities surveys shall be required at later design stages.
20. Geometric design of bellmouths has been carried out following guidance in the DMRB document CD123 *Geometric design of at-grade priority and signal-controlled junctions, Section 5,* along with SPA for the relevant vehicles.

Notes

1. Do not scale from this drawing.
2. Dimensions in m unless otherwise specified.
3. This drawing is to be read and printed in colour.
4. This drawing is to be read in conjunction with all relevant documents and drawings.
5. No unauthorised disclosure, storage or copying.
6. All spatial coordinates relate to the Ordnance Survey, British National Grid (OSGB36).
7. This drawing is for development purposes only and should not be used for construction.
8. Wider improvement works design at Ardleigh Rd carried out by others.
9. Proposed arrangements shown for indicative purposes only. Dimensions and design may vary following completion of site surveys at detailed design stage.
10. Swept path analysis carried out in this drawing refer to movements in/out of the bellmouths for the design vehicles indicated: a low loader with a turning radius of 6.990m (most restrictive turning radius) and articulated vehicle of maximum legal length in the UK. for details on the SPA for the AIL - AL50 Girder 24 Axle vehicle with rear tractor, please refer to drawing 104560-MMD-00-XX-DR-CE-1016 - Permanent Access Junction with Ardleigh Road.
11. Vehicle models used for the assessments are indicative only, actual turning radii and vehicle track will depend on the precise vehicles used by the works contractor.
12. For details on the bellmouth and overrun area at the proposed permanent access, please refer to drawing 104560-MMD-00-XX-DR-CE-1016.
13. For details on the proposed permanent access to the co-located substations, please refer to drawing 104560-MMD-00-XX-DR-CE-1015.
14. Drainage features are shown indicatively only. Drainage at bellmouths to be confirmed, construction boundary may change subject to drainage strategy and available outfalls.For further details on drainage features, please refer to drawing 104560-MMD-00-XX-DR-CE-1011.

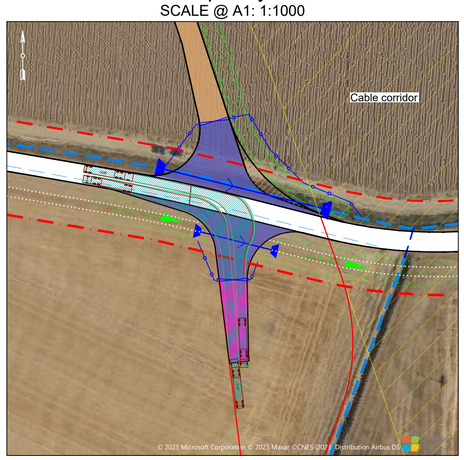
SPA - Right in/Right out movement to/from temporary bellmouth

SCALE @ A1: 1:1000



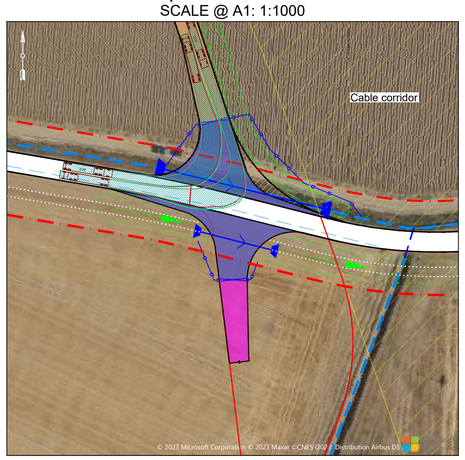
SPA - Left in/Left out movement to/from temporary bellmouth

SCALE @ A1: 1:1000



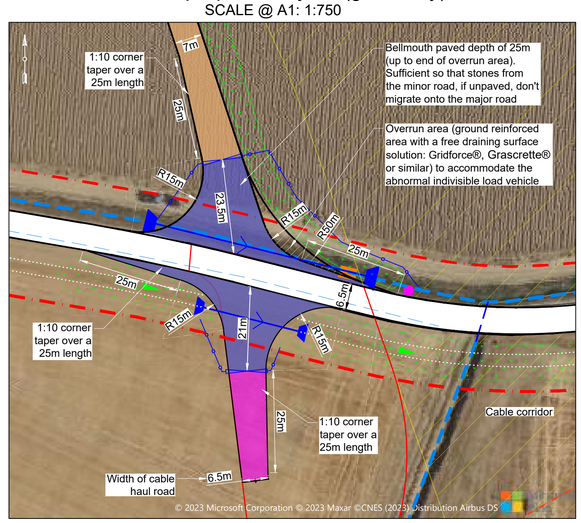
SPA - Right in/Right out movement to/from permanent bellmouth

SCALE @ A1: 1:1000



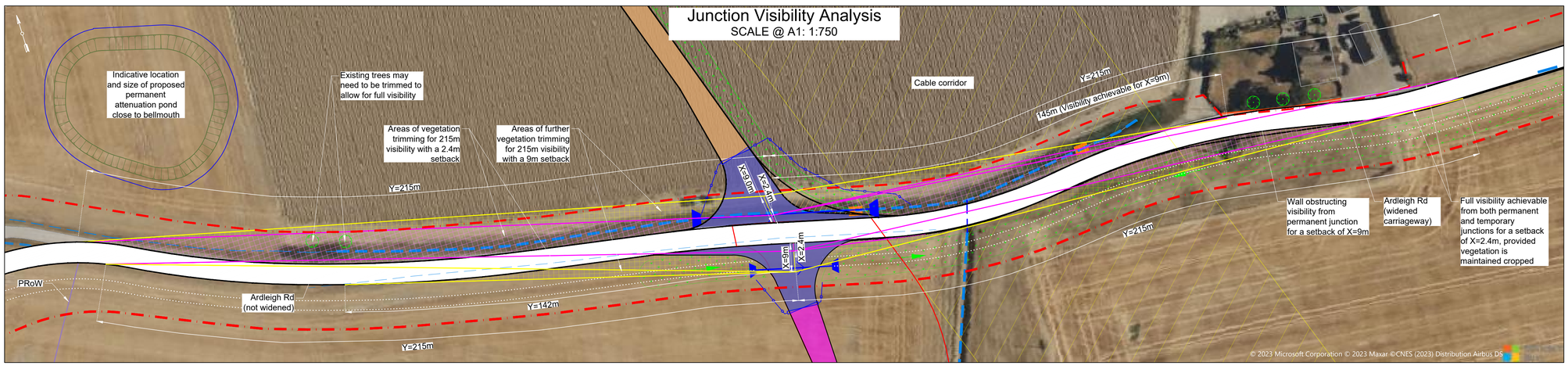
Junction proposed layout (geometry)

SCALE @ A1: 1:750



Junction Visibility Analysis

SCALE @ A1: 1:750



Legend:

- Cable corridor construction swathe
- Proposed edges of widened carriageway & bellmouth outline (by others)
- Proposed widened carriageway on Ardleigh Road (by others)
- Ardleigh Road construction swathe (@ scales 1:750 / 1:1000)
- Construction swathe for the cable haul road off route section
- Proposed tail of bellmouth at permanent access to substation
- Proposed paved area (tarmac) at bellmouths
- Proposed overrun area at the permanent access bellmouth
- Proposed tail of temporary bellmouth at the cable haul road
- Existing surface water ditch / watercourse (@ scales 1:750 / 1:1000)
- Assumed existing surface water ditch / watercourse (@ scales 1:750 / 1:1000)
- Assumed existing culvert below road
- Proposed permanent swale / infiltration ditch
- Proposed permanent drainage pipework / culvert
- Proposed permanent drainage headwall
- Indicative fenceline at co-located substations permanent access
- Indicative gate at co-located substations permanent access
- Visibility splays for an X=2.4m setback from stopping line
- Extents of vegetation clearance for full visibility at X=2.4m setback
- Visibility splays for an X=9m setback from stopping line
- Further extents of vegetation clearance for full visibility at X=9m setback
- Swept path - wheels (red) and vehicle body overswing (green) paths
- Envelope of vehicle body swept path
- Proposed location for a potential cycle track installation

Reference drawings

OS map
Essex County Council Private Rights of Way
Cable Route_Draft_Ardleigh_Rd_Update_Rev1_Opt.B (230628)
104560-MMD-00-XX-DR-CE-1004 - Site Layout/ Location Plan - AIS Option 2
104560-MMD-00-XX-DR-CE-1011 - Drainage Layout - Operational Phase - Opt. 2
104560-MMD-00-XX-DR-CE-1016 - Permanent Access Junction with Ardleigh Road

Rev	Date	Drawn	Description	Ch'k'd	App'd
02	15/12/2023	SAP	Ardleigh Rd widening updated w/ NG inform.	JW	AFC
01	18/10/2023	SAP	For Information	JW	AFC

Status Stamp

DRAFT

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Client

NORTH FALLS Offshore Wind Farm

FIVE ESTUARIES OFFSHORE WIND FARM

Title

Co-located AIS Substations Early Design - Temporary and Permanent Access Junction with Ardleigh Road

Sheet 01 of 01

Designed	S. Amado-Pedrosa	SAP	Eng check	John Weeks	JW
Drawn	S. Amado-Pedrosa	SAP	Coordination	Andrea F. Crespo	AFC
Dwg check	John Weeks	JW	Approved	Andrea F. Crespo	AFC

MMD Project Number	Scale at A1	Security
104560-001	As Indicated	STD

Client Number	Suit. Code
004943785-02	S3

Drawing Number	Revision
104560-MMD-00-XX-DR-CE-1061	02

1:750 0 37.5m 75m

1:1000 0 50m 100m

1:3000 0 150m 300m

C:\Users\AMA100030\DC\ACCDocs\Mott MacDonald\100104560 - RWE Co-location project\Project Files\MOTTMAC\C_CIV_MMD\DR\104560-MMD-00-XX-DR-CE-1061.dwg Dec 15, 2023 - 6:48PM AMA100030

Appendix Q Haul Road Crossings – General Arrangement Drawings

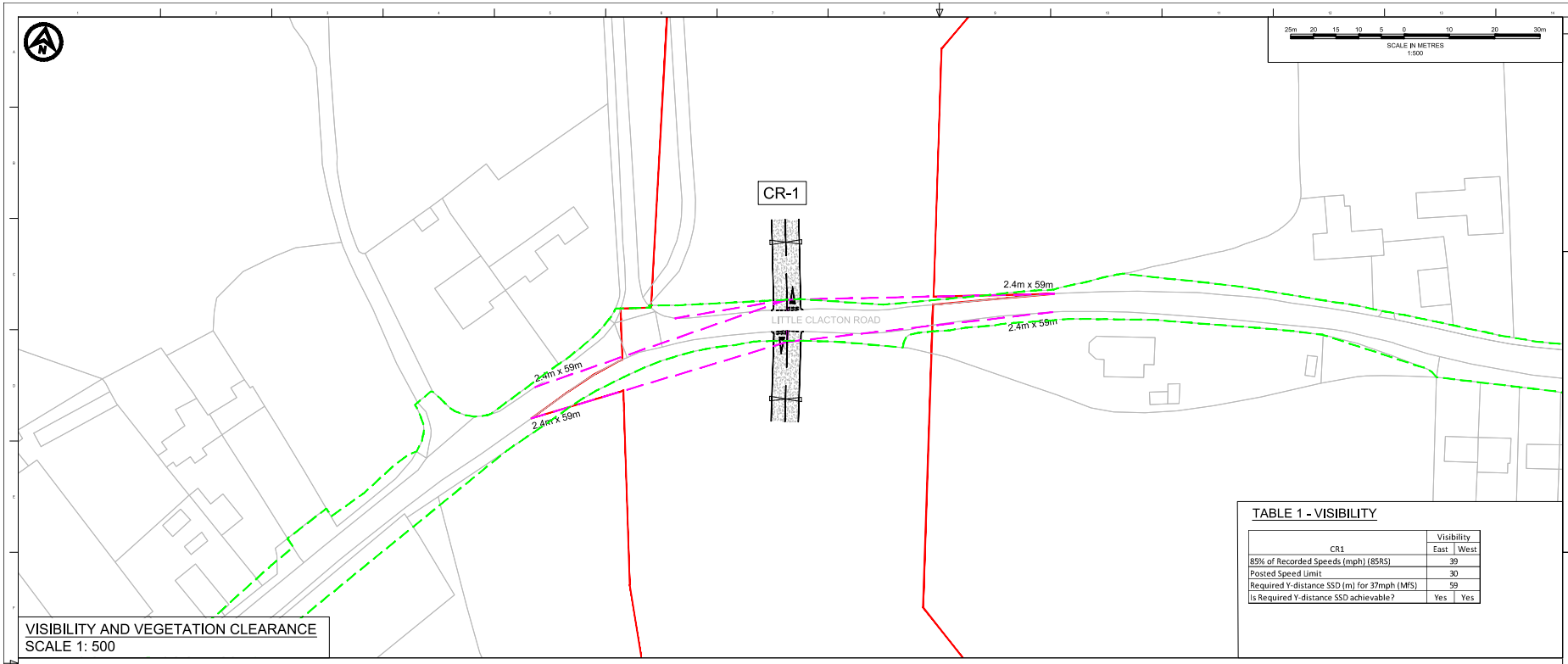
Volume 6, Part 6, Annex 8.1 Transport Assessment (Onshore)

Five Estuaries Offshore Wind Farm

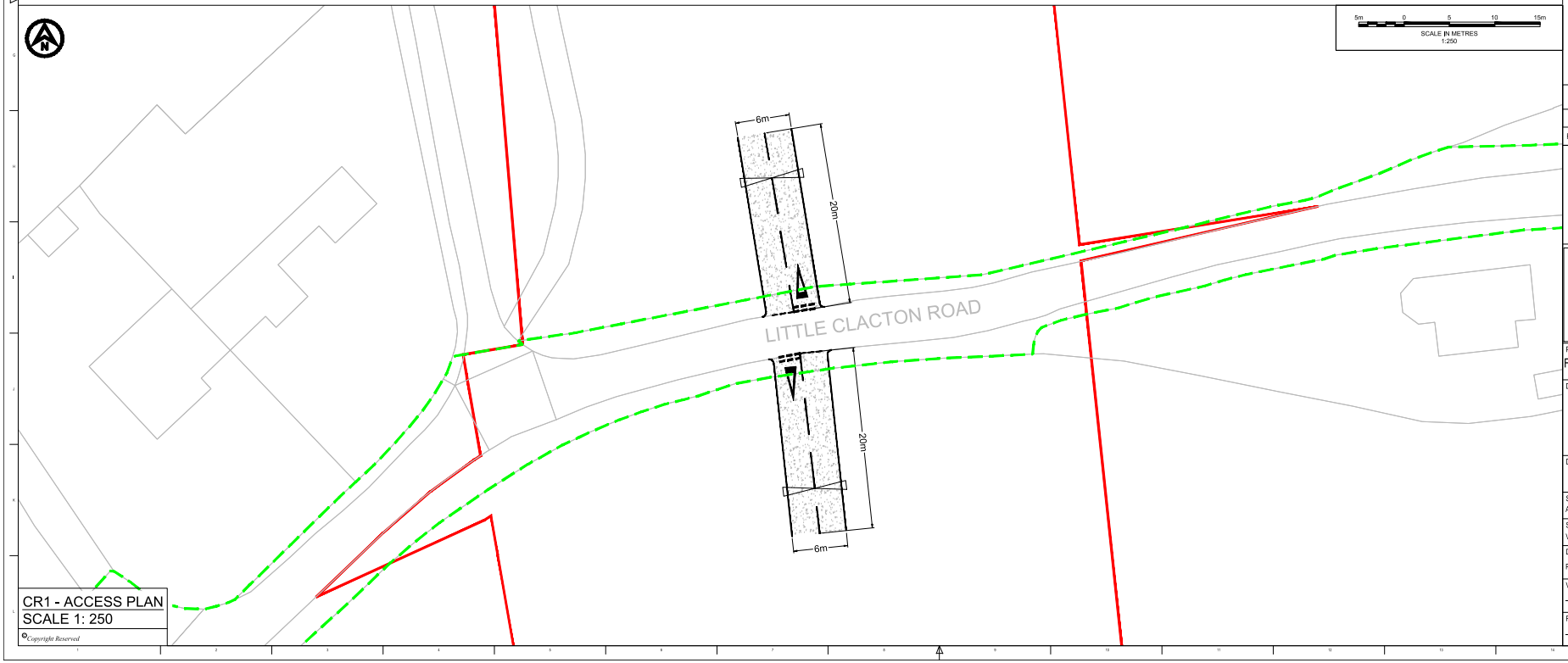
Five Estuaries Wind Farm Ltd

SLR Project No.: 404.V05356.00010

23 September 2024



VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500



CR1 - ACCESS PLAN
SCALE 1: 250

TABLE 1 - VISIBILITY

CR1	Visibility East	Visibility West
85% of Recorded Speeds (mph) (85RS)	39	
Posted Speed Limit	30	
Required Y-distance SSD (m) for 37mph (MfS)	59	
Is Required Y-distance SSD achievable?	Yes	Yes

DO NOT SCALE FROM THIS DRAWING

NOTES
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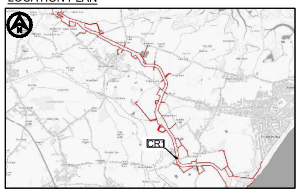
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarentee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.

KEY

- EXISTING ARRANGEMENT
- ONSHORE RED LINE BOUNDARY
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P02	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm

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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
CR-1 - LITTLE CLACTON ROAD
GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0016	P02
VE DOCUMENT NUMBER	REVISION
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RWE ECODOC NUMBER	SHEET No / REVISION
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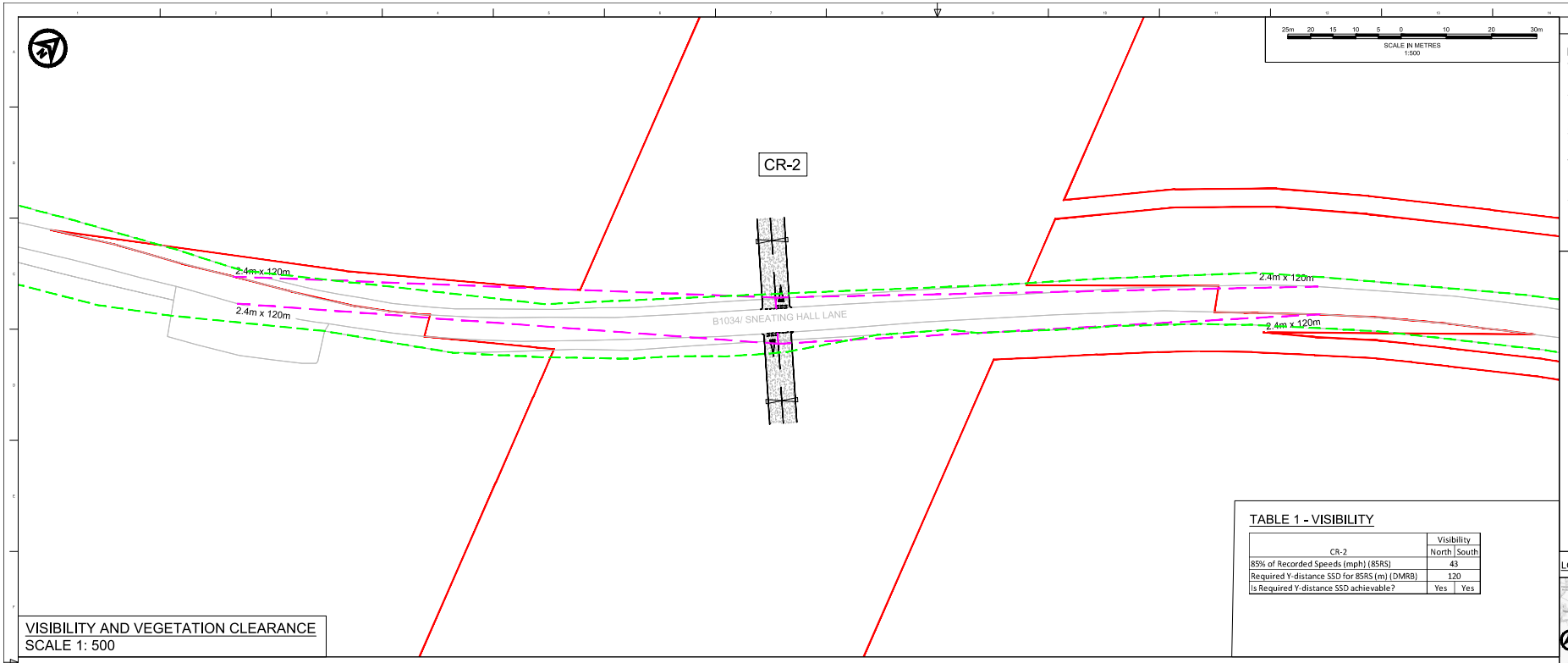
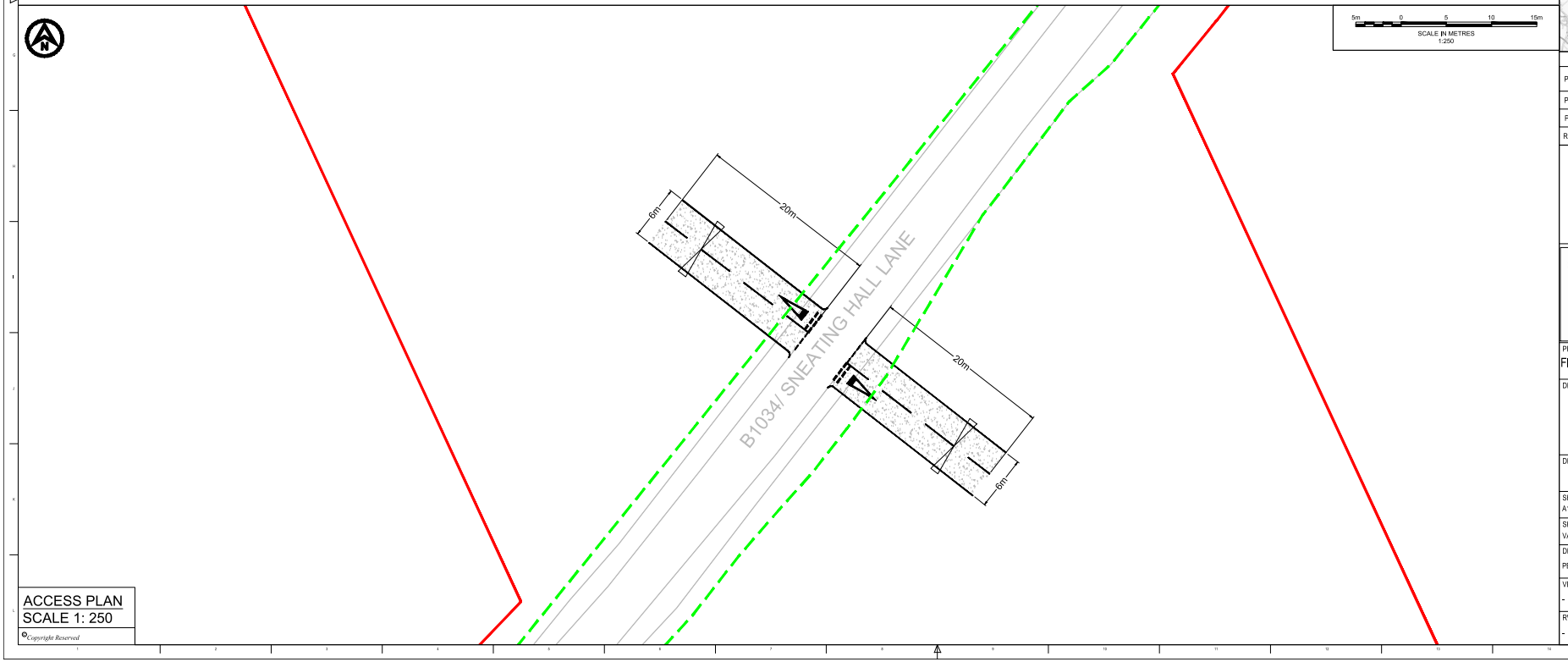


VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500

TABLE 1 - VISIBILITY

CR-2	Visibility North	Visibility South
85% of Recorded Speeds (mph) (85RS)	43	
Required Y-distance SSD for 85RS (m) (DMRB)	120	
Is Required Y-distance SSD achievable?	Yes	Yes



ACCESS PLAN
SCALE 1: 250

DO NOT SCALE FROM THIS DRAWING

NOTES
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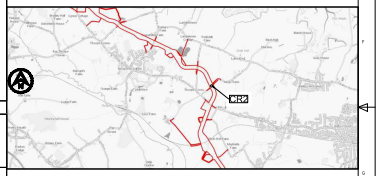
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarentee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.

KEY

- EXISTING ARRANGEMENT
- ONSHORE RED LINE BOUNDARY
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY

LOCATION PLAN



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P03	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P02	09/01/2024	UPDATE TO CROSSING NUMBERING	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm

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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
CR2 - B1034/ SNEATING HALL LANE
GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
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SHEET SCALE	DATE	DATE	DATE	DATE
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VE DOCUMENT NUMBER	REVISION
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RWE ECODOC NUMBER	SHEET No / REVISION
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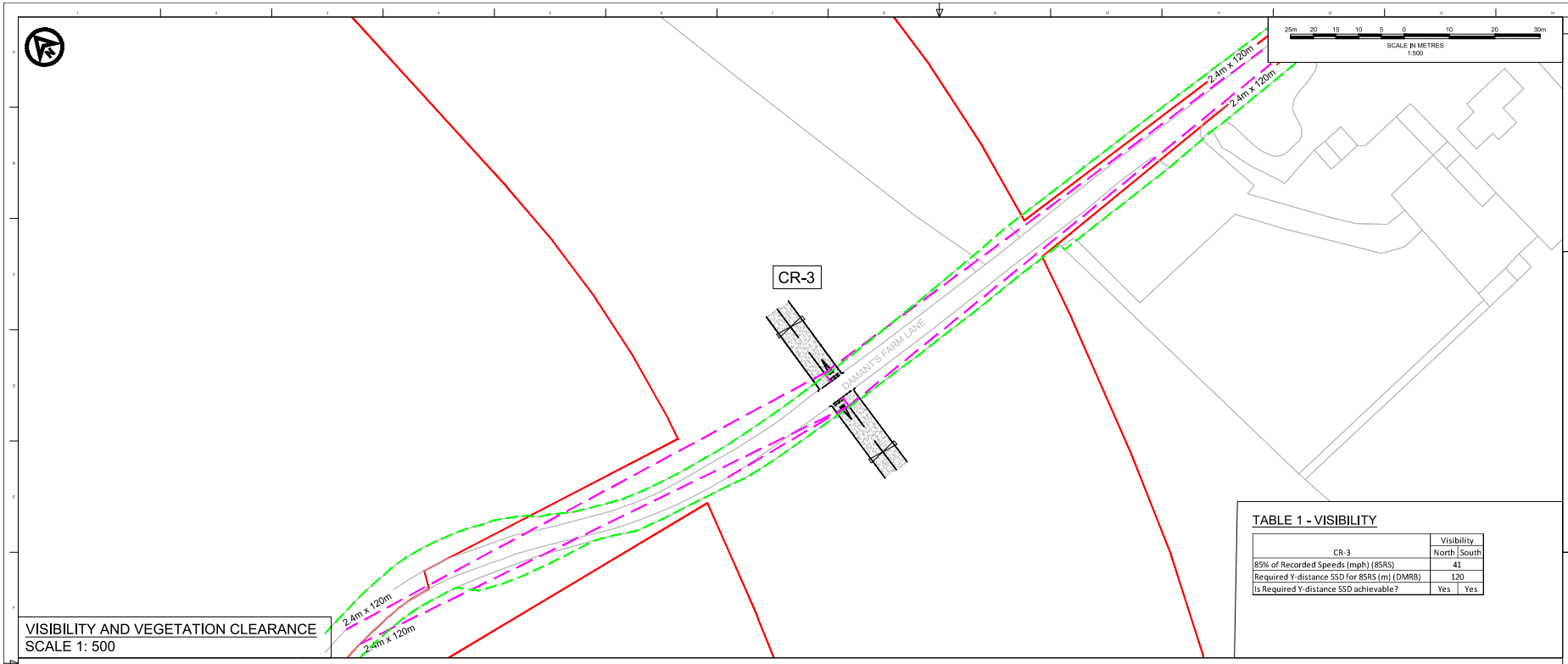
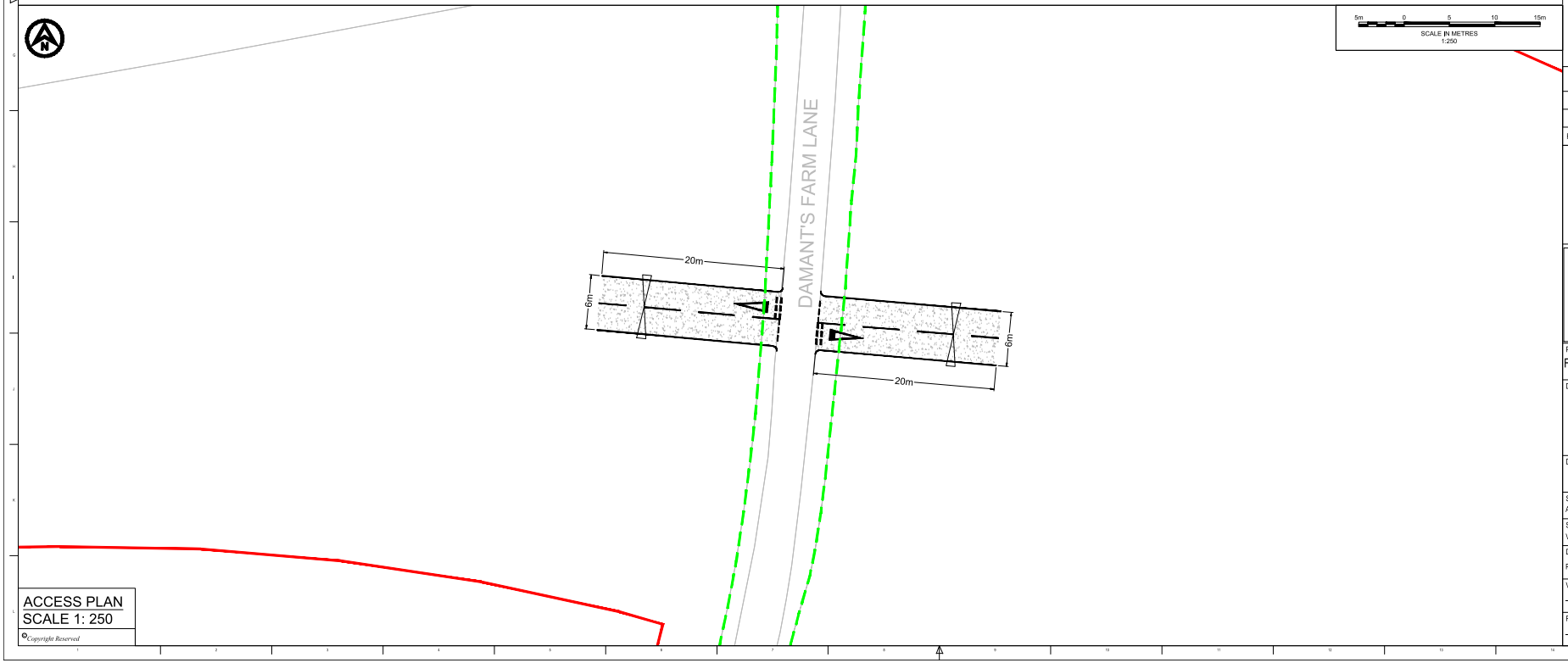


VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500

TABLE 1 - VISIBILITY

CR-3	Visibility	
	North	South
85% of Recorded Speeds (mph) (85RS)	41	
Required Y-distance SSD for 85RS (m) (DMRB)	120	
Is Required Y-distance SSD achievable?	Yes	Yes



ACCESS PLAN
SCALE 1: 250

DO NOT SCALE FROM THIS DRAWING

NOTES
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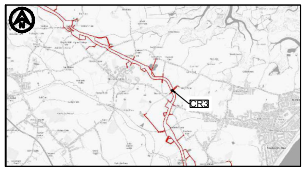
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarentee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.

KEY

- EXISTING ARRANGEMENT
- ONSHORE RED LINE BOUNDARY
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY

LOCATION PLAN



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P03	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P02	09/01/2024	UPDATE TO CROSSING NUMBERING	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
CR-3 - DAMANT'S FARM LANE
GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0010	P03
VE DOCUMENT NUMBER	REVISION
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RWE ECODOC NUMBER	SHEET No / REVISION
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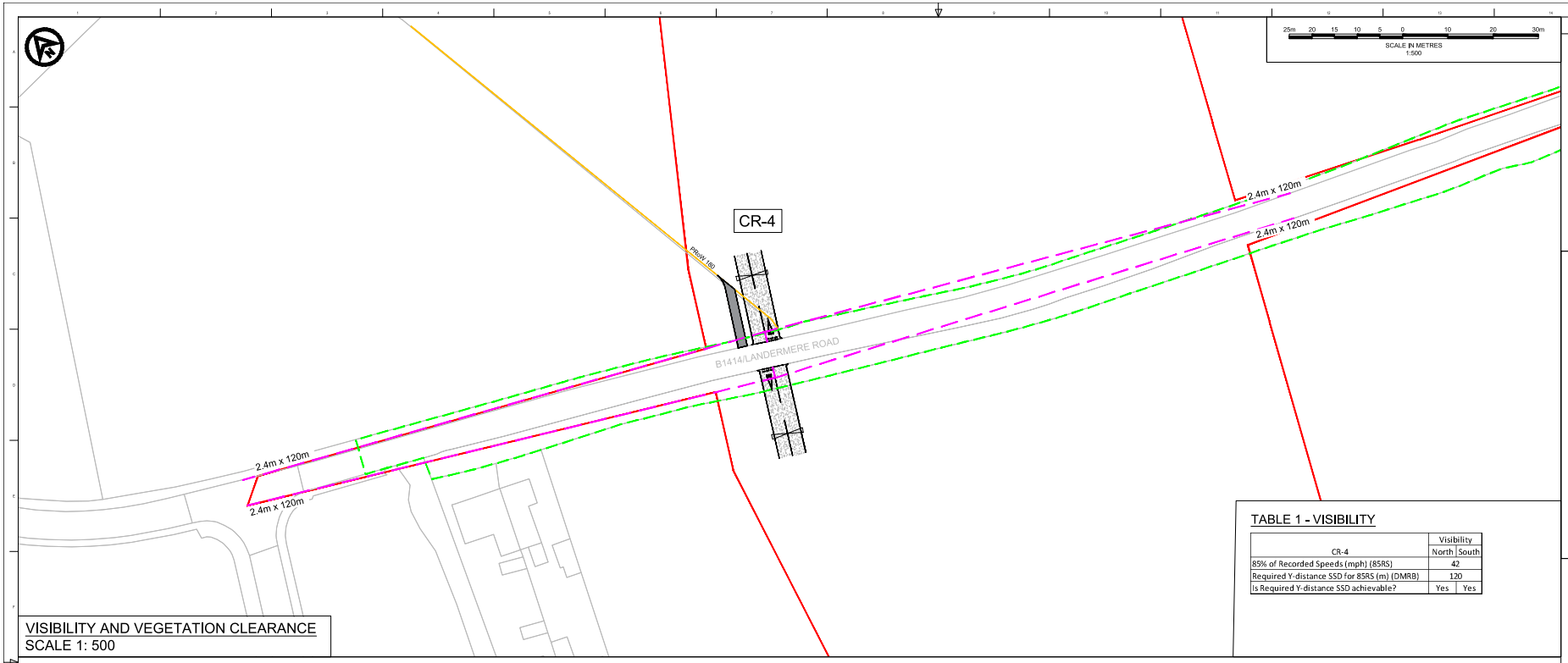
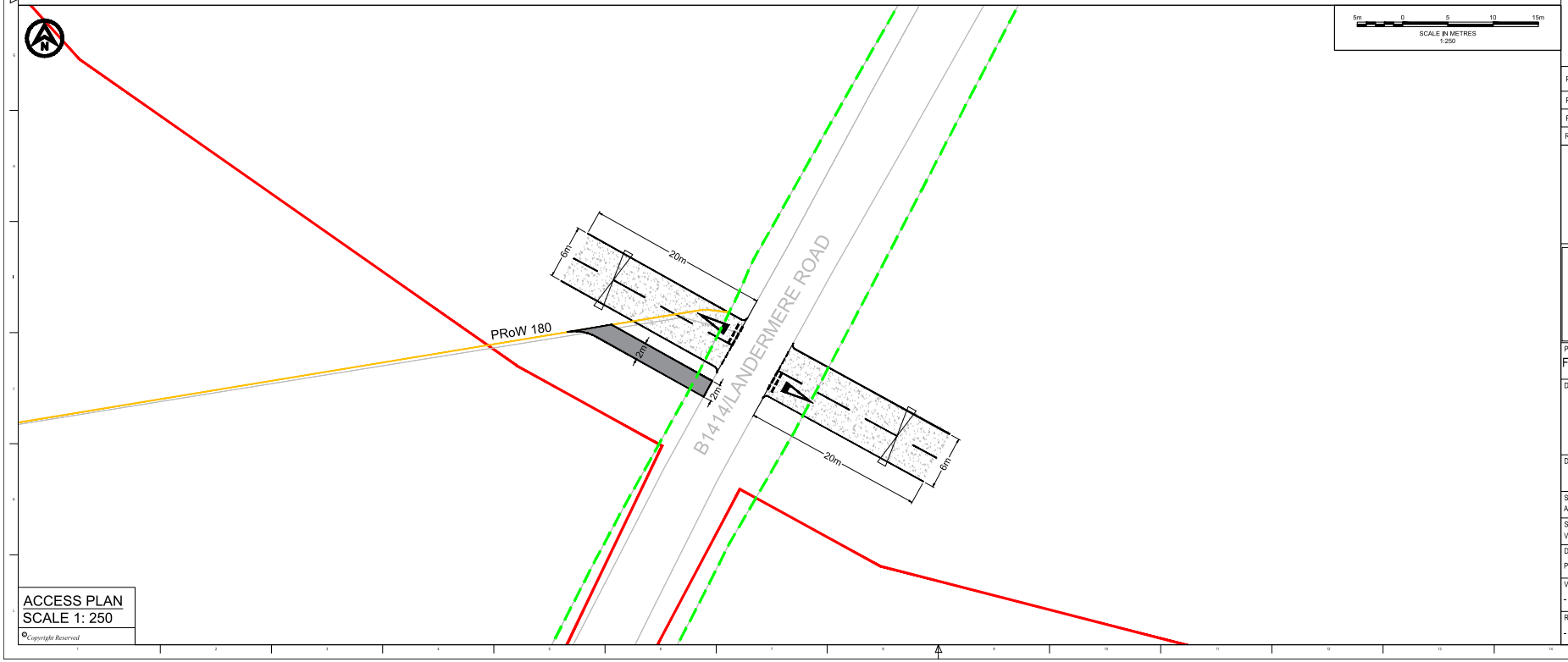


VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500

25m 20 15 10 5 0 10 20 30m
SCALE IN METRES
1:500

TABLE 1 - VISIBILITY

CR-4	Visibility North	Visibility South
85% of Recorded Speeds (mph) (85RS)	42	
Required Y-distance SSD for 85RS (m) (DMRB)	120	
Is Required Y-distance SSD achievable?	Yes	Yes



ACCESS PLAN
SCALE 1: 250

5m 0 5 10 15m
SCALE IN METRES
1:250

DO NOT SCALE FROM THIS DRAWING

NOTES
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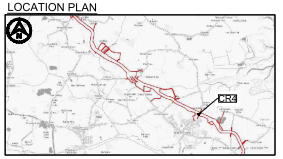
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.

KEY
- EXISTING ARRANGEMENT
- ONSHORE CABLE CORRIDOR
- HIGHWAY BOUNDARY
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- EXISTING PUBLIC RIGHTS OF WAY
- PROPOSED TEMPORARY OFFROAD PUBLIC RIGHTS OF WAY ROUTE
- PROPOSED GATE

LOCATION PLAN



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P04	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P03	09/01/2024	UPDATE TO CROSSING NUMBERING	CB	SKT	SKT
P02	15/11/2023	PUBLIC RIGHTS OF WAY AMENDMENTS	AA	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm

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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
CR-4 - B1414/LANDERMERE ROAD GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

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PB9244-RHD-ZZ-ZZ-DR-R-0011	P04
VE DOCUMENT NUMBER	REVISION
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RWE ECODOC NUMBER	SHEET No / REVISION
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NOTES
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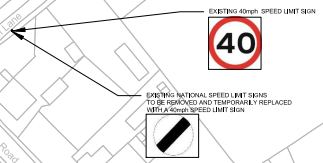
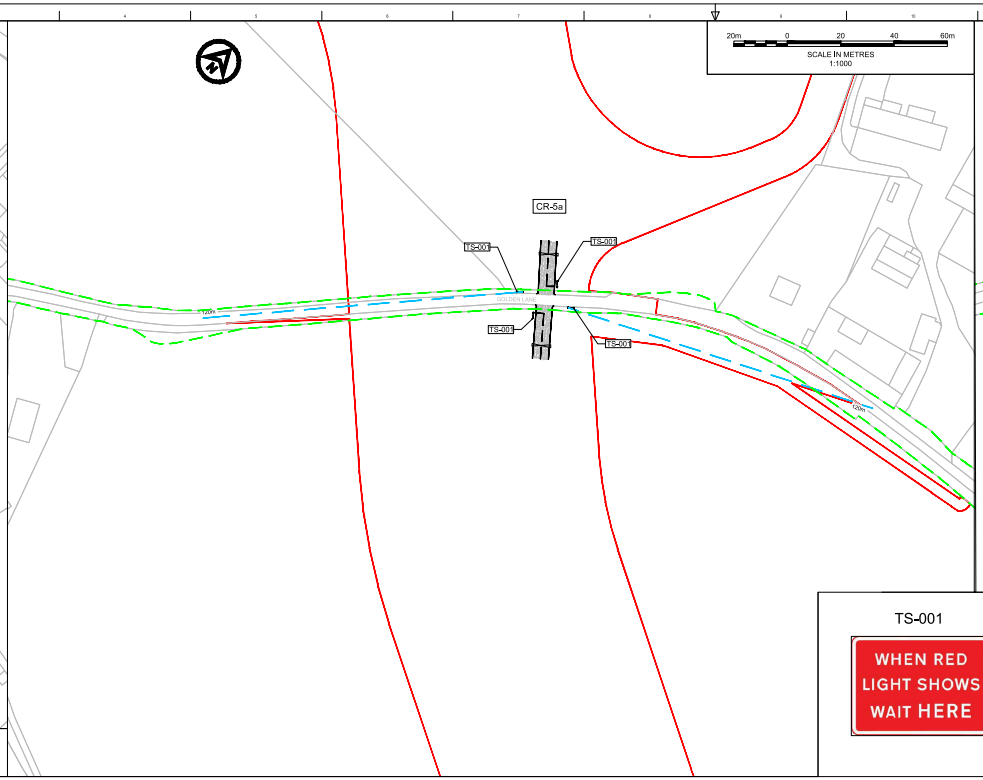
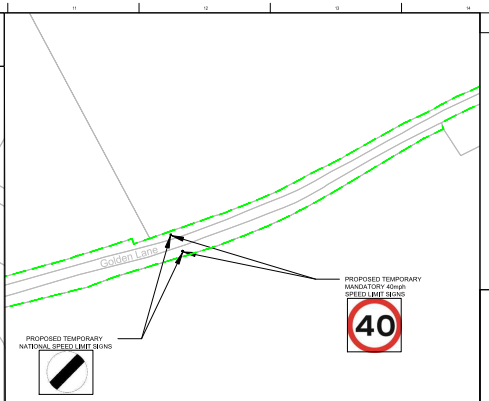
KEY

- EXISTING ARRANGEMENT
- ONSHORE CABLE CORRIDOR
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- FORWARD STOPPING DISTANCE
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY
- PROPOSED TEMPORARY PORTABLE TRAFFIC LIGHTS
- PROPOSED TEMPORARY ROAD SIGN

SIGNAGE LOCATION - 1







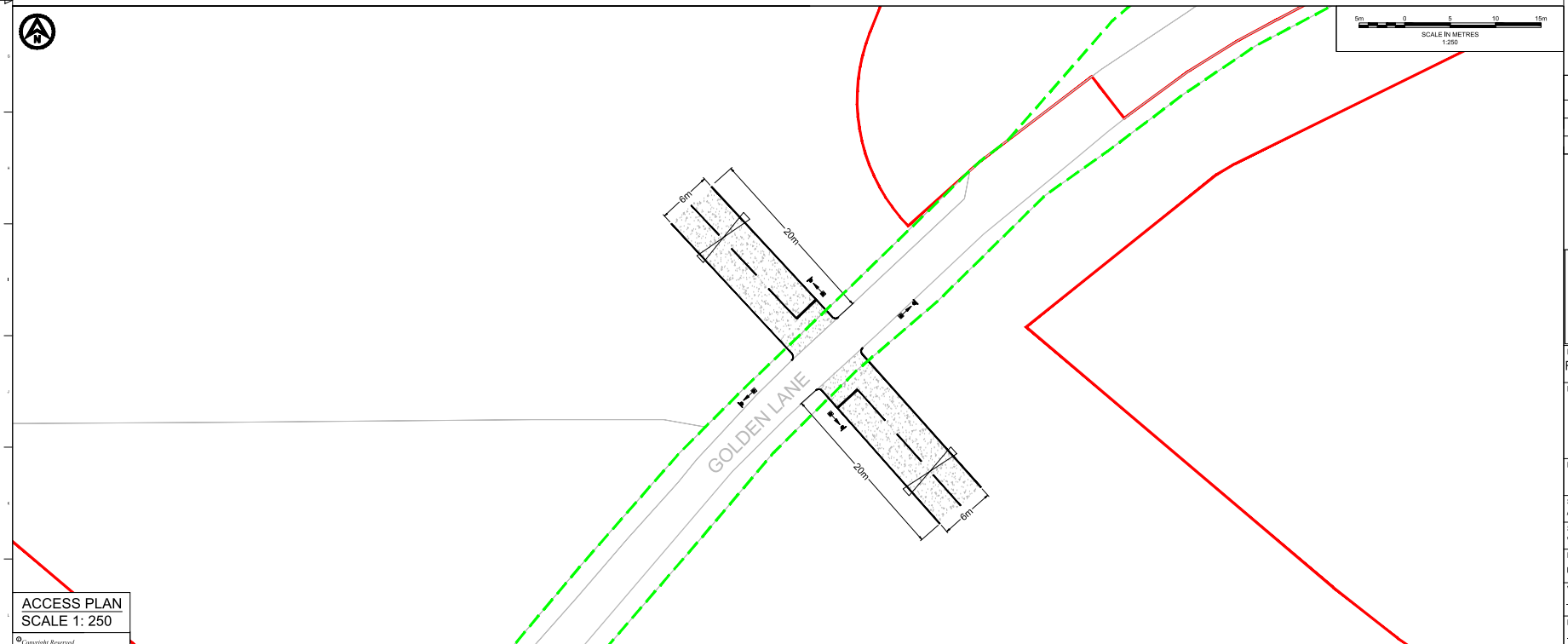
SIGNAGE LOCATION - 2

VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 1000

TS-001

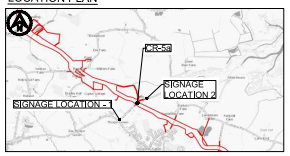
TABLE 1 - VISIBILITY

CR-5a	Visibility North	Visibility South
85% of Recorded Speeds (mph) (85RS)	45	
Required Y-distance SSD for 85RS (m) (DMRB)	160	
Proposed initial traffic management plan	Traffic signal control and reduced mandatory speed limit	
Proposed Reduced Speed Limit (RSL) (mph)	30	
Required Y-distance SSD for RSL (m) (DMRB)	120	
Is Required Y-distance SSD achievable?	Yes	Yes



ACCESS PLAN
SCALE 1: 250

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P04	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P03	09/01/2024	UPDATE TO CROSSING NUMBERING	CB	SKT	SKT
P02	28/09/2023	UPDATE TO ACCESS LOCATION	CB	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm

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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
CR-5a - GOLDEN LANE
GENERAL ARRANGEMENT
TRAFFIC SIGNAL OPTION

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0012	P04
VE DOCUMENT NUMBER	REVISION
-	-
RWE ECODOC NUMBER	SHEET No	REVISION
-	1_OF_1	-

DO NOT SCALE FROM THIS DRAWING

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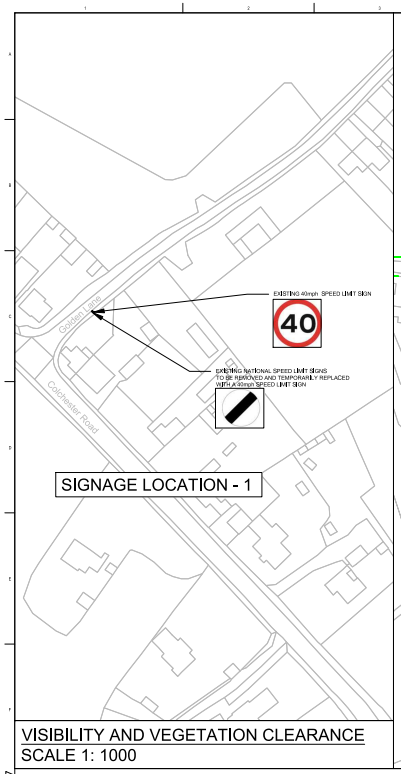
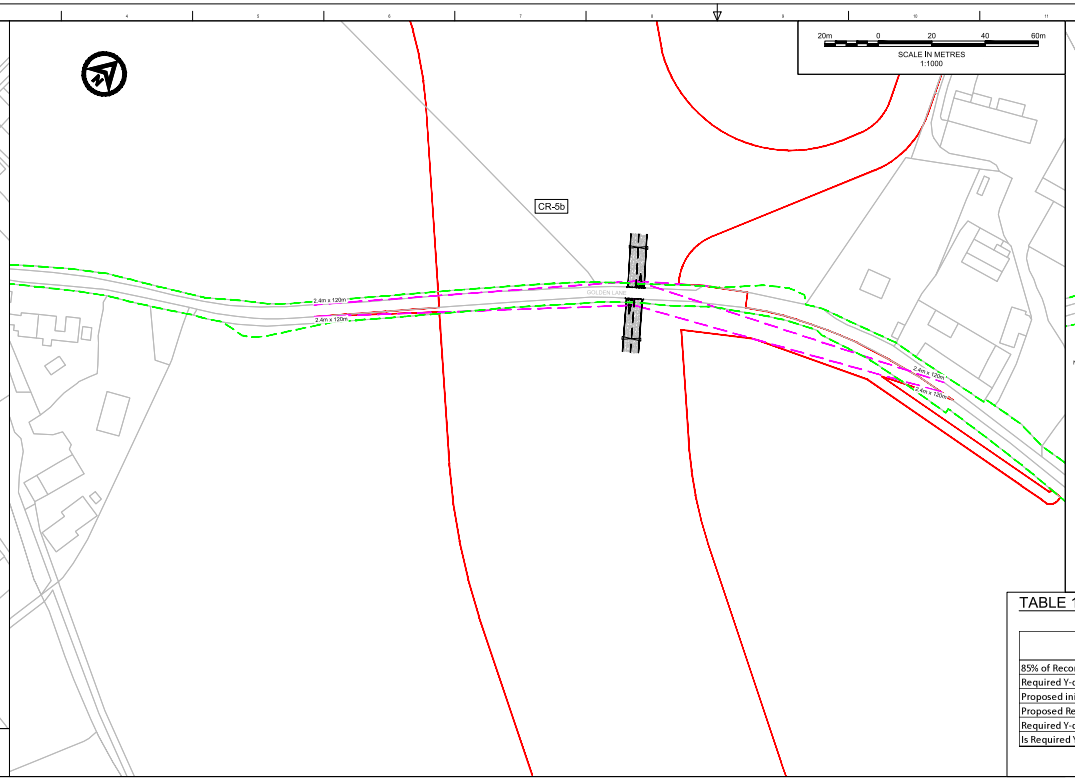
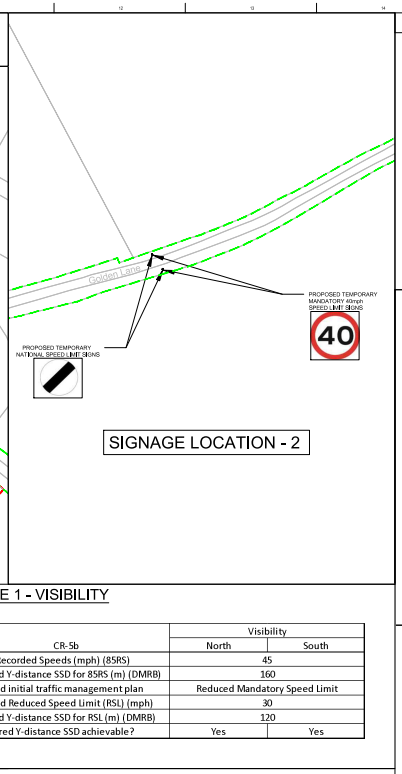
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.



SIGNAGE LOCATION - 1





SIGNAGE LOCATION - 2

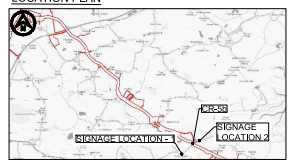
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 1000

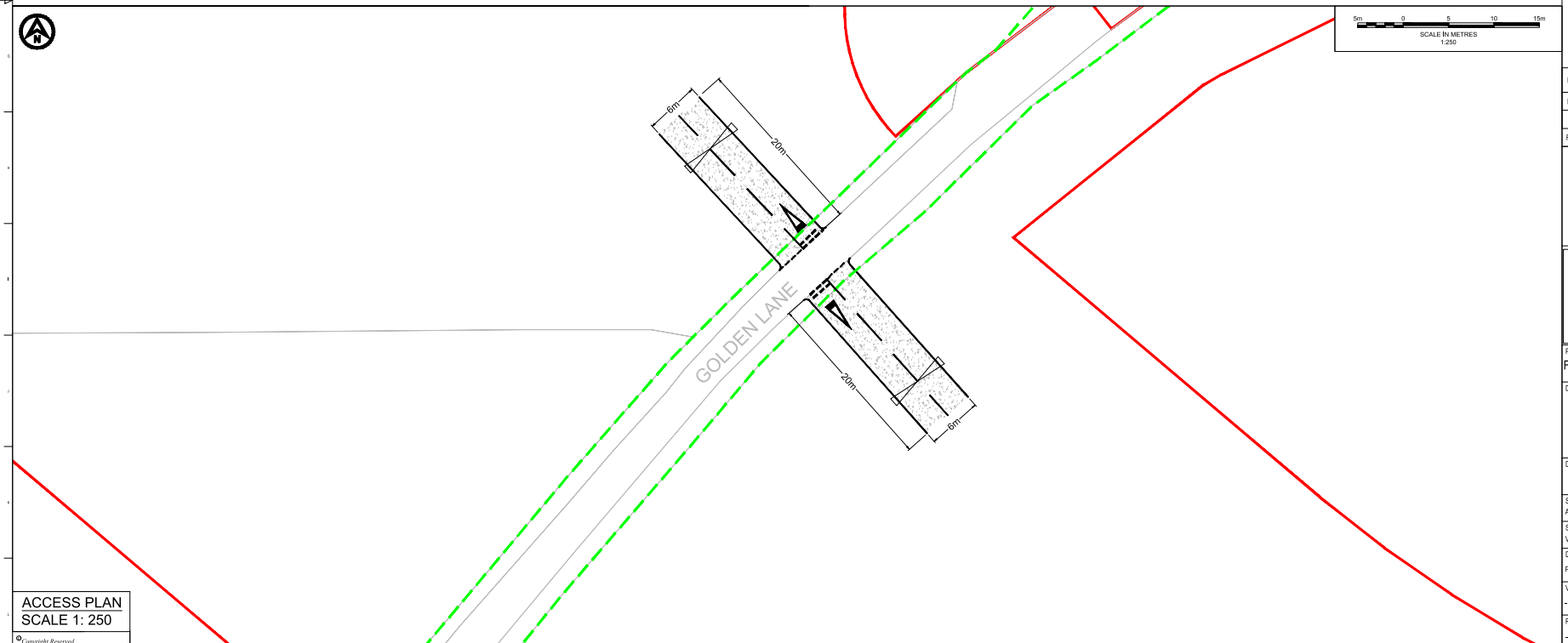
TABLE 1 - VISIBILITY

CR-5b	Visibility	
	North	South
85% of Recorded Speeds (mph) (85RS)	45	
Required Y-distance SSD for 85RS (m) (DMRB)	160	
Proposed initial traffic management plan	Reduced Mandatory Speed Limit	
Proposed Reduced Speed Limit (RSL) (mph)	30	
Required Y-distance SSD for RSL (m) (DMRB)	120	
Is Required Y-distance SSD achievable?	Yes	Yes

KEY
- EXISTING ARRANGEMENT
- ONSHORE CABLE CORRIDOR
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FORWARD STOPPING DISTANCE
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY
- PROPOSED TEMPORARY ROAD SIGN

LOCATION PLAN





ACCESS PLAN
SCALE 1: 250

REV	DATE	DESCRIPTION	BY	CHK	APP
P03	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P02	09/01/2024	UPDATE TO CROSSING NUMBERS	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm

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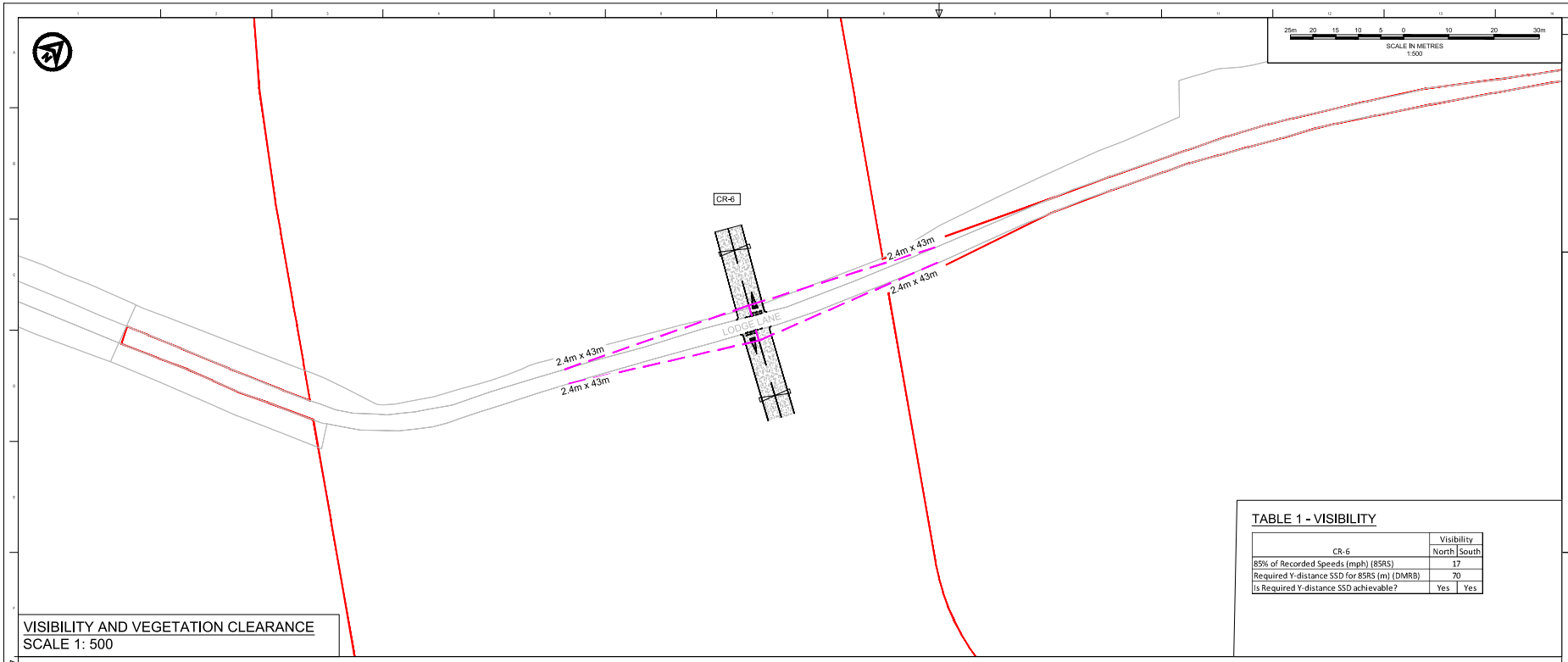
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
CR-5b - GOLDEN LANE
GENERAL ARRANGEMENT
PRIORITY OPTION

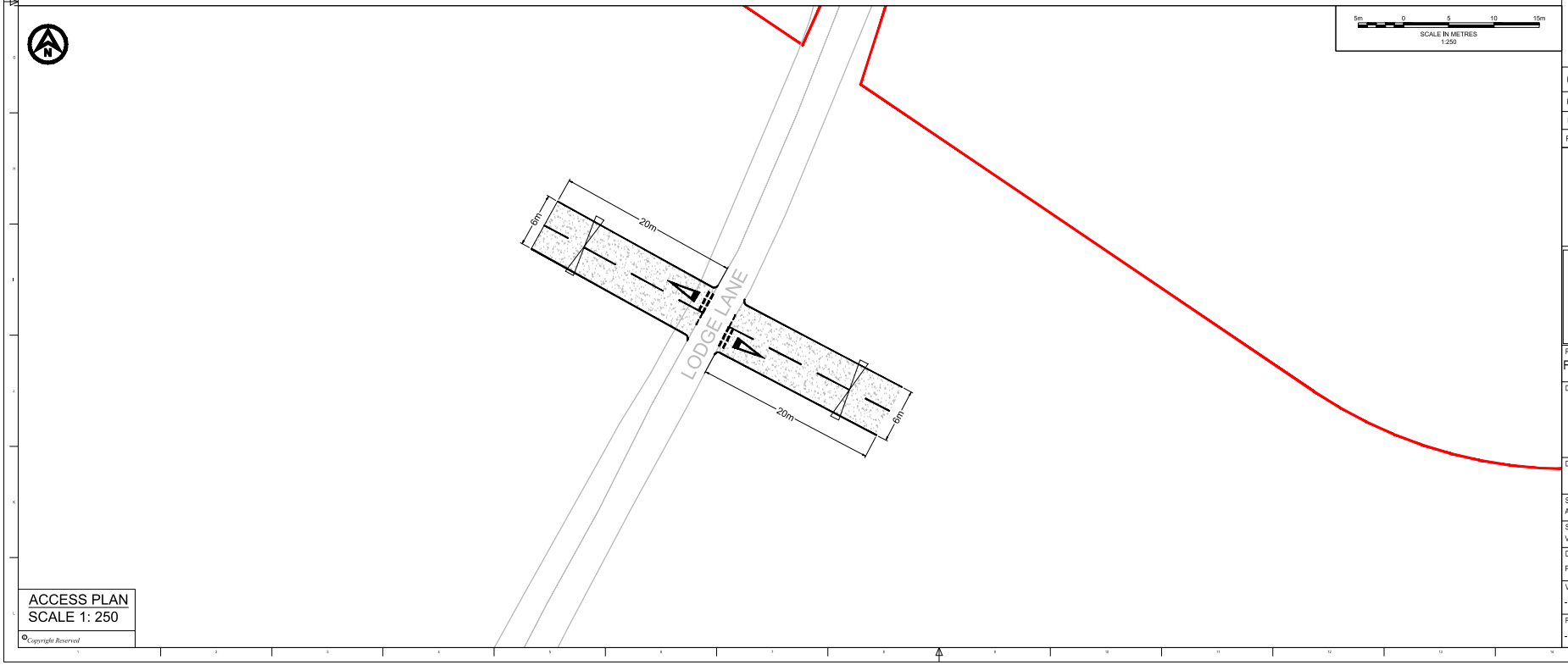
DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0021	P03
VE DOCUMENT NUMBER	REVISION
-	-
RWE ECODOC NUMBER	SHEET No / REVISION
-	1_OF_1 / -



VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500



ACCESS PLAN
SCALE 1: 250

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4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.

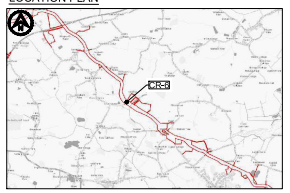
KEY

- EXISTING ARRANGEMENT
- ONSHORE RED LINE BOUNDARY
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE

TABLE 1 - VISIBILITY

CR-6	Visibility North	Visibility South
85% of Recorded Speeds (mph) (85RS)	17	
Required Y-distance SSD for 85RS (m) (DMRB)	70	
Is Required Y-distance SSD achievable?	Yes	Yes

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P03	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P02	09/01/2024	UPDATE TO CROSSING NUMBERING	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM
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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
CR-6 - LODGE LANE
GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SRT	SRT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0013	P03
VE DOCUMENT NUMBER	REVISION
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RWE ECODOC NUMBER	SHEET No / REVISION
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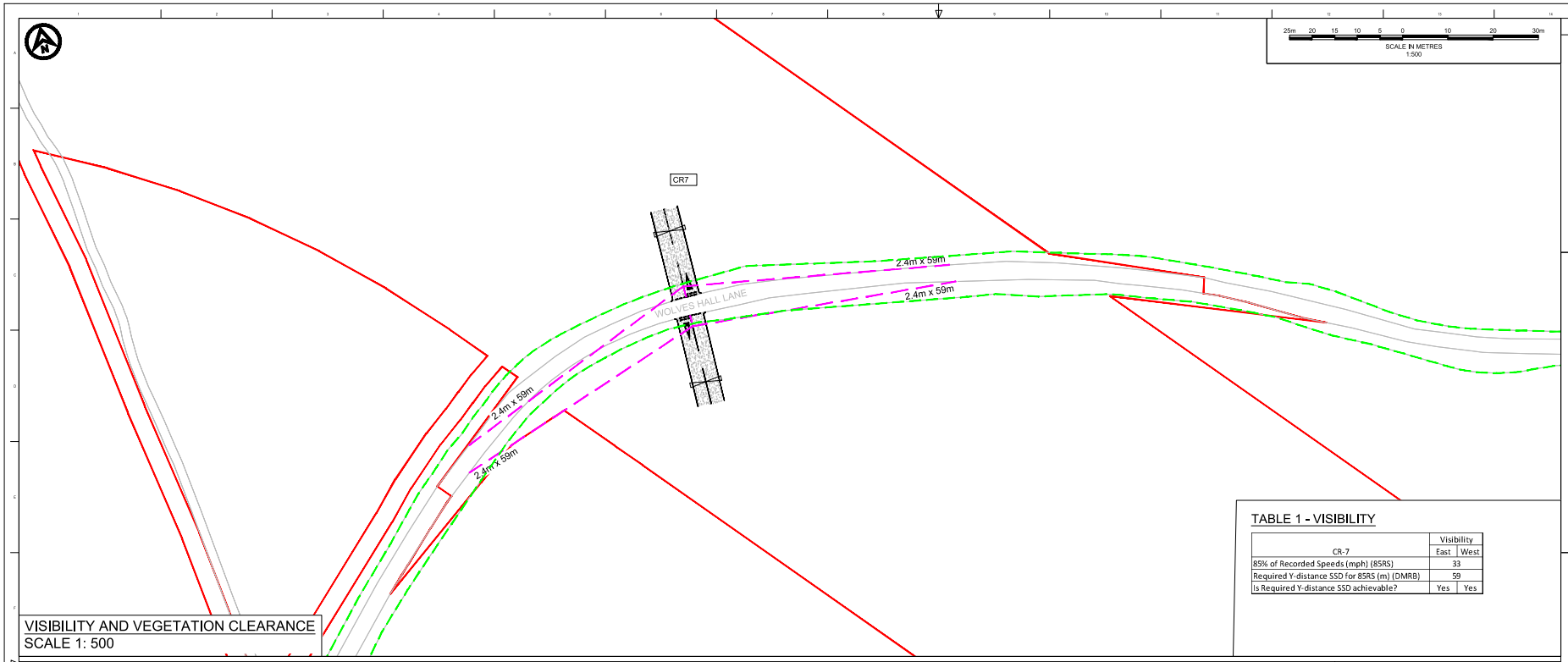
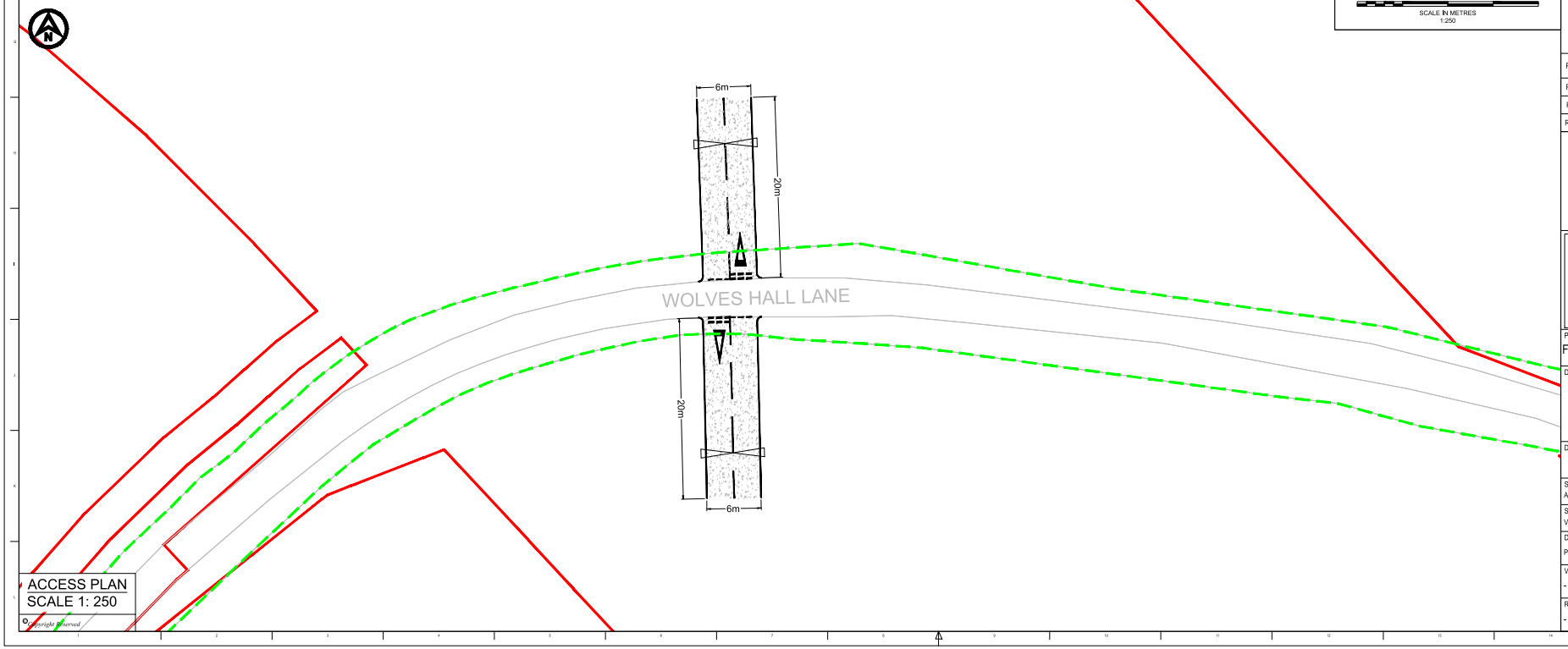


VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500

25m 20 15 10 5 0 10 20 30m
SCALE IN METRES
1:500

TABLE 1 - VISIBILITY

CR-7	Visibility East	Visibility West
85% of Recorded Speeds (mph) (85RS)	33	
Required Y-distance SSD for 85RS (m) (DMRB)	59	
Is Required Y-distance SSD achievable?	Yes	Yes



ACCESS PLAN
SCALE 1: 250

5m 0 5 10 15m
SCALE IN METRES
1:250

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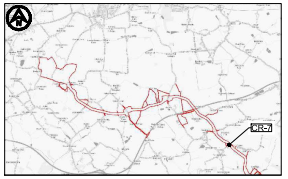
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.

KEY

- EXISTING ARRANGEMENT
- ONSHORE RED LINE BOUNDARY
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P03	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P02	09/01/2024	UPDATE TO CROSSING NUMBERING	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM
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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
CR-7 - WOLVES HALL LANE
GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0019	P03
VE DOCUMENT NUMBER	REVISION
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RWE ECODOC NUMBER	SHEET No	REVISION
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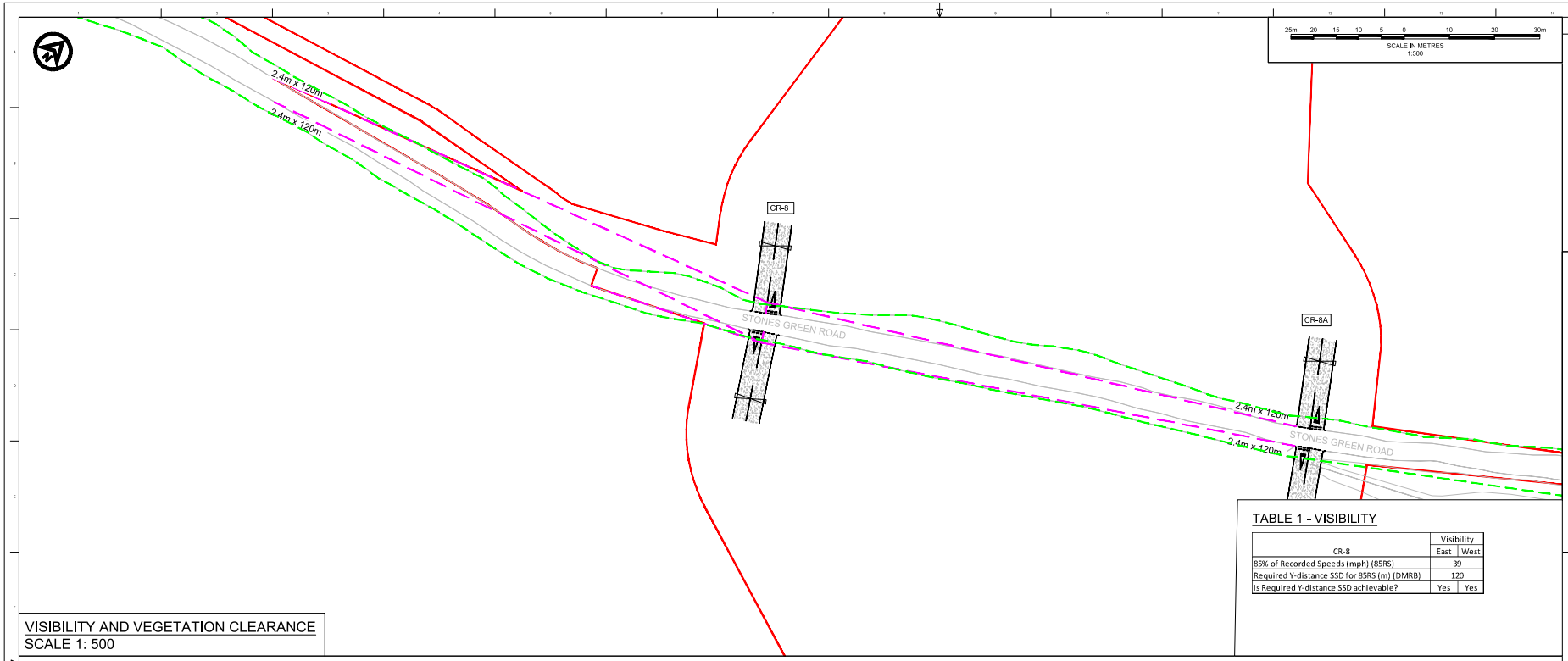
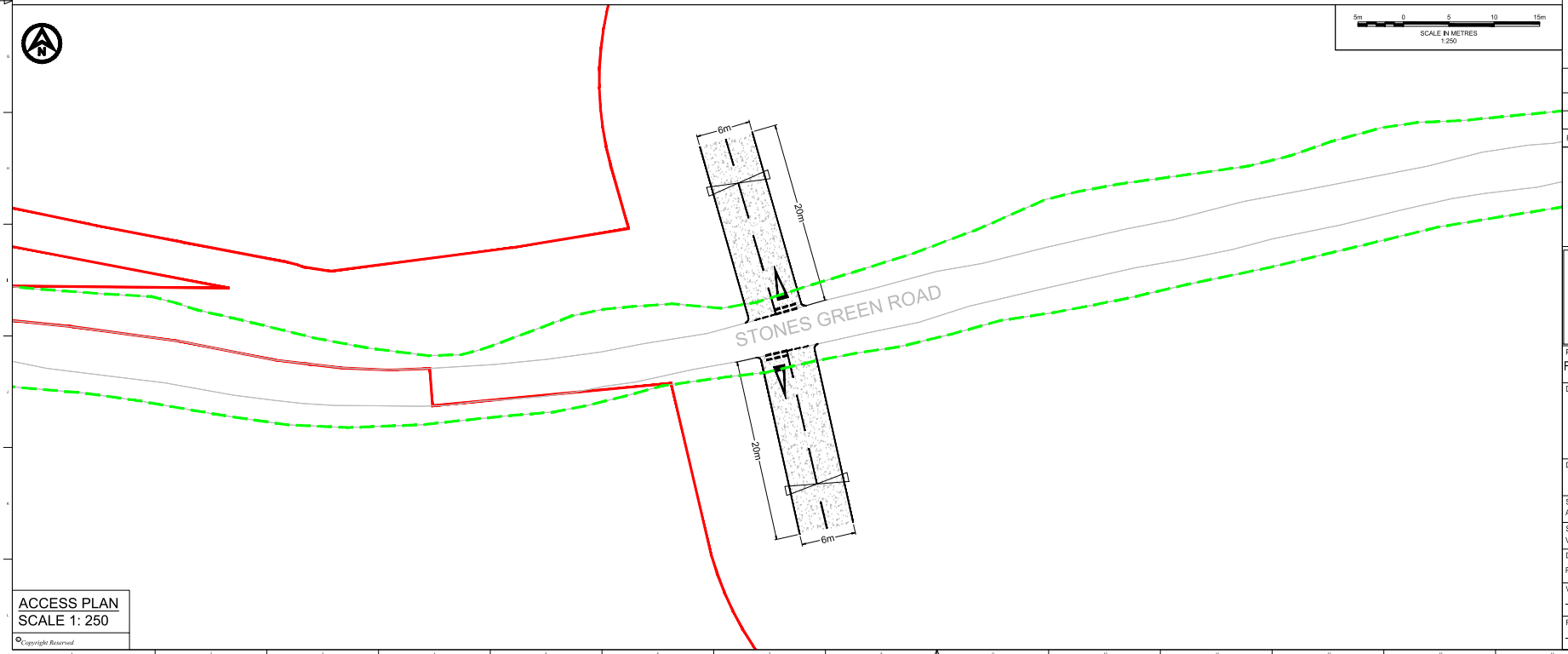


VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500



ACCESS PLAN
SCALE 1: 250

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5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.

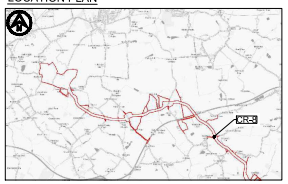
KEY

- EXISTING ARRANGEMENT
- ONSHORE RED LINE BOUNDARY
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY

TABLE 1 - VISIBILITY

CR-8	Visibility East	Visibility West
85% of Recorded Speeds (mph) (85RS)	39	
Required Y-distance SSD for 85RS (m) (DMRB)	120	
Is Required Y-distance SSD achievable?	Yes	Yes

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P03	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P02	09/01/2024	UPDATE TO CROSSING NUMBERING	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm

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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
CR-8 - STONES GREEN ROAD
GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0014	P03
VE DOCUMENT NUMBER	REVISION
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RWE ECODOC NUMBER	SHEET No / REVISION
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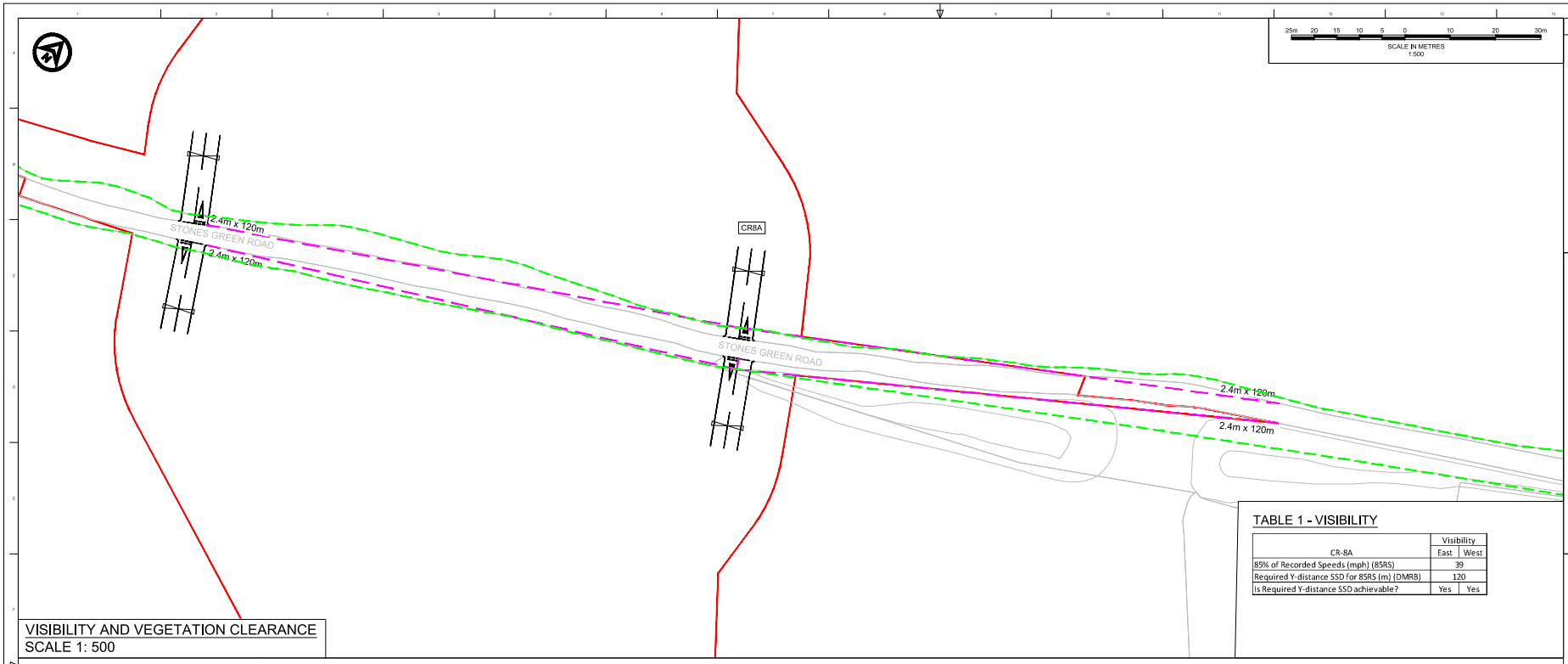
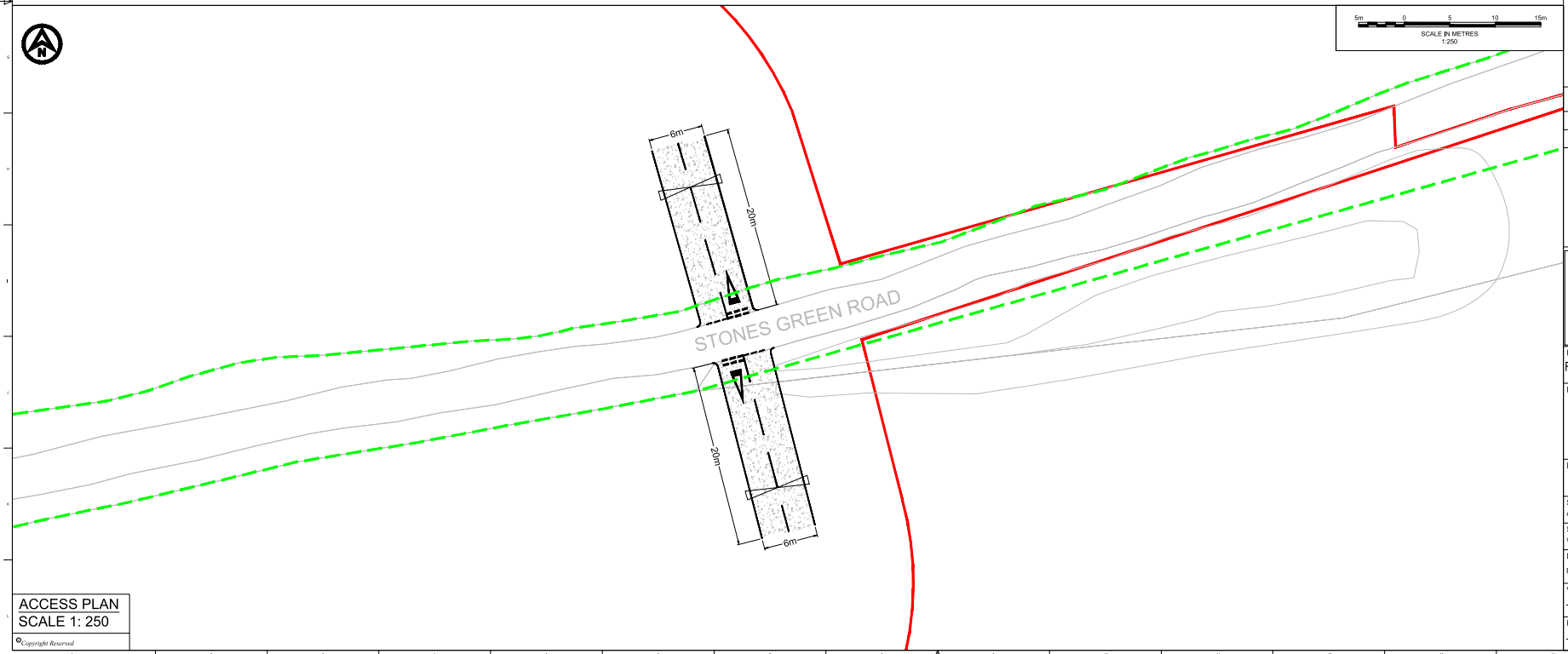


VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500

25m 20 15 10 5 0 10 20 30m
SCALE IN METRES
1:500

TABLE 1 - VISIBILITY

CR-8A	Visibility East	Visibility West
85% of Recorded Speeds (mph) (85RS)	39	
Required Y-distance SSD for 85RS (m) (DMRB)	120	
Is Required Y-distance SSD achievable?	Yes	Yes



ACCESS PLAN
SCALE 1: 250

5m 0 5 10 15m
SCALE IN METRES
1:250

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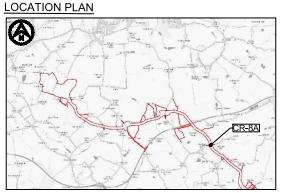
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.

KEY

- EXISTING ARRANGEMENT
- ONSHORE RED LINE BOUNDARY
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P02	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

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PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
CR-8A - STONES GREEN ROAD
GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0020	P02
VE DOCUMENT NUMBER	REVISION
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RWE ECODOC NUMBER	SHEET No / REVISION
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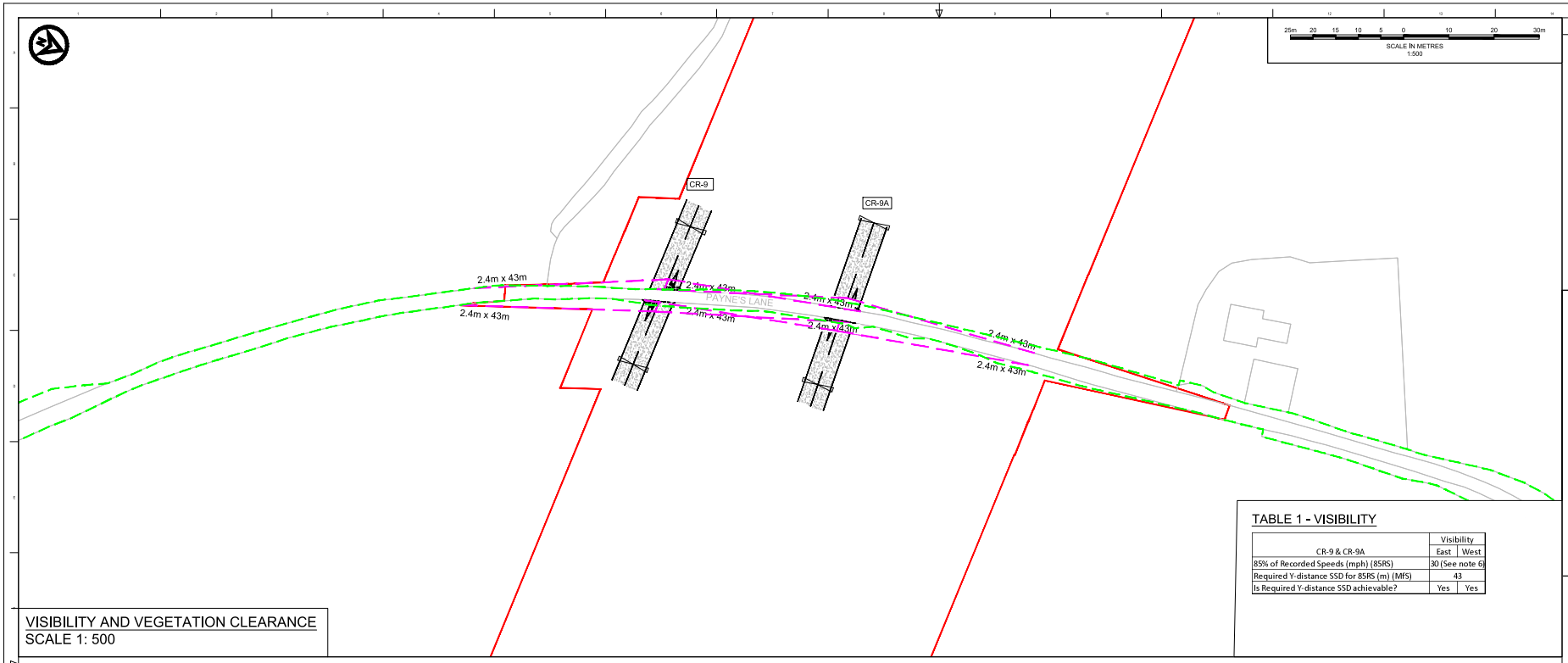
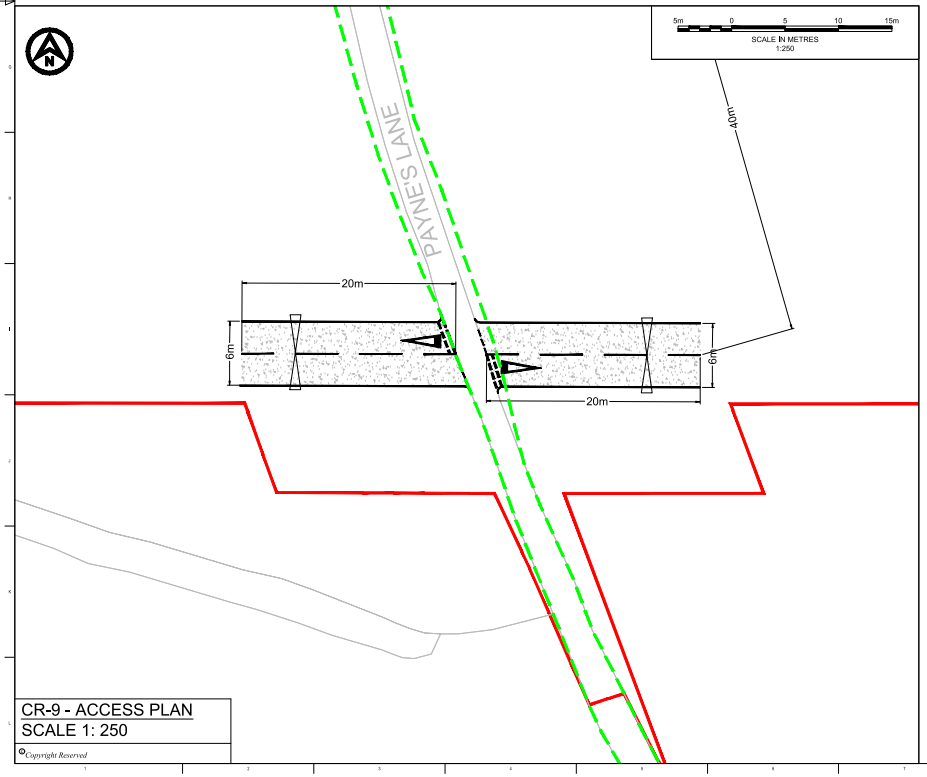


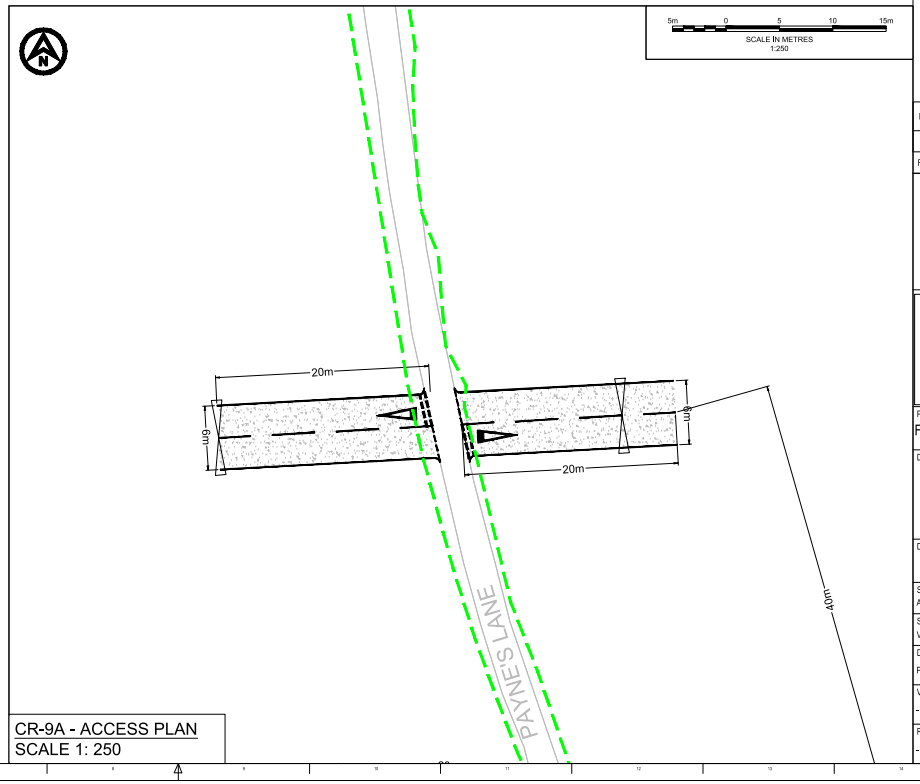
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500

TABLE 1 - VISIBILITY

CR-9 & CR-9A	Visibility	
	East	West
85% of Recorded Speeds (mph) (85RS)	30 (See note 6)	
Required Y-distance SSD for 85RS (m) (MfS)	43	
Is Required Y-distance SSD achievable?	Yes	Yes



CR-9 - ACCESS PLAN
SCALE 1: 250



CR-9A - ACCESS PLAN
SCALE 1: 250

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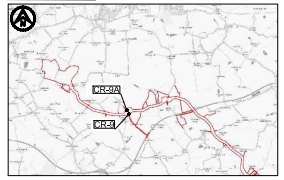
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
6. Reduced speed limit and Manual for Streets (MfS) visibility splays have been taken into account considering the geometry of the existing road.

KEY

- EXISTING ARRANGEMENT
- ONSHORE RED LINE BOUNDARY
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY

LOCATION PLAN



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P02	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm

Royal HaskoningDHV
Enhancing Society Together
Westpoint, Peterborough Business Park, Lynch Wood, Peterborough PE2 6FZ
Tel:+44(0)1832 565566
www.royalhaskoningdhv.com

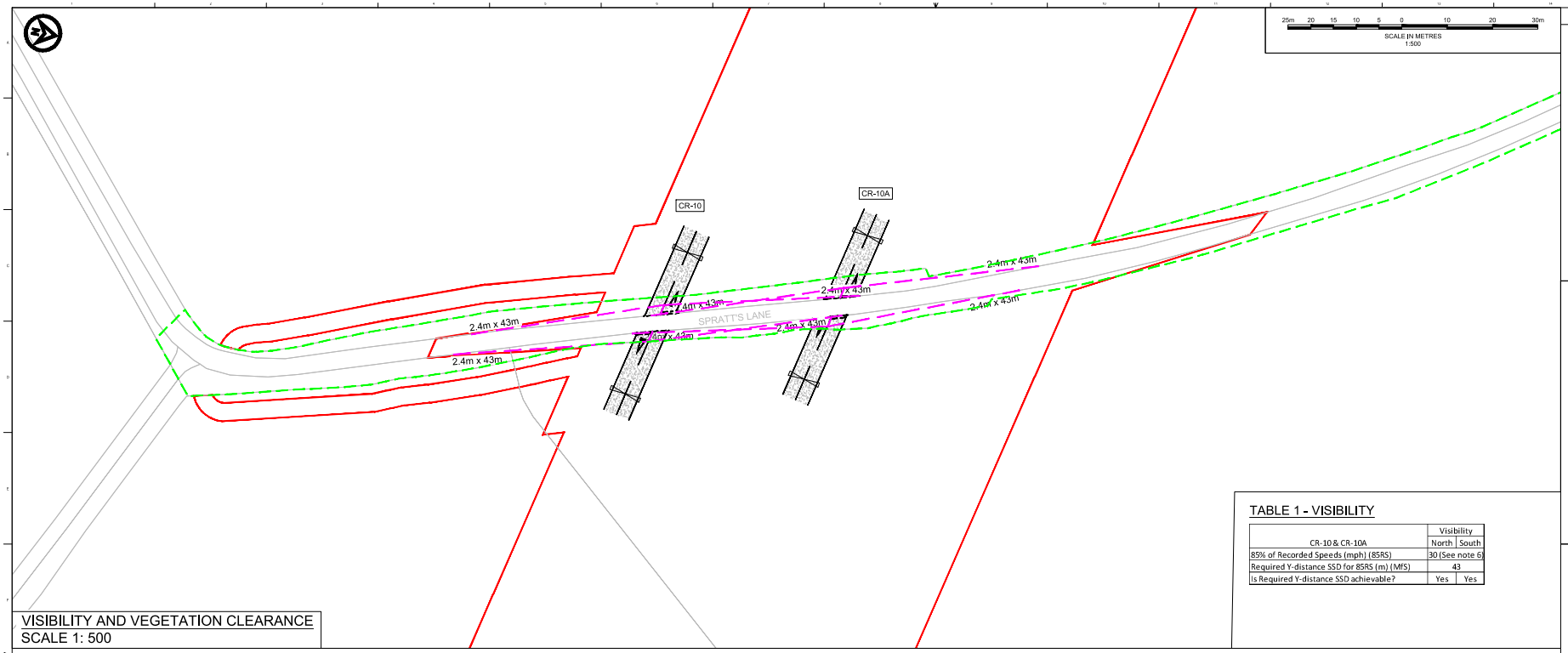
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
CR-9 & CR-9A - PAYNE'S LANE
GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

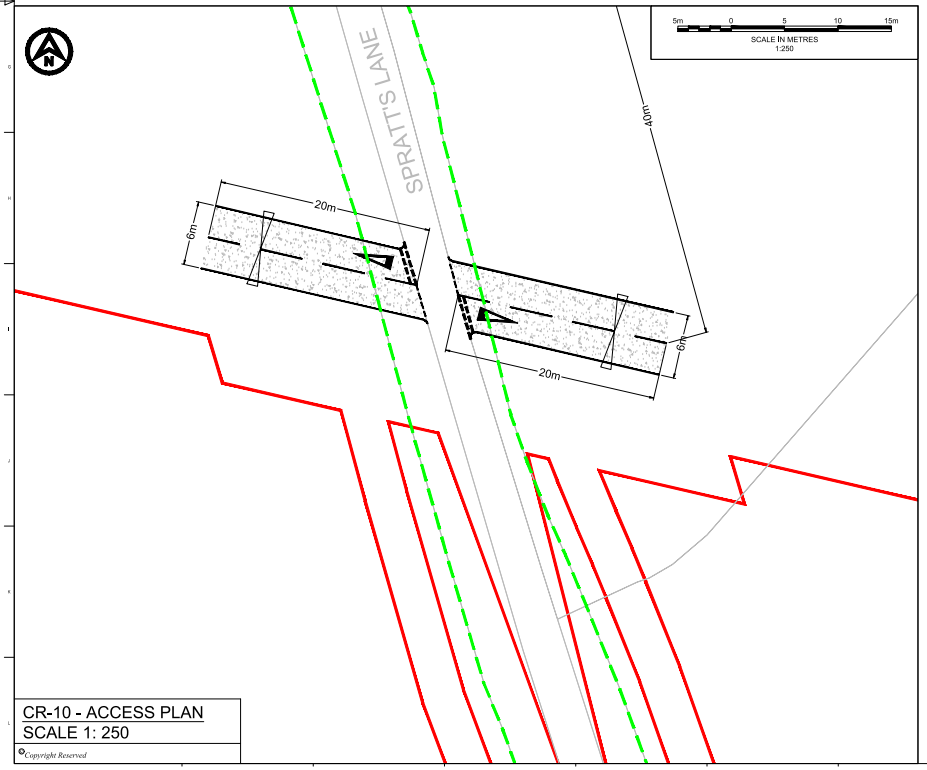
DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0017	P02
VE DOCUMENT NUMBER	REVISION
-	-
RWE ECODOC NUMBER	SHEET No / REVISION
-	1_OF_1 / -



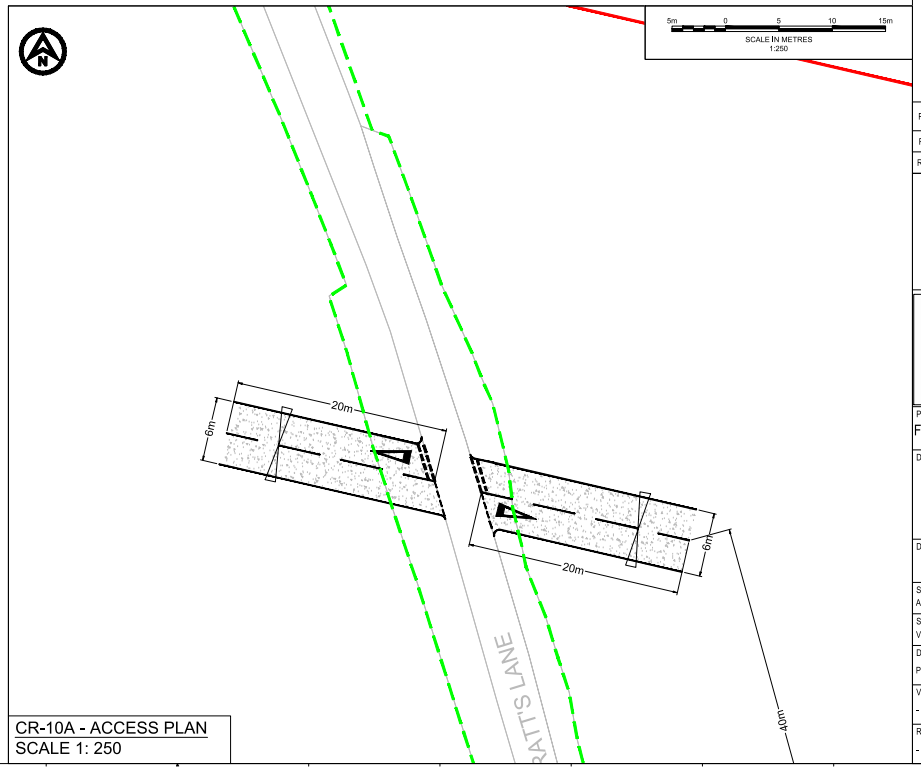
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500

TABLE 1 - VISIBILITY

CR-10 & CR-10A	Visibility North	Visibility South
85% of Recorded Speeds (mph) (85RS)	30 (See note 6)	
Required Y-distance SSD for 85RS (m) (MfS)	43	
Is Required Y-distance SSD achievable?	Yes	Yes



CR-10 - ACCESS PLAN
SCALE 1: 250



CR-10A - ACCESS PLAN
SCALE 1: 250

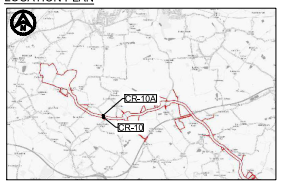
DO NOT SCALE FROM THIS DRAWING

NOTES
1. Do not scale from this drawing. all dimensions are in metres unless noted otherwise.
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarentee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
6. Reduced speed limit and Manual for Streets (MfS) visibility splays have been taken into account considering the geometry of the existing road.

KEY

- EXISTING ARRANGEMENT
- ONSHORE RED LINE BOUNDARY
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P02	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm

Royal HaskoningDHV
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Westpoint, Peterborough Business Park, Lynch Wood, Peterborough PE2 6FZ
Tel +44(0)1502 565656
www.royalhaskoningdhv.com

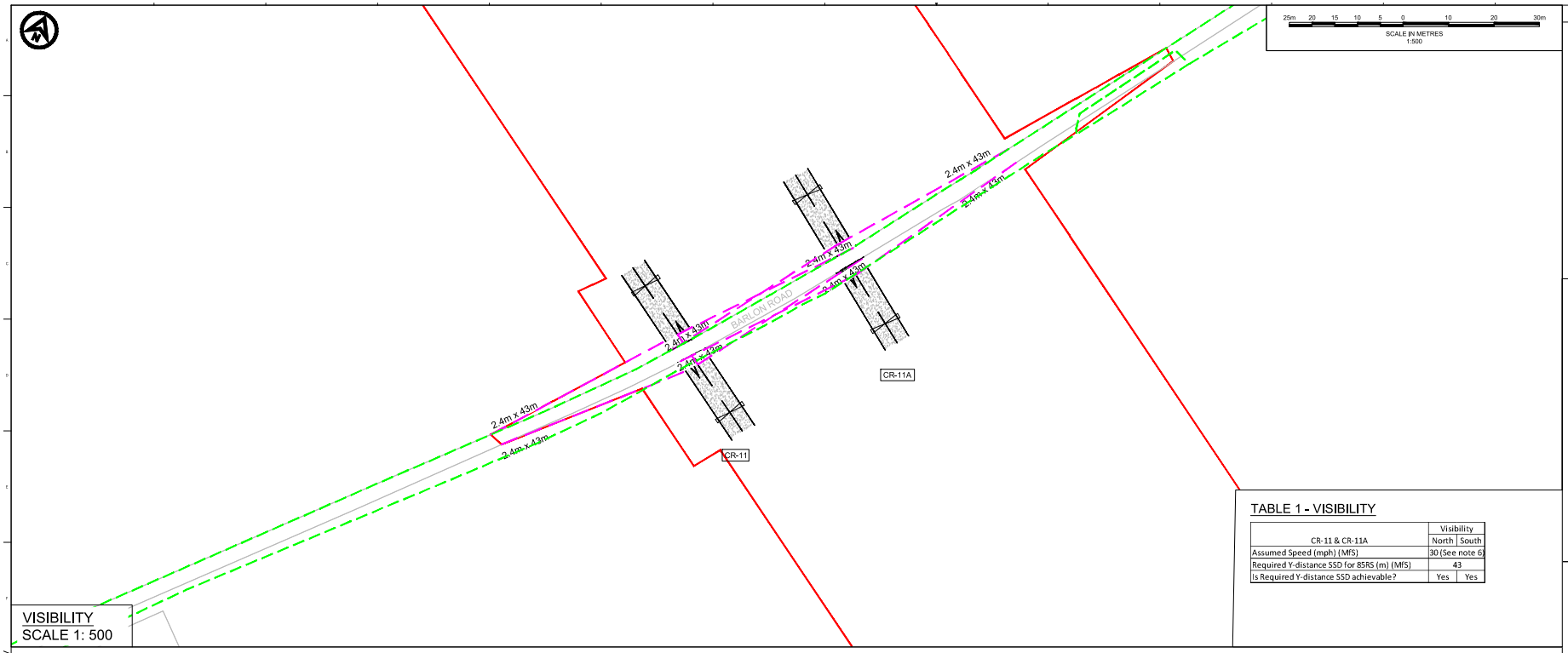
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
CR-10 & CR-10A - SPRATT'S LANE GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

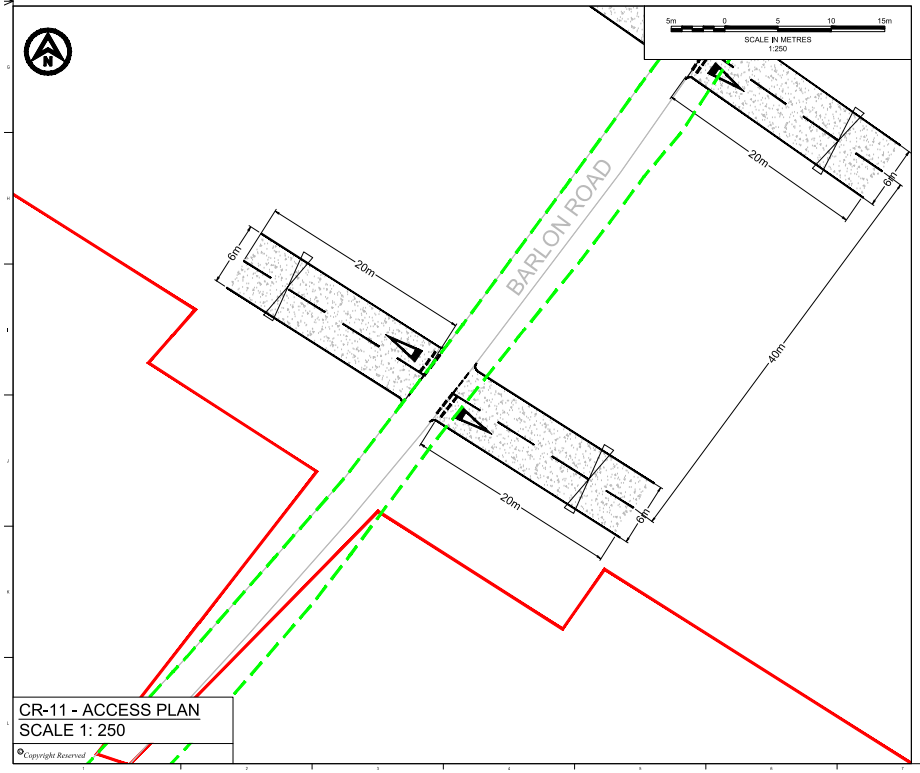
DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0018	P02
VE DOCUMENT NUMBER	REVISION
-	-
RWE ECODOC NUMBER	SHEET No / REVISION
-	1_OF_1 / -



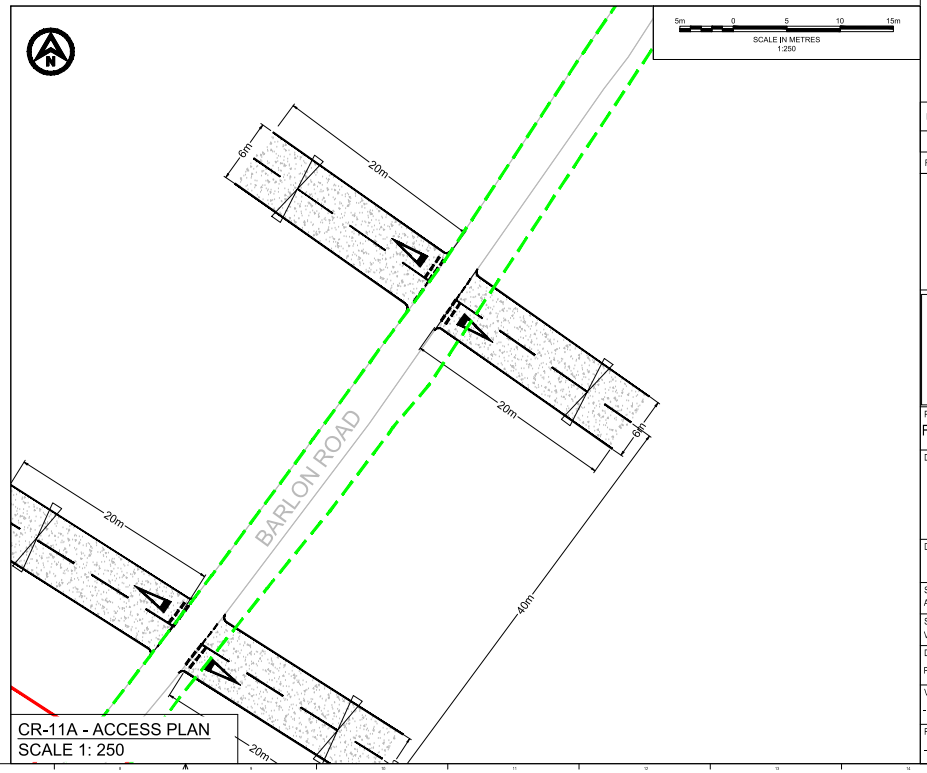
VISIBILITY
SCALE 1: 500

TABLE 1 - VISIBILITY

CR-11 & CR-11A	Visibility	
	North	South
Assumed Speed (mph) (MfS)	30 (See note 6)	
Required Y-distance SSD for 85RS (m) (MfS)	43	
Is Required Y-distance SSD achievable?	Yes	Yes



CR-11 - ACCESS PLAN
SCALE 1: 250



CR-11A - ACCESS PLAN
SCALE 1: 250

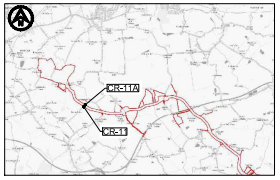
DO NOT SCALE FROM THIS DRAWING

NOTES
1. Do not scale from this drawing. all dimensions are in metres unless noted otherwise.
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarentee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
6. Reduced speed limit and Manual for Streets (MfS) visibility splays have been taken into account considering the geometry of the existing road.

KEY

- EXISTING ARRANGEMENT
- ONSHORE RED LINE BOUNDARY
- PROPOSED GATE
- PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
- VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
- FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
- HIGHWAY BOUNDARY

LOCATION PLAN



REV	DATE	DESCRIPTION	BY	CHK	APP
P02	02/02/2024	ORDER LIMIT AND ROAD SAFETY AUDIT UPDATES	CB	SKT	SKT
P01	07/08/2023	FIRST ISSUE	AA	SKT	SKT

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Tel +44(0)1932 560566
www.royalhaskoningdhv.com

PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS

DRAWING TITLE
CR-11 & CR-11A - BARLON ROAD
GENERAL ARRANGEMENT

DRAWING STATUS
PLANNING

SHEET SIZE	DESIGNED	DRAWN	CHECKED	APPROVED
A1	AA	AA	SKT	SKT
SHEET SCALE	DATE	DATE	DATE	DATE
VARIES	07/08/2023	07/08/2023	07/08/2023	07/08/2023

DRAWING NUMBER	REVISION
PB9244-RHD-ZZ-ZZ-DR-R-0015	P02
VE DOCUMENT NUMBER	REVISION
-	-
RWE ECODOC NUMBER / SHEET No	REVISION
- / 1_OF_1	-

Appendix R Construction Accesses and Haul Road Crossings – Stage 1 RSA

Volume 6, Part 6, Annex 8.1 Transport Assessment (Onshore)

Five Estuaries Offshore Wind Farm

Five Estuaries Wind Farm Ltd

SLR Project No.: 404.V05356.00010

23 September 2024

Stage 1 Road Safety Audit

Ardleigh Road / Bentley Road, Five Estuaries Wind Farm

RWE

Prepared by:

SLR Consulting Limited

Ground Floor Helmont House , Churchill Way, Cardiff,
CF10 2HE

SLR Project No.: 425.002196.00001

Client Reference No: XXXX

27 November 2023

Revision: 01

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
01	27 November 2023	Sasha Respini	Alastair Pike	Alastair Pike
	Click to enter a date.			

Basis of Report

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Table of Contents

Appendices

Acronyms and Abbreviations

RSA	Road Safety Audit
DMRB	Design Manual for Roads and Bridges
MfS	Manual for Streets
PIC	Personal Injury Collisions
DfS	Departures from Standards
SPA	Swept Path Analysis

1.0 Introduction

1.1 This report results from a Stage 1 Road Safety Audit carried out on Monday 27th November 2023. The RSA was carried out on behalf of RWE. The Overseeing Organisation for this Stage 1 is Essex County Council.

1.2 An Audit Brief was prepared by Daniel Moran of SLR Consulting Ltd on 13th September 2023. This Audit Brief was formally accepted by the Audit Team on the same date.

1.3 This Road Safety Audit team was as follows:

Sasha Respini, BSc (Hons), MSc, MCIHT, MSoRSA
Audit Team Leader
Principal Transport Planner
SLR Consulting Ltd

ALASTAIR PIKE, MICE, MCIHT, MSoRSA, HE Approved Cert. Comp.
Audit Team Member
Head of Road Safety
SLR Consulting Ltd

1.4 A site visit was undertaken by the Audit Team on Thursday 09th November 2023, between the hours of 13:00 and 14:30. The weather at the time of the visit was overcast and the carriageway surface was generally dry. Vehicular traffic levels were considered to be low. There were no pedestrian and no cyclist movements observed during this time.

1.5 Site location plans can be found at **Appendix A** of this report.

1.6 The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges (DMRB) Standard, GG119 Road Safety Audit.

1.7 The Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem the Audit Team may, on occasion, have referred to a design standard without touching on technical audit.

1.8 A table of documents submitted for this Stage 1 RSA can be found in **Appendix B**.

1.9 The scheme subject to Stage 1 RSA for both Ardleigh Road and Bentley Road comprises a construction access junction and haul road crossings associated with the installation of an export cable to carry power from a proposed offshore windfarm located off the coast of Essex. This access point and haul road are located on Ardleigh Road, Little Bentley and will be required for a period of approximately 18 months.

1.10 Submitted design drawings have been annotated to show the locations of any problems identified during this Stage 1 RSA. These plans can be found at **Appendix C**.

1.11 Whilst recommendations have been made within this report, there may be equally satisfactory alternatives. The Audit Team will be pleased to consider alternatives if required.

Departures from Standards

1.12 The Audit Team were not informed of any Departure from Standards (DfS) associated with the design proposals.

2.0 Matters arising from this Stage 1 RSA

004943785-01-MOT - Co-located Substations Early Design – Permanent and Temporary Access Junction with Ardleigh Road

2.1 Problem.

Location: Site access.

Summary: Overhead cables may lead to damage to infrastructure, vehicles and occupants.

Onsite observations noted that the presence of overhead cables that cross Ardleigh Road in various locations in the vicinity of the proposed development. The vertical alignment of proposed HGV access movements may lead to damage to infrastructure or damage to vehicles and injury to occupants.

Recommendation:

It is recommended that the vertical assessment is carried out for the appropriate vehicle types to ensure no conflict remains.

2.2 Problem.

Location: Site access.

Summary: Westbound HGV egress does not allow for two way working for large vehicles potentially leading to shunt or head on type collisions.

The proposed access swept path analysis shows a vehicle both egressing and accessing the proposed junction from the west. This location does not support the two-way movements of HGV's and this movement may in turn lead to head on or shunt type collisions between vehicles.

Recommendation:

It is recommended that all HGV access should be controlled such that opposing vehicles meet to the east of the access junction.

2.3 Problem.

Location: Site haul road.

Summary: There is no tolerance for HGVs when turning into / out of the site access which may lead to loss of control type collisions.

The vehicle tracking demonstrates no additional tolerance in surfaced width for HGVs at the site access and along the haul road track. This arrangement does not allow any room for manoeuvre along the track and relies on a perfect HGV turn each time. This proposed arrangement may lead to loss of control type collisions.

Recommendation:

It is recommended that the proposed haul road is widened to allow more width for large construction vehicles.

104560-MMD-00-XX-DR-CE-1032-1

2.4 Problem.

Location: Site access.

Summary: At a 9m setback, existing trees may obscure the visibility splay potentially leading to side swipe type collisions.

Onsite observations noted that the presence of existing vegetation may constitute an obstruction to the junction visibility. Obstruction to visibility splays may lead to injudicious vehicle movements at the proposed junction leading to side swipe collisions between vehicles.

Recommendation:

It is recommended that the trees be cut back and maintained as such that it does not pose an obstruction to the visibility splays.

2.5 Problem.

Location: Site access.

Summary: The position of the gate could cause rear end shunts.

The position of the proposed gate is set back 18m and does not allow the largest vehicle (25m) to fully clear the main carriageway when waiting. There is no detail provided that shows the proposed operation of the gate features. Should they be closed for any reason their proposed location could leave HGVs overhanging the public highway which may result in shunt / side swipe type collisions.

Recommendation:

It is recommended that the gates are relocated further back into the site such that if a gate is closed for whatever reason, an HGV can still clear the public highway before stopping.

2.6 Problem.

Location: Site haul road.

Summary: There is no tolerance for HGVs when turning into / out of the site access which may lead to loss of control type collisions.

The vehicle tracking demonstrates no additional tolerance in surfaced width for HGVs at the site access and along the haul road track. This arrangement does not allow any room for manoeuvre along the track and relies on a perfect HGV turn each time. This proposed arrangement may lead to loss of control type collisions.

Recommendation:

It is recommended that the proposed haul road is widened to allow more width for large construction vehicles.

2.7 Problem.

Location: Internal site.

Summary: No turning area is provided to allow vehicles to turn and egress the site in a forward gear, may lead to side swipe type collisions.

It is not clear from the supplied drawings whether a construction compound, or similar, will be provided on the site to allow for vehicles to turn within the site, this could compel drivers to reverse from the site onto the public highway which could lead to obscured visibility and side swipe type collisions.

Recommendation:

It is recommended that a turning area for large construction vehicles is provided within the site boundary during the construction works to ensure vehicles can access and egress the site in a forward gear.

104560-MMD-00-XX-DR-CE-1032-2

2.8 Problem.

Location: Proposed site access.

Summary: The level difference between the carriageway and site could result in loss of control or side swipe type collisions.

Onsite observations found that there was a difference in levels between the existing carriageway and the new access. An excessive gradient may create difficulty for large construction vehicles wishing to access Lodge Lane and may in turn lead to a lack of surface friction and slow egress movements potentially creating shunt / side swipe type collisions between egressing construction vehicles and vehicles travelling on Bentley Road.

Recommendation:

It is recommended that the existing gradient be amended to an appropriate level for the restart movements of large vehicles accessing Bentley Road from the proposed site.

Appendix A Site Location Plans

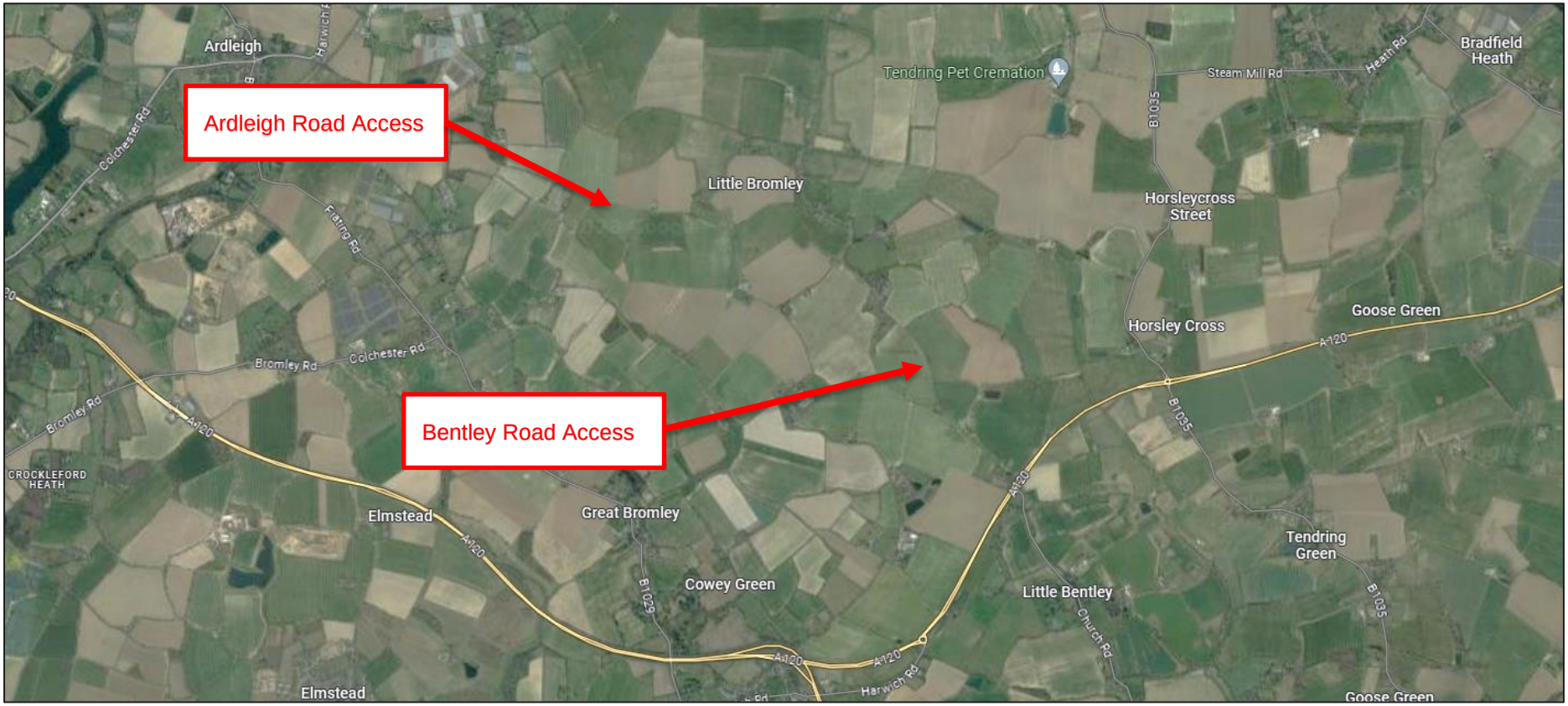
Stage 1 Road Safety Audit

Ardleigh Road / Bentley Road, Five Estuaries Wind Farm

RWE

SLR Project No.: 425.002196.00001

27 November 2023


Ardleigh Road Access
Bentley Road Access
Ardleigh
Tendring Pet Cremation
Steam Mill Rd
Heath Rd
Bradfield Heath
B1035
Colchester Rd
Little Bromley
Horsleycross Street
Frating Rd
Horsley Cross
Goose Green
A120
Bromley Rd
Colchester Rd
Bromley Rd
CROCKLEFORD HEATH
Elmstead
Great Bromley
B1029
Cowey Green
Little Bentley
Church Rd
Tendring Green
Harwich Rd
Elmstead
Goose Green

Appendix B Submitted Documents

Stage 1 Road Safety Audit

Ardleigh Road / Bentley Road, Five Estuaries Wind Farm

RWE

SLR Project No.: 425.002196.00001

27 November 2023

Submitted Documents

Document	Document Title
Design Drawings	104560-MMD-00-XX-DR-CE-1032-1 004943785-01-MOT - Co-located Substations Early Design – Permanent and Temporary Access Junction with Ardleigh Road 104560-MMD-00-XX-DR-CE-1032-1 104560-MMD-00-XX-DR-CE-1032-2

Appendix C Problem Location Plans

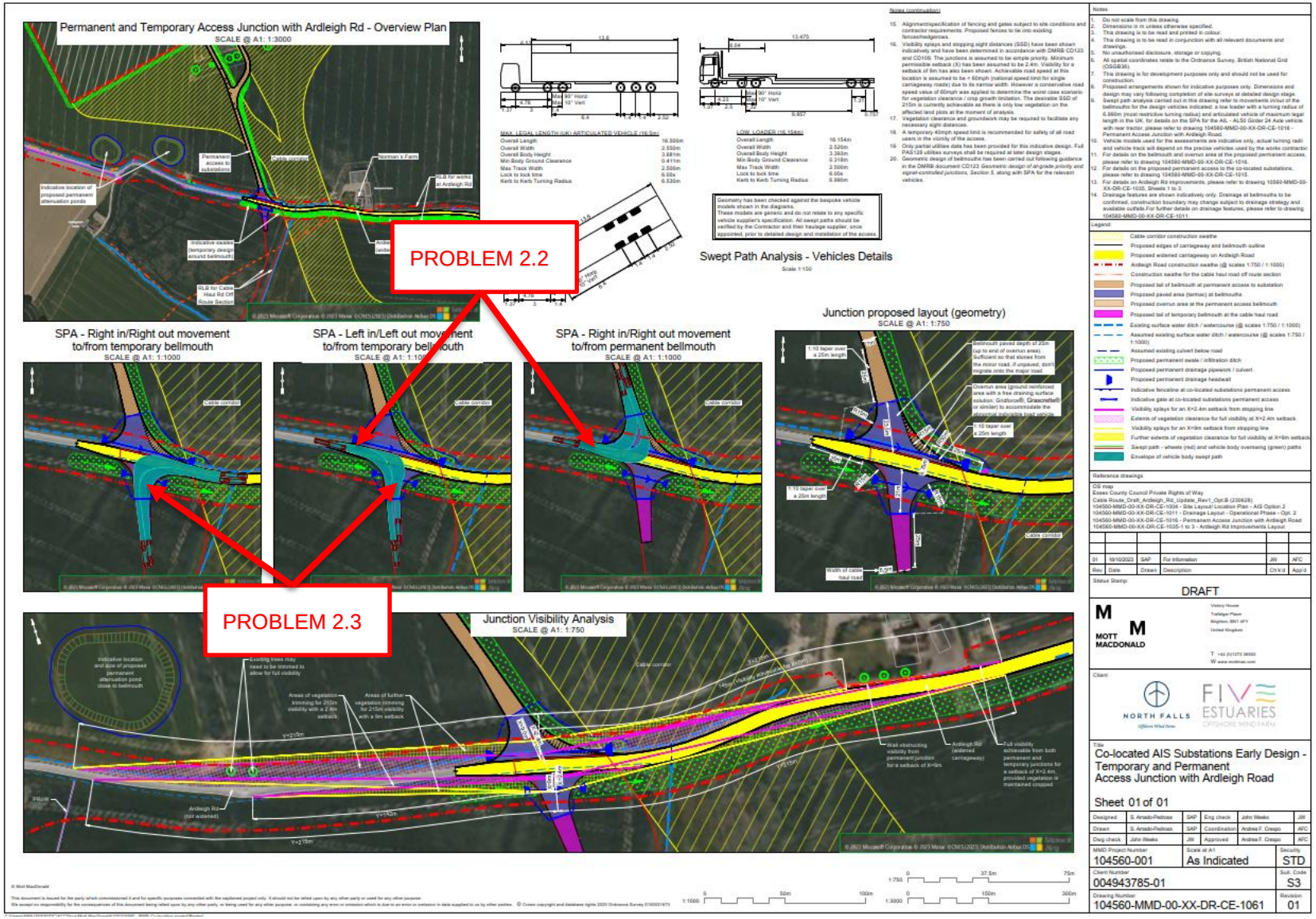
Stage 1 Road Safety Audit

Ardleigh Road / Bentley Road, Five Estuaries Wind Farm

RWE

SLR Project No.: 425.002196.00001

27 November 2023


Permanent and Temporary Access Junction with Ardleigh Rd - Overview Plan
SCALE @ A1: 1:3000
PROBLEM 2.2
Swept Path Analysis - Vehicles Details
SPA - Right in/Right out movement to/from temporary bellmouth
SCALE @ A1: 1:1000
SPA - Left in/Left out movement to/from temporary bellmouth
SCALE @ A1: 1:1000
SPA - Right in/Right out movement to/from permanent bellmouth
SCALE @ A1: 1:1000
Junction proposed layout (geometry)
SCALE @ A1: 1:750
PROBLEM 2.3
Junction Visibility Analysis
SCALE @ A1: 1:750
DRAFT
MOTT MACDONALD
NORTH FALLS
FIVE ESTUARIES
Co-located AIS Substations Early Design - Temporary and Permanent Access Junction with Ardleigh Road
Sheet 01 of 01
104560-001
As Indicated
STD
004943785-01
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104560-MMD-00-XX-DR-CE-1061
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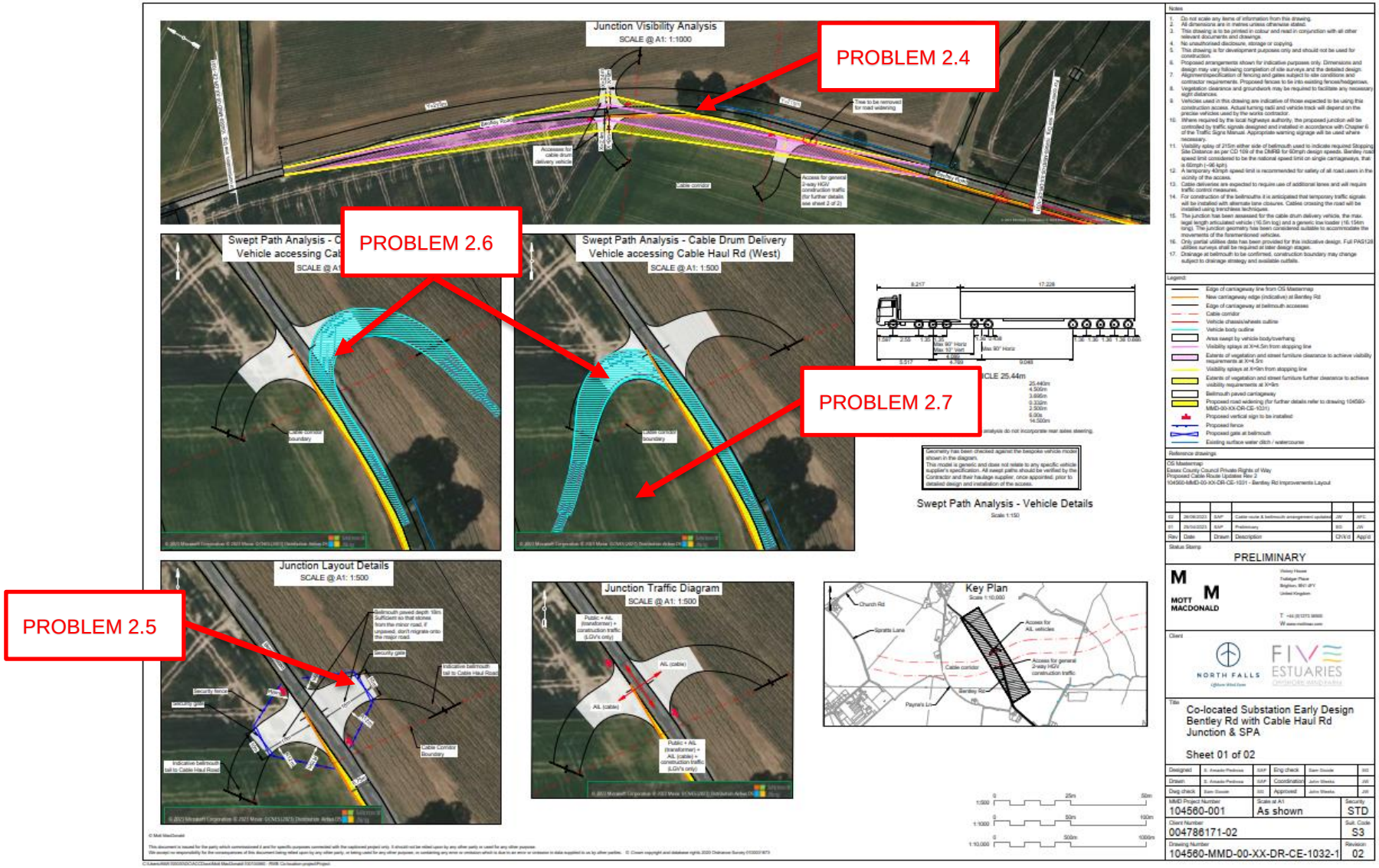
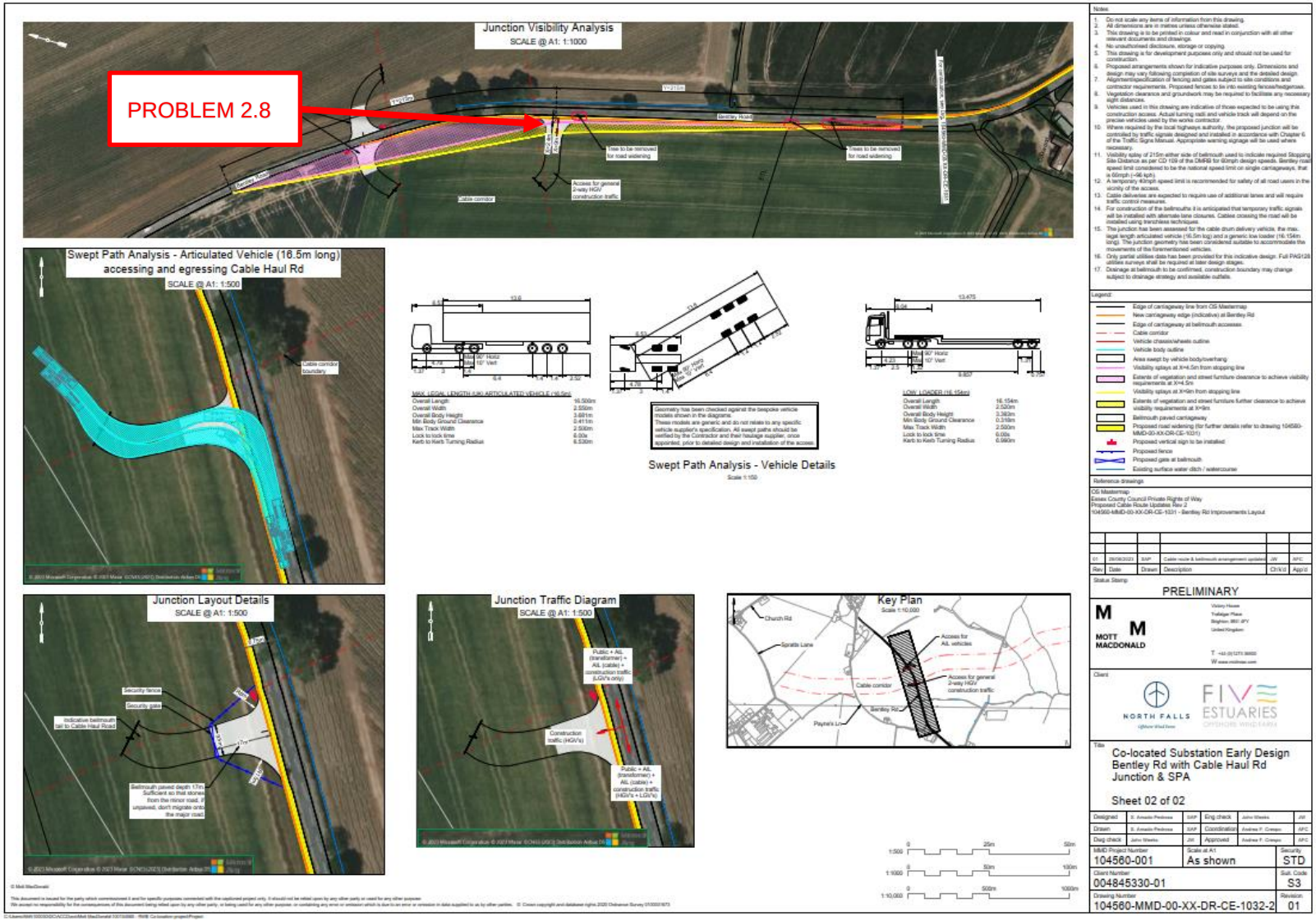

PROBLEM 2.4
PROBLEM 2.6
PROBLEM 2.7
PROBLEM 2.5
Junction Visibility Analysis
SCALE @ A1: 1:1000
Swept Path Analysis - Cable Drum Delivery Vehicle accessing Cable Haul Rd (West)
SCALE @ A1: 1:500
Swept Path Analysis - Vehicle Details
Junction Layout Details
SCALE @ A1: 1:500
Junction Traffic Diagram
SCALE @ A1: 1:500
Key Plan
PRELIMINARY
Co-located Substation Early Design
Bentley Rd with Cable Haul Rd
Junction & SPA
Sheet 01 of 02
104560-001
As shown
STD
004786171-02
S3
104560-MMD-00-XX-DR-CE-1032-1
02


PROBLEM 2.8
Junction Visibility Analysis
SCALE @ A1: 1:1000
Swept Path Analysis - Articulated Vehicle (16.5m long) accessing and egressing Cable Haul Rd
SCALE @ A1: 1:500
Swept Path Analysis - Vehicle Details
Junction Layout Details
SCALE @ A1: 1:500
Junction Traffic Diagram
SCALE @ A1: 1:500
Key Plan
PRELIMINARY
Co-located Substation Early Design
Bentley Rd with Cable Haul Rd
Junction & SPA
Sheet 02 of 02
104560-001
As shown
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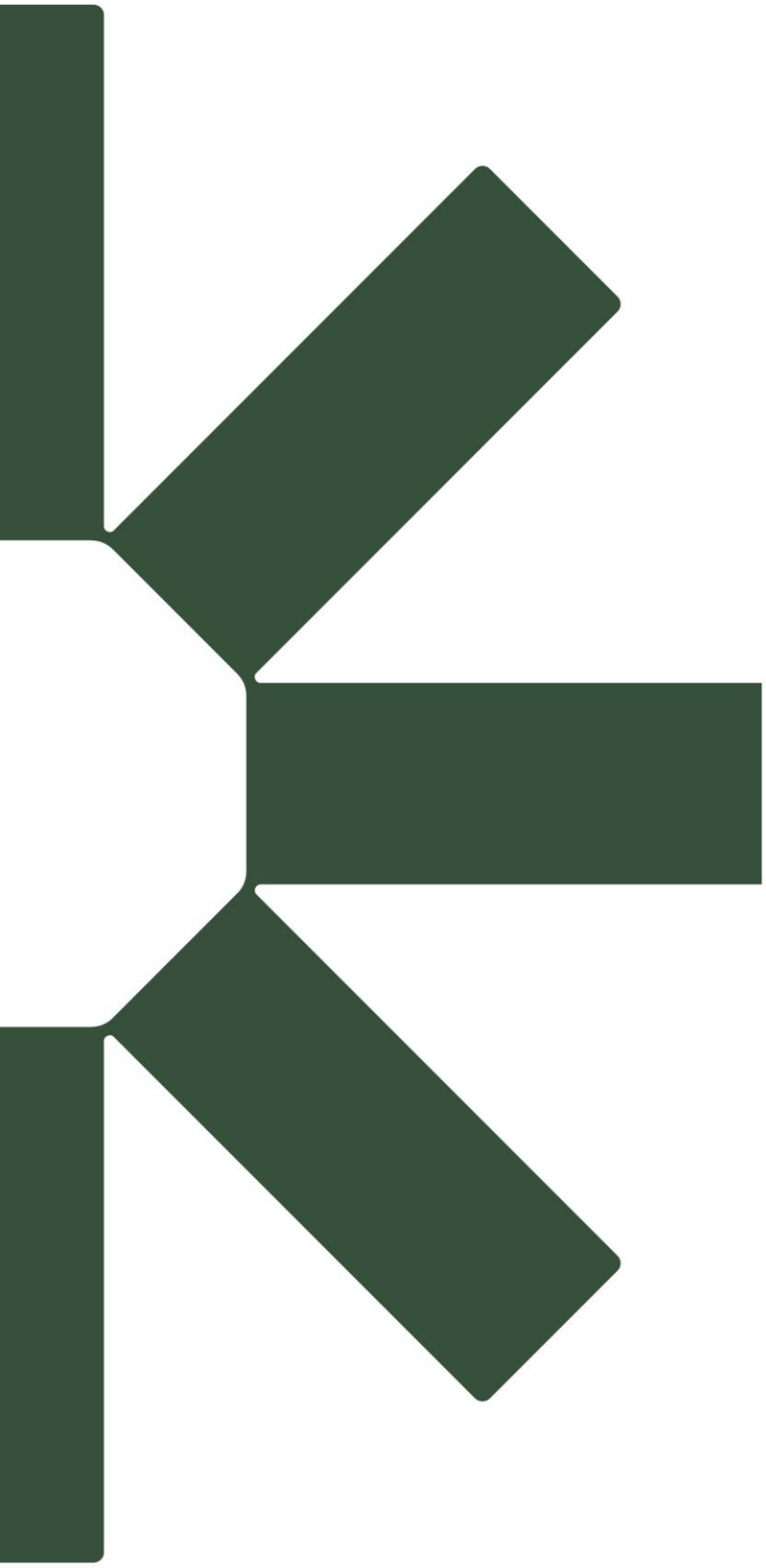
004845330-01
S3
104560-MMD-00-XX-DR-CE-1032-2
01



Making Sustainability Happen

Stage 1 Road Safety Audit

Five Estuaries / North Falls Wind Farm

RWE

Prepared by:

SLR Consulting Limited

Ground Floor Helmont House , Churchill Way, Cardiff,
CF10 2HE

SLR Project No.: 237699

Client Reference No: XXXX

7 November 2023

Revision: 05

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
01	17 October 2023	Alastair Pike	Sasha Boland	Alastair Pike
02	23 October 2023	Alastair Pike	Sasha Boland	Alastair Pike
03	25 October 2023	Alastair Pike	Sasha Boland	Alastair Pike
04	27 October 2023	Alastair Pike	Sasha Boland	Alastair Pike
05	7 November 2023	Alastair Pike	Sasha Boland	Alastair Pike

Basis of Report

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MfS	Manual for Streets
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SPA	Swept Path Analysis

1.0 Introduction

1.1 This report results from a Stage 1 Road Safety Audit carried out on Tuesday 17th October 2023. The RSA was carried out on behalf of RWE. The Overseeing Organisation for this Stage 1 is Essex County Council.

1.2 An Audit Brief was prepared by Daniel Moran of SLR Consulting Ltd on 13th September 2023. This Audit Brief was formally accepted by the Audit Team on the same date.

1.3 This Road Safety Audit team was as follows:

ALASTAIR PIKE, MICE, MCIHT, MSoRSA, HE Approved Cert. Comp.
Audit Team Leader
Head of Road Safety
SLR Consulting Ltd

Sasha Respini, BSc (Hons), MSc, MCIHT, MSoRSA
Audit Team Member
Principal Transport Planner
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1.4 A site visits were undertaken by the Audit Team on Wednesday 20th September 2023, between the hours of 12:00pm and 16:00pm. The weather at the time of the visit was overcast with light rain and the carriageway surface was generally dry. Vehicular traffic levels were considered to be low. There were no pedestrian and no cyclist movements observed during this time.

1.5 Site location plans can be found at **Appendix A** of this report.

1.6 The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges (DMRB) Standard, GG119 Road Safety Audit.

1.7 The Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem the Audit Team may, on occasion, have referred to a design standard without touching on technical audit.

1.8 A table of documents submitted for this Stage 1 RSA can be found in **Appendix B**.

1.9 The scheme subject to Stage 1 RSA comprises a number of construction access junctions and haul road crossings associated with the installation of an export cable to carry power from a proposed offshore windfarm located off the coast of Essex. These access points and haul roads will be required for a period of approximately 18 months. Access have been constructed to both DMRB and MfS design standards.

1.10 Submitted design drawings have been annotated to show the locations of any problems identified during this Stage 1 RSA. These plans can be found at **Appendix C**.

1.11 Whilst recommendations have been made within this report, there may be equally satisfactory alternatives. The Audit Team will be pleased to consider alternatives if required.

Departures from Standards

1.12 The Audit Team were not informed of any Departure from Standards (DfS) associated with the design proposals.

2.0 Matters arising from this Stage 1 RSA

Location AC1 - B1032 - General Arrangement

2.1 No road safety problems.

Location AC1 - B1032 - Swept Path Analysis

2.2 No road safety problems.

Location AC2 - B1032 - General Arrangement

2.3 No road safety problems.

Location AC2 - B1032 - Swept Path Analysis

2.4 No road safety problems.

Location AC3 – B1033 / Thorpe Road - General Arrangement

2.5 Problem.

Location: B1033 Thorpe Road access arrangements.

Summary: Drainage ditches either side of the carriageway may lead to loss of control type collisions.

Onsite observations found that there were drainage ditches running alongside the carriageway in the proposed location of the site access junctions. These ditches are not shown on design drawings to be culverted. This arrangement may lead to vehicles wishing to access / egress the site dropping a wheel into the existing ditches potentially leading to loss of control type collisions.

Recommendation:

It is recommended that any access point which crossed an existing drainage facility is appropriately culverted to ensure HGV's can access the site without loss of control issues.

Location AC3 – B1033 / Thorpe Road – Swept Path Analysis

2.6 No road safety problems.

Location AC4 – B1035 / Tendring Road - General Arrangement

2.7 Problem.

Location: B1035 Tendring Road access arrangement.

Summary: Drainage ditches either side of the carriageway may lead to loss of control type collisions.

Onsite observations found that there were drainage ditches running alongside the carriageway in the proposed location of the site access junctions. These ditches are not shown on design drawings to be culverted. This arrangement may lead to vehicles wishing to access / egress the site dropping a wheel into the existing ditches potentially leading to loss of control type collisions.

Recommendation:

It is recommended that any access point which crossed an existing drainage facility is appropriately culverted to ensure HGV's can access the site without loss of control issues.

2.8 Problem.

Location: B1035 Tendring Road access arrangement.

Summary: The level difference between the carriageway and site could result in loss of control or side swipe type collisions.

Onsite observations found that there was a difference in levels between the existing carriageway and the new access. The steep gradient may create difficulty for large construction vehicles wishing to access Tendring Road and may in turn lead to a lack of surface friction and slow egress movements potentially creating shunt / side swipe type collisions between egressing construction vehicles and vehicles travelling on Tendring Road.

Recommendation:

It is recommended that the existing gradient be amended to an appropriate level for the restart movements of large vehicles accessing Tendring Road from the proposed site.

Location AC4 – B1035 / Tendring Road – Swept Path Analysis

2.9 No road safety problems.

Location AC5 – B1035 / Thorpe Road - General Arrangement

2.10 Problem.

Location: Thorpe Road - both sides of the proposed access.

Summary: Signage obscured by vegetation leading to shunt type collisions or collisions between vehicles and signage installations

Onsite observations found that there was limited room to mount signage posts on the edge of the carriageway without being obscured by existing vegetation. Obstruction to the signage may lead to injudicious vehicles movements at the transition point potentially leading to side swipe or shunt type collisions between vehicles.

Recommendation.

It is recommended that the vegetation is cut back and maintained and that there is appropriate clearance to traffic such that the signage does not pose an obstruction to vehicles.

2.11 Problem.

Location: Proposed access.

Summary: Drainage ditches either side of the carriageway may lead to loss of control type collisions.

Onsite observations found that there were drainage ditches running alongside the carriageway in the proposed location of the site access junctions. These ditches are not shown on design drawings to be culverted. This arrangement may lead to vehicles wishing to access / egress the site dropping a wheel into the existing ditches potentially leading to loss of control type collisions.

Recommendation:

It is recommended that any access point which crossed an existing drainage facility is appropriately culverted to ensure HGV's can access the site without loss of control issues.

2.12 Problem.

Location: Proposed access.

Summary: Existing vegetation may obscure visibility splay to the west and east potentially leading to side swipe type collisions.

Onsite observations noted that the presence of existing vegetation may constitute an obstruction to the junction visibility. Design drawings show the visibility splay crossing the carriageway but does not account for the existing vegetation that overhangs at the existing field access point. Obstruction to junction visibility splays may lead to injudicious vehicles movements at the proposed junction potentially leading to side swipe type collisions between vehicles.

Recommendation:

It is recommended that the vegetation to the west and east of the site access junction be cut back and maintained such that it does not pose an obstruction to visibility splays.

Location AC5 – B1035 / Thorpe Road – Swept Path Analysis

2.13 No road safety problems.

Location AC7 – B1035 - General Arrangement

2.14 Problem.

Location: Proposed site access.

Summary: Public Right of Way (PRoW) route following the access route could lead to side swipe type collisions.

An existing PRoW was signposted at the site access. The presence of this route could create a potential conflict between pedestrians and vehicles. Vulnerable road users may be at risk of being struck by turning vehicles or may inadvertently obstruct the path of the vehicles, increasing the likelihood of collisions due to the difference in speeds between vehicles and pedestrians.

Recommendation:

It is recommended to relocate the access or divert the PRoW to avoid potential collisions between vehicles and pedestrians.

Location AC7 – B1035 – Swept Path Analysis

2.15 No road safety problems.

Location AC8 – B1035 - General Arrangement

2.16 No road safety problems.

Location AC8 – B1035 – Swept Path Analysis

2.17 No road safety problems.

Location CR1 – Little Clacton Road - General Arrangement

2.18 Problem.

Location: Proposed southern access junction.

Summary: The position of the gate could cause rear end shunts.

The position of the proposed gate does not allow a vehicle to fully clear the main carriageway when waiting. There is no detail provided that shows the proposed operation of the gate features. Should they be closed for any reason their proposed locations may leave HGV's overhanging the public highway which may result in shunt / side swipe type collisions between vehicles.

Recommendation:

It is recommended that the gates are relocated further back into the site such that if a gate is closed for any reason, an HGV can still clear the public highway before stopping.

2.19 Problem.

Location: Proposed northern access junction.

Summary: The position of the gate could cause rear end shunts.

The position of the proposed gate does not allow a vehicle to fully clear the main carriageway when waiting. There is no detail provided that shows the proposed operation of the gate features. Should they be closed for any reason their proposed locations may leave HGV's overhanging the public highway which may result in shunt / side swipe type collisions between vehicles.

Recommendation:

It is recommended that the gates are relocated further back into the site such that if a gate is closed for any reason, an HGV can still clear the public highway before stopping.

2.20 Problem.

Location: Proposed access.

Summary: Drainage ditches either side of the carriageway may lead to loss of control type collisions.

Onsite observations found that there were drainage ditches running alongside the carriageway in the proposed location of the site access junctions. These ditches are not shown on design drawings to be culverted. This arrangement may lead to vehicles wishing to access / egress the site dropping a wheel into the existing ditches potentially leading to loss of control type collisions.

Recommendation:

It is recommended that any access point which crossed an existing drainage facility is appropriately culverted to ensure HGV's can access the site without loss of control issues.

Location CR3 – B1034 /Sneating Hall Lane - General Arrangement

2.21 Problem.

Location: General.

Summary: Low overhead cables could lead to damage to vehicles.

Onsite observations found that there were existing low hanging overhead cables parallel to the carriageway in the position of the proposed access. This could cause damage to vehicles and their occupants or could potentially cause congestion as vehicles manoeuvred around them, leading to side swipe or rear end shunt type collisions.

Recommendation:

It is recommended that a safe clearance height is provided and maintained, especially within the vicinity of the proposed site access.

2.22 Problem.

Location: B1034 / Sneating Hall Lane proposed access.

Summary: No information provided with regards to control of junctions and gates may lead to vehicles being left straddling the public highway at risk of shunt / side swipe collisions between vehicles.

Vehicles travelling along the B1034 / Sneating Hall Lane may not be aware of crossing HGV movements. There are no details provided which might indicate the operation of gates and therefore no certainty that vehicles may cross the public highway unassisted. These arrangements may lead to HGV's straddling the public highway with approaching vehicles unaware of this potential hazard which may in turn lead to side swipe / shunt type collisions.

Recommendation:

It is recommended that a control measure is introduced to ensure gates are open for crossing vehicles and that approaching vehicles on the public highway are given advanced warning of the potential for HGV traffic to be crossing the public highway.

2.23 Problem.

Location: Proposed access.

Summary: Drainage ditches either side of the carriageway may lead to loss of control type collisions.

Onsite observations found that there were drainage ditches running alongside the carriageway in the proposed location of the site access junctions. These ditches are not shown on design drawings to be culverted. This arrangement may lead to vehicles wishing to access / egress the site dropping a wheel into the existing ditches potentially leading to loss of control type collisions.

Recommendation:

It is recommended that any access point which crossed an existing drainage facility is appropriately culverted to ensure HGV's can access the site without loss of control issues.

Location CR4 – Damant's Farm Lane - General Arrangement

2.24 Problem.

Location: Proposed site access.

Summary: No information provided with regards to control of junctions and gates may lead to vehicles being left straddling the public highway at risk of shunt / side swipe collisions between vehicles.

Vehicles travelling along the Damant's Farm Lane may not be aware of crossing HGV movements. There are no details provided which might indicate the operation of gates and therefore no certainty that vehicles may cross the public highway unassisted. These arrangements may lead to HGV's straddling the public highway with approaching vehicles unaware of this potential hazard which may in turn lead to side swipe / shunt type collisions.

Recommendation:

It is recommended that a control measure is introduced to ensure gates are open for crossing vehicles and that approaching vehicles on the public highway are given advanced warning of the potential for HGV traffic to be crossing the public highway.

Location CR5 – B1414 / Andermere Road - General Arrangement

2.25 Problem.

Location: Proposed site access.

Summary: Public Right of Way (PRoW) route following the access route could lead to side swipe type collisions.

An existing PRoW was signposted at the site access. The presence of this route could create a potential conflict between pedestrians / cyclists and vehicles. Vulnerable road users may be at risk of being struck by turning vehicles or may inadvertently obstruct the path of the vehicles, increasing the likelihood of collisions due to the difference in speeds between vehicles and pedestrians.

Recommendation:

It is recommended to relocate the access or divert the PRoW to avoid potential collisions between vehicles and pedestrians / cyclists.

2.26 Problem.

Location: Proposed site access.

Summary: The position of the gate could cause rear end shunts.

The position of the proposed gate does not allow a vehicle to fully clear the main carriageway when waiting. There is no detail provided that shows the proposed operation of the gate features. Should they be closed for any reason their proposed locations may leave HGV's overhanging the public highway which may result in shunt / side swipe type collisions between vehicles.

Recommendation:

It is recommended that the gates are relocated further back into the site such that if a gate is closed for any reason, an HGV can still clear the public highway before stopping.

2.27 Problem.

Location: Proposed site access.

Summary: No information provided with regards to control of junctions and gates may lead to vehicles being left straddling the public highway at risk of shunt / side swipe collisions between vehicles.

Vehicles travelling along the B1414 may not be aware of crossing HGV movements. There are no details provided which might indicate the operation of gates and therefore no certainty that vehicles may cross the public highway unassisted. These arrangements may lead to HGV's straddling the public highway with approaching vehicles unaware of this potential hazard which may in turn lead to side swipe / shunt type collisions.

Recommendation:

It is recommended that a control measure is introduced to ensure gates are open for crossing vehicles and that approaching vehicles on the public highway are given advanced warning of the potential for HGV traffic to be crossing the public highway.

Location CR6a – Golden Lane - General Arrangement – Traffic Signals

2.28 Problem.

Location: Proposed access.

Summary: The position of the gate could cause rear end shunts.

The position of the proposed gate does not allow a vehicle to fully clear the main carriageway when waiting. There is no detail provided that shows the proposed operation of the gate features. Should they be closed for any reason their proposed locations may leave HGV's overhanging the public highway which may result in shunt / side swipe type collisions between vehicles.

Recommendation:

It is recommended that the gates are relocated further back into the site such that if a gate is closed for any reason, an HGV can still clear the public highway before stopping.

Location CR6b – Golden Lane - General Arrangement – Priority

2.29 Problem.

Location: Golden Lane proposed access.

Summary: No information provided with regards to control of junctions and gates may lead to vehicles being left straddling the public highway at risk of shunt / side swipe collisions between vehicles.

Vehicles travelling along Golden Lane may not be aware of crossing HGV movements. There are no details provided which might indicate the operation of gates and therefore no certainty that vehicles may cross the public highway unassisted. These arrangements may lead to HGV's straddling the public highway with approaching vehicles unaware of this potential hazard which may in turn lead to side swipe / shunt type collisions.

Recommendation:

It is recommended that a control measure is introduced to ensure gates are open for crossing vehicles and that approaching vehicles on the public highway are given advanced warning of the potential for HGV traffic to be crossing the public highway.

2.30 Problem.

Location: Proposed site access.

Summary: The position of the proposed gate obstructs incoming construction vehicles when closed which may lead to shunt type collisions on Golden Lane.

A proposed gate is shown on each priority and it is unclear from the drawings whether a construction vehicle will be able to pull off the main carriageway and wait without causing an obstruction on Little Clacton Road. This arrangement may lead to shunt type collisions.

Recommendation:

It is recommended that the proposed gate is relocated to ensure that construction vehicles are able to leave Golden Lane unobstructed.

2.31 Problem.

Location: Golden Lane.

Summary: Signage obscured by vegetation leading to shunt type collisions or collisions between vehicles and signage installations

Onsite observations found that there was limited room to mount signage posts on the edge of the carriageway without being obscured by existing vegetation. Obstruction to the signage may lead to injudicious vehicles movements at the transition point potentially leading to side swipe or shunt type collisions between vehicles.

Recommendation.

It is recommended that the vegetation is cut back and maintained and that there is appropriate clearance to traffic such that the signage does not pose an obstruction to vehicles.

Location CR7 – Lodge Lane - General Arrangement

2.32 Problem.

Location: Proposed access.

Summary: No information provided with regards to control of junctions and gates may lead to vehicles being left straddling the public highway at risk of shunt / side swipe collisions between vehicles.

Vehicles travelling along Lodge Lane may not be aware of crossing HGV movements. There are no details provided which might indicate the operation of gates and therefore no certainty that vehicles may cross the public highway unassisted. These arrangements may lead to HGV's straddling the public highway with approaching vehicles unaware of this potential hazard which may in turn lead to side swipe / shunt type collisions.

Recommendation:

It is recommended that a control measure is introduced to ensure gates are open for crossing vehicles and that approaching vehicles on the public highway are given advanced warning of the potential for HGV traffic to be crossing the public highway.

2.33 Problem.

Location: Proposed site access.

Summary: The position of the proposed gate obstructs incoming construction vehicles when closed which may lead to shunt type collisions on Lodge Lane.

A proposed gate is shown on each priority and it is unclear from the drawings whether a construction vehicle will be able to pull off the main carriageway and wait without causing an obstruction on Lodge Lane. This arrangement may lead to shunt type collisions.

Recommendation:

It is recommended that the proposed gate is relocated to ensure that construction vehicles are able to leave Lodge Lane unobstructed.

2.34 Problem.

Location: Proposed site access.

Summary: The level difference between the carriageway and site could result in loss of control or side swipe type collisions.

Onsite observations found that there was a difference in levels between the existing carriageway and the new access. The steep gradient may create difficulty for large construction vehicles wishing to access Lodge Lane and may in turn lead to a lack of surface friction and slow egress movements potentially creating shunt / side swipe type collisions between egressing construction vehicles and vehicles travelling on Lodge Lane.

Recommendation:

It is recommended that the existing gradient be amended to an appropriate level for the restart movements of large vehicles accessing Lodge Lane from the proposed site.

2.35 Problem.

Location: Proposed site access.

Summary: Drainage ditches either side of the carriageway may lead to loss of control type collisions.

Onsite observations found that there were drainage ditches running alongside the carriageway in the proposed location of the site access junctions. These ditches are not shown on design drawings to be culverted. This arrangement may lead to vehicles wishing to access / egress the site dropping a wheel into the existing ditches potentially leading to loss of control type collisions.

Recommendation:

It is recommended that any access point which crossed an existing drainage facility is appropriately culverted to ensure HGV's can access the site without loss of control issues.

Location CR8 P1 – Stones Green Road - General Arrangement

2.36 Problem.

Location: Proposed site access.

Summary: No information provided with regards to control of junctions and gates may lead to vehicles being left straddling the public highway at risk of shunt / side swipe collisions between vehicles.

Vehicles travelling along Stones Green Road may not be aware of crossing HGV movements. There are no details provided which might indicate the operation of gates and therefore no certainty that vehicles may cross the public highway unassisted. These arrangements may lead to HGV's straddling the public highway with approaching vehicles unaware of this potential hazard which may in turn lead to side swipe / shunt type collisions.

Recommendation:

It is recommended that a control measure is introduced to ensure gates are open for crossing vehicles and that approaching vehicles on the public highway are given advanced warning of the potential for HGV traffic to be crossing the public highway.

2.37 Problem.

Location: Proposed site access.

Summary: Drainage ditches either side of the carriageway may lead to loss of control type collisions.

Onsite observations found that there were drainage ditches running alongside the carriageway in the proposed location of the site access junctions. These ditches are not shown on design drawings to be culverted. This arrangement may lead to vehicles wishing to access / egress the site dropping a wheel into the existing ditches potentially leading to loss of control type collisions.

Recommendation:

It is recommended that any access point which crossed an existing drainage facility is appropriately culverted to ensure HGV's can access the site without loss of control issues.

2.38 Problem.

Location: Proposed site access.

Summary: The position of the proposed gate obstructs incoming construction vehicles when closed which may lead to shunt type collisions on Stones Green Road.

A proposed gate is shown as it is unclear from the drawings whether a construction vehicle will be able to pull off the main carriageway and wait without causing an obstruction on Stones Green Road. This arrangement may lead to shunt type collisions.

Recommendation:

It is recommended that the proposed gate is relocated to ensure that construction vehicles are able to leave Stones Green Road unobstructed.

Location CR9 P1&P2 – Paynes Lane - General Arrangement

2.39 Problem.

Location: Proposed site access.

Summary: No information provided with regards to control of junctions and gates may lead to vehicles being left straddling the public highway at risk of shunt / side swipe collisions between vehicles.

Vehicles travelling along Paynes Lane may not be aware of crossing HGV movements. There are no details provided which might indicate the operation of gates and therefore no certainty that vehicles may cross the public highway unassisted. These arrangements may lead to HGV's straddling the public highway with approaching vehicles unaware of this potential hazard which may in turn lead to side swipe / shunt type collisions.

Recommendation:

It is recommended that a control measure is introduced to ensure gates are open for crossing vehicles and that approaching vehicles on the public highway are given advanced warning of the potential for HGV traffic to be crossing the public highway.

2.40 Problem.

Location: Proposed site access.

Summary: The position of the proposed gate obstructs incoming construction vehicles when closed which may lead to shunt type collisions on Paynes Lane.

A proposed gate is shown on each priority access as it is unclear from the drawings whether a construction vehicle will be able to pull off the main carriageway and wait without causing an obstruction on Paynes Lane. This arrangement may lead to shunt type collisions.

Recommendation:

It is recommended that the proposed gate is relocated to ensure that construction vehicles are able to leave Paynes Lane unobstructed.

Location CR10 P1&P2 – Spratt's Lane - General Arrangement

2.41 Problem.

Location: Proposed site access

Summary: Existing passing places could be displaced due to the proposals causing shunt type collisions.

The proposed site access is in the location of existing passing places on the carriageway and if these got displaced could lead to rear end shunt type collisions due to vehicles reversing or driving off the road to allow oncoming vehicles to pass.

Recommendation

It is recommended that the either the site access or passing places are relocated so there are appropriate places for vehicles to pass on Spratt's Lane.

2.42 Problem.

Location: Proposed site access.

Summary: No information provided with regards to control of junctions and gates may lead to vehicles being left straddling the public highway at risk of shunt / side swipe collisions between vehicles.

Vehicles travelling along Spratt's Lane may not be aware of crossing HGV movements. There are no details provided which might indicate the operation of gates and therefore no certainty that vehicles may cross the public highway unassisted. These arrangements may lead to HGV's straddling the public highway with approaching vehicles unaware of this potential hazard which may in turn lead to side swipe / shunt type collisions.

Recommendation:

It is recommended that a control measure is introduced to ensure gates are open for crossing vehicles and that approaching vehicles on the public highway are given advanced warning of the potential for HGV traffic to be crossing the public highway.

2.43 Problem.

Location: Proposed site access.

Summary: The position of the proposed gate obstructs incoming construction vehicles when closed which may lead to shunt type collisions on Spratt's Lane.

A proposed gate is shown on each priority access as it is unclear from the drawings whether a construction vehicle will be able to pull off the main carriageway and wait without causing an obstruction on Spratt's Lane. This arrangement may lead to shunt type collisions.

Recommendation:

It is recommended that the proposed gate is relocated to ensure that construction vehicles are able to leave Spratt's Lane unobstructed.

2.44 Problem.

Location: Proposed site access.

Summary: Drainage ditches either side of the carriageway may lead to loss of control type collisions.

Onsite observations found that there were drainage ditches running alongside the carriageway in the proposed location of the site access junctions. These ditches are not shown on design drawings to be culverted. This arrangement may lead to vehicles wishing to access / egress the site dropping a wheel into the existing ditches potentially leading to loss of control type collisions.

Recommendation:

It is recommended that any access point which crossed an existing drainage facility is appropriately culverted to ensure HGV's can access the site without loss of control issues.

Location CR11 P1&P2 – Barlon Road - General Arrangement

2.45 Problem.

Location: Proposed site access.

Summary: No information provided with regards to control of junctions and gates may lead to vehicles being left straddling the public highway at risk of shunt / side swipe collisions between vehicles.

Vehicles travelling along Barlon Road may not be aware of crossing HGV movements. There are no details provided which might indicate the operation of gates and therefore no certainty that vehicles may cross the public highway unassisted. These arrangements may lead to HGV's straddling the public highway with approaching vehicles unaware of this potential hazard which may in turn lead to side swipe / shunt type collisions.

Recommendation:

It is recommended that a control measure is introduced to ensure gates are open for crossing vehicles and that approaching vehicles on the public highway are given advanced warning of the potential for HGV traffic to be crossing the public highway.

2.46 Problem.

Location: Proposed site access.

Summary: The position of the proposed gate obstructs incoming construction vehicles when closed which may lead to shunt type collisions on Barlon Road.

A proposed gate is shown on each priority access as it is unclear from the drawings whether a construction vehicle will be able to pull off the main carriageway and wait without causing an obstruction on Barlon Road. This arrangement may lead to shunt type collisions.

Recommendation:

It is recommended that the proposed gate is relocated to ensure that construction vehicles are able to leave Barlon Road unobstructed.

Location CR12 P1&P2 – Wolves Hall Lane - General Arrangement

2.47 Problem.

Location: Proposed site access.

Summary: Visibility splays not appropriate for site conditions and may lead to side swipe type collisions.

Visibility splays of 2.4 m x 59 m in line with MfS standards for 33mph are provided to the back of the carriageway in both directions from the proposed junctions, except looking right out of the northern access where it can only be provided to the opposite side of the carriageway due to a bend. This could lead to vehicles not slowing in time for an egressing vehicle and causing a side swipe or shunt type collision.

Recommendation

It is recommended that the access / visibility splays are amended to take account for the bend in Wolves Hall Lane.

Location CR8 P2 – Stones Green Road - General Arrangement

2.48 Problem.

Location: General.

Summary: No information provided with regards to control of junctions and gates may lead to vehicles being left straddling the public highway at risk of shunt / side swipe collisions between vehicles.

Vehicles travelling along Stones Green Road may not be aware of crossing HGV movements. There are no details provided which might indicate the operation of gates and therefore no certainty that vehicles may cross the public highway unassisted. These arrangements may lead to HGV's straddling the public highway with approaching vehicles unaware of this potential hazard which may in turn lead to side swipe / shunt type collisions.

Recommendation:

It is recommended that a control measure is introduced to ensure gates are open for crossing vehicles and that approaching vehicles on the public highway are given advanced warning of the potential for HGV traffic to be crossing the public highway.

2.49 Problem.

Location: Proposed site access.

Summary: The position of the proposed gate obstructs incoming construction vehicles when closed which may lead to shunt type collisions on Stones Green Road.

A proposed gate is shown on each priority access as it is unclear from the drawings whether a construction vehicle will be able to pull off the main carriageway and wait without causing an obstruction on Stones Green Road. This arrangement may lead to shunt type collisions.

Recommendation:

It is recommended that the proposed gate is relocated to ensure that construction vehicles are able to leave Stones Green Road unobstructed.

Appendix A Site Location Plans

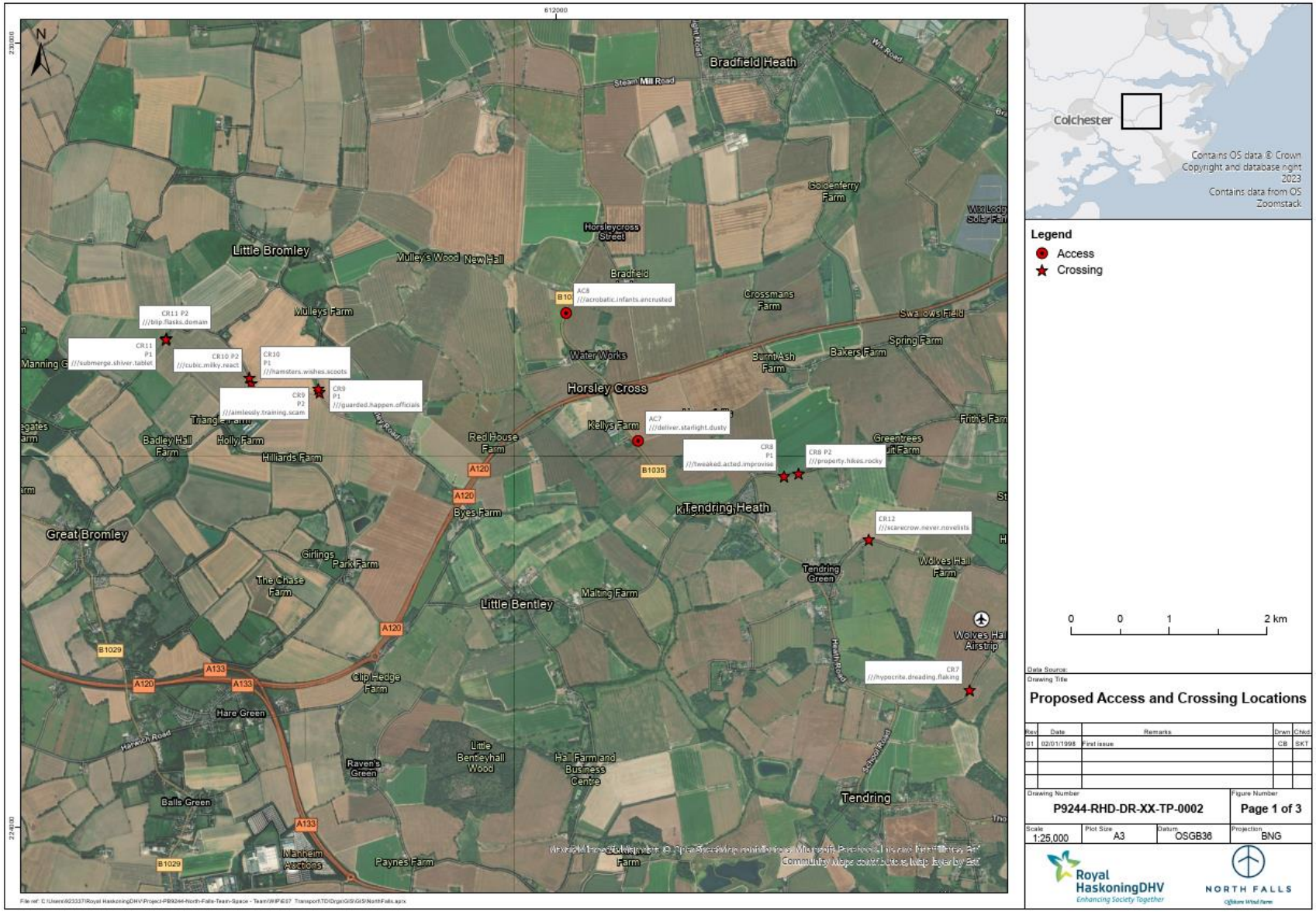
Stage 1 Road Safety Audit

Five Estuaries / North Falls Wind Farm

RWE

SLR Project No.: 237699

7 November 2023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Bradfield Heath
Steam Mill Road
Little Bromley
Mulley's Wood
New Hall
Bradfield
Goldenferry Farm
Horsleycross Street
Crossmans Farm
Swallows Field
Spring Farm
Bakers Farm
Burnt Ash Farm
Water Works
Horsley Cross
Mulleys Farm
Manning G
Badley Hall Farm
Holly Farm
Hillards Farm
Triang
Red House Farm
Kelly's Farm
Greentrees
Frith's Farm
Byes Farm
Tendring Heath
Great Bromley
Girlings
Park Farm
The Chase Farm
Malting Farm
Little Bentley
Tendring Green
Wakes Hall Farm
Wakes Hall Airstrip
Clip Hedge Farm
Hare Green
Hamwich Road
Heath Road
School Road
Little Bentleyhall Wood
Hall Farm and Business Centre
Raven's Green
Balls Green
Tendring
Manheim Auctions
Paynes Farm
Farm
B1029
A120
A133
B1035
CR11 P2 ///blip.flasks.domain
CR11 P1 ///submerge.shiver.tablet
CR10 P2 ///cubic.milky.react
CR10 P1 ///hamsters.wishes.scoots
CR9 P2 ///aimlessly.training.scam
CR9 P1 ///guarded.happen.officials
AC8 ///acrobatic.infants.encrusted
AC7 ///deliver.starlight.dusty
CR8 P1 ///tweaked.acted.improvise
CR8 P2 ///property.hikes.rocky
CR12 ///scarecrow.never.novelists
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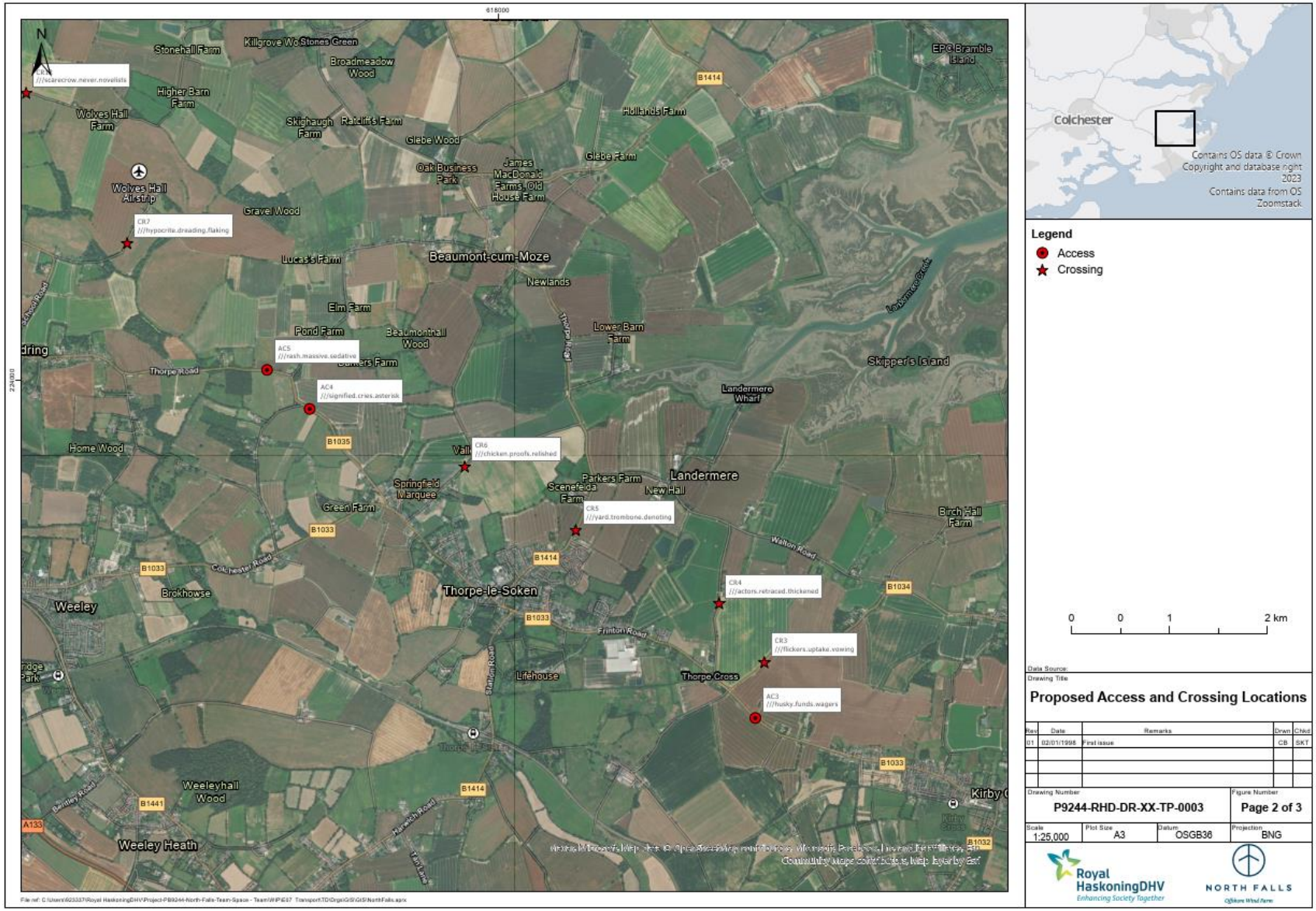
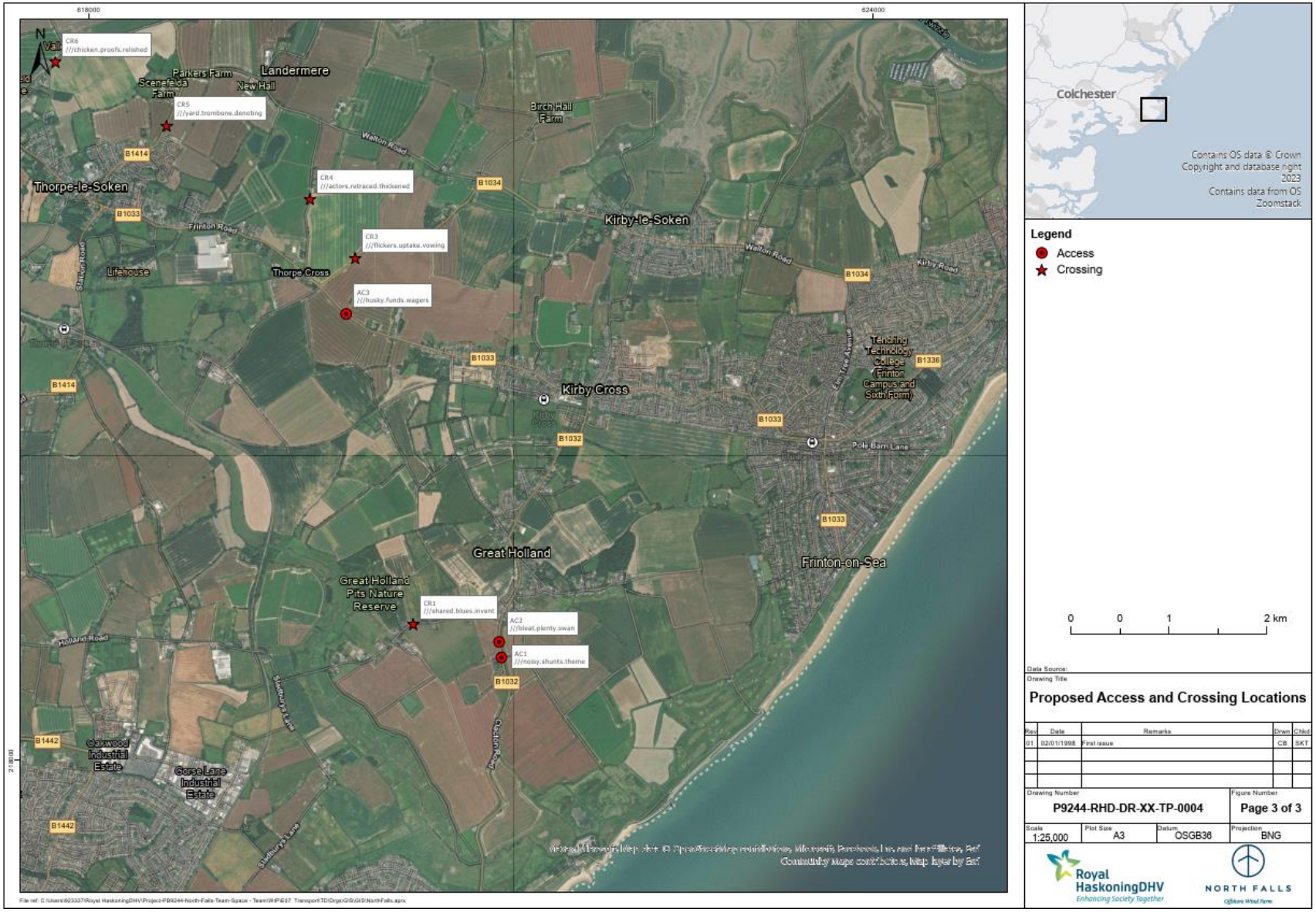
Enhancing Society Together
NORTH FALLS
Offshore Wind Farm


N
618000
Stonehall Farm
Killgrove Wo
Stones Green
Broadmeadow Wood
EPG Bramble Island
B1414
Higher Barn Farm
Wolves Hall Farm
Skighaugh Farm
Ratcliffs Farm
Glebe Wood
Hollands Farm
Glebe Farm
Oak Business Park
James MacDonald Farms, Old House Farm
Wolves Hall Airstrip
Grave Wood
Lucas's Farm
Beaumont-cum-Moze
Newlands
Elm Farm
Pond Farm
Beaumonthall Wood
Lower Barn Farm
Skipper's Island
Landermere Wharf
Thorpe Road
Home Wood
B1035
Parkers Farm
Landermere
Springfield Marquee
Scenefeda Farm
New Hall
Green Farm
Birch Hall Farm
B1033
Walton Road
B1414
Colchester Road
Brokhowse
Thorpe-le-Soken
B1034
Weeley
Frinton Road
Lifehouse
Thorpe Cross
Station Road
Weeleyhall Wood
B1441
Kirby
Bentley Road
A133
Harwich Road
Weeley Heath
B1032
Colchester
Contains OS data © Crown Copyright and database right 2023
Contains data from OS Zoomstack
Legend
Access
Crossing
0 0 1 2 km
Data Source:
Drawing Title
Proposed Access and Crossing Locations
Rev Date Remarks Drwn Chkd
01 02/01/1998 First issue CB SKT
Drawing Number
P9244-RHD-DR-XX-TP-0003
Figure Number
Page 2 of 3
Scale
1:25,000
Plot Size
A3
Datum
OSGB36
Projection
BNG
Royal HaskoningDHV
Enhancing Society Together
NORTH FALLS
Offshore Wind Farm


618000
624000
N
Vail
CR6
///chicken.proofs.relished
Parkers Farm
Landermere
Scenefields Farm
New Hall
CR5
///yard.trombone.donating
Birch Hall Farm
Walton Road
B1414
B1034
Thorpe-le-Soken
CR4
///actors.retraced.thickened
B1033
Frinton Road
Kirby-le-Soken
CR3
///flickers.uptake.vowing
Lifehouse
Thorpe Cross
AC3
///husky.funds.wagers
Kirby Road
B1336
Tendring Technology College (Frinton Campus and Sixth Form)
Kirby Cross
B1032
Pole Barn Lane
Great Holland
Frinton-on-Sea
Great Holland Pits Nature Reserve
CR1
///shared.blues.invent
AC2
///bleat.plenty.swan
AC1
///noisy.shunts.theme
Holland Road
B1442
Oakwood Industrial Estate
Gorse Lane Industrial Estate
Colchester
Contains OS data © Crown Copyright and database right 2023
Contains data from OS Zoomstack
Legend
Access
Crossing
0 0 1 2 km
Data Source:
Drawing Title
Proposed Access and Crossing Locations
Rev | Date | Remarks | Drwn | Chkd
01 | 02/01/1998 | First issue | CB | SKT
Drawing Number
P9244-RHD-DR-XX-TP-0004
Figure Number
Page 3 of 3
Scale
1:25,000
Plot Size
A3
Datum
OSGB36
Projection
BNG
Royal HaskoningDHV
Enhancing Society Together
NORTH FALLS

Appendix B Submitted Documents

Stage 1 Road Safety Audit

Five Estuaries / North Falls Wind Farm

RWE

SLR Project No.: 237699

7 November 2023

Submitted Documents

Document	Document Title
All Docs	404.05356.00010_Five Estauries_RSA Brief 230919_VE Trip Generation Access Design Accident Summary CombinedSheets PB9244-RHD-DR-ZZ-ZZ-DR-R-0012 PB9244-RHD-DR-ZZ-ZZ-DR-R-0021

Appendix C Problem Location Plans

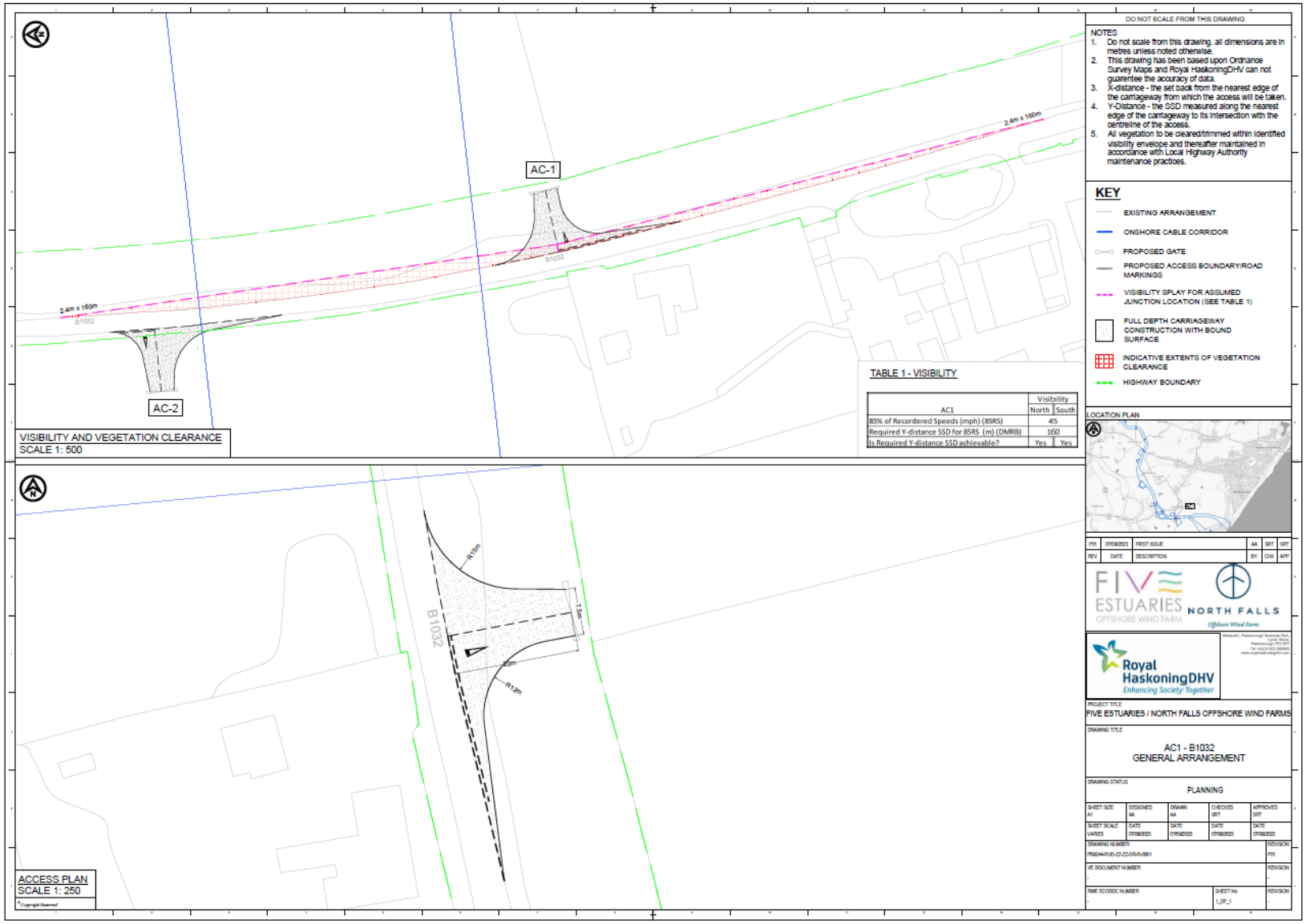
Stage 1 Road Safety Audit

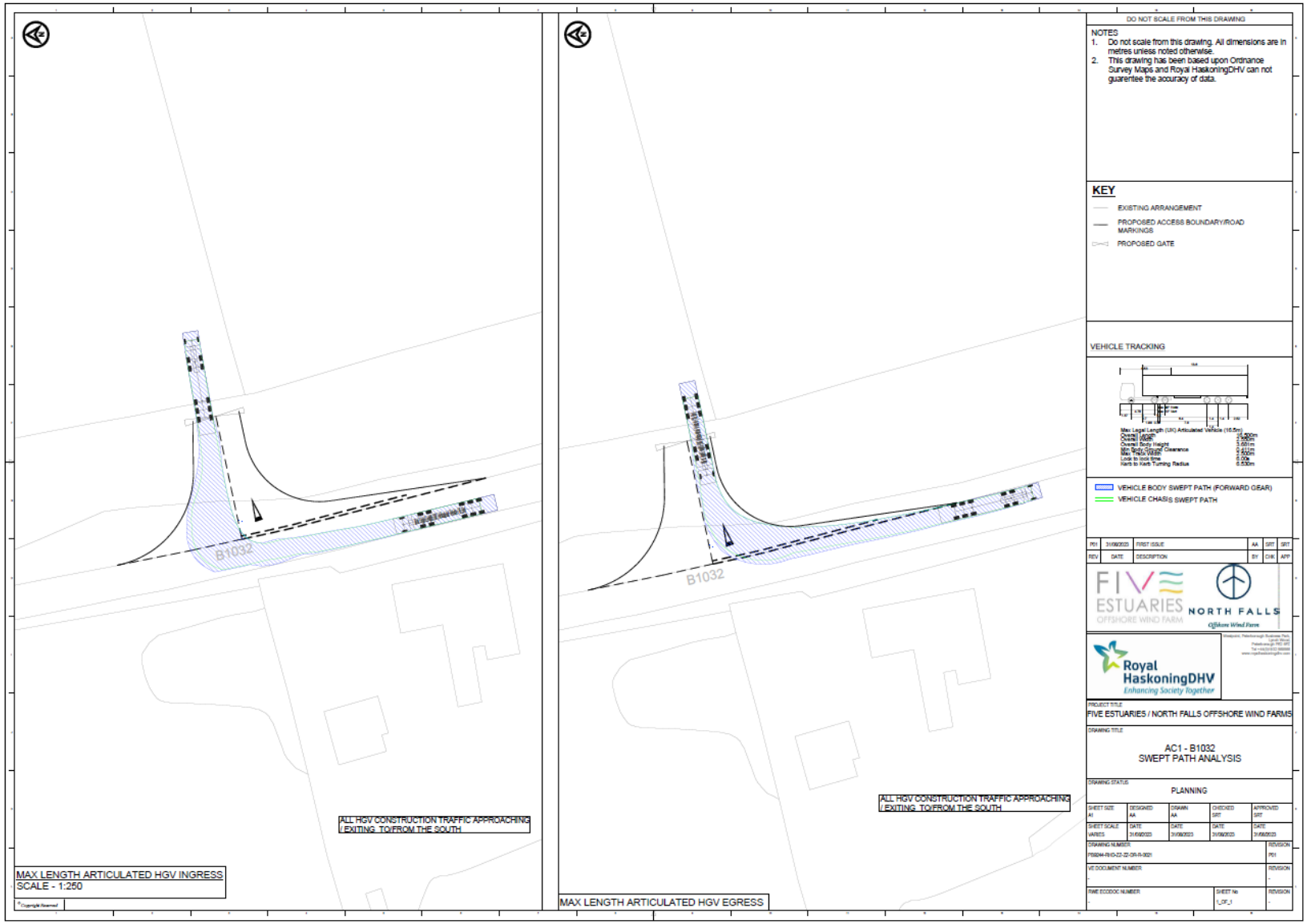
Five Estuaries / North Falls Wind Farm

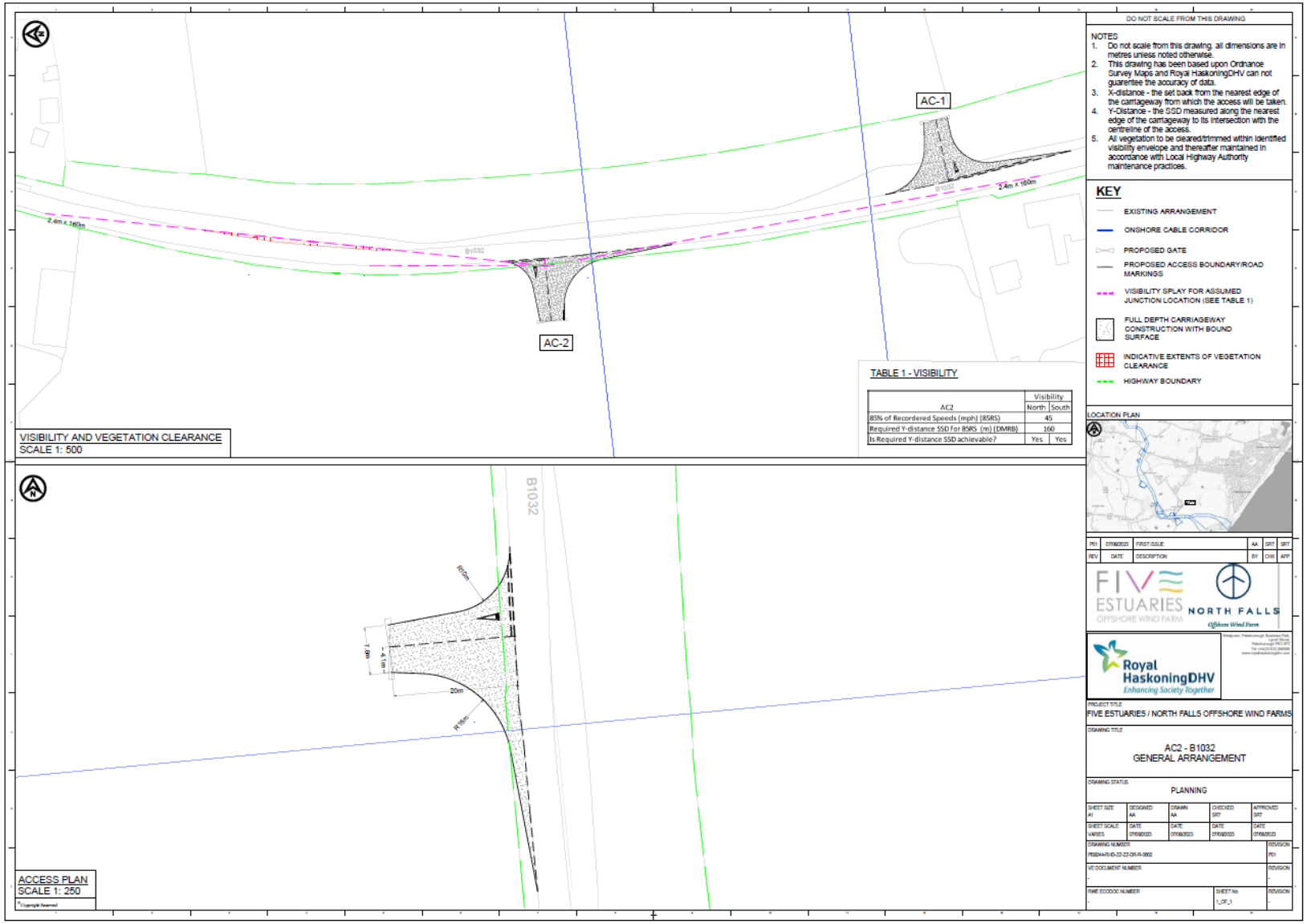
RWE

SLR Project No.: 237699

7 November 2023


AC-1
AC-2
2.4m x 160m
2.4m x 160m
B1032
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500
ACCESS PLAN
SCALE 1: 250
B1032
DO NOT SCALE FROM THIS DRAWING
NOTES
1. Do not scale from this drawing, all dimensions are in metres unless noted otherwise.
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarentee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
TABLE 1 - VISIBILITY
AC1
Visibility
North
South
85% of Recordered Speeds (mph) (85RS) 45
Required Y-distance SSD for 85RS (m) (DMRB) 160
Is Required Y-distance SSD achievable? Yes Yes
LOCATION PLAN
P01 07/09/2023 FIRST ISSUE AA SRT SRT
REV DATE DESCRIPTION BY CHK APP
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
AC1 - B1032
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING


B1032
ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE SOUTH
MAX LENGTH ARTICULATED HGV INGRESS
SCALE - 1:250
B1032
ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE SOUTH
MAX LENGTH ARTICULATED HGV EGRESS
DO NOT SCALE FROM THIS DRAWING
NOTES
1. Do not scale from this drawing. All dimensions are in metres unless noted otherwise.
2. This drawing has been based upon Ordinance Survey Maps and Royal HaskoningDHV can not guarantee the accuracy of data.
KEY
EXISTING ARRANGEMENT
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
PROPOSED GATE
VEHICLE TRACKING
VEHICLE BODY SWEPT PATH (FORWARD GEAR)
VEHICLE CHASIS SWEPT PATH
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
AC1 - B1032
SWEPT PATH ANALYSIS
PLANNING


AC-1
AC-2
B1032
2.4m x 160m
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500
ACCESS PLAN
SCALE 1: 250
DO NOT SCALE FROM THIS DRAWING
NOTES
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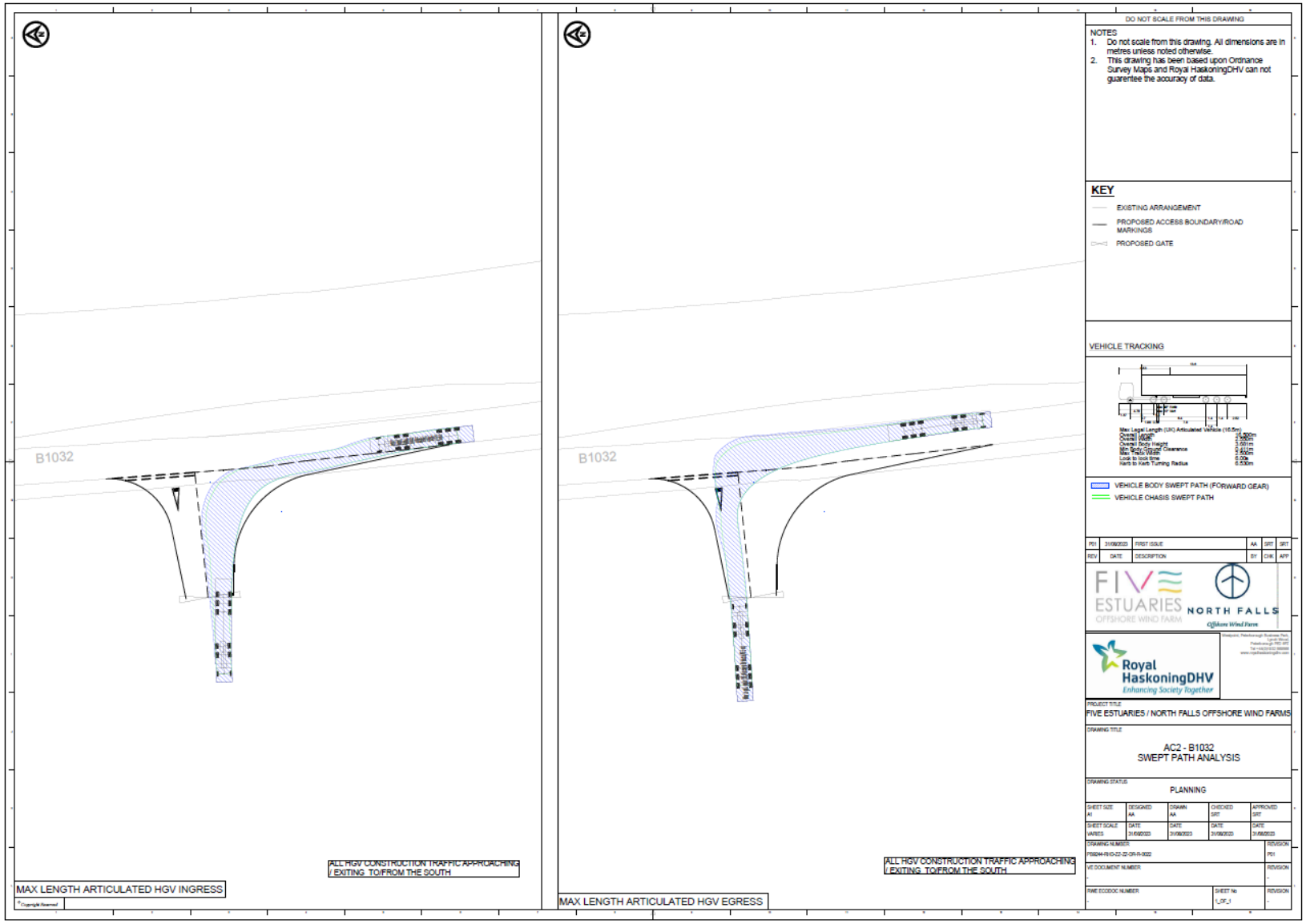
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
TABLE 1 - VISIBILITY
AC2
Visibility
North
South
85% of Recordered Speeds (mph) (85RS)
45
Required Y-distance SSD for 85RS (m) (DMRB)
160
Is Required Y-distance SSD achievable?
Yes
Yes
LOCATION PLAN
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
AC2 - B1032
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING


B1032
ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE SOUTH
MAX LENGTH ARTICULATED HGV INGRESS
B1032
ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE SOUTH
MAX LENGTH ARTICULATED HGV EGRESS
DO NOT SCALE FROM THIS DRAWING
NOTES
1. Do not scale from this drawing. All dimensions are in metres unless noted otherwise.
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarantee the accuracy of data.
KEY
EXISTING ARRANGEMENT
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
PROPOSED GATE
VEHICLE TRACKING
VEHICLE BODY SWEPT PATH (FORWARD GEAR)
VEHICLE CHASIS SWEPT PATH
P01 31/08/2023 FIRST ISSUE AA GRT GRT
REV DATE DESCRIPTION BY CHK APP
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
AC2 - B1032
SWEPT PATH ANALYSIS
DRAWING STATUS
PLANNING
SHEET SIZE A1 | DESIGNED AA | DRAWN AA | CHECKED GRT | APPROVED GRT
SHEET SCALE VARIES | DATE 31/08/2023 | DATE 31/08/2023 | DATE 31/08/2023 | DATE 31/08/2023
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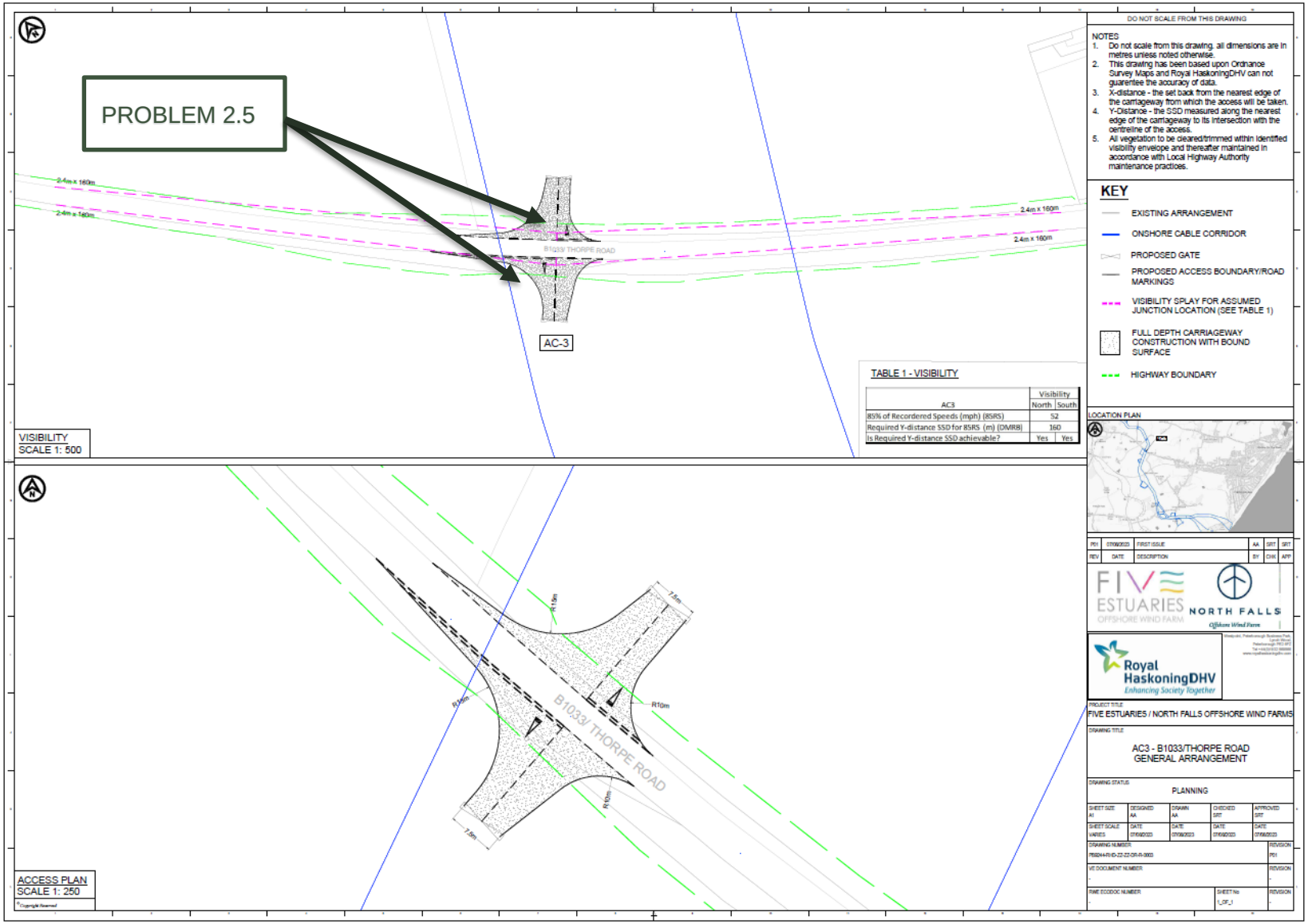
VE DOCUMENT NUMBER -
RWE ECODOC NUMBER -
SHEET No 1_OF_1
REVISION -


PROBLEM 2.5
AC-3
VISIBILITY
SCALE 1: 500
ACCESS PLAN
SCALE 1: 250
B1033/ THORPE ROAD
2.4m x 160m
2.4m x 180m
TABLE 1 - VISIBILITY
AC3
Visibility
North
South
85% of Recordered Speeds (mph) (85RS)
52
Required Y-distance SSD for 85RS (m) (DMRB)
160
Is Required Y-distance SSD achievable?
Yes
Yes
DO NOT SCALE FROM THIS DRAWING
NOTES
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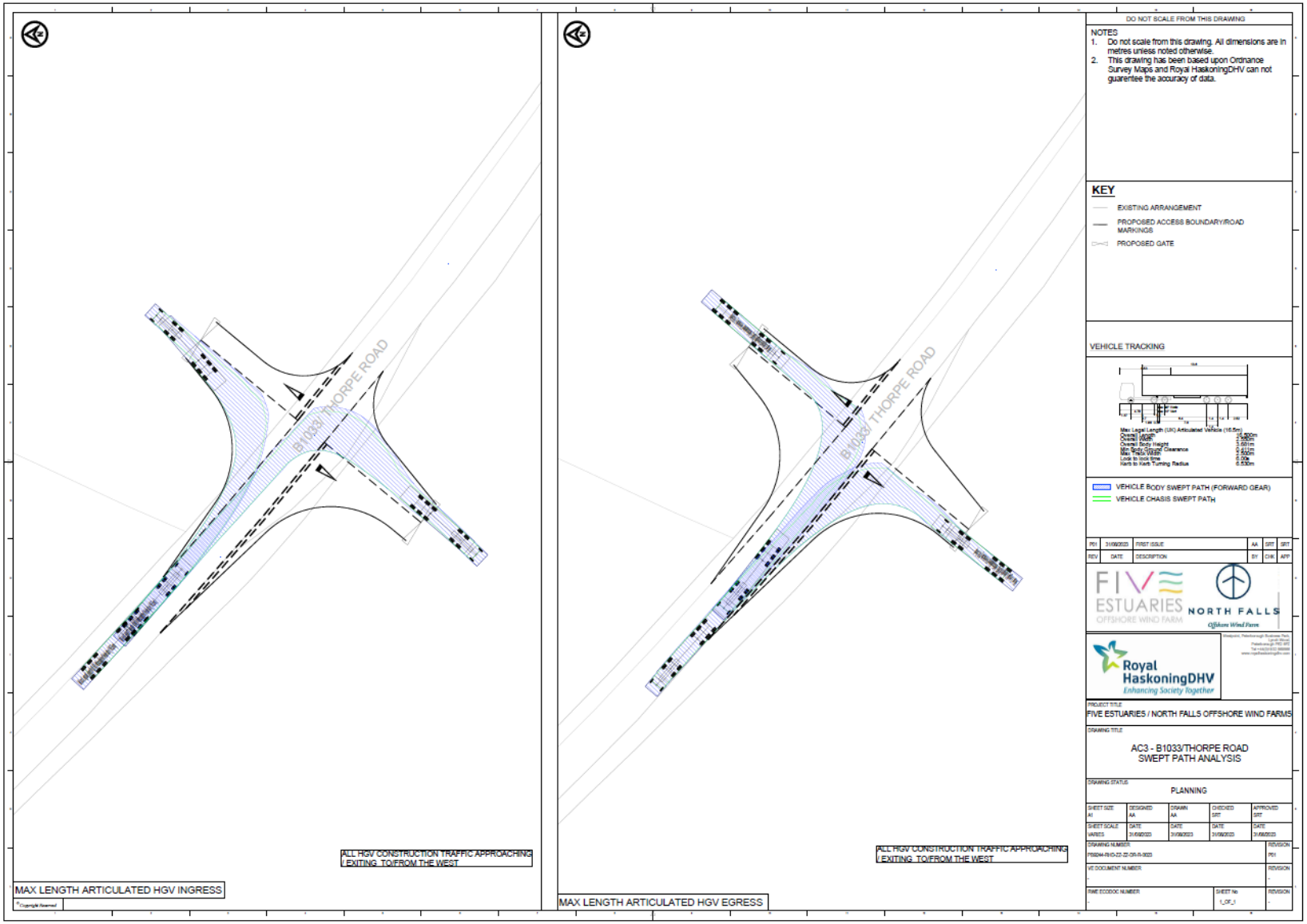
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
HIGHWAY BOUNDARY
LOCATION PLAN
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
AC3 - B1033/THORPE ROAD
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING


B1033/ THORPE ROAD
ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE WEST
MAX LENGTH ARTICULATED HGV INGRESS
B1033/ THORPE ROAD
ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE WEST
MAX LENGTH ARTICULATED HGV EGRESS
DO NOT SCALE FROM THIS DRAWING
NOTES
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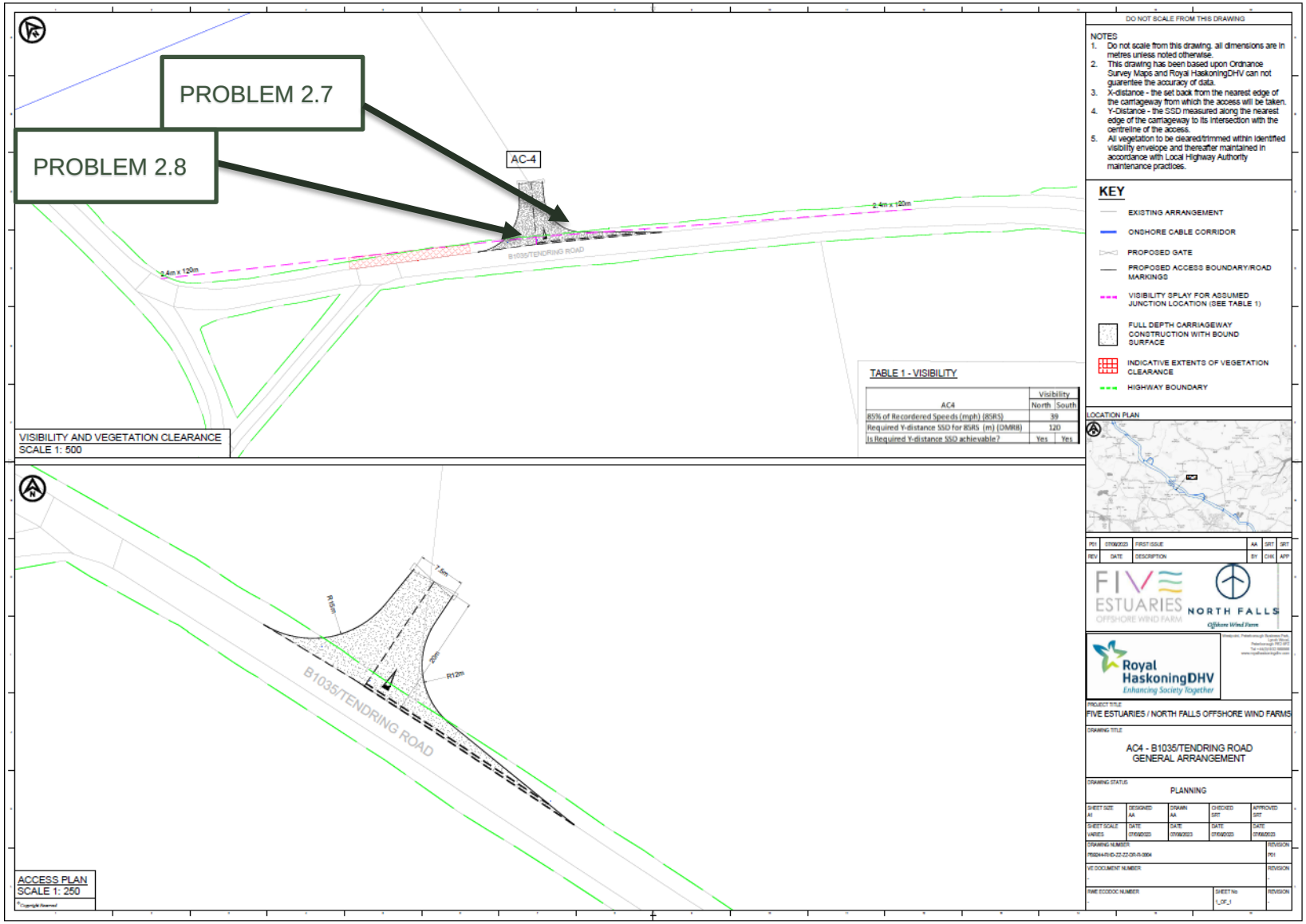
2. This drawing has been based upon Ordinance Survey Maps and Royal HaskoningDHV can not guarantee the accuracy of data.
KEY
EXISTING ARRANGEMENT
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
PROPOSED GATE
VEHICLE TRACKING
VEHICLE BODY SWEPT PATH (FORWARD GEAR)
VEHICLE CHASSIS SWEPT PATH
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
AC3 - B1033/THORPE ROAD
SWEPT PATH ANALYSIS
DRAWING STATUS
PLANNING


PROBLEM 2.7
PROBLEM 2.8
AC-4
2.4m x 120m
B1035/TENDRING ROAD
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500
ACCESS PLAN
SCALE 1: 250
B1035/TENDRING ROAD
DO NOT SCALE FROM THIS DRAWING
NOTES
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5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
TABLE 1 - VISIBILITY
AC4
Visibility
North
South
85% of Recordered Speeds (mph) (85RS)
39
Required Y-distance SSD for 85RS (m) (DMRB)
120
Is Required Y-distance SSD achievable?
Yes
Yes
LOCATION PLAN
P01 07/08/2023 FIRST ISSUE AA SRT SRT
REV DATE DESCRIPTION BY CHK APP
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
AC4 - B1035/TENDRING ROAD
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING
SHEET SIZE A1
DESIGNED AA
DRAWN AA
CHECKED SRT
APPROVED SRT
SHEET SCALE VARIES
DATE 07/08/2023
DATE 07/08/2023
DATE 07/08/2023
DATE 07/08/2023
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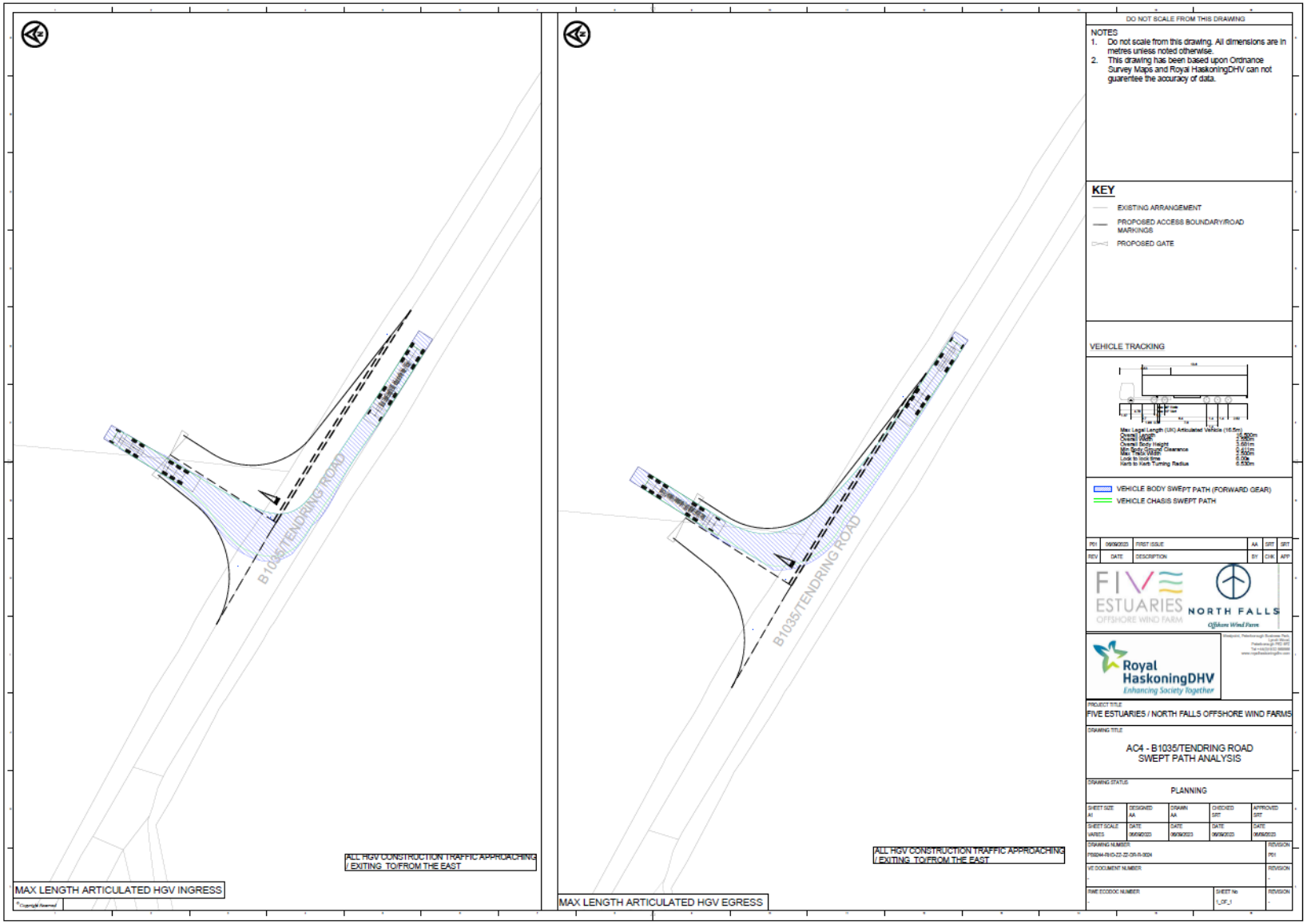
VE DOCUMENT NUMBER
REVISION -
RWE ECODOC NUMBER
SHEET No 1_OF_1
REVISION -


B1035/TENDRING ROAD
ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE EAST
MAX LENGTH ARTICULATED HGV INGRESS
B1035/TENDRING ROAD
ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE EAST
MAX LENGTH ARTICULATED HGV EGRESS
DO NOT SCALE FROM THIS DRAWING
NOTES
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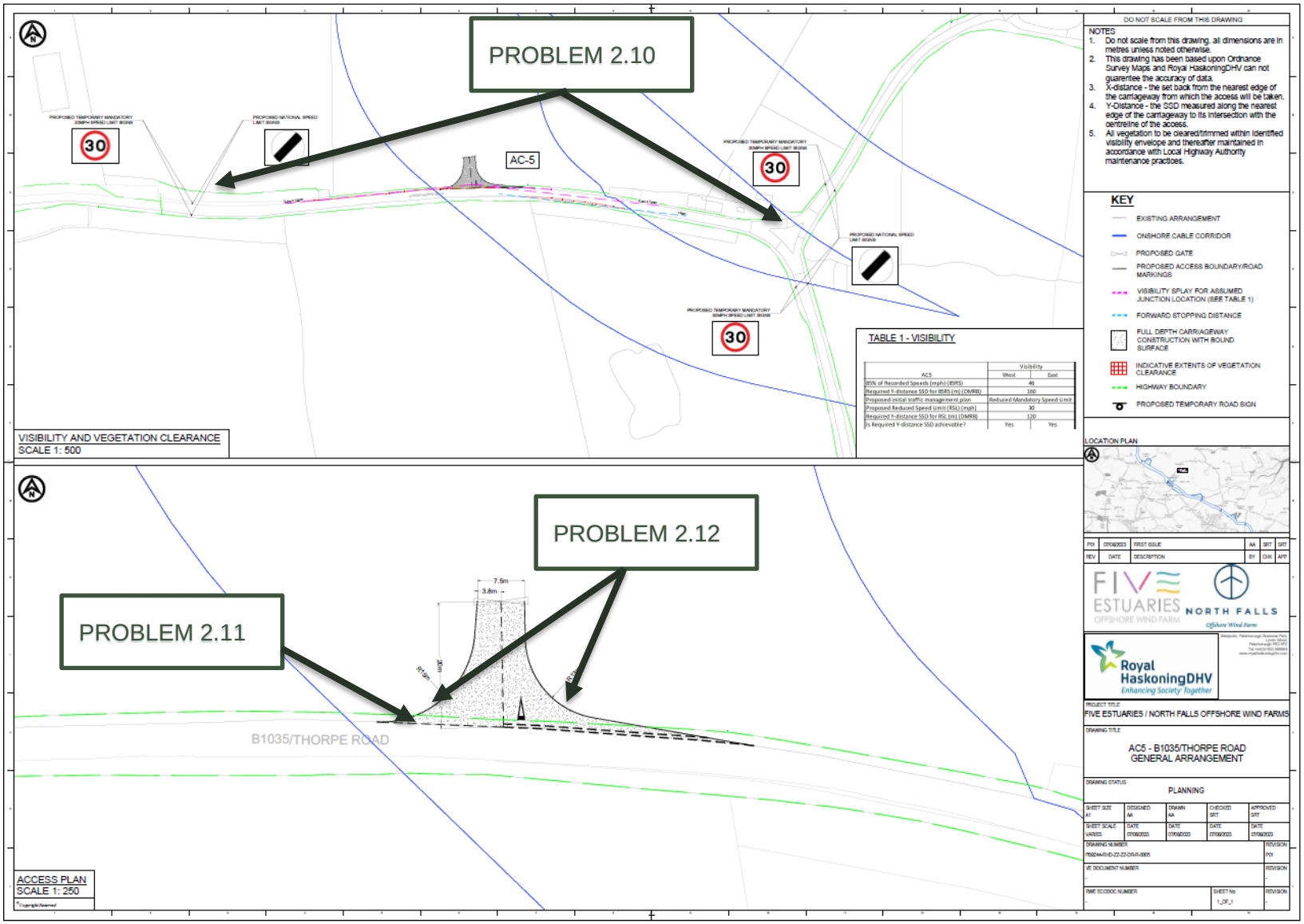
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarantee the accuracy of data.
KEY
EXISTING ARRANGEMENT
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
PROPOSED GATE
VEHICLE TRACKING
VEHICLE BODY SWEPT PATH (FORWARD GEAR)
VEHICLE CHASIS SWEPT PATH
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
AC4 - B1035/TENDRING ROAD SWEPT PATH ANALYSIS
DRAWING STATUS
PLANNING


PROBLEM 2.10
AC-5
30
30
30
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500
PROBLEM 2.12
PROBLEM 2.11
B1035/THORPE ROAD
ACCESS PLAN
SCALE 1: 250
DO NOT SCALE FROM THIS DRAWING
NOTES
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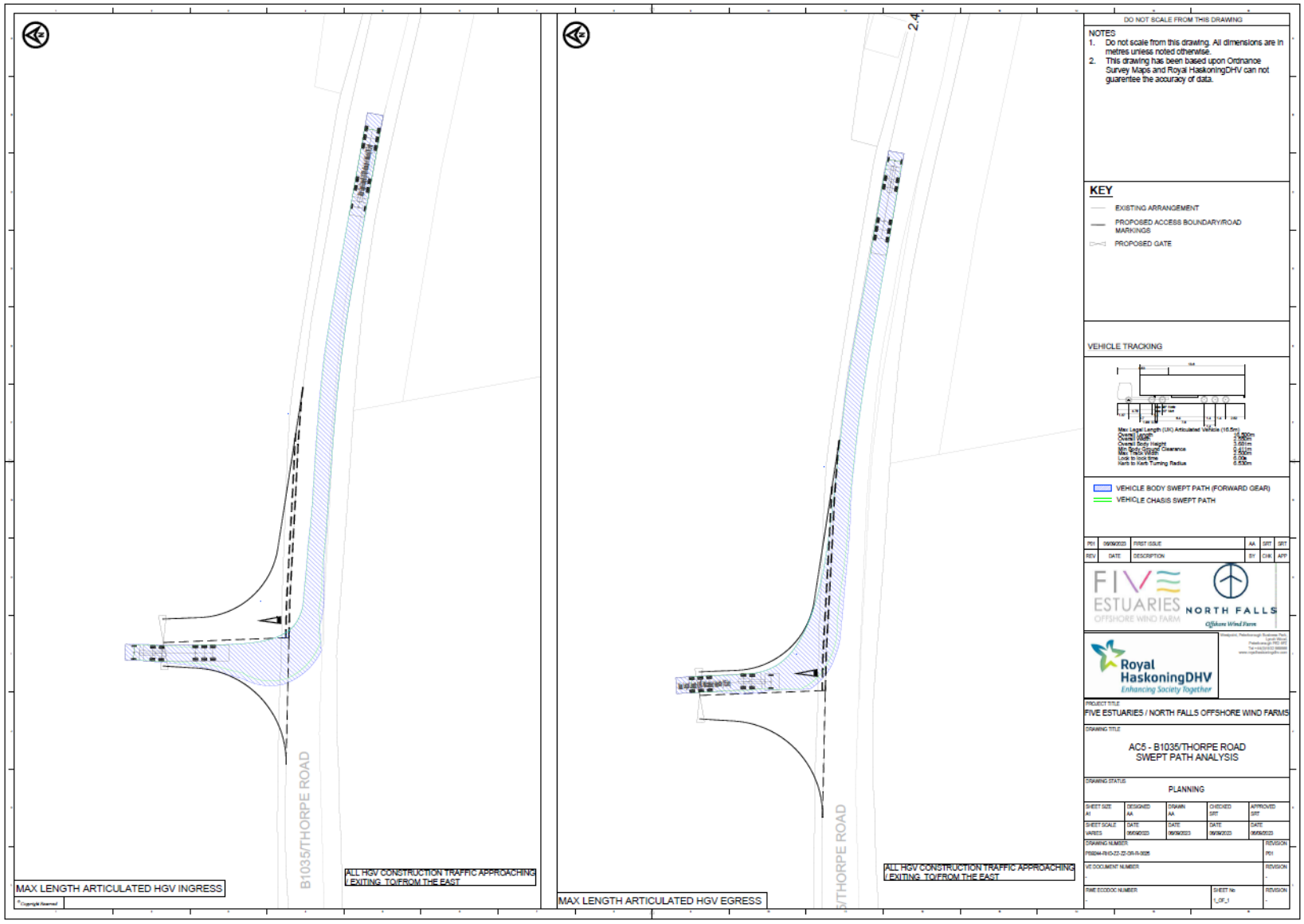
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FORWARD STOPPING DISTANCE
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
PROPOSED TEMPORARY ROAD SIGN
TABLE 1 - VISIBILITY
LOCATION PLAN
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
AC5 - B1035/THORPE ROAD
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING


MAX LENGTH ARTICULATED HGV INGRESS
B1035/THORPE ROAD
ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE EAST
MAX LENGTH ARTICULATED HGV EGRESS
B1035/THORPE ROAD
ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE EAST
DO NOT SCALE FROM THIS DRAWING
NOTES
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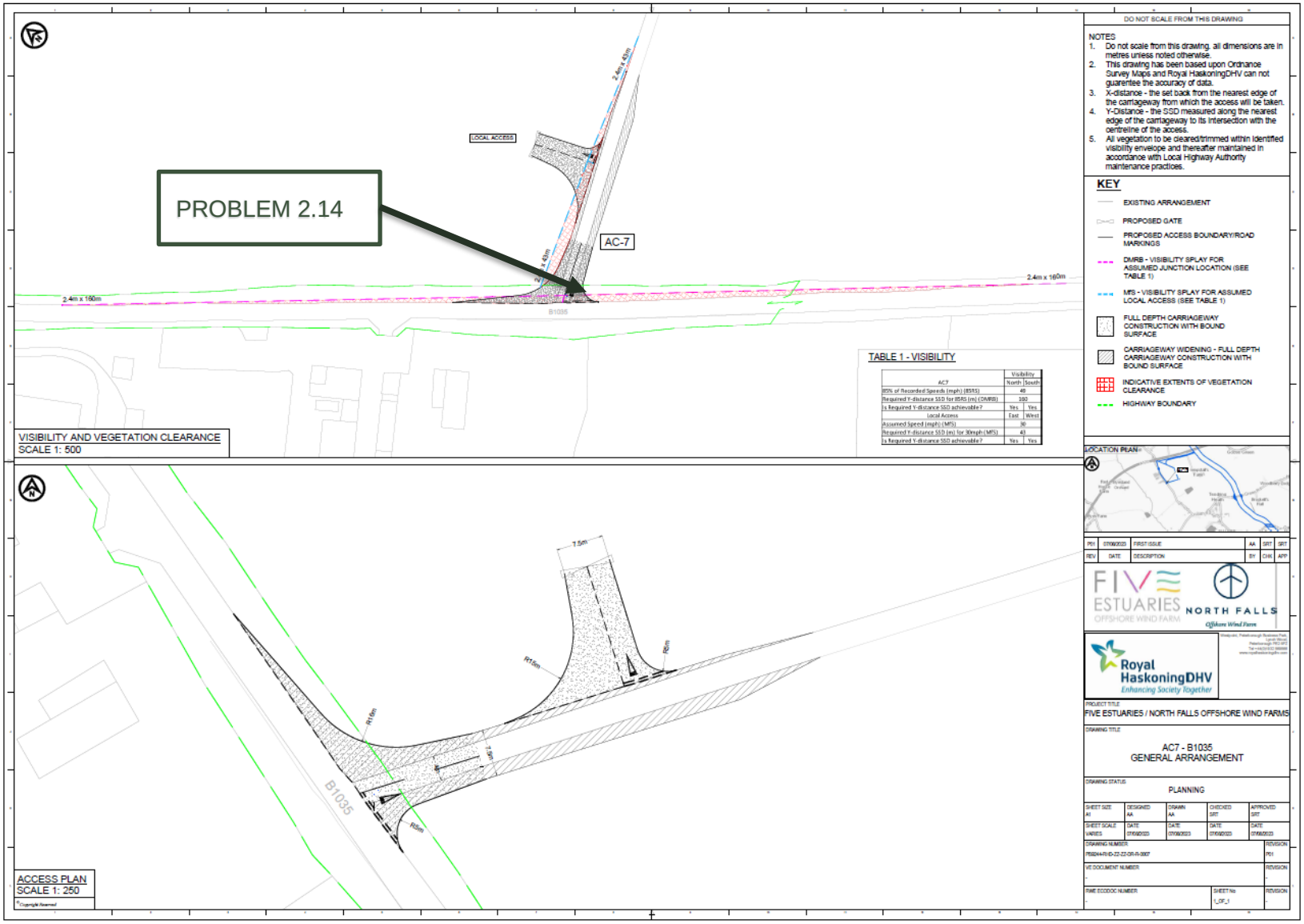
KEY
EXISTING ARRANGEMENT
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
PROPOSED GATE
VEHICLE TRACKING
VEHICLE BODY SWEPT PATH (FORWARD GEAR)
VEHICLE CHASIS SWEPT PATH
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
AC5 - B1035/THORPE ROAD
SWEPT PATH ANALYSIS
DRAWING STATUS
PLANNING


PROBLEM 2.14
AC-7
LOCAL ACCESS
2.4m x 160m
2.4m x 160m
2.4m x 43m
2.4m x 43m
B1035
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500
TABLE 1 - VISIBILITY
ACCESS PLAN
SCALE 1: 250
B1035
7.5m
R15m
R10m
R8m
R8m
DO NOT SCALE FROM THIS DRAWING
NOTES
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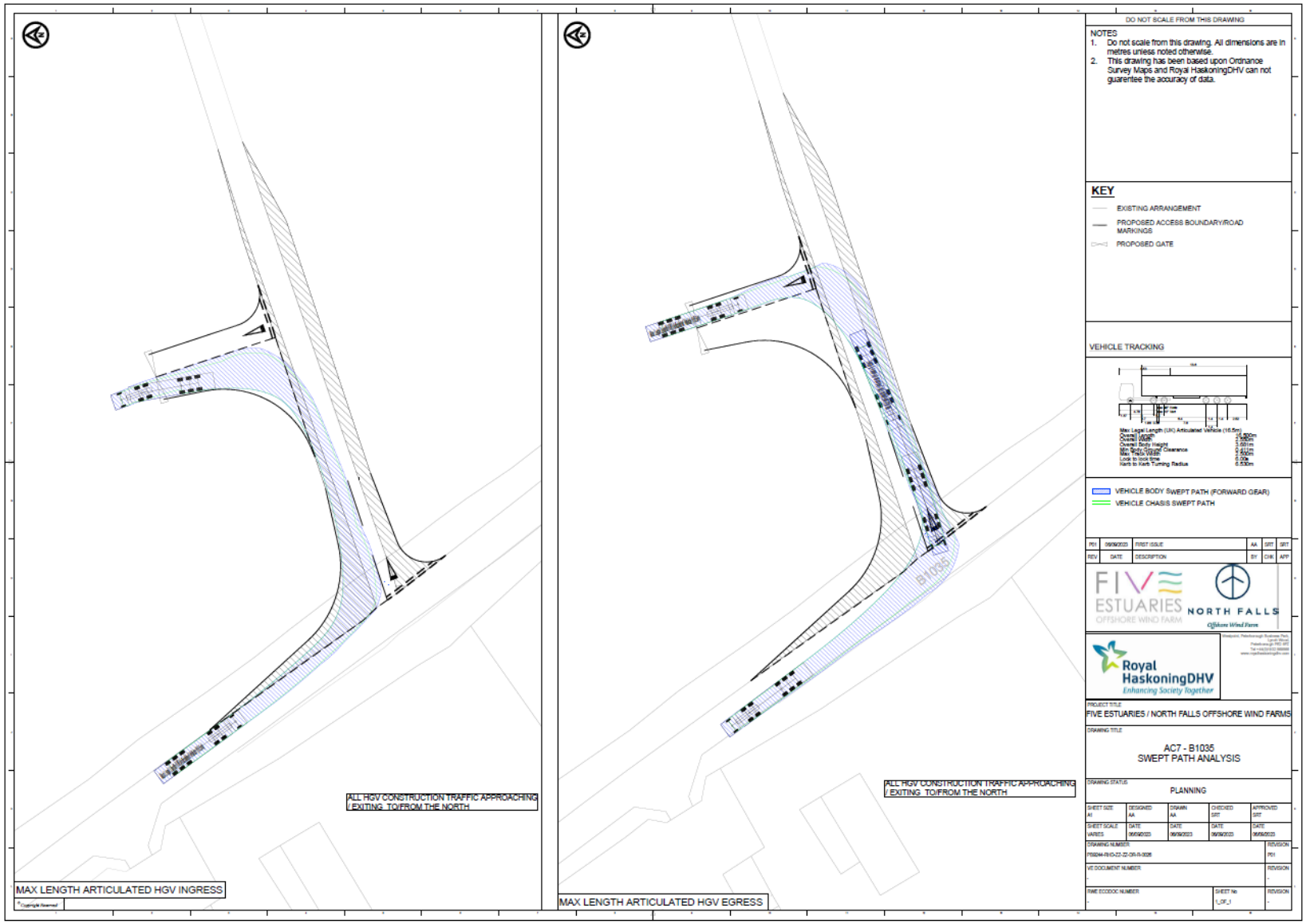
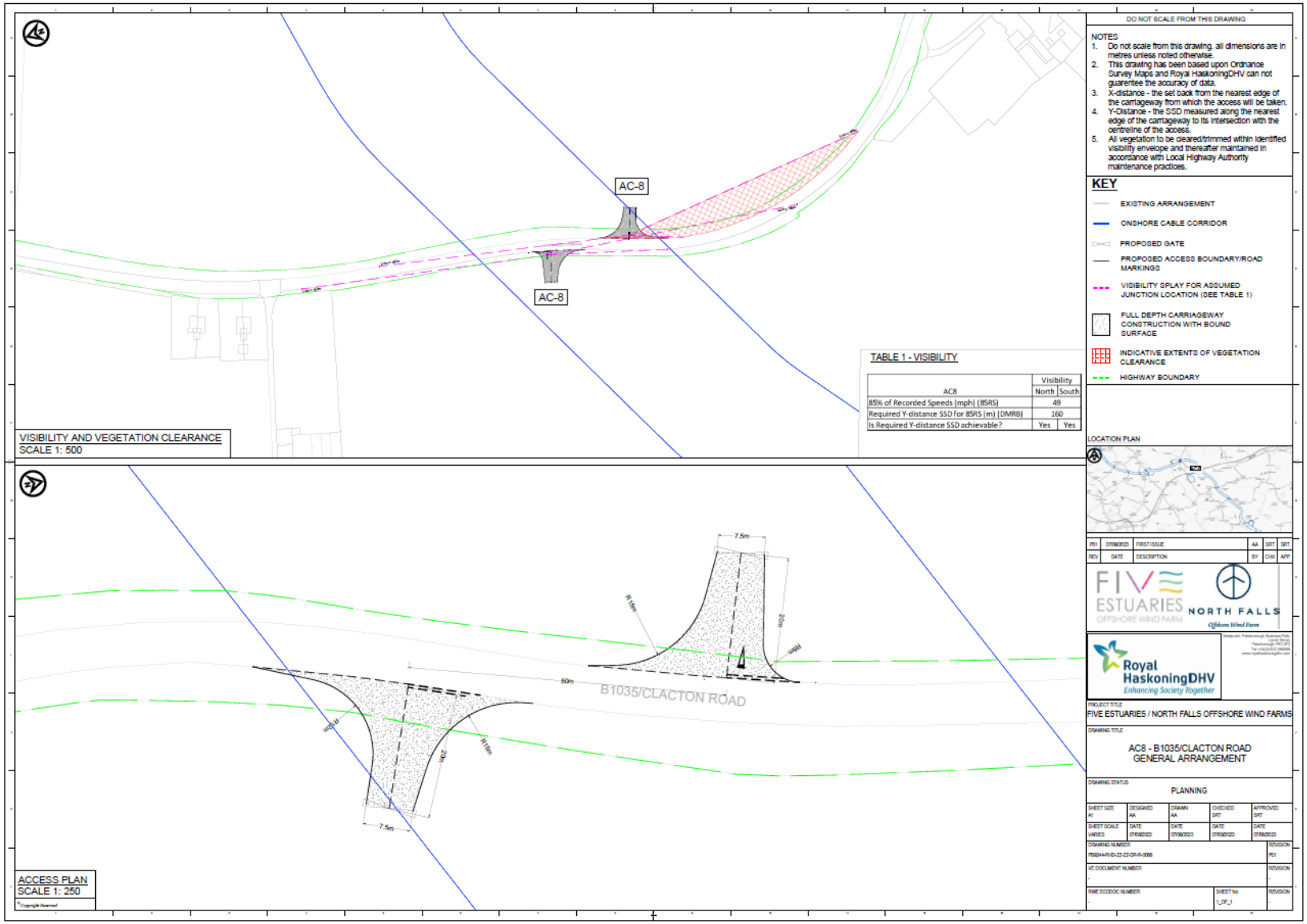
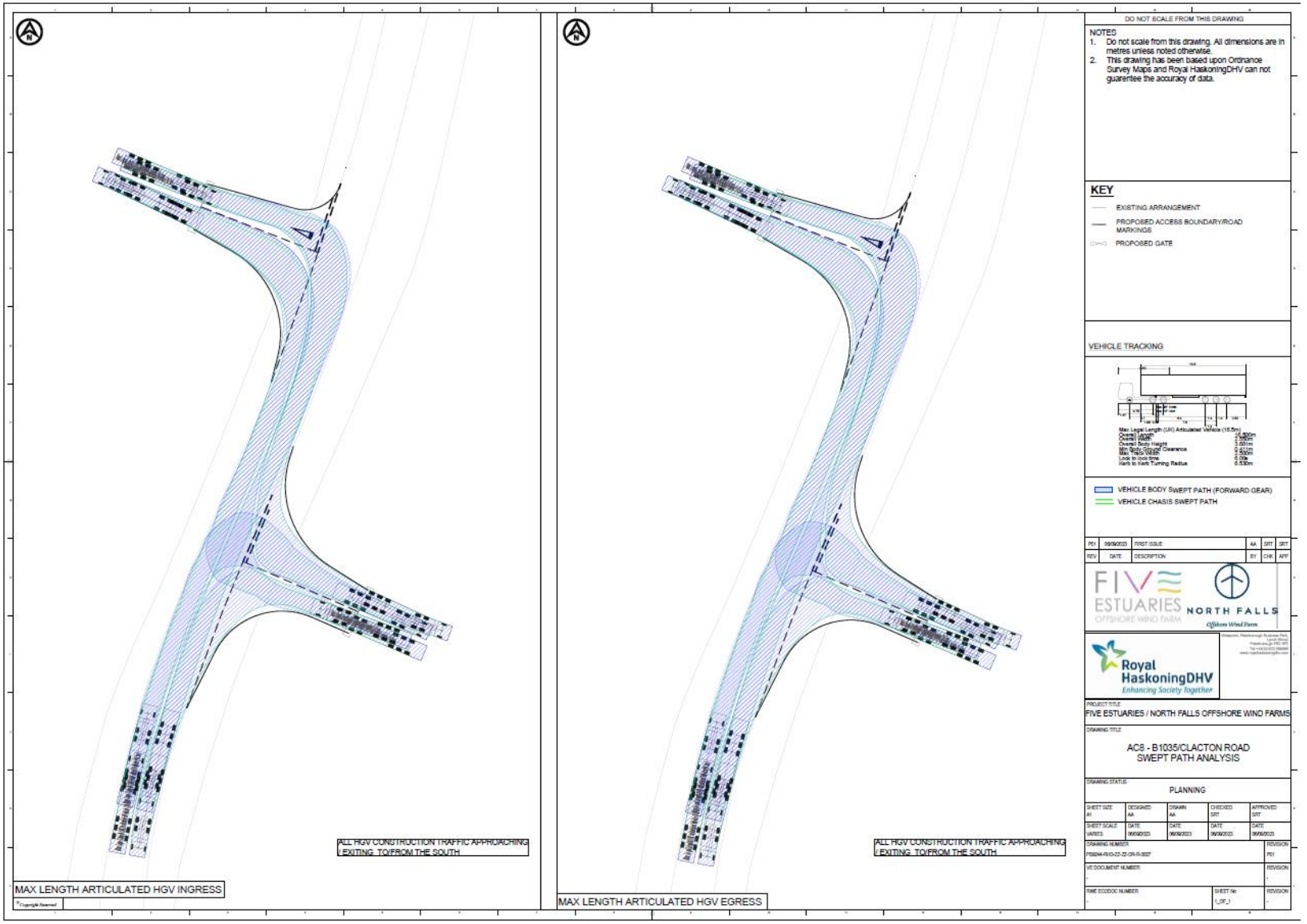
KEY
EXISTING ARRANGEMENT
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
DMRB - VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
MS - VISIBILITY SPLAY FOR ASSUMED LOCAL ACCESS (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
CARRIAGEWAY WIDENING - FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
LOCATION PLAN
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
AC7 - B1035
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING


MAX LENGTH ARTICULATED HGV INGRESS
ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE NORTH
MAX LENGTH ARTICULATED HGV EGRESS
ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE NORTH
B1035
DO NOT SCALE FROM THIS DRAWING
NOTES
1. Do not scale from this drawing. All dimensions are in metres unless noted otherwise.
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarantee the accuracy of data.
KEY
EXISTING ARRANGEMENT
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
PROPOSED GATE
VEHICLE TRACKING
VEHICLE BODY SWEPT PATH (FORWARD GEAR)
VEHICLE CHASIS SWEPT PATH
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
AC7 - B1035
SWEPT PATH ANALYSIS
DRAWING STATUS
PLANNING


AC-8
AC-8
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500
TABLE 1 - VISIBILITY
AC8
Visibility
North
South
85% of Recorded Speeds (mph) (85RS) 49
Required Y-distance SSD for 85RS (m) (DMRB) 160
Is Required Y-distance SSD achievable? Yes Yes
DO NOT SCALE FROM THIS DRAWING
NOTES
1. Do not scale from this drawing, all dimensions are in metres unless noted otherwise.
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarantee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
LOCATION PLAN
B1035/CLACTON ROAD
ACCESS PLAN
SCALE 1: 250
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
AC8 - B1035/CLACTON ROAD
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING


ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE SOUTH
MAX LENGTH ARTICULATED HGV INGRESS
ALL HGV CONSTRUCTION TRAFFIC APPROACHING / EXITING TO/FROM THE SOUTH
MAX LENGTH ARTICULATED HGV EGRESS
DO NOT SCALE FROM THIS DRAWING
NOTES
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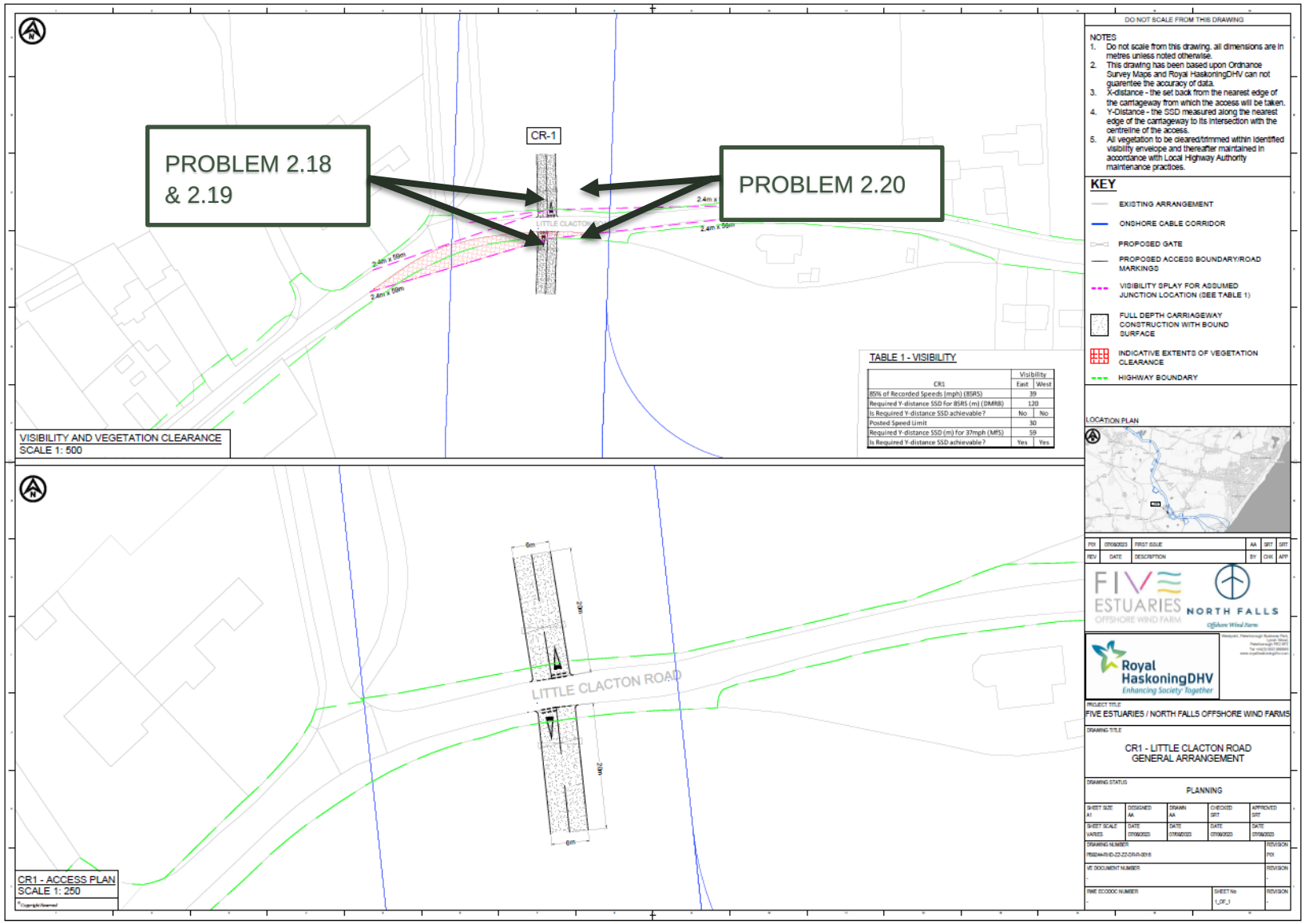
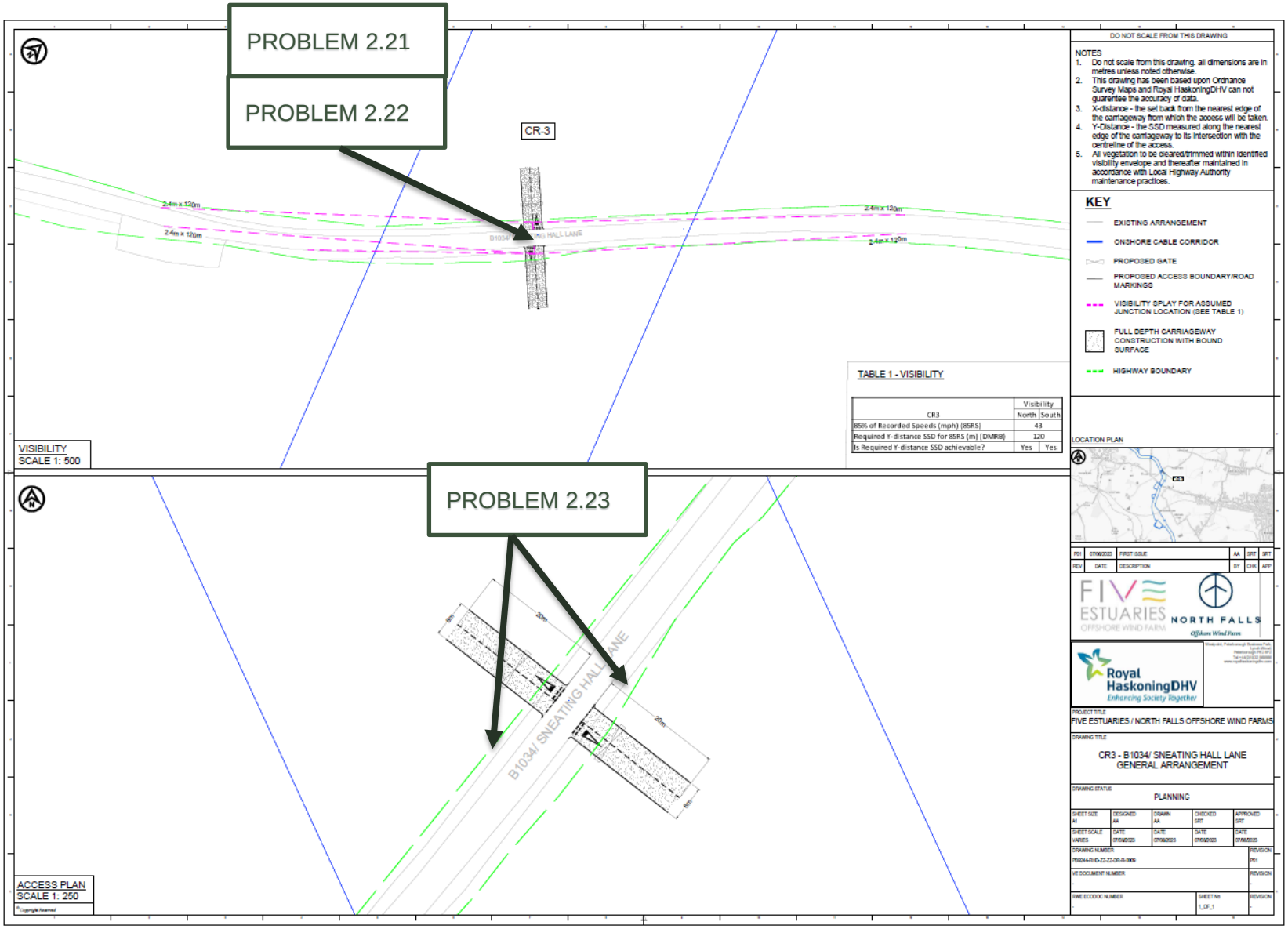
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarentee the accuracy of data.
KEY
EXISTING ARRANGEMENT
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
PROPOSED GATE
VEHICLE TRACKING
VEHICLE BODY SWEPT PATH (FORWARD GEAR)
VEHICLE CHASIS SWEPT PATH
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
AC8 - B1035/CLACTON ROAD
SWEPT PATH ANALYSIS
DRAWING STATUS
PLANNING



CR1	Visibility East	Visibility West
85% of Recorded Speeds (mph) (85RS)	39	
Required Y-distance SSD for 85RS (m) (DMRB)	120	
Is Required Y-distance SSD achievable?	No	No
Posted Speed Limit	30	
Required Y-distance SSD (m) for 37mph (MfS)	59	
Is Required Y-distance SSD achievable?	Yes	Yes


PROBLEM 2.21
PROBLEM 2.22
PROBLEM 2.23
CR-3
VISIBILITY
SCALE 1: 500
ACCESS PLAN
SCALE 1: 250
B1034/ SNEATING HALL LANE
2.4m x 120m
20m
DO NOT SCALE FROM THIS DRAWING
NOTES
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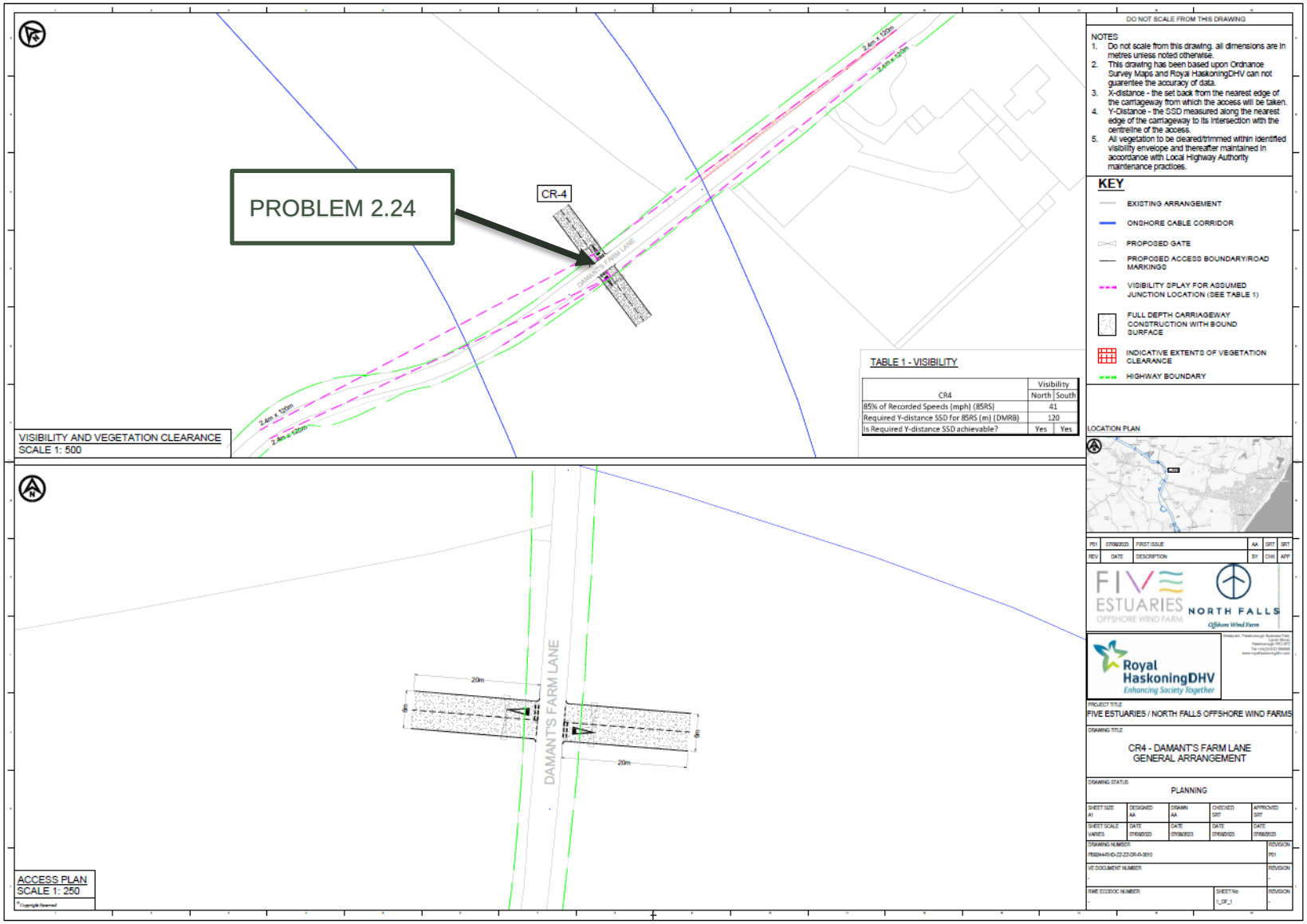
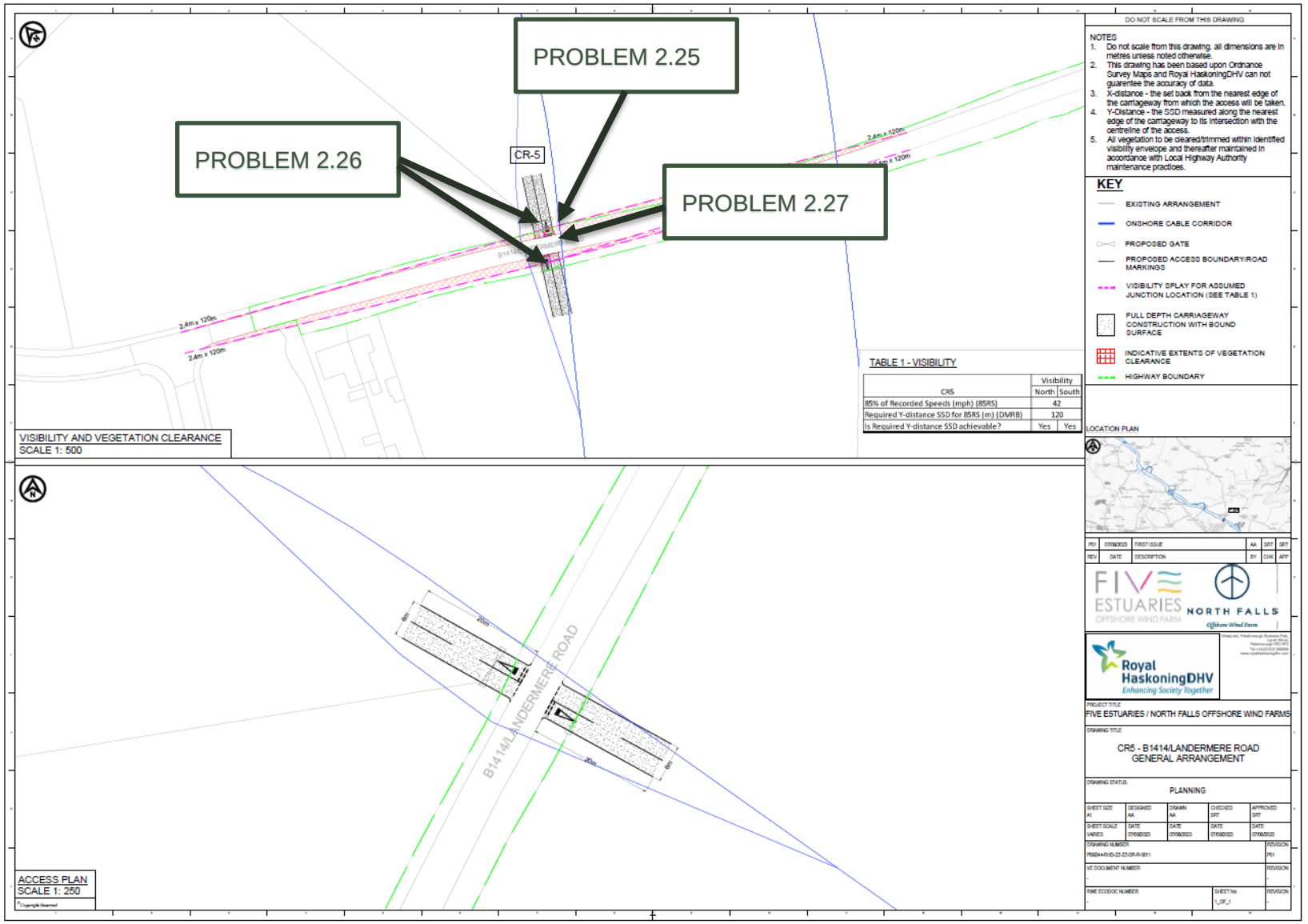
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarentee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
HIGHWAY BOUNDARY
TABLE 1 - VISIBILITY
CR3
Visibility
North
South
85% of Recorded Speeds (mph) (85RS)
43
Required Y-distance SSD for 85RS (m) (DMRB)
120
Is Required Y-distance SSD achievable?
Yes
Yes
LOCATION PLAN
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
CR3 - B1034/ SNEATING HALL LANE
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING


PROBLEM 2.24
CR-4
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500
ACCESS PLAN
SCALE 1: 250
DAMANT'S FARM LANE
20m
20m
TABLE 1 - VISIBILITY
CR4
Visibility
North
South
85% of Recorded Speeds (mph) (85RS) 41
Required Y-distance SSD for 85RS (m) (DMRB) 120
Is Required Y-distance SSD achievable? Yes Yes
DO NOT SCALE FROM THIS DRAWING
NOTES
1. Do not scale from this drawing. all dimensions are in metres unless noted otherwise.
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarentee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
LOCATION PLAN
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
CR4 - DAMANT'S FARM LANE
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING


PROBLEM 2.25
PROBLEM 2.26
PROBLEM 2.27
CR-5
2.4m x 120m
2.4m x 120m
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500
TABLE 1 - VISIBILITY
CR5
Visibility
North
South
85% of Recorded Speeds (mph) (85RS)
42
Required Y-distance SSD for 85RS (m) (DMRB)
120
Is Required Y-distance SSD achievable?
Yes
Yes
DO NOT SCALE FROM THIS DRAWING
NOTES
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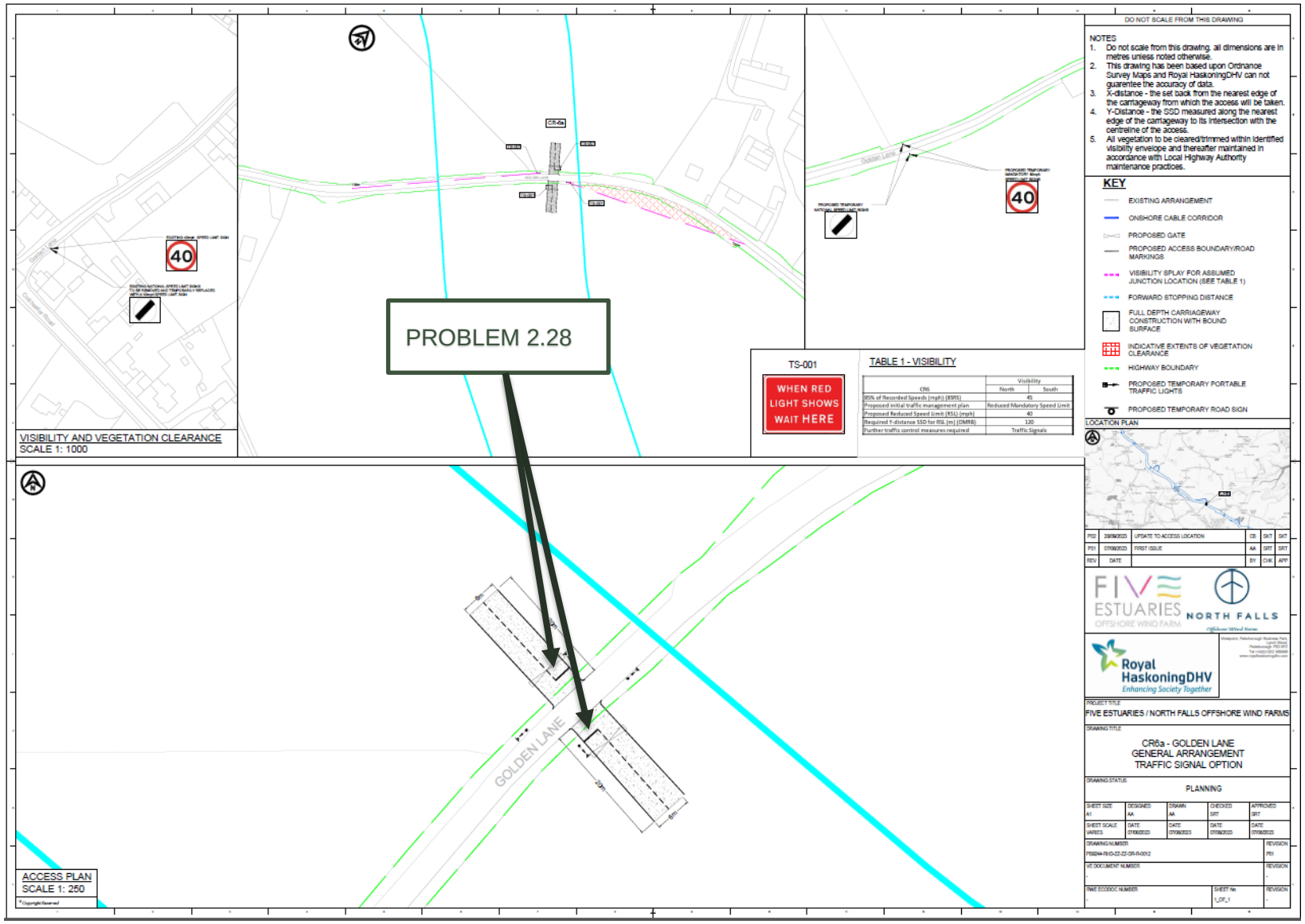
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
LOCATION PLAN
B1414/LANDERMERE ROAD
ACCESS PLAN
SCALE 1: 250
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
CR5 - B1414/LANDERMERE ROAD
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING


PROBLEM 2.28
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 1000
ACCESS PLAN
SCALE 1: 250
GOLDEN LANE
TS-001
WHEN RED LIGHT SHOWS WAIT HERE
TABLE 1 - VISIBILITY
DO NOT SCALE FROM THIS DRAWING
NOTES
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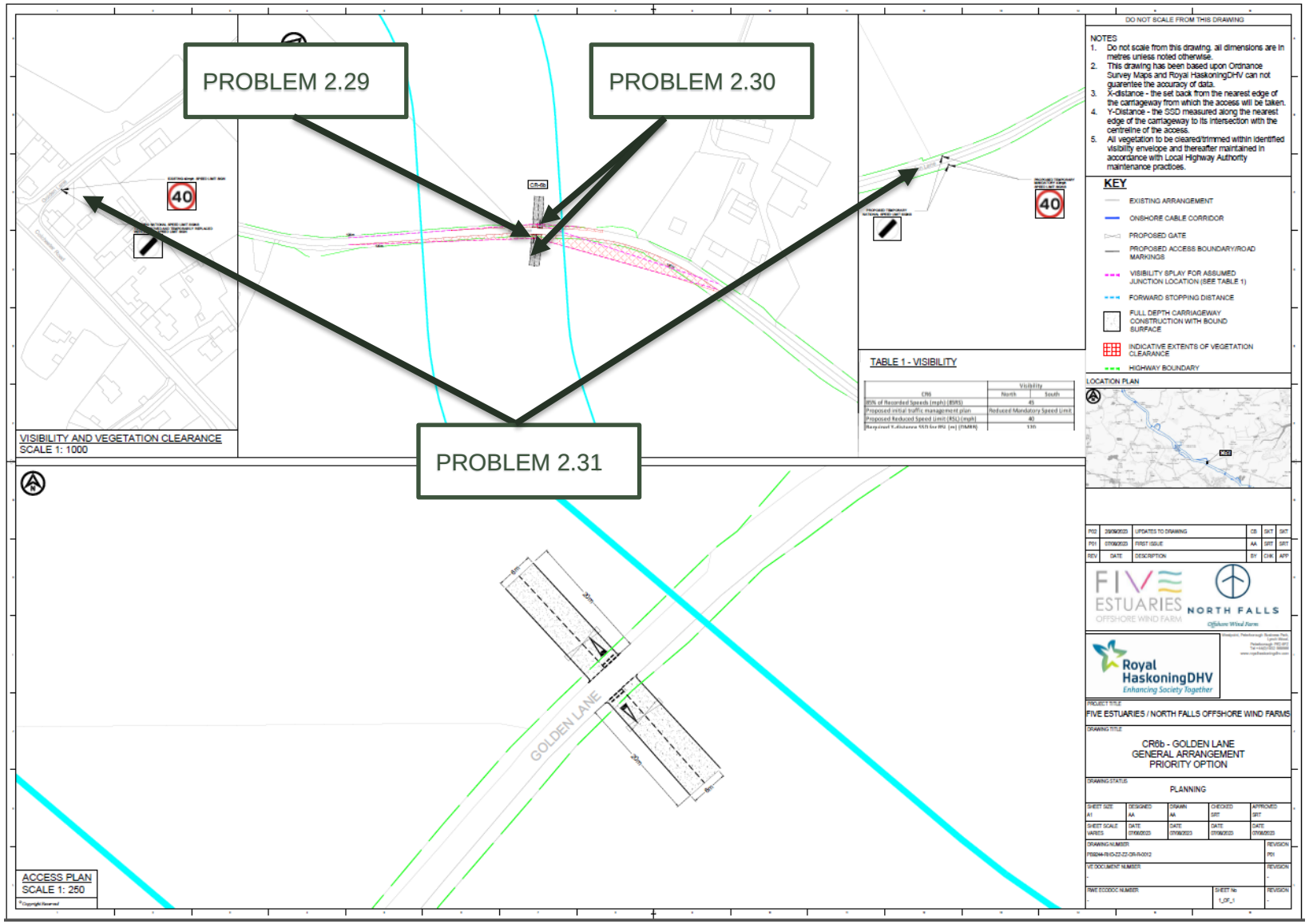
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FORWARD STOPPING DISTANCE
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
PROPOSED TEMPORARY PORTABLE TRAFFIC LIGHTS
PROPOSED TEMPORARY ROAD SIGN
LOCATION PLAN
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
CR6a - GOLDEN LANE
GENERAL ARRANGEMENT
TRAFFIC SIGNAL OPTION
DRAWING STATUS
PLANNING


PROBLEM 2.29
PROBLEM 2.30
PROBLEM 2.31
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 1000
ACCESS PLAN
SCALE 1: 250
GOLDEN LANE
DO NOT SCALE FROM THIS DRAWING
NOTES
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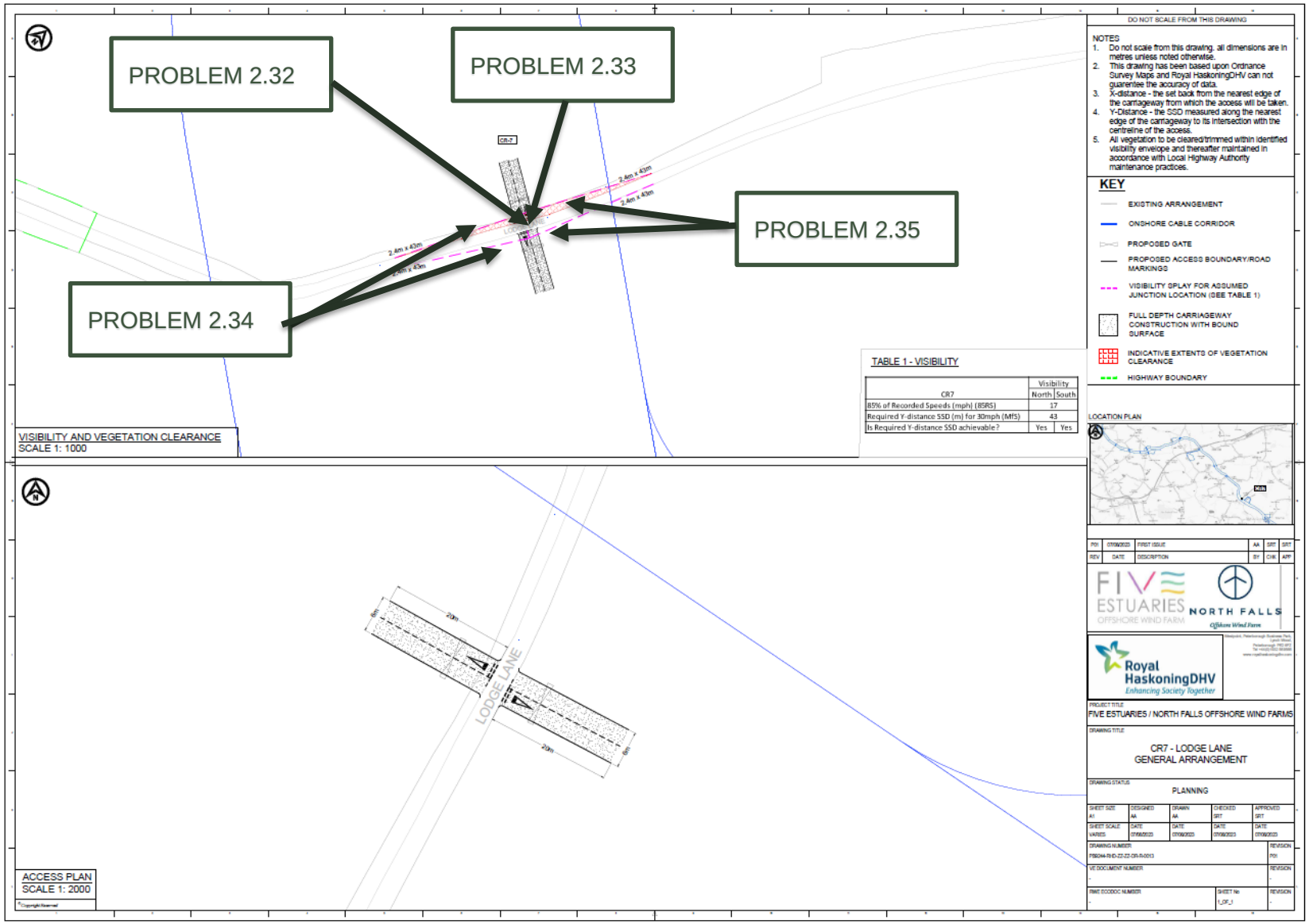
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarantee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FORWARD STOPPING DISTANCE
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
TABLE 1 - VISIBILITY
LOCATION PLAN
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
CR6b - GOLDEN LANE
GENERAL ARRANGEMENT
PRIORITY OPTION
DRAWING STATUS
PLANNING


PROBLEM 2.32
PROBLEM 2.33
PROBLEM 2.35
PROBLEM 2.34
CR7
2.4m x 43m
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 1000
TABLE 1 - VISIBILITY
CR7
Visibility
North
South
85% of Recorded Speeds (mph) (85RS)
17
Required Y-distance SSD (m) for 30mph (MfS)
43
Is Required Y-distance SSD achievable?
Yes
Yes
DO NOT SCALE FROM THIS DRAWING
NOTES
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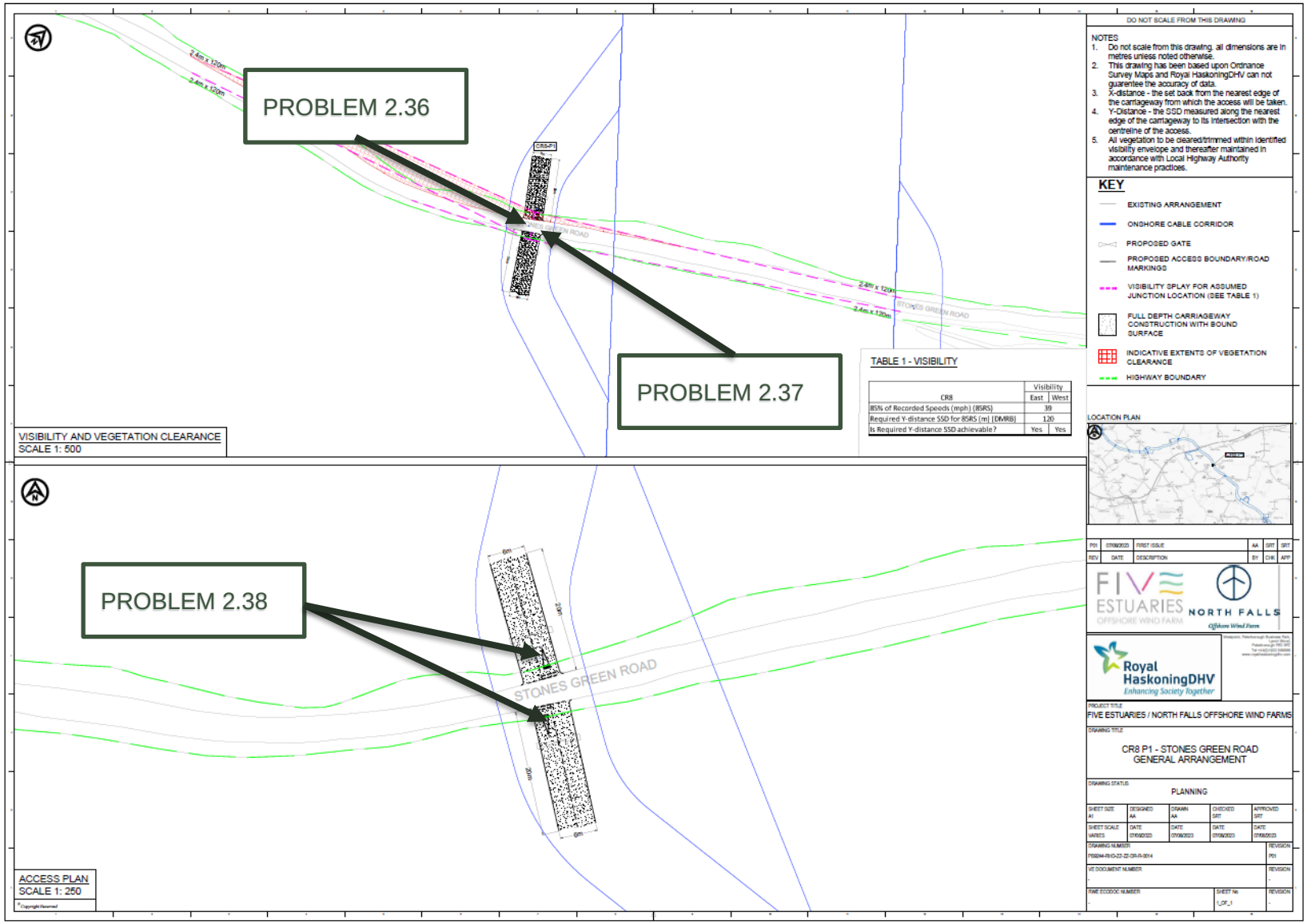
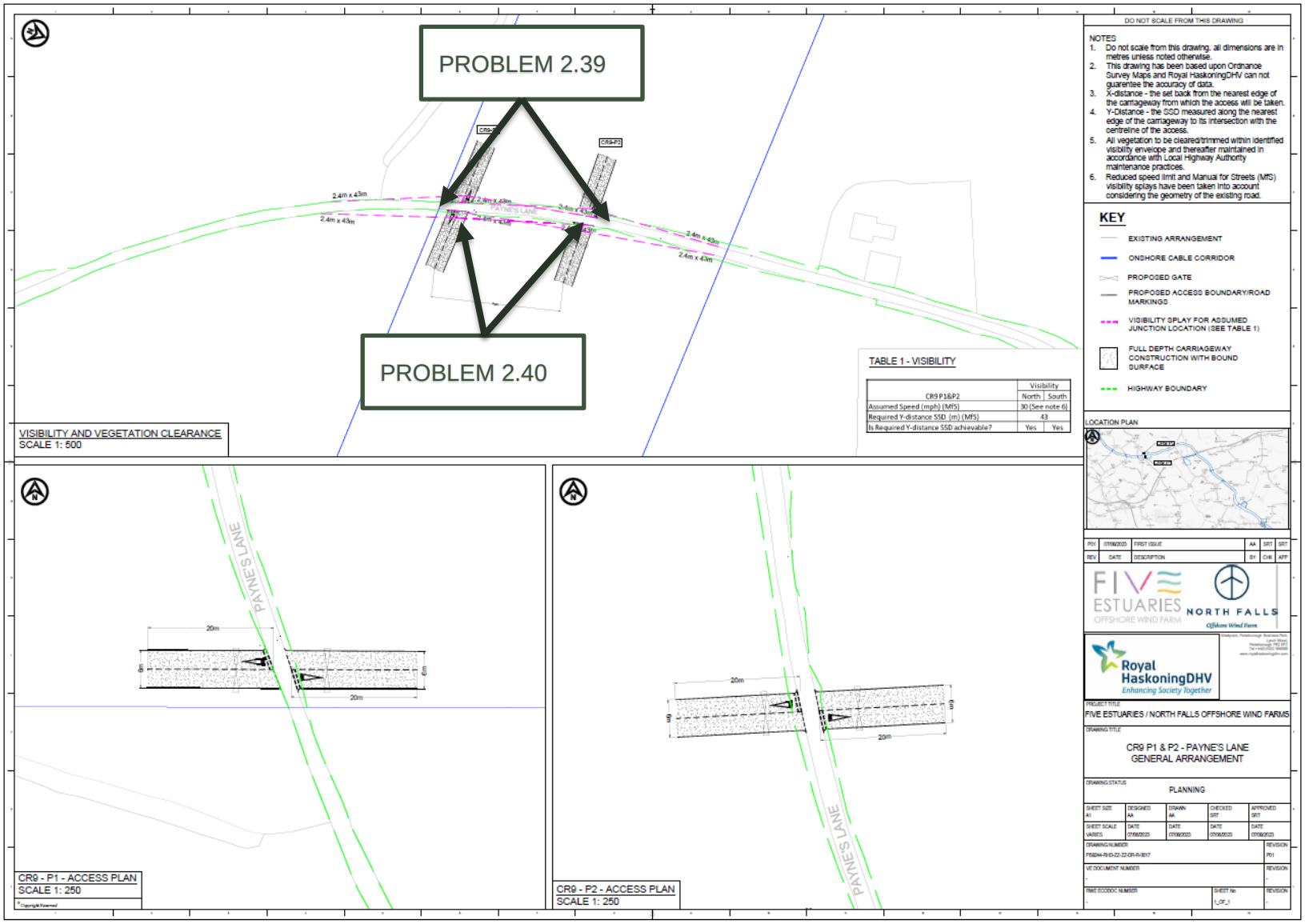
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
LOCATION PLAN
LODGE LANE
20m
6m
ACCESS PLAN
SCALE 1: 2000
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
CR7 - LODGE LANE
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING


PROBLEM 2.36
PROBLEM 2.37
PROBLEM 2.38
STONES GREEN ROAD
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500
ACCESS PLAN
SCALE 1: 250
TABLE 1 - VISIBILITY
CR8
Visibility
East
West
85% of Recorded Speeds (mph) (85RS)
39
Required Y-distance SSD for 85RS (m) [DMRB]
120
Is Required Y-distance SSD achievable?
Yes
Yes
DO NOT SCALE FROM THIS DRAWING
NOTES
1. Do not scale from this drawing, all dimensions are in metres unless noted otherwise.
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarantee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
LOCATION PLAN
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
CR8 P1 - STONES GREEN ROAD
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING


PROBLEM 2.39
PROBLEM 2.40
PAYNE'S LANE
2.4m x 43m
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500
TABLE 1 - VISIBILITY
CR9 P1&P2
Visibility
North
South
Assumed Speed (mph) (MfS)
30 (See note 6)
Required Y-distance SSD (m) (MfS)
43
Is Required Y-distance SSD achievable?
Yes
Yes
DO NOT SCALE FROM THIS DRAWING
NOTES
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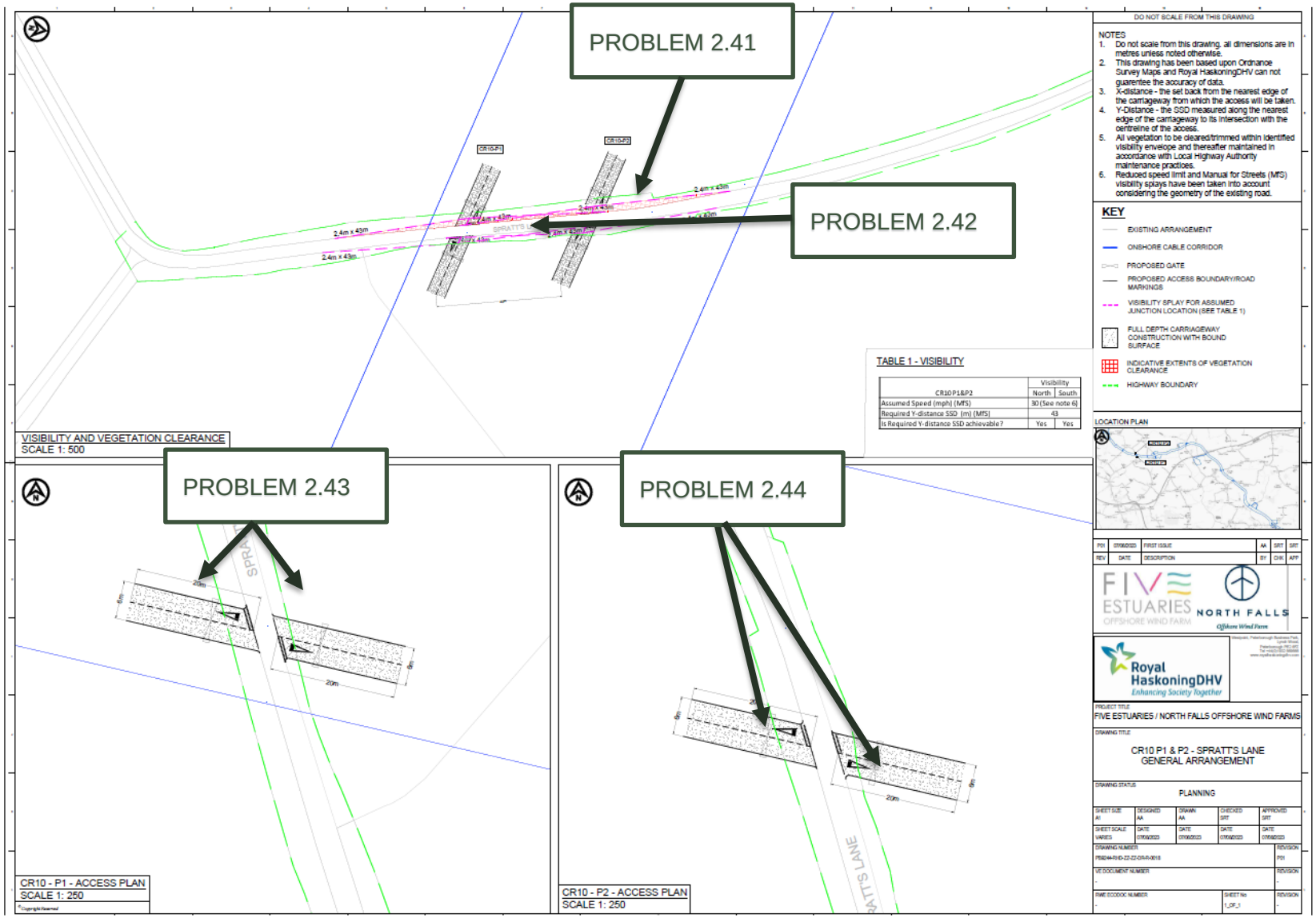
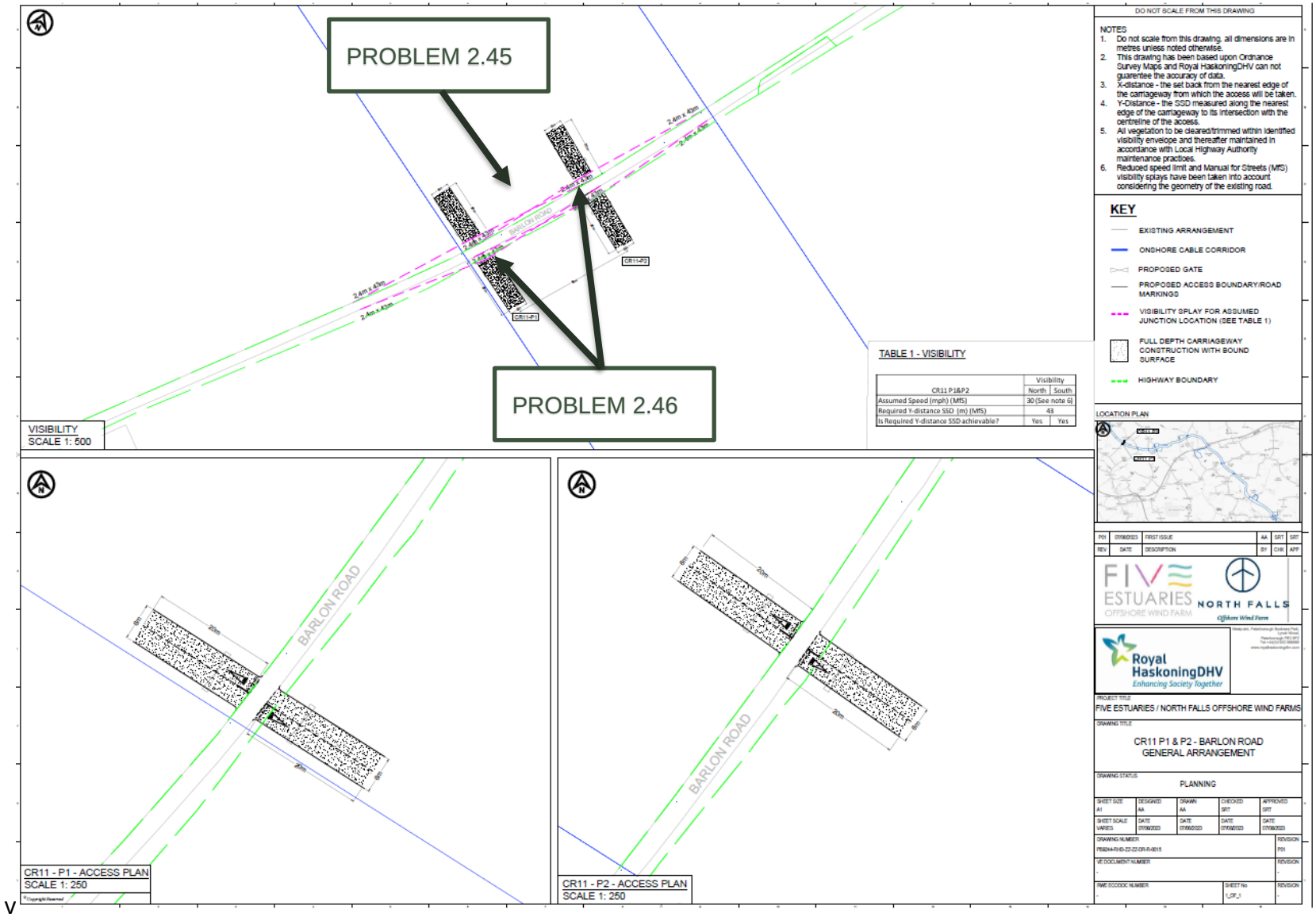
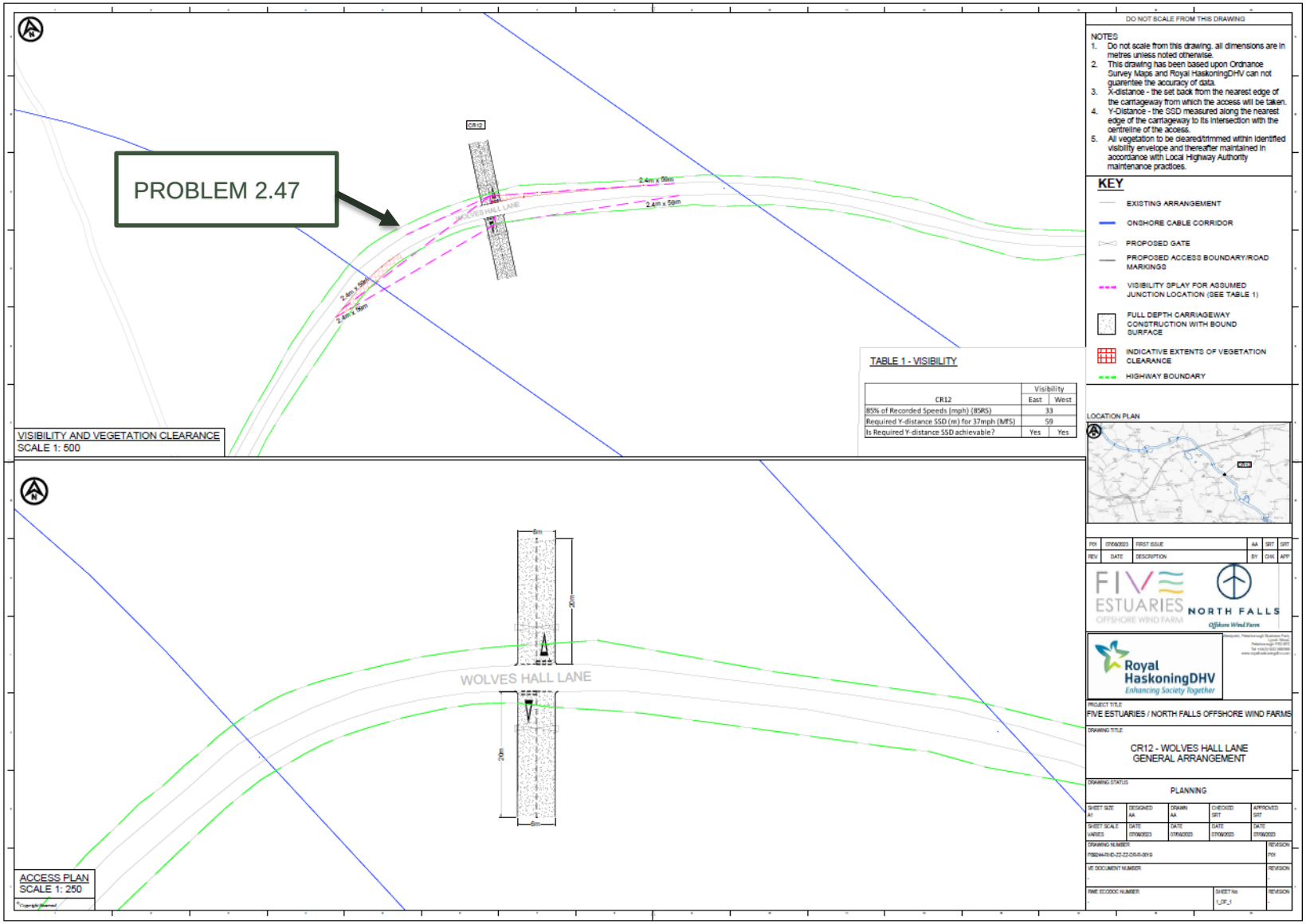
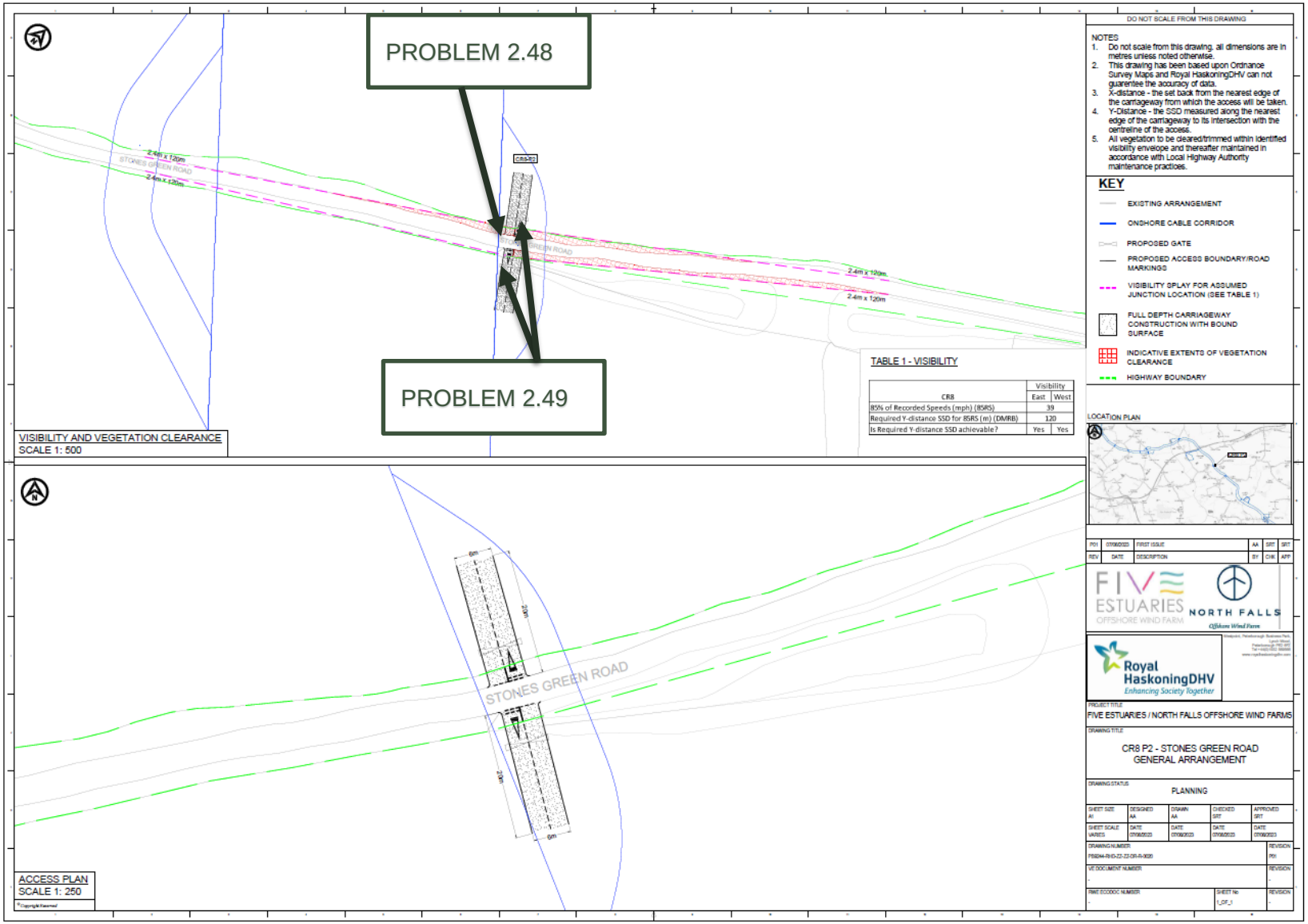
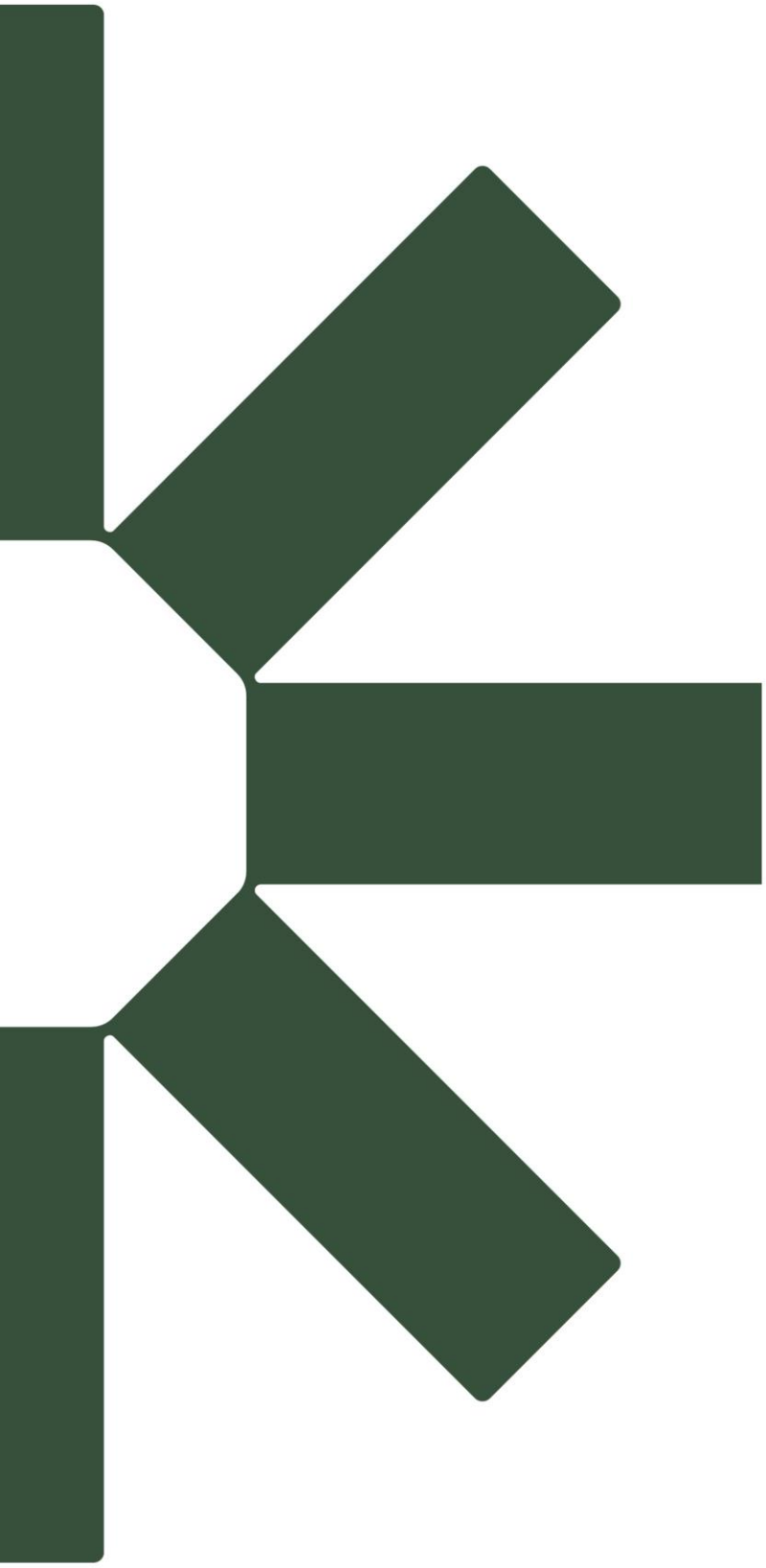
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarantee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
6. Reduced speed limit and Manual for Streets (MfS) visibility splays have been taken into account considering the geometry of the existing road.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
HIGHWAY BOUNDARY
LOCATION PLAN
CR9 - P1 - ACCESS PLAN
SCALE 1: 250
CR9 - P2 - ACCESS PLAN
SCALE 1: 250
20m
6m
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
CR9 P1 & P2 - PAYNE'S LANE
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING


PROBLEM 2.41
PROBLEM 2.42
PROBLEM 2.43
PROBLEM 2.44
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500
CR10 - P1 - ACCESS PLAN
SCALE 1: 250
CR10 - P2 - ACCESS PLAN
SCALE 1: 250
TABLE 1 - VISIBILITY
CR10 P1&P2
Visibility
North
South
Assumed Speed (mph) (MfS)
30 (See note 6)
Required Y-distance SSD (m) (MfS)
43
Is Required Y-distance SSD achievable?
Yes
Yes
DO NOT SCALE FROM THIS DRAWING
NOTES
1. Do not scale from this drawing, all dimensions are in metres unless noted otherwise.
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarantee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
6. Reduced speed limit and Manual for Streets (MfS) visibility splays have been taken into account considering the geometry of the existing road.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
LOCATION PLAN
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
CR10 P1 & P2 - SPRATT'S LANE
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING


PROBLEM 2.45
PROBLEM 2.46
VISIBILITY
SCALE 1: 500
BARLON ROAD
CR11-P1
CR11-P2
2.4m x 43m
TABLE 1 - VISIBILITY
CR11 P1&P2
Visibility
North
South
Assumed Speed (mph) (MfS)
30 (See note 6)
Required Y-distance SSD (m) (MfS)
43
Is Required Y-distance SSD achievable?
Yes
Yes
DO NOT SCALE FROM THIS DRAWING
NOTES
1. Do not scale from this drawing, all dimensions are in metres unless noted otherwise.
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarantee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
6. Reduced speed limit and Manual for Streets (MfS) visibility splays have been taken into account considering the geometry of the existing road.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
HIGHWAY BOUNDARY
LOCATION PLAN
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
CR11 P1 & P2 - BARLON ROAD
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING
CR11 - P1 - ACCESS PLAN
SCALE 1: 250
CR11 - P2 - ACCESS PLAN
SCALE 1: 250
20m
8m


PROBLEM 2.47
CR12
WOLVES HALL LANE
2.4m x 59m
2.4m x 59m
2.4m x 59m
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500
TABLE 1 - VISIBILITY
CR12
Visibility
East
West
85% of Recorded Speeds (mph) (85RS)
33
Required Y-distance SSD (m) for 37mph (MfS)
59
Is Required Y-distance SSD achievable?
Yes
Yes
DO NOT SCALE FROM THIS DRAWING
NOTES
1. Do not scale from this drawing, all dimensions are in metres unless noted otherwise.
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarentee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
LOCATION PLAN
WOLVES HALL LANE
ACCESS PLAN
SCALE 1: 250
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
CR12 - WOLVES HALL LANE
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING


PROBLEM 2.48
PROBLEM 2.49
VISIBILITY AND VEGETATION CLEARANCE
SCALE 1: 500
ACCESS PLAN
SCALE 1: 250
STONES GREEN ROAD
2.4m x 120m
CR8P2
TABLE 1 - VISIBILITY
CR8
Visibility
East
West
85% of Recorded Speeds (mph) (85RS)
39
Required Y-distance SSD for 85RS (m) (DMRB)
120
Is Required Y-distance SSD achievable?
Yes
Yes
DO NOT SCALE FROM THIS DRAWING
NOTES
1. Do not scale from this drawing, all dimensions are in metres unless noted otherwise.
2. This drawing has been based upon Ordnance Survey Maps and Royal HaskoningDHV can not guarentee the accuracy of data.
3. X-distance - the set back from the nearest edge of the carriageway from which the access will be taken.
4. Y-Distance - the SSD measured along the nearest edge of the carriageway to its intersection with the centreline of the access.
5. All vegetation to be cleared/trimmed within identified visibility envelope and thereafter maintained in accordance with Local Highway Authority maintenance practices.
KEY
EXISTING ARRANGEMENT
ONSHORE CABLE CORRIDOR
PROPOSED GATE
PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
VISIBILITY SPLAY FOR ASSUMED JUNCTION LOCATION (SEE TABLE 1)
FULL DEPTH CARRIAGEWAY CONSTRUCTION WITH BOUND SURFACE
INDICATIVE EXTENTS OF VEGETATION CLEARANCE
HIGHWAY BOUNDARY
LOCATION PLAN
FIVE ESTUARIES OFFSHORE WIND FARM
NORTH FALLS Offshore Wind Farm
Royal HaskoningDHV
Enhancing Society Together
PROJECT TITLE
FIVE ESTUARIES / NORTH FALLS OFFSHORE WIND FARMS
DRAWING TITLE
CR8 P2 - STONES GREEN ROAD
GENERAL ARRANGEMENT
DRAWING STATUS
PLANNING



Making Sustainability Happen

Appendix S Construction Accesses and Haul Road Crossings – Designer's Response

Volume 6, Part 6, Annex 8.1 Transport Assessment (Onshore)

Five Estuaries Offshore Wind Farm

Five Estuaries Wind Farm Ltd

SLR Project No.: 404.V05356.00010

23 September 2024

Contractor Coversheet

Project Name:	FE_NF_Mott Macdonald Co-Located Substation Studies	**Package No:**	PROJECTCODE 12 - Electrical Systems

Document Title:	Co-located Substations Early Design - Ardleigh Road Junction - Audit Response Report
Classification:	Confidential

Contractor Doc. No:	104560-MMD-00-XX-RP-HE-1062	**Contractor Revision:**	02
Date:	19/03/2024	**Pages:**	17

Employer Doc. No:	005014244-02	**Employer Revision:**	NA
Document Status:	Preliminary		
Reason for Issue	Review		

MOTT MACDONALD

Co-Located Substation Early Design - Ardleigh Road Junction

Stage 1 RSA Designer's Response

March 2024

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Co-Located Substation Early Design - Ardleigh Road Junction

Stage 1 RSA Designer's Response

March 2024

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Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
01	20/12/2023	Sonia A. Pedrosa	John Weeks	Andrea F. Crespo	First Issue for Comment
02	19/03/2024	Riswana M. Puthiyapurayil	John Weeks	Andrea F. Crespo	Updated after client and client's environmental consultant (SLR) comment

Document reference: 104560 | 104560-MMD-00-XX-RP-HE-1062 | 02 | 005014244-02

Information class: Standard

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1 Introduction

This Road Safety Audit Response Report documents considered responses aligned with road safety 'problems' and 'recommendations' defined through the Stage 1 Road Safety Audit process.

1.1 Overview

This report documents original Stage 1 Road Safety Audit (RSA) 'problems' and 'recommendations' for the Ardleigh Road junction design defined by the SLR Consulting Ltd. Road Safety Audit Team and includes formally considered RSA responses developed by Mott MacDonald Designers.

The audit was carried out by SLR Consulting Ltd at the request of RWE, the Client and Project Sponsor. The Overseeing Organisation for this Stage 1 is Essex County Council.

The scheme subject to Stage 1 RSA comprises a construction access junction and haul road crossings associated with the installation of an export cable to carry power from a proposed offshore windfarm located off the coast of Essex. This access point and haul road are located on Ardleigh Road, Little Bromley and will be required for a period of approximately 18 months.

The Road Safety Audit was originally carried out with reference to the supplied Road Safety Audit Brief prepared by SLR Consulting Ltd on 13th September 2023 and formally accepted by the Audit Team on the same date. The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges (DMRB) Standard, GG119 Road Safety Audit.

A site visit was undertaken by the Audit Team on Thursday 09th November 2023, between the hours of 14:00 and 14:30. The weather at the time of the visit was overcast and the carriageway surface was generally dry. Vehicular traffic levels were considered to be low. There were no pedestrian and no cyclist movements observed during this time.

The Road Safety Audit comprised an examination of the documentation and drawings listed in **Appendix A**. Accompanying drawings indicating the location of identified safety related issues are provided in **Appendix B** and **C**.

Figure 1.1 shows the location of the accesses included in scheme in a local context.

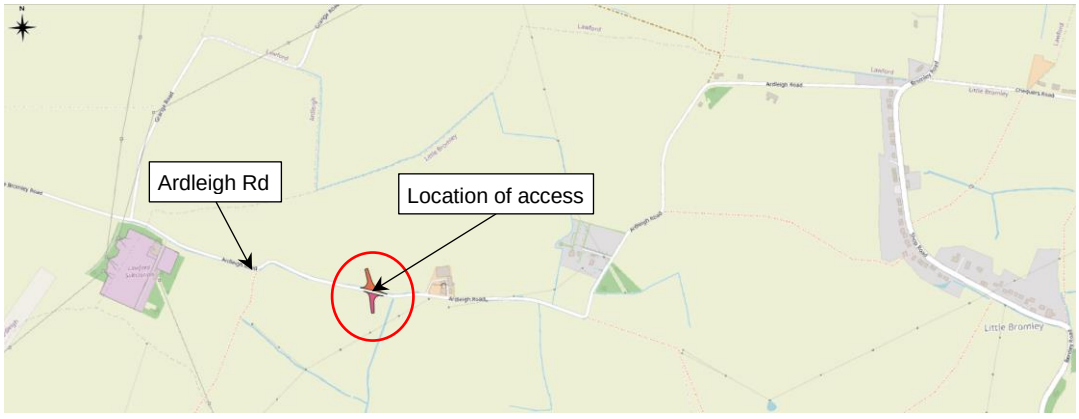


Figure 1.1. Location of the proposed Ardleigh Rd Junction
Source: Mott MacDonald based on OpenStreetMap

1.2 Relevant Parties

Project Sponsor: **RWE**

Client: **RWE**

Designer: **Mott MacDonald**

The Road Safety Audit Team consisted of:

Sasha Respini	BSc (Hons), MSc, MCIHT, MSoRSA Audit Team Leader Principal Transport Planner SLR Consulting Ltd
Alastair Pike	MICE, MCIHT, MSoRSA, HE Approved Cert. Comp. Audit Team Member Head of Road Safety SLR Consulting Ltd

The Road Safety Audit Designer Response has been prepared by:

John Weeks	Design Lead for Bentley Road Improvement Works and Access Junction to the Haul Road, Mott MacDonald
Sonia A. Pedrosa	Design Team Member for Bentley Road Improvement Works and Access Junction to the Haul Road, Mott MacDonald

The client representatives are:

Emmanuelle Bassey	Civil Engineering Lead, RWE
Ian Maclean	Engineering Manager, RWE

1.3 Report Structure

- **Section 2** comprises of a 'Road Safety Audit Decision Log'.
- **Section 3** includes audit response statements.

2 Road Safety Audit Decision Log

This section presents a road safety audit decision log, incorporating ‘Designer Responses’ to all identified problems and recommendations from the Stage 1 RSA; see **Table 2.1**.

Table 2.1: Road Safety Audit Decision Log

Ref.	RSA Problem	RSA Recommendation	Design Organisation Response	Audit Team Supplementary Comment	Client / Project Sponsor Comment	Agreed RSA action[1]
PROBLEMS IDENTIFIED AND ALIGNED RECOMMENDATIONS FROM STAGE 1 RSA						
Scheme: Ardleigh Road Junction						
Drawing 104560-MMD-00-XX-DR-CE-1061_Rev01						
2.1	Location: Site Access (Temporary Access Junction with Ardleigh Rd) Summary: Overhead cables may lead to damage to infrastructure, vehicles and occupants. Onsite observations noted the presence of overhead cables that cross Ardleigh Road in various locations in the vicinity of the proposed development. The vertical alignment of proposed HGV access movements may lead to damage to infrastructure or damage to vehicles and injury to occupants.	It is recommended that the vertical assessment is carried out for the appropriate vehicle types to ensure no conflict remains.	• RSA problem and recommendation agreed. • This matter will be appraised further as an integral part of the detailed design process, when full PAS128 utilities surveys are to be obtained, and drawings detailing diversion or undergrounding (and/or further measures required) of utilities in the vicinity of the proposed access junction and crossing will be developed to take due account of the safety problem and the aligned recommendation. • A wider utility diversion / undergrounding assessment would need to be carried out by the third party in charge of the Ardleigh Rd improvement works design at the scheme detailed design stage, when full PAS128 utilities surveys shall be completed. Coordination between Mott MacDonald and that third party may be required. • Notes 9 and 19 in drawing 104560-MMD-00-XX-DR-CE-1061_Rev01 are intended to account for this matter: • Note 9. «Proposed arrangements shown for indicative purposes only. Dimensions and design may vary following completion of site surveys at detailed design stage». • Note 19. «Only partial utilities data has been provided for this indicative design. Full PAS128 utilities surveys shall be required at later design stages».	No comment	No comment	This matter will be appraised further as an integral part of the detailed design process, when full PAS128 utilities surveys are to be obtained, and drawings detailing diversion or undergrounding of utilities in the vicinity of the proposed access junction and crossing will be developed to take due account of the safety problem and the aligned recommendation.
2.2	Location: Site Access (Temporary Access Junction with Ardleigh Rd). Refer to Appendix B. Summary: Westbound HGV egress does not allow for two-way working for large vehicles potentially leading to shunt or head on type collisions. The proposed access swept path analysis shows a vehicle both egressing and accessing the proposed junction from the west. This location does not support the two-way movements of HGV's and this movement may in turn lead to head on or shunt type collisions between vehicles.	It is recommended that all HGV access should be controlled such that opposing vehicles meet to the east of the access junction.	• RSA problem acknowledged but recommendation dismissed due to it being outdated after recent changes to design. • Developers have agreed with third party stakeholders to continue the Ardleigh Rd improvement works (which include carriageway widening) to the west of the Five Estuaries & North Falls co-located substation access (i.e., site access). Ardleigh Rd Junction proposed layout has been updated to adjust to the new proposed edges of carriageway and it is allowing now for HGV two-way movements west of the junction. • RSA problem solved in drawing 104560-MMD-00-XX-DR-CE-1061_Rev02 (refer to Appendix C). Swept path analysis (SPA) at the updated Ardleigh Rd Junction layout shows that there are no issues with two-way movements West of the junction.	No comment	No comment	RSA problem no longer relevant after recent design updates, as shown in drawing 104560-MMD-00-XX-DR-CE-1061_Rev02 (refer to Appendix C). Swept path analysis (SPA) at the updated Ardleigh Rd Junction layout shows that there are no issues with two-way movements West of the junction in latest design anymore.
2.3	Location: Site Haul Road Access (Temporary Access Junction with Ardleigh Rd). Refer to Appendix B. Summary: There is no tolerance for HGVs when turning into / out of the site access which may lead to loss of control type collisions. The vehicle tracking demonstrates no additional tolerance in surfaced width for HGVs at the site access and along the haul road track. This arrangement does not allow any room for manoeuvre along the track and relies on a perfect HGV turn each time. This proposed arrangement may lead to loss of control type collisions.	It is recommended that the proposed haul road is widened to allow more width for large construction vehicles.	• RSA problem and recommendation acknowledged and partially agreed, since simultaneous HGV access and egress movements from/to either to the West or East of Ardleigh Road are expected to occur on the odd occasion. The majority of HGV movements at the concerned junction are expected to be crossing movements from the cable haul road to the co-located permanent access and vice versa. HGVs working at third party substation development are not expected to be using the co-located substation cable haul road. Current design represents a compromise between safety for manoeuvres, design of bellmouth compliant with standard (CD123, Section 5) and minimisation of total area of bellmouth, along with minimisation of land-take and volumes of material required to construct the junction. • Also, please note that the SPA shown in drawing 104560-MMD-00-XX-DR-CE-1061_Rev01 is not making full use of the junction surface since it is not using the corner taper at the permanent access bellmouth north of Ardleigh Rd. This shall be updated by the designer in drawing 104560-MMD-00-XX-DR-CE-1061_Rev02, showing greater easiness for manoeuvring.	No comment	No comment	Designer to update vehicles swept paths accessing/egressing Ardleigh Rd East leg in drawing 104560-MMD-00-XX-DR-CE-1061_Rev02, making use of the full junction surface so that manoeuvring of vehicles appears less constrained.

Ref.	RSA Problem	RSA Recommendation	Design Organisation Response	Audit Team Supplementary Comment	Client / Project Sponsor Comment	Agreed RSA action[1]
			• Also please note that vehicle models used to perform the SPA (low loaders) are conservative and representing the worst case scenario since they have the greatest requirement for turning radius (6.99m). The overall maximum vehicle width is 2.55m (Max. legal length articulated vehicle), as shown in vehicle details, which means that a two-way movement will need a road width greater than 5.1m. Ardleigh Rd proposed widened carriageway width of 6.5m satisfies this condition although the SPA drawn appears tight in the drawings. We can conclude that if the swept path fits within the carriageway limits with these conservative vehicle models (as it does), room is to be sufficient in reality. • Note 12 in drawing 104560-MMD-00-XX-DR-CE-1061_Rev01 («Vehicle models used for the assessments are indicative only, actual turning radii and vehicle track will depend on the precise vehicles used by the works contractor») and disclaimer shown in Vehicle Details («These models are generic and do not relate to any specific vehicle supplier's specification. All swept paths should be verified by the Contractor and their haulage supplier, once appointed, prior to detailed design and installation of the access») were included as caveats in relation to this matter.			

1. Agreed RSA actions not completed in latest update of drawings

Appendices

A. Documents and Drawings Referenced

Table A.1: Documents and Drawings Referenced

Ref.	Title	Date
RSA1: 425.002196.00001	Stage 1 Road Safety Audit - Ardleigh Road, Five Estuaries Wind Farm_Rev01	27/11/2023
Design Drawing: 104560-MMD-00-XX-DR-CE-1061_Rev01 (Client No. 004943785-01)	Co-located Substations Early Design – Permanent and Temporary Access Junction with Ardleigh Road_Rev01	18/10/2023
Design Drawing: 104560-MMD-00-XX-DR-CE-1061_Rev02 (Client No. 004943785-02)	Co-located Substations Early Design – Permanent and Temporary Access Junction with Ardleigh Road_Rev02	15/12/2023

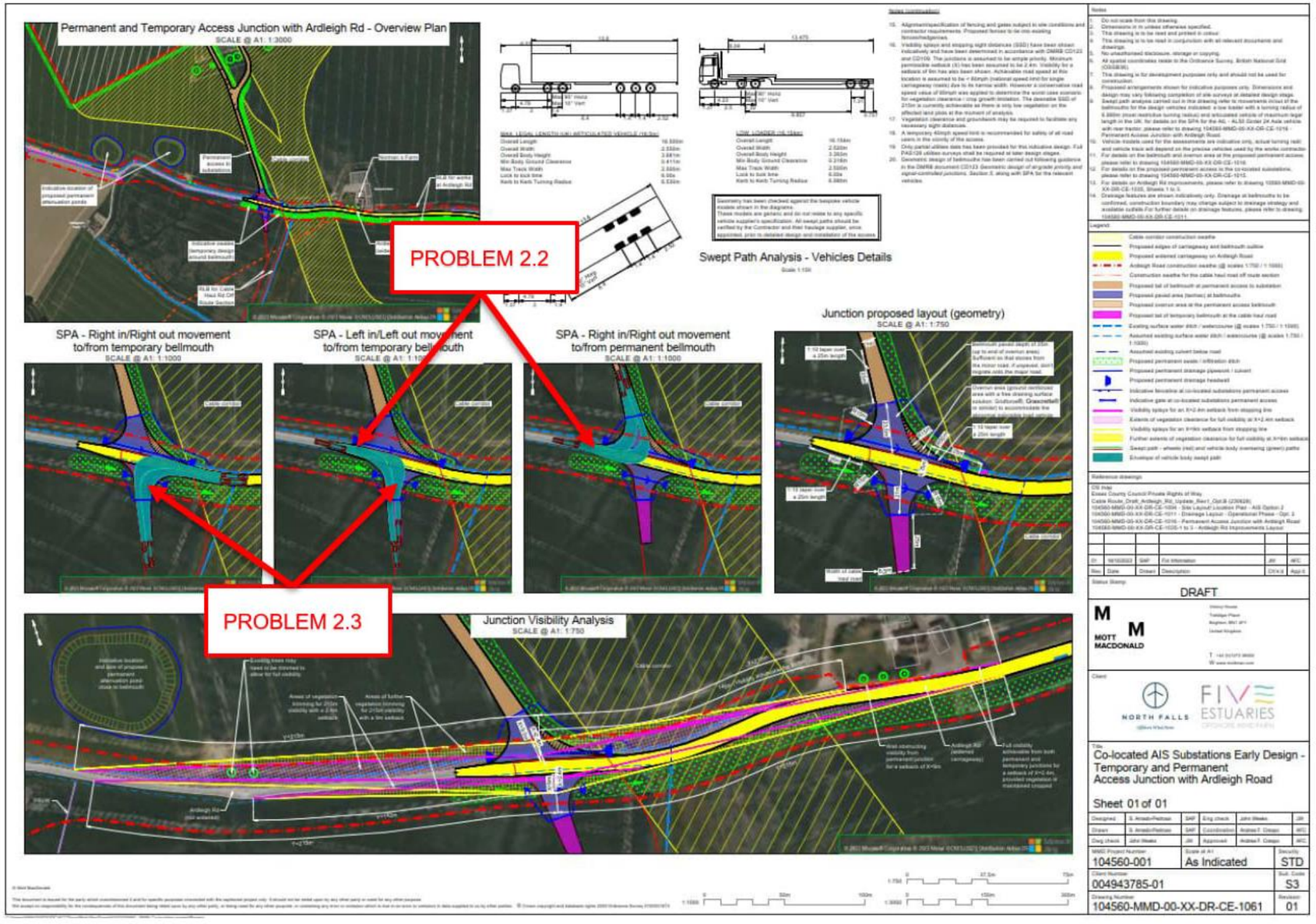
Source: Mott MacDonald

B. Key Plan - Drawing subjected to Stage 1 RSA

Drawing 104560-MMD-00-XX-DR-CE-1061_Rev01

RWE
Stage 1 Road Safety Audit

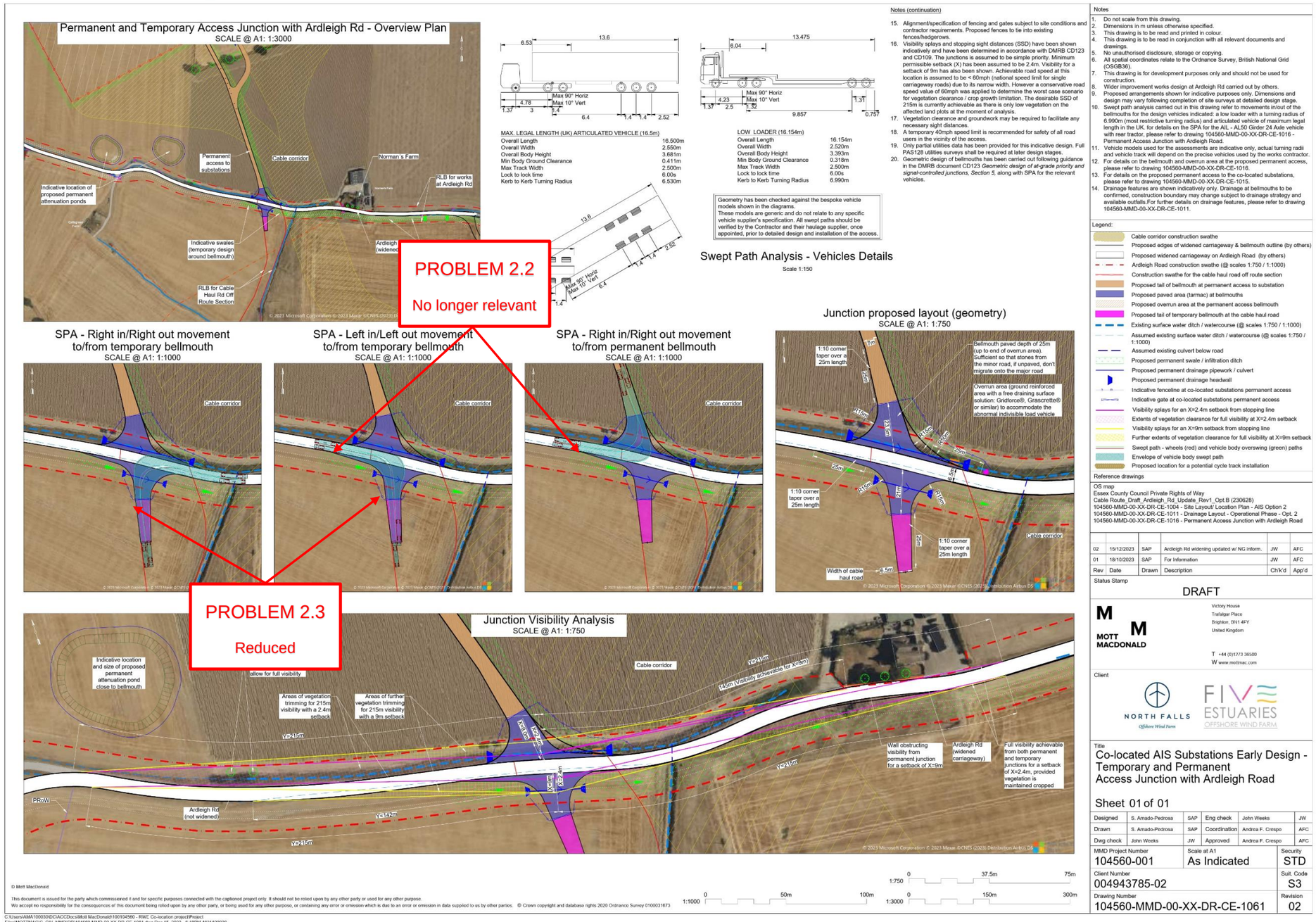
27 November 2023
SLR Project No.: 425.002196.00001



(Source: SLR Consulting, Stage 1 RSA Audit, Problem Location Plan, SLR Project No.:425.002196.00001)

C. Key Plan – Drawing incorporating latest design decisions previous to receiving Stage 1 RSA report

Drawing 104560-MMD-00-XX-DR-CE-1061_Rev02



(Source: Mott MacDonald based on SLR Consulting, Stage 1 RSA Audit, Problem Location Plan, SLR Project No.:425.002196.00001)

Contractor Coversheet

Project Name:	FE_NF_Mott Macdonald Co-Located Substation Studies	**Package No:**	PROJECTCODE 12 - Electrical Systems

Document Title:	Co-located Substations Early Design - Bentley Road Junction - Audit Response Report
Classification:	Confidential

Contractor Doc. No:	104560-MMD-00-XX-RP-HE-1063	**Contractor Revision:**	02
Date:	19/03/2024	**Pages:**	18

Employer Doc. No:	005016415-02	**Employer Revision:**	NA
Document Status:	Preliminary		
Reason for Issue	Review		

MOTT MACDONALD

Co-Located Substation Early Design - Bentley Road

Stage 1 RSA Designer's Response

March 2024

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Co-Located Substation Early Design - Bentley Road

Stage 1 RSA Designer's Response

March 2024

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Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
01	20/12/2023	Sonia A. Pedrosa	John Weeks	Andrea F. Crespo	First Issue for comment
02	19/03/2024	Riswana M. Puthiyapurayil	John Weeks	Andrea F. Crespo	Updated after client and client's environmental consultant (SLR) comment

Document reference: 104560 | 104560-MMD-00-XX-RP-HE-1063 | 02 | 005016415-02

Information class: Standard

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Figure 1.1 shows the location of accesses included in scheme in a local context.

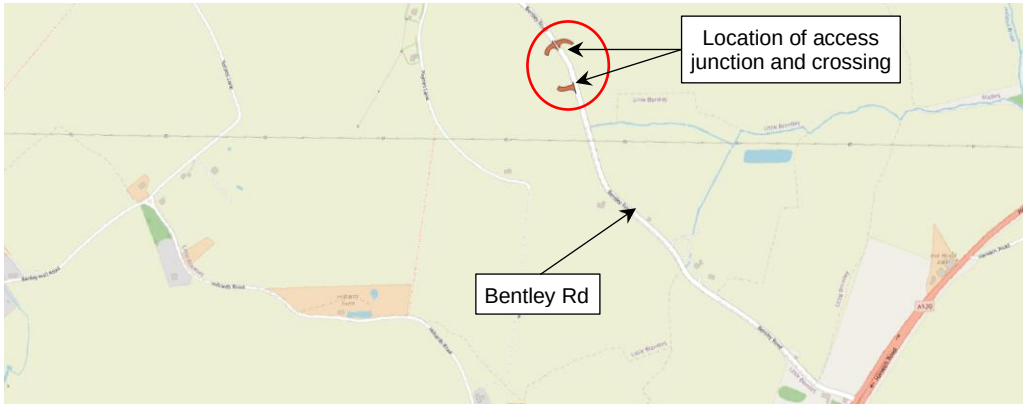

Figure 1.1. Location of the proposed Bentley Rd Junction and crossing
Source: Mott MacDonald based on OpenStreetMap

1.2 Relevant Parties

Project Sponsor: **RWE**

Client: **RWE**

Designer: **Mott MacDonald**

The Road Safety Audit Team consisted of:

Sasha Respini	BSc (Hons), MSc, MCIHT, MSoRSA Audit Team Leader Principal Transport Planner SLR Consulting Ltd
Alastair Pike	MICE, MCIHT, MSoRSA, HE Approved Cert. Comp. Audit Team Member Head of Road Safety SLR Consulting Ltd

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John Weeks	Design Lead for Bentley Road Improvement Works and Access Junction to the Haul Road, Mott MacDonald
Sonia A. Pedrosa	Design Team Member for Bentley Road Improvement Works and Access Junction to the Haul Road, Mott MacDonald

The client representatives are:

Emmanuelle Bassey	Civil Engineering Lead, RWE
Ian Maclean	Engineering Manager, RWE

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- **Section 3** includes audit response statements.

2 Road Safety Audit Decision Log

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Table 2.1: Road Safety Audit Decision Log

Ref.	RSA Problem	RSA Recommendation	Design Organisation Response	Audit Team Supplementary Comment	Client / Project Sponsor Comment	Agreed RSA action[1]
PROBLEMS IDENTIFIED AND ALIGNED RECOMMENDATIONS FROM STAGE 1 RSA						
Scheme: Bentley Road Junction and crossing						
Drawing 104560-MMD-00-XX-DR-CE-1032-1_Rev02						
2.1	Location: Site Access (Temporary Access Junction with Bentley Rd). Refer to Appendix B. Summary: At a 9m setback, existing trees may obscure the visibility splay potentially leading to side swipe type collisions. Onsite observations noted that the presence of existing vegetation may constitute an obstruction to the junction visibility. Obstruction to visibility splays may lead to injudicious vehicle movements at the proposed junction leading to side swipe collisions between vehicles.	It is recommended that the trees be cut back and maintained as such that it does not pose an obstruction to the visibility splays.	• RSA problem and recommendation acknowledged but not agreed since it is not considered that these trees have an impact on the visibility clearance areas. The visibility splay with a 9m setback on the eastern side of Bentley Rd (northern side of Bentley Rd on drawing 104560-MMD-00-XX-DR-CE-1032-1) only captures a small area of road verge west of these existing trees, to run across the road to the other verge side west of Bentley Rd (South of Bentley Rd in drawing 104560-MMD-00-XX-DR-CE-1032-1). Cutting back or trimming the trees will not produce any changes to visibility. Trees are located on the southeast of the road and will cast shadow during most part of the day unless they are totally cut. • In drawing 104560-MMD-00-XX-DR-CE-1031-3 for the same scheme (refer to Appendix C in this document), it is indicated the trimming of these existing trees to facilitate passage of vehicles, which will also help with general visibility. • No designer action proposed.	No comment	No comment	No action.
2.2	Location: Site Access (Temporary Haul Road crossing at Bentley Rd). Refer to Appendix B. Summary: The position of the gate could cause rear end shunts. The position of the proposed gate is set back 18m and does not allow the largest vehicle (25m) to fully clear the main carriageway when waiting. There is no detail provided that shows the proposed operation of the gate features. Should they be closed for any reason their proposed location could leave HGVs overhanging the public highway which may result in shunt / side swipe type collisions.	It is recommended that the gates are relocated further back into the site such that if a gate is closed for whatever reason, an HGV can still clear the public highway before stopping.	• RSA problem and recommendation agreed. • Design drawing will be amended in accord.	No comment	No comment	Design drawing will be amended consistent with RSA recommendation.
2.3	Location: Site Haul Road Access (Temporary Access Junction with Bentley Rd). Refer to Appendix B. Summary: There is no tolerance for HGVs when turning into / out of the site access which may lead to loss of control type collisions. The vehicle tracking demonstrates no additional tolerance in surfaced width for HGVs at the site access and along the haul road track. This arrangement does not allow any room for manoeuvre along the track and relies on a perfect HGV turn each time. This proposed arrangement may lead to loss of control type collisions.	It is recommended that the proposed haul road is widened to allow more width for large construction vehicles.	• RSA problem and recommendation acknowledged but partially agreed since it is not considered to constitute a significant safety concern at this stage for the following reasons: • The turning movements of the cable drum delivery HGV from Bentley Rd onto the cable haul road are expected to occur on the odd occasion. Cable Drum delivery is considered to be a non-Special Order abnormal load movement and will be subject to agreement with the LHA and Police through the ESDAL system, as a controlled movement they will be timed with other deliveries so as not to be impeded. Majority of cable drum delivery HGV movements at the crossing are expected to be crossing movements from the cable haul road on one side of Bentley Rd to the cable haul road on the other side. The current design represents a compromise between safety for manoeuvres, design of bellmouth compliant with standard (CD123, Section 5) and minimisation of total area of bellmouth, along with minimisation of land-take and volumes of material required to construct the junction. • Also please note that the swept path hatched area in drawing 104560-MMD-00-XX-DR-CE-1032-1 corresponds to the vehicle body envelope and not to the vehicle chassis envelope. For clarity, drawing to be updated to show that the hatched area corresponding to the vehicle chassis envelope, instead of the vehicle body	No comment	No comment	Designer to update vehicle swept path hatched areas to enhance vehicle chassis envelope as well as vehicle body envelope, showing that vehicle turning movements fit within the bellmouth outlines. The chassis envelope line will be brought forward in the drawing for clarity.

Ref.	RSA Problem	RSA Recommendation	Design Organisation Response	Audit Team Supplementary Comment	Client / Project Sponsor Comment	Agreed RSA action[1]
			envelope, fits within the bellmouth outlines. The chassis envelope line will be brought forward in the drawing for clarity. • Also please note that vehicle models used to perform the SPA are conservative and representing a worst case scenario. We can conclude that if the vehicle chassis swept path fits within the carriageway limits with these conservative vehicle models (as it does), room is to be sufficient in reality. • Note 9 in drawing 104560-MMD-00-XX-DR-CE-1032-1_Rev02 («Vehicles used in this drawing are indicative of those expected to be using this construction access. Actual turning radii and vehicle track will depend on the precise vehicles used by the works contractor») and disclaimer shown in Vehicle Details («This model is generic and do not relate to any specific vehicle supplier's specification. All swept paths should be verified by the Contractor and their haulage supplier, once appointed, prior to detailed design and installation of the access») were included as caveats in relation to this matter.			
2.4	Location: Internal site. Refer to Appendix B. Summary: No turning area is provided to allow vehicles to turn and egress the site in a forward gear, may lead to side swipe type collisions. It is not clear from the supplied drawings whether a construction compound, or similar, will be provided on the site to allow for vehicles to turn within the site, this could compel drivers to reverse from the site onto the public highway which could lead to obscured visibility and side swipe type collisions.	It is recommended that a turning area for large construction vehicles is provided within the site boundary during the construction works to ensure vehicles can access and egress the site in a forward gear	• RSA problem and recommendation acknowledged and partially agreed. • Construction compound areas, which would allow for vehicle turning movements, are shown in drawing 104560-MMD-00-XX-DR-CE-1031-3 for the same scheme (refer to Appendix C in this document). • Drawing 104560-MMD-00-XX-DR-CE-1032-1_Rev02 to be updated to show the construction compound areas for clarity.	No comment	No comment	Designer to update drawing 104560-MMD-00-XX-DR-CE-1032-1_Rev02 to show the construction compound areas for clarity.
Drawing 104560-MMD-00-XX-DR-CE-1032-2_Rev01						
2.5	Location: Proposed site access. Refer to Appendix B. Summary: The level difference between the carriageway and site could result in loss of control or side swipe type collisions. Onsite observations found that there was a difference in levels between the existing carriageway and the new access. An excessive gradient may create difficulty for large construction vehicles wishing to access Lodge Lane and may in turn lead to a lack of surface friction and slow egress movements potentially creating shunt / side swipe type collisions between egressing construction vehicles and vehicles travelling on Bentley Road.	It is recommended that the existing gradient be amended to an appropriate level for the restart movements of large vehicles accessing Bentley Road from the proposed site	• RSA problem and recommendation agreed. • This matter will be appraised further as an integral part of the detailed design process and drawings developed to take due account of the safety problem and the aligned recommendation.	No comment	No comment	This matter will be appraised further as an integral part of the detailed design process and drawings developed to take due account of the safety problem and the aligned recommendation.

1. Agreed RSA actions not completed in latest update of drawings.

Appendices

A. Documents and Drawings Referenced

Table A.1: Documents and Drawings Referenced

Ref.	Title	Date
RSA1: 237699	Stage 1 Road Safety Audit - Bentley Road, Five Estuaries Wind Farm_Rev01	13/11/2023
Design Drawing: 104560-MMD-00-XX-DR-CE-1032-1_Rev02 (Client No. 004786171-02)	Co-located Substation Early Design – Bentley Rd with Cable Haul Rd Junction & SPA_Sheet 1 of 2 Rev01	26/06/2023
Design Drawing: 104560-MMD-00-XX-DR-CE-1032-2_Rev1 (Client No. 004845330-01)	Co-located Substation Early Design – Bentley Rd with Cable Haul Rd Junction & SPA_Sheet 2 of 2 Rev01	26/06/2023
Design Drawing: 104560-MMD-00-XX-DR-CE-1031-_Rev3 (Client No. 004786180-03)	Co-located Substation Early Design – Bentley Rd improvement works_Sheet 3 of 3 Rev03	30/11/2023

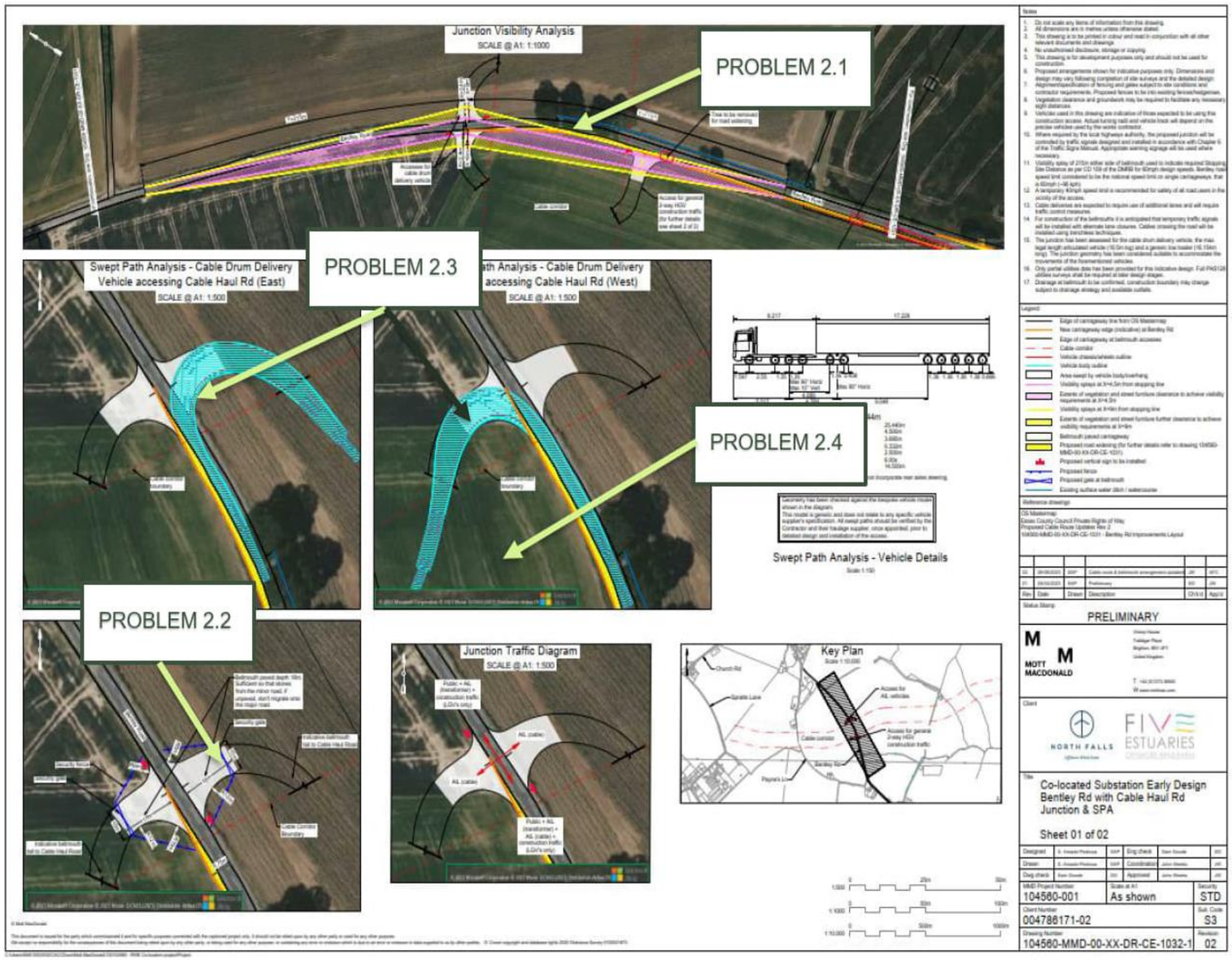
Source: Mott MacDonald

B. Key Plans - Drawings subjected to Stage 1 RSA

Drawing 104560-MMD-00-XX-DR-CE-1032-1_Rev02

RWE
Stage 1 Road Safety Audit

13 November 2023
SLR Project No.: 237699

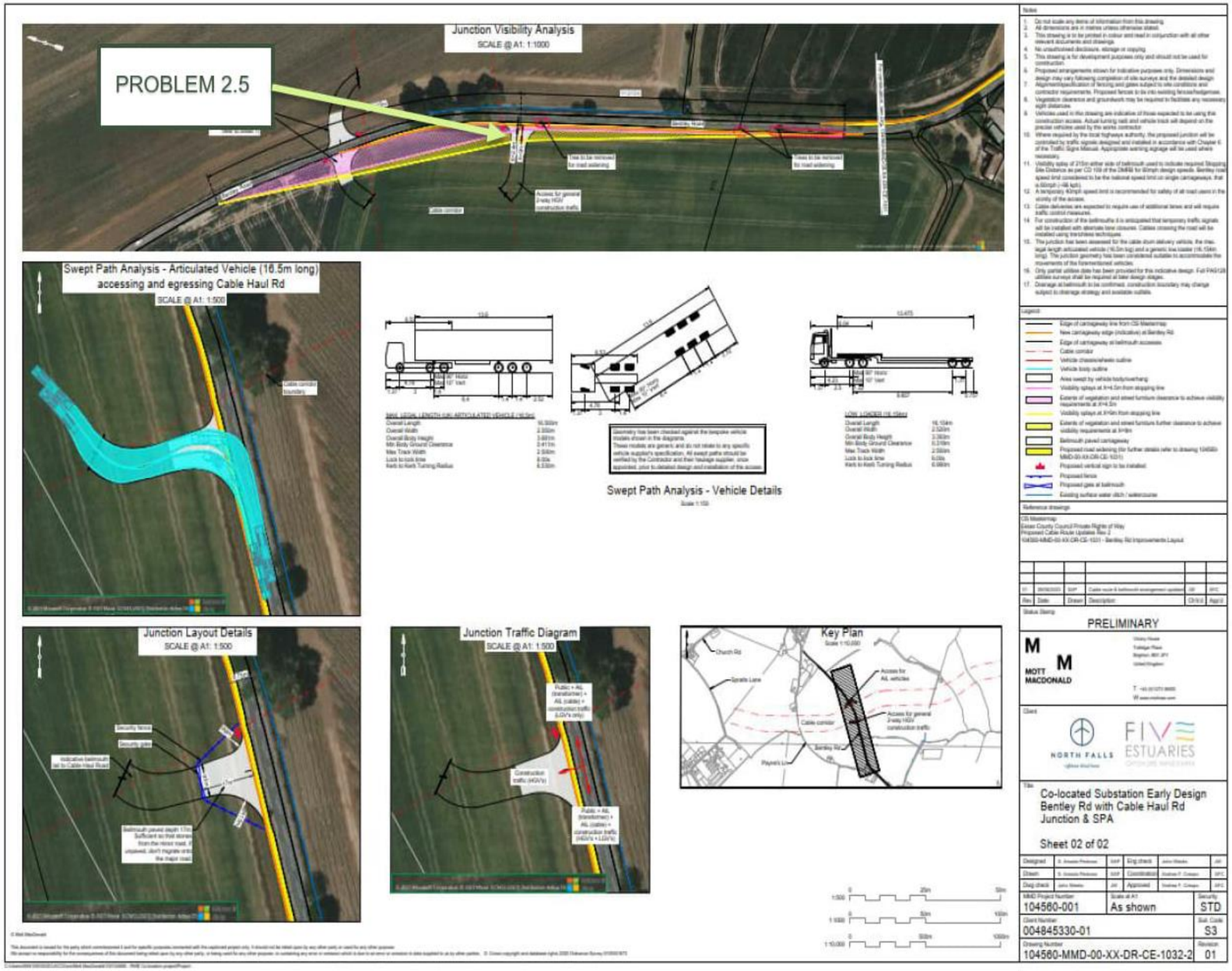


(Source: "SLR Consulting, Stage 1 RSA Audit, Problem Location Plan, SLR Project No.:237699")

Drawing 104560-MMD-00-XX-DR-CE-1032-2_Rev01

RWE
Stage 1 Road Safety Audit

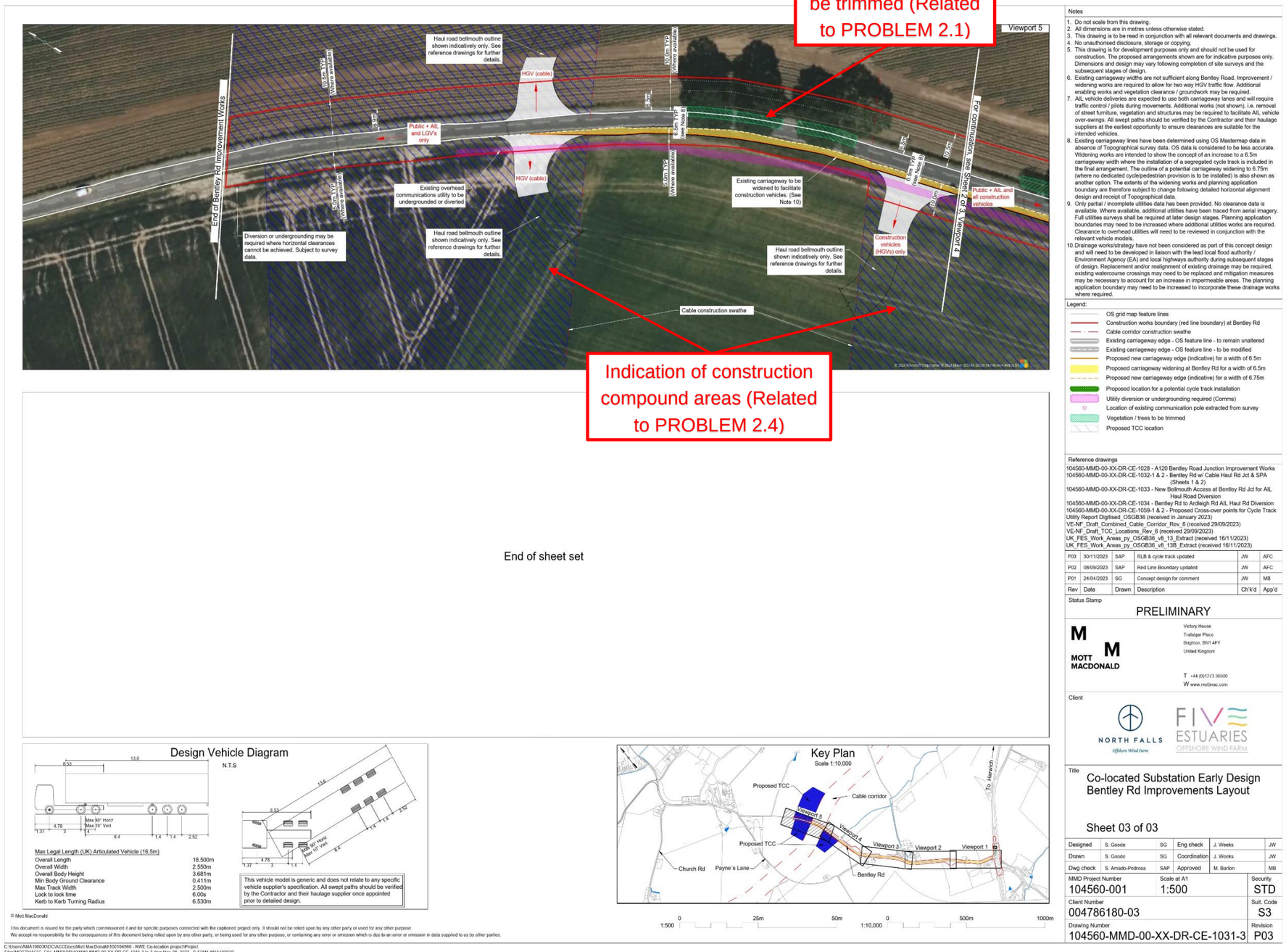
13 November 2023
SLR Project No.: 237699



(Source: "SLR Consulting, Stage 1 RSA Audit, Problem Location Plan, SLR Project No.:237699")

C. Additional Key Plans for completeness of information (Not subjected to Stage 1 RSA)

Drawing 104560-MMD-00-XX-DR-CE-1031-3_Rev03



(Source: "Mott MacDonald")

ROAD SAFETY AUDIT – DESIGNER'S RESPONSE

Project Details

Project Title	Five Estuaries / North Falls Wind Farm
Date of Audit	7 November 2023
Document Reference and revision	237699
Prepared by	Alastair Pike and Sasha Boland of SLR
On behalf of	Five Estuaries / North Falls Wind Farm

Road Safety Audit Decision Log

Problem No.	Problem Accepted (Yes / No)	Recommended Measure Accepted (Yes / No)	Alternative Measure (describe)
2.5, 2.7, 2.11, 2.20, 2.23, 2.35, 2.37, 2.44	Yes	Yes. *Details of the design of the ditch crossings will be provided at Stage 2 as part of the detailed design process. This will include appropriate detail in regard to separation between the edge of the access/crossing and the ditch.*	n/a
2.8, 2.34	Yes	Yes. *Detailed design of the accesses will be provided at Stage 2 as part of the detailed design process. Accesses and crossings will be designed to provide a smooth and level transition.*	n/a
2.10, 2.31	Yes	Yes. *Details of the design of the signage will be provided at Stage 2 as part of the detailed design process. This will include detail of sign sizes, offsets from the edge of the highway and any foliage that may need to be cut back to improve visibility.*	n/a
2.12	Yes	Yes. *The design of access AC5 has been amended to show the vegetation to the east and west of the junction being cut back.*	n/a
2.14, 2.25	Yes	No	*The design of access AC7 and CR4 have been amended to include a segregated route for pedestrians alongside the access. This route would separate pedestrians and construction traffic.*
2.18, 2.26, 2.28, 2.30, 2.33, 2.38, 2.40, 2.43, 2.46, 2.49	Yes	Yes. *The proposed gates will be set back from the edge of the road providing space for a HGV to wait off the highway in the event that the gates are closed.*	n/a
2.21	Yes	Yes. *The detailed design drawings to be provide at Stage 2 will include detail of all statutory undertaker plant and necessary accommodation works.*	n/a
2.22, 2.24, 2.27, 2.29, 2.32, 2.36, 2.39, 2.42, 2.45, 2.48	Yes	Yes. *The proposed gates will be set back from the edge of the road providing space for a HGV to wait off the highway in the event that the gates are closed.*	n/a
2.41	Yes	No	*It is accepted that one of the crossings is located*

ROAD SAFETY AUDIT – DESIGNER'S RESPONSE

Problem No.	Problem Accepted (Yes / No)	Recommended Measure Accepted (Yes / No)	Alternative Measure (describe)
			'on top of' an existing informal passing place. The crossing would therefore remove this passing place. There are however passing places approximately 50m north and south of this crossing. The final design of the crossing will include surfacing/verge details showing how the passing place will be removed for the duction of construction.
2.47	Yes	Yes. *The design of CR12 has been amened to show visibility splay drawn to the northern side of the road.*	n/a

Design Organisation and Overseeing Organisation statements

On behalf of the design organisation I certify that:

The RSA actions identified in response to the road safety audit problems in the road safety audit have been discussed and agreed with the Overseeing Organisation

Name	*SKT*
Signed	*SKT*
Position	*Asscociate Director*
Organisation	*Royal HaskoningDHV*
Date	*08.11.2023*

Please submit this completed Designer's Response to the Local Highway Authority, in conjunction with the associated Road Safety Audit.

Appendix T Trip Generation Calculations

Volume 6, Part 6, Annex 8.1 Transport Assessment (Onshore)

Five Estuaries Offshore Wind Farm

Five Estuaries Wind Farm Ltd

SLR Project No.: 404.V05356.00010

23 September 2024

Appendix T1: Daily 2-Way HGV Movements per Route Section per Month

Scenario 1 (VE + NF Ducts)

	Month																			Maximum	Average (18 Months)
Route Section	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**		
Section 1	42	62	63	86	95	106	104	86	81	71	78	80	46	42	38	63	62	72	0	**106**	**67**
Section 2	33	29	22	21	24	26	20	29	21	15	26	30	23	21	30	33	0	0	0	**33**	**21**
Section 3	50	71	81	87	84	67	64	41	57	42	52	25	72	77	42	76	75	53	0	**87**	**59**
Section 4a	33	29	28	39	6	3	3	25	22	28	10	8	6	18	34	27	30	33	0	**39**	**20**
Section 4b	42	60	59	59	61	71	36	42	34	40	58	16	48	67	72	67	34	42	0	**72**	**48**
Section 5	41	32	57	39	50	48	38	39	33	45	36	34	34	28	29	32	32	41	0	**57**	**36**
Section 6/7	50	41	41	55	47	57	73	30	36	32	36	35	16	58	91	85	74	41	0	**91**	**47**
400kV Works	0	0	0	0	0	0	0	19	42	31	30	7	36	0	0	0	0	0	0	**42**	**9**
OnSS and unlicensed works	10	10	94	96	95	97	28	116	114	133	112	114	26	12	10	10	9	12	10	**133**	**58**
Beach Access	0	10	30	2	0	0	3	2	3	1	3	3	39	0	0	0	0	0	0	**39**	**5**
Total	**301**	**344**	**475**	**484**	**462**	**475**	**369**	**429**	**443**	**438**	**441**	**352**	**346**	**323**	**346**	**393**	**316**	**294**	**10**	**660**	**371**

Core Access Route Reduction Factor	**0.73**	**1.00**

	Month																			
Access	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	
Beach Access	0	10	30	2	0	0	3	2	3	1	3	3	39	0	0	0	0	0	0	
AC-1 / AC-2	42	62	63	86	95	106	104	86	81	71	78	80	46	42	38	63	62	72	0	
AC-3A	33	29	22	21	24	26	20	29	21	15	26	30	23	21	30	33	0	0	0	
AC-3B	25	36	41	44	42	34	32	21	29	21	26	13	36	39	21	38	38	27	0	
AC - 4	25	36	41	44	42	34	32	21	29	21	26	13	36	39	21	38	38	27	0	
AC -5	33	29	28	39	6	3	3	25	22	28	10	8	6	18	34	27	30	33	0	
AC -6 / AC -7	42	60	59	59	61	71	36	42	34	40	58	16	48	67	72	67	34	42	0	
AC -8 / AC - 8A	21	16	29	20	25	24	19	20	17	23	18	17	17	14	15	16	16	21	0	
AC -9 / AC -10 / AC -11	81	67	164	171	167	178	120	185	209	219	196	173	95	84	116	111	99	74	10	

Appendix T2: Daily 2-Way Workforce Vehicle Movements per Route Section per Month

Scenario 1 (VE + NF Ducts)

	Workforce Movements																			Vehicle Movements	
	Month																			Maximum	Average (18 Months)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Section 1	53	60	77	71	126	159	207	218	214	168	192	148	99	108	75	77	77	77	0	**145**	**77**
Section 2	53	53	51	51	42	84	86	53	86	86	115	75	51	51	51	51	0	0	0	**77**	**36**
Section 3	53	77	82	106	137	146	157	124	117	130	163	108	137	117	75	77	77	51	0	**109**	**68**
Section 4a	53	53	51	66	16	16	16	80	86	88	49	49	47	75	75	51	51	51	0	**59**	**34**
Section 4b	53	77	77	77	69	113	117	119	106	119	126	91	121	117	91	77	51	51	0	**84**	**58**
Section 5	60	53	77	66	77	93	110	124	102	124	113	110	75	51	51	16	16	16	0	**83**	**47**
Section 6/7	53	53	53	66	55	84	106	104	0	102	106	121	88	119	104	88	77	51	0	**81**	**50**
400kV Works	0	0	0	0	0	0	0	51	66	82	75	49	51	0	0	0	0	0	0	**55**	**13**
OnSS and unlicensed works	51	51	72	83	192	113	162	230	219	302	210	251	183	140	189	198	198	180	40	**201**	**108**
Beach Access	0	47	44	0	0	0	17	17	17	0	10	15	80	0	0	0	0	0	0	**53**	**9**
Total	**429**	**524**	**584**	**586**	**714**	**808**	**978**	**1120**	**1013**	**1201**	**1159**	**1017**	**932**	**778**	**711**	**635**	**547**	**477**	**40**	**946**	**500**

Core Access Route Reduction Factor	**0.85**	**1.00**
Car Occupancy	**1.5**	

	Workforce Movements																			Vehicle Movements	
	Month																			Maximum	Average (18 Months)
Access	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Beach Access	0	47	44	0	0	0	17	17	17	0	10	15	80	0	0	0	0	0	0	**53**	**9**
AC-1 / AC-2	53	60	77	71	126	159	207	218	214	168	192	148	99	108	75	77	77	77	0	**145**	**77**
AC-3A	53	53	51	51	42	84	86	53	86	86	115	75	51	51	51	51	0	0	0	**77**	**36**
AC-3B	27	39	41	53	69	73	79	62	59	65	82	54	69	59	38	39	39	26	0	**54**	**34**
AC - 4	27	39	41	53	69	73	79	62	59	65	82	54	69	59	38	39	39	26	0	**54**	**34**
AC -5	53	53	51	66	16	16	16	80	86	88	49	49	47	75	75	51	51	51	0	**59**	**34**
AC -6 / AC -7	53	77	77	77	69	113	117	119	106	119	126	91	121	117	91	77	51	51	0	**84**	**58**
AC -8 / AC - 8A	30	27	39	33	39	47	55	62	51	62	57	55	38	26	26	8	8	8	0	**41**	**23**
AC -9 / AC -10 / AC -11	134	131	164	182	286	244	323	447	336	548	448	476	360	285	319	294	283	239	40	**365**	**194**

Appendix T3: Daily 2-Way HGV Movements per Route Section per Month

Scenario 1 (VE + NF OWF)

	Months																			Maximum	Average (18 Months)
Route Section	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**		
Section 1	42	62	63	86	95	106	109	90	85	75	75	83	46	42	39	63	62	72	0	**109**	**72**
Section 2	33	29	22	21	24	26	20	29	21	18	26	31	23	21	30	33	0	0	0	**33**	**23**
Section 3	50	71	81	87	84	72	68	45	61	46	52	25	72	77	42	76	75	53	0	**87**	**63**
Section 4a	33	29	28	39	6	3	3	25	22	28	10	8	9	18	35	27	30	33	0	**39**	**21**
Section 4b	42	60	59	59	61	71	36	45	38	44	61	16	48	67	72	67	34	42	0	**72**	**51**
Section 5	41	32	57	39	50	48	38	43	36	48	36	34	34	28	29	32	32	41	0	**57**	**39**
Section 6/7	50	41	41	55	47	57	73	30	40	35	40	35	16	58	91	85	74	41	0	**91**	**51**
400kV Works	0	0	0	0	0	0	0	19	42	31	30	10	36	0	0	0	0	0	0	**42**	**9**
OnSS and unlicensed works	20	20	186	186	187	187	54	226	226	259	222	222	52	24	20	20	18	24	40	**259**	**120**
Beach Access	0	10	30	2	0	0	3	2	3	1	3	3	39	0	0	0	0	0	0	**39**	**5**
Total	**311**	**354**	**567**	**574**	**554**	**570**	**404**	**554**	**574**	**585**	**555**	**467**	**375**	**335**	**358**	**403**	**325**	**306**	**40**	**789**	**454**

Core Access Route Reduction Factor	**0.74**	**1.00**

	Month																		
Access	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**
Beach Access	0	10	30	2	0	0	3	2	3	1	3	3	39	0	0	0	0	0	0
AC-1 / AC-2	42	62	63	86	95	106	109	90	85	75	75	83	46	42	39	63	62	72	0
AC-3A	33	29	22	21	24	26	20	29	21	18	26	31	23	21	30	33	0	0	0
AC-3B	25	36	41	44	42	36	34	23	31	23	26	13	36	39	21	38	38	27	0
AC - 4	25	36	41	44	42	36	34	23	31	23	26	13	36	39	21	38	38	27	0
AC -5	33	29	28	39	6	3	3	25	22	28	10	8	9	18	35	27	30	33	0
AC -6 / AC -7	42	60	59	59	61	71	36	45	38	44	61	16	48	67	72	67	34	42	0
AC -8 / AC - 8A	21	16	29	20	25	24	19	22	18	24	18	17	17	14	15	16	16	21	0
AC -9 / AC -10 / AC -11	91	77	256	261	259	268	146	296	326	349	310	284	121	96	126	121	108	86	40

Appendix T4: Daily 2-Way Workforce Vehicle Movements per Route Section per Month

Scenario 1 (VE + NF OWF)

	Workforce Movements																			Vehicle Movements	
	Months																			Maximum	Average (18 Months)
Route Section	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Section 1	53	60	77	71	126	159	218	223	218	172	201	148	99	108	75	77	77	77	0	**149**	**83**
Section 2	53	53	51	51	42	84	86	53	86	97	115	75	51	51	51	51	0	0	0	**77**	**39**
Section 3	53	77	82	106	137	157	168	148	146	141	163	108	137	117	75	77	77	51	0	**112**	**75**
Section 4a	53	53	51	66	16	16	16	80	86	88	49	49	58	75	75	51	51	51	0	**59**	**36**
Section 4b	53	77	77	77	69	113	117	130	126	130	137	91	121	117	91	77	51	51	0	**91**	**63**
Section 5	60	53	77	66	77	93	110	135	121	135	113	110	75	51	51	16	16	16	0	**90**	**51**
Section 6/7	53	53	53	66	55	84	106	104	117	121	117	121	88	119	104	88	77	51	0	**81**	**58**
400kV Works	0	0	0	0	0	0	0	51	66	82	75	49	51	0	0	0	0	0	0	**55**	**14**
OnSS and unlicensed works	102	102	144	166	384	226	324	460	438	604	420	502	366	280	378	396	396	360	40	**403**	**224**
Beach Access	0	0	0	0	46	53	17	17	17	0	17	17	80	0	0	0	0	0	0	**53**	**9**
Total	**480**	**528**	**612**	**669**	**952**	**985**	**1162**	**1401**	**1421**	**1570**	**1407**	**1270**	**1126**	**918**	**900**	**833**	**745**	**657**	**40**	**1169**	**653**

Core Access Route Reduction Factor	0.90	1.00
	1.5	

	Workforce Movements																			Vehicle Movements	
	Month																			Maximum	Average (18 Months)
Access	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Beach Access	0	0	0	0	46	53	17	17	17	0	17	17	80	0	0	0	0	0	0	**89**	**16**
AC-1 / AC-2	53	60	77	71	126	159	218	223	218	172	201	148	99	108	75	77	77	77	0	**249**	**132**
AC-3A	53	53	51	51	42	84	86	53	86	97	115	75	51	51	51	51	0	0	0	**128**	**62**
AC-3B	27	39	41	53	69	79	84	74	73	71	82	54	69	59	38	39	39	26	0	**94**	**59**
AC - 4	27	39	41	53	69	79	84	74	73	71	82	54	69	59	38	39	39	26	0	**94**	**59**
AC -5	53	53	51	66	16	16	16	80	86	88	49	49	58	75	75	51	51	51	0	**98**	**58**
AC -6 / AC -7	53	77	77	77	69	113	117	130	126	130	137	91	121	117	91	77	51	51	0	**153**	**100**
AC -8 / AC - 8A	30	27	39	33	39	47	55	68	61	68	57	55	38	26	26	8	8	8	0	**75**	**40**
AC -9 / AC -10 / AC -11	185	182	236	265	478	357	485	683	682	875	669	727	543	425	508	492	481	419	40	**583**	**513**

Appendix T5: Scenario 1 (VE + NF OWF Ducts) Assessment A - HGV Distribution and Assignment

		Maximum									
		Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
		39	106	33	87	39	72	57	91	42	133

		Average									
		Beach	Beach and Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
		5	76	21	59	20	48	36	47	9	58

Link ID	Link	HGV Distribution									
		Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
1	A12 (N)	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
2	A12 (S)	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
6	A12 (N) offslip at J29 Roundabout	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
7	A12 (N) onslip at J29 Roundabout	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
8	A120 (E) offslip at J29 Roundabout	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
9	A120 (E) onslip at J29 Roundabout	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
10	A120 between J29 and A133	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
11	A120 between A133 and Harwich Road						100%	100%	100%	100%	100%
12	A120 between Harwich Road and Bentley Road						100%	100%	100%	100%	100%
13	A120 between Bentley Road and B1035						100%	100%	100%	100%	100%
14	A120 East of B1035										
15	A120 at Harwich										
16	A133 between A120 and A133 Main Road	100%	100%	100%	100%	100%					
17	A133 between A133 Main Road and B1033	100%	100%	100%	100%	100%					
18	A133 between B1033 and B1027	100%	100%								
19	A133 Clacton Road (Elmstead Market)										
20	A133 Main Road										
21	B1027 St John's Road (west of Clacton)										
22	B1027 Colchester Road (St Osyth Park)										
23	B1027 Valley Road (Clacton)	100%	100%								
24	B1032 Frinton Road	100%	100%								
25	B1032 Clacton Road	100%	100%								
26	B1033 Colchester Road (west of B1441)			100%	100%	100%					
27	B1441 Clacton Road			100%							
28	B1414 Harwich Road			100%							
29	B1033 Frinton Road			100%							
30	B1033 Colchester Road (east of B1441)					100%					
31	B1035 Tendring Road					100%					
32	B1035 Thorpe Road					100%					
33	B1035 south of A120						100%				
34	B1035 Clacton Road							50%			
35	Bentley Road							50%	100%	100%	100%
18	A133 between B1033 and B1027	100%	100%								
23	B1027 Valley Road (Clacton)										
36	Bentley Road (north of construction access)										
37	B1035 Clacton Road (north of construction access)										
38	B1441 via Little Clacton										
39	Progress Way										
40	B1029 Harwich Road										
41	Harwch Road										
42	B1032 Kirby Cross										
43	B1033 Thorpe Road										
44	B1029 Frating Road										
45	Waterhouse Lane										

	HGV Trips (Maximum)									
Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
20	53	17	44	20	36	29	46	21	67
20	53	17	44	20	36	29	46	21	67
10	27	8	22	10	18	14	23	11	33
10	27	8	22	10	18	14	23	11	33
10	27	8	22	10	18	14	23	11	33
10	27	8	22	10	18	14	23	11	33
39	106	33	87	39	72	57	91	42	133
					72	57	91	42	133
					72	57	91	42	133
					72	57	91	42	133
39	106	33	87	39					
39	106	33	87	39					
39	106								
39	106								
39	106								
39	106								
		33	87	39					
		33	44						
		33	44						
		33	44						
			44	39					
			44	39					
				39					
					72				
						29			
						29	91	42	133
39	106								

	HGV Trips (Average 18 / 19 Months)									
Beach	Beach and Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
3	38	11	29	10	24	18	24	4	29
3	38	11	29	10	24	18	24	4	29
1	10	3	7	3	6	5	6	1	7
1	10	3	7	3	6	5	6	1	7
1	10	3	7	3	6	5	6	1	7
1	10	3	7	3	6	5	6	1	7
5	76	21	59	20	48	36	47	9	58
					48	36	47	9	58
					48	36	47	9	58
					48	36	47	9	58
5	76	21	59	20					
	76	21	59	20					
5	76								
5	76								
5	76								
5	76								
		21	59	20					
		21	29						
		21	29						
		21	29						
			29	20					
			29	20					
				20					
					48				
						18			
						18	47	9	58
5	76								

Total HGV Trips	
Maximum	Average
330	187
330	187
165	47
165	47
165	47
165	47
660	374
395	198
395	198
395	198
265	176
265	176
106	76
106	76
106	76
106	76
159	100
77	51
77	51
77	51
83	49
83	49
39	20
72	48
29	18
295	132
106	76

Appendix T6: Scenario 1 (VE + NF OWF Ducts) Assessment B - HGV Distribution and Assignment

Maximum									
Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
39	106	33	87	39	72	57	91	42	133

Average									
Beach	Beach and Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
5	76	21	59	20	48	36	47	9	58

Link ID	Link	HGV Distribution										HGV Trips (Maximum)										HGV Trips (Average 18 / 19 Months)										Total HGV Trips	
		Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS	Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS	Beach	Beach and Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS	Maximum	Average
1	A12 (N)																																
2	A12 (S)																																
3	Ipswich Road at J29 Roundabout																																
4	A12 (S) offslip at J29 Roundabout																																
5	A12 (S) onslip at J29 Roundabout																																
6	A12 (N) offslip at J29 Roundabout																																
7	A12 (N) onslip at J29 Roundabout																																
8	A120 (E) offslip at J29 Roundabout	100%	100%	100%	100%	100%						39	106	33	87	39						5	38	11	29	10						265	88
9	A120 (E) onslip at J29 Roundabout	100%	100%	100%	100%	100%						39	106	33	87	39						5	38	11	29	10						265	88
10	A120 between J29 and A133	200%	200%	200%	200%	200%						78	212	66	174	78						10	152	42	117	40						530	352
11	A120 between A133 and Harwich Road	100%	100%	100%	100%	100%						39	106	33	87	39						5	76	21	59	20						265	176
12	A120 between Harwich Road and Bentley Road	100%	100%	100%	100%	100%		50%	100%	100%	100%	39	106	33	87	39		29	91	42	133	5	76	21	59	20		18	47	9	58	560	308
13	A120 between Bentley Road and B1035	100%	100%	100%	100%	100%		50%	100%	100%	100%	39	106	33	87	39		29	91	42	133	5	76	21	59	20		18	47	9	58	560	308
14	A120 East of B1035	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	39	106	33	87	39	72	57	91	42	133	5	76	21	59	20	48	36	47	9	58	660	374
15	A120 at Harwich	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	39	106	33	87	39	72	57	91	42	133	5	76	21	59	20	48	36	47	9	58	660	374
16	A133 between A120 and A133 Main Road	100%	100%	100%	100%	100%						39	106	33	87	39						5	76	21	59	20						265	176
17	A133 between A133 Main Road and B1033	100%	100%	100%	100%	100%						39	106	33	87	39							76	21	59	20						265	176
18	A133 between B1033 and B1027	100%	100%									39	106									5	76									106	76
19	A133 Clacton Road (Elmstead Market)																																
20	A133 Main Road																																
21	B1027 St John's Road (west of Clacton)																																
22	B1027 Colchester Road (St Osyth Park)																																
23	B1027 Valley Road (Clacton)	100%	100%									39	106									5	76									106	76
24	B1032 Frinton Road	100%	100%									39	106									5	76									106	76
25	B1032 Clacton Road	100%	100%									39	106									5	76									106	76
26	B1033 Colchester Road (west of B1441)			100%	100%	100%								33	87	39								21	59	20						159	100
27	B1441 Clacton Road			100%										33	44									21	29							77	51
28	B1414 Harwich Road			100%										33	44									21	29							77	51
29	B1033 Frinton Road			100%										33	44									21	29							77	51
30	B1033 Colchester Road (east of B1441)					100%									44	39									29	20						83	49
31	B1035 Tendring Road					100%									44	39									29	20						83	49
32	B1035 Thorpe Road					100%										39										20						39	20
33	B1035 south of A120						100%										72										48					72	48
34	B1035 Clacton Road							50%										29										18				29	18
35	Bentley Road							50%	100%	100%	100%							29	91	42	133							18	47	9	58	295	132
18	A133 between B1033 and B1027	100%	100%									39	106									5	76									106	76
23	B1027 Valley Road (Clacton)																																
36	Bentley Road (north of construction access)																																
37	B1035 Clacton Road (north of construction access)																																
38	B1441 via Little Clacton																																
39	Progress Way																																
40	B1029 Harwich Road																																
41	Harwch Road																																
42	B1032 Kirby Cross																																
43	B1033 Thorpe Road																																
44	B1029 Frating Road																																
45	Waterhouse Lane																																

Appendix T7: Scenario 1 (VE + NF OWF) - HGV Distribution and Assignment

Link ID	Link	HGV Distribution									
		Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
1	A12 (N)	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
2	A12 (S)	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
6	A12 (N) offslip at J29 Roundabout	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
7	A12 (N) onslip at J29 Roundabout	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
8	A120 (E) offslip at J29 Roundabout	100%	100%	100%	100%	100%	25%	25%	25%	25%	25%
9	A120 (E) onslip at J29 Roundabout	100%	100%	100%	100%	100%	25%	25%	25%	25%	25%
10	A120 between J29 and A133	200%	200%	200%	200%	200%	100%	100%	100%	100%	100%
11	A120 between A133 and Harwich Road	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
12	A120 between Harwich Road and Bentley Road	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
13	A120 between Bentley Road and B1035	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
14	A120 East of B1035	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
15	A120 at Harwich	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
16	A133 between A120 and A133 Main Road	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%
17	A133 between A133 Main Road and B1033	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%
18	A133 between B1033 and B1027	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%
19	A133 Clacton Road (Elmstead Market)										
20	A133 Main Road										
21	B1027 St John's Road (west of Clacton)										
22	B1027 Colchester Road (St Osyth Park)										
23	B1027 Valley Road (Clacton)	100%	100%								
24	B1032 Frinton Road	100%	100%								
25	B1032 Clacton Road	100%	100%								
26	B1033 Colchester Road (west of B1441)			100%	100%	100%					
27	B1441 Clacton Road			100%							
28	B1414 Harwich Road			100%							
29	B1033 Frinton Road			100%							
30	B1033 Colchester Road (east of B1441)					100%					
31	B1035 Tendring Road					100%					
32	B1035 Thorpe Road					100%					
33	B1035 south of A120						100%				
34	B1035 Clacton Road										
35	Bentley Road								100%	100%	100%

Maximum									
Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
39	109	33	87	39	72	57	91	42	259

Average									
Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
5	72	23	63	21	51	39	51	9	120

HGV Trips (Maximum)									
Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
20	55	17	44	20	36	29	46	21	130
20	55	17	44	20	36	29	46	21	130
10	27	8	22	10	18	14	23	11	65
10	27	8	22	10	18	14	23	11	65
39	109	33	87	39	18	14	23	11	65
39	109	33	87	39	18	14	23	11	65
78	218	66	174	78	72	57	91	42	259
39	109	33	87	39	72	57	91	42	259
39	109	33	87	39	72	57	91	42	259
39	109	33	87	39	72	57	91	42	259
39	109	33	87	39	72	57	91	42	259
39	109	33	87	39	72	57	91	42	259
39	109	33	87	39					
39	109	33	87	39					
39	109								
39	109								
39	109								
39	109								
		33	87	39					
		33	44						
		33	44						
		33	44						
			44	39					
			44	39					
				39					
					72				
						29			
						29	91	42	259

HGV Trips (Average 18 Months)									
Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
3	36	11	32	21	26	19	25	5	60
3	36	11	32	21	26	19	25	5	60
1	9	3	8	3	6	5	6	1	15
1	9	3	8	3	6	5	6	1	15
5	36	11	32	11	6	5	6	1	15
5	36	11	32	11	6	5	6	1	15
11	144	45	126	43	51	39	51	9	120
5	72	23	63	21	51	39	51	9	120
5	72	23	63	21	51	39	51	9	120
5	72	23	63	21	51	39	51	9	120
5	72	23	63	21	51	39	51	9	120
5	72	23	63	21	51	39	51	9	120
5	72	23	63	21					
	72	23	63	21					
5	72								
5	72								
5	72								
5	72								
		23	63	21					
		23	32						
		23	32						
		23	32						
			32	21					
			32	21					
				21					
					51				
						19			
						19	51	9	120

Total HGV Trips	
Max	Av
414	238
414	238
207	57
207	57
437	129
437	129
1135	639
828	454
828	454
828	454
828	454
828	454
307	185
307	179
148	77
148	77
148	77
148	77
159	107
77	54
77	54
77	54
83	53
83	53
39	21
72	51
29	19
421	199

Appendix T8a: Workforce Vehicle Assignment

Link ID	Link	A12 North Workforce Distribution									
		Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
1	A12 (N)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
2	A12 (S)										
3	Ipswich Road at J29 Roundabout										
4	A12 (S) offslip at J29 Roundabout										
5	A12 (S) onslip at J29 Roundabout	100%									
6	A12 (N) offslip at J29 Roundabout	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
7	A12 (N) onslip at J29 Roundabout	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
8	A120 (E) offslip at J29 Roundabout	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
9	A120 (E) onslip at J29 Roundabout	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
10	A120 between J29 and A133	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
11	A120 between A133 and Harwich Road						100%	100%	100%	100%	100%
12	A120 between Harwich Road and Bentley Road						100%	100%	100%	100%	100%
13	A120 between Bentley Road and B1035						100%	100%	100%	100%	100%
14	A120 East of B1035										
15	A120 at Harwich										
16	A133 between A120 and A133 Main Road	100%	100%	100%	100%	100%					
17	A133 between A133 Main Road and B1033	100%	100%	100%	100%	100%					
18	A133 between B1033 and B1027	100%	100%								
19	A133 Clacton Road (Elmstead Market)										
20	A133 Main Road										
21	B1027 St John's Road (west of Clacton)										
22	B1027 Colchester Road (St Osyth Park)										
23	B1027 Valley Road (Clacton)	100%	100%								
24	B1032 Frinton Road	100%	100%								
25	B1032 Clacton Road	100%	100%								
26	B1033 Colchester Road (west of B1441)			100%	100%	100%					
27	B1441 Clacton Road			100%	50%						
28	B1414 Harwich Road			100%	50%						
29	B1033 Frinton Road			100%	50%						
30	B1033 Colchester Road (east of B1441)				50%	100%					
31	B1035 Tendring Road				50%	100%					
32	B1035 Thorpe Road					100%					
33	B1035 south of A120						100%				
34	B1035 Clacton Road							50%			
35	Bentley Road							50%	100%	100%	100%
18	A133 between B1033 and B1027										
36	Bentley Road (north of construction access)										
37	B1035 Clacton Road (north of construction access)										
38	B1441 via Little Clacton										
39	Progress Way										
40	B1029 Harwich Road										
41	Harwich Road										
42	B1032 Kirby Cross										
43	B1033 Thorpe Road										
44	B1029 (norh of Harwich Road)										100%
45	Waterhouse Lane										100%

Link ID	Link	A12 South Workforce Distribution									
		Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
1	A12 (N)										
2	A12 (S)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
3	Ipswich Road at J29 Roundabout										
4	A12 (S) offslip at J29 Roundabout	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
5	A12 (S) onslip at J29 Roundabout	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
6	A12 (N) offslip at J29 Roundabout										
7	A12 (N) onslip at J29 Roundabout										
8	A120 (E) offslip at J29 Roundabout	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
9	A120 (E) onslip at J29 Roundabout	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
10	A120 between J29 and A133	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
11	A120 between A133 and Harwich Road						100%	100%	100%	100%	100%
12	A120 between Harwich Road and Bentley Road						100%	100%	100%	100%	100%
13	A120 between Bentley Road and B1035						100%	100%	100%	100%	100%
14	A120 East of B1035										
15	A120 at Harwich										
16	A133 between A120 and A133 Main Road	100%	100%	100%	100%	100%					
17	A133 between A133 Main Road and B1033	100%	100%	100%	100%	100%					
18	A133 between B1033 and B1027	100%	100%								
19	A133 Clacton Road (Elmstead Market)										
20	A133 Main Road										
21	B1027 St John's Road (west of Clacton)										
22	B1027 Colchester Road (St Osyth Park)										
23	B1027 Valley Road (Clacton)	100%	100%								
24	B1032 Frinton Road	100%	100%								
25	B1032 Clacton Road	100%	100%								
26	B1033 Colchester Road (west of B1441)			100%	100%	100%					
27	B1441 Clacton Road			100%	50%						
28	B1414 Harwich Road			100%	50%						
29	B1033 Frinton Road			100%	50%						
30	B1033 Colchester Road (east of B1441)				50%	100%					
31	B1035 Tendring Road				50%	100%					
32	B1035 Thorpe Road					100%					
33	B1035 south of A120						100%				
34	B1035 Clacton Road							50%			
35	Bentley Road							50%	100%	100%	100%
18	A133 between B1033 and B1027										
36	Bentley Road (north of construction access)										
37	B1035 Clacton Road (north of construction access)										
38	B1441 via Little Clacton										
39	Progress Way										
40	B1029 Harwich Road										
41	Harwich Road										
42	B1032 Kirby Cross										
43	B1033 Thorpe Road										
44	B1029 (norh of Harwich Road)									100%	
45	Waterhouse Lane									100%	

Link ID	Link	Colchester 001 - 004 and 012 Workforce Distribution									
		Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
1	A12 (N)										
2	A12 (S)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
3	Ipswich Road at J29 Roundabout										
4	A12 (S) offslip at J29 Roundabout	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
5	A12 (S) onslip at J29 Roundabout	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
6	A12 (N) offslip at J29 Roundabout										
7	A12 (N) onslip at J29 Roundabout										
8	A120 (E) offslip at J29 Roundabout	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
9	A120 (E) onslip at J29 Roundabout	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
10	A120 between J29 and A133	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
11	A120 between A133 and Harwich Road						100%	100%	100%	100%	100%
12	A120 between Harwich Road and Bentley Road						100%	100%	100%	100%	100%
13	A120 between Bentley Road and B1035						100%	100%	100%	100%	100%
14	A120 East of B1035										
15	A120 at Harwich										
16	A133 between A120 and A133 Main Road	100%	100%	100%	100%	100%					
17	A133 between A133 Main Road and B1033	100%	100%	100%	100%	100%					
18	A133 between B1033 and B1027	100%	100%								
19	A133 Clacton Road (Elmstead Market)										
20	A133 Main Road										
21	B1027 St John's Road (west of Clacton)										
22	B1027 Colchester Road (St Osyth Park)										
23	B1027 Valley Road (Clacton)	100%	100%								
24	B1032 Frinton Road	100%	100%								
25	B1032 Clacton Road	100%	100%								
26	B1033 Colchester Road (west of B1441)			100%	100%	100%					
27	B1441 Clacton Road			100%	50%						
28	B1414 Harwich Road			100%	50%						
29	B1033 Frinton Road			100%	50%						
30	B1033 Colchester Road (east of B1441)				50%	100%					
31	B1035 Tendring Road				50%	100%					
32	B1035 Thorpe Road					100%					
33	B1035 south of A120						100%				
34	B1035 Clacton Road							50%			
35	Bentley Road							50%	100%	100%	100%
18	A133 between B1033 and B1027										
36	Bentley Road (north of construction access)										
37	B1035 Clacton Road (north of construction access)										
38	B1441 via Little Clacton										
39	Progress Way										
40	B1029 Harwich Road										
41	Harwich Road										
42	B1032 Kirby Cross										
43	B1033 Thorpe Road										
44	B1029 (norh of Harwich Road)										100%
45	Waterhouse Lane										100%

Link 36 - 25% of workforce vehicles for Route Sections 5,6,7 the OnSS and 400KV connection (sensitivity test)

Appendix T8b: Workforce Vehicle Assigment

Link ID	Link	Colchester 007 -011 and 013, 014 Workforce Distribution										Colchester south and central Workforce Distribution										A120 East of A133 / Manningtree Workforce Distribution									
		Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS	Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS	Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
1	A12 (N)																														
2	A12 (S)																														
3	Ipswich Road at J29 Roundabout																														
4	A12 (S) offslip at J29 Roundabout																														
5	A12 (S) onslip at J29 Roundabout																														
6	A12 (N) offslip at J29 Roundabout																														
7	A12 (N) onslip at J29 Roundabout																														
8	A120 (E) offslip at J29 Roundabout																														
9	A120 (E) onslip at J29 Roundabout																														
10	A120 between J29 and A133																														
11	A120 between A133 and Harwich Road						100%	100%	100%	100%	100%																				
12	A120 between Harwich Road and Bentley Road						100%	100%	100%	100%	100%						100%	100%	100%	100%	100%	100%	100%					100%	100%	100%	100%
13	A120 between Bentley Road and B1035						100%	100%	100%	100%	100%						100%	50%	100%	100%	100%	100%	100%					100%	100%	100%	100%
14	A120 East of B1035																					100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
15	A120 at Harwich																					100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
16	A133 between A120 and A133 Main Road																														
17	A133 between A133 Main Road and B1033	100%	100%	100%	100%	100%						100%	100%	100%	100%	100%						100%	100%								
18	A133 between B1033 and B1027	100%	100%									100%	100%									100%	100%								
19	A133 Clacton Road (Elmstead Market)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%										
20	A133 Main Road	100%	100%	100%	100%	100%						100%	100%	100%	100%	100%						100%	100%								
21	B1027 St John's Road (west of Clacton)																														
22	B1027 Colchester Road (St Osyth Park)																														
23	B1027 Valley Road (Clacton)	100%	100%									100%	100%									100%									
24	B1032 Frinton Road	100%	100%									100%	100%									100%	100%								
25	B1032 Clacton Road	100%	100%									100%	100%	100%	100%	100%						100%	100%								
26	B1033 Colchester Road (west of B1441)			100%	100%	100%								100%	50%	100%															
27	B1441 Clacton Road			100%	50%									100%	50%																
28	B1414 Harwich Road			100%	50%									100%	50%																
29	B1033 Frinton Road			100%	50%									100%	50%																
30	B1033 Colchester Road (east of B1441)				50%	100%									50%	100%															
31	B1035 Tendring Road				50%	100%									50%	100%								100%	100%	100%						
32	B1035 Thorpe Road					100%										100%								100%	100%	100%						
33	B1035 south of A120						100%										100%	50%						100%	100%	100%	100%					
34	B1035 Clacton Road							50%																				50%				
35	Bentley Road							50%	100%	100%	100%							50%	100%	100%	100%							50%	100%	100%	100%
18	A133 between B1033 and B1027																														
36	Bentley Road (north of construction access)																														
37	B1035 Clacton Road (north of construction access)																														
38	B1441 via Little Clacton																														
39	Progress Way																														
40	B1029 Harwich Road																100%	100%	100%	100%	100%										
41	Harwich Road																100%	100%	100%	100%	100%	100%	100%								
42	B1032 Kirby Cross																														
43	B1033 Thorpe Road																						100%	100%							
44	B1029 (norh of Harwich Road)										100%										100%										100%
45	Waterhouse Lane										100%										100%										100%

Link 36 - 25% of workforce vehicles for Route Sections 5,6,7 the OnSS and 400KV connection (sensitivity test)

Appendix T8c: Workforce Vehicle Assigment

Link ID	Link	Tendring via A120 (north of A133) Workforce Distribution										B1027 corridor south of Colchester Workforce Distribution										Clacton Workforce Distribution									
		Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS	Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/	400kV	OnSS	Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
1	A12 (N)																														
2	A12 (S)																														
3	Ipswich Road at J29 Roundabout																														
4	A12 (S) offslip at J29 Roundabout																														
5	A12 (S) onslip at J29 Roundabout																														
6	A12 (N) offslip at J29 Roundabout																														
7	A12 (N) onslip at J29 Roundabout																														
8	A120 (E) offslip at J29 Roundabout																														
9	A120 (E) onslip at J29 Roundabout																														
10	A120 between J29 and A133																														
11	A120 between A133 and Harwich Road																														
12	A120 between Harwich Road and Bentley Road						100%	100%	100%	100%	100%						100%	100%	100%	100%	100%							50%	100%	100%	100%
13	A120 between Bentley Road and B1035						100%	100%	100%	100%	100%						100%	50%										50%	100%	100%	100%
14	A120 East of B1035																														
15	A120 at Harwich																														
16	A133 between A120 and A133 Main Road	100%	100%	100%	100%	100%																									
17	A133 between A133 Main Road and B1033	100%	100%											75%	100%	100%												50%	100%	100%	100%
18	A133 between B1033 and B1027	100%	100%	100%	100%	100%								25%	25%	25%								100%	100%	100%	100%	100%	100%	100%	100%
19	A133 Clacton Road (Elmstead Market)																														
20	A133 Main Road	100%	100%	100%	100%	100%								75%	75%	75%												50%	100%	100%	100%
21	B1027 St John's Road (west of Clacton)											100%	100%	25%	25%	25%						50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
22	B1027 Colchester Road (St Osyth Park)											100%	100%																		
23	B1027 Valley Road (Clacton)	100%	100%									100%	100%									50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
24	B1032 Frinton Road	100%	100%									100%	100%									100%	100%	50%	50%	50%	50%	50%	50%	50%	50%
25	B1032 Clacton Road	100%	100%									100%	100%									100%	100%								
26	B1033 Colchester Road (west of B1441)			100%	100%									75%	50%	100%								100%	50%	100%	100%	50%			
27	B1441 Clacton Road			100%										75%	50%									100%	50%						
28	B1414 Harwich Road			100%										100%	50%									100%	50%						
29	B1033 Frinton Road			100%										100%	50%									100%	50%						
30	B1033 Colchester Road (east of B1441)			100%	100%	100%									50%	100%									50%	100%	100%	50%			
31	B1035 Tendring Road				100%	100%									50%	100%									50%	100%	100%	50%			
32	B1035 Thorpe Road					100%	100%									100%										100%	100%	50%			
33	B1035 south of A120																100%										100%	50%			
34	B1035 Clacton Road																	50%										50%			
35	Bentley Road	100%	100%	100%	100%	100%	100%											50%	100%	100%	100%							50%	100%	100%	100%
18	A133 between B1033 and B1027																														
36	Bentley Road (north of construction access)							100%	100%	100%	100%																				
37	B1035 Clacton Road (north of construction access)																														
38	B1441 via Little Clacton													25%	25%																
39	Progress Way													25%	25%																
40	B1029 Harwich Road	100%	100%	100%	100%	100%								75%	75%	75%	100%	100%	100%	100%	100%							50%	100%	100%	100%
41	Harwich Road							100%	100%	100%	100%						100%	100%	100%	100%	100%							50%	100%	100%	100%
42	B1032 Kirby Cross																														
43	B1033 Thorpe Road																														
44	B1029 (norh of Harwich Road)										100%										100%										100%
45	Waterhouse Lane										100%										100%										100%

Link 36 - 25% of workforce vehicles for Route Sections 5,6,7 the OnSS and 400KV connection (sensitivity test)

Appendix T8d: Workforce Vehicle Assigment

Link ID	Link	Frinton / Walton on the Naze Workforce Distribution										Thrope-Le-Soken and surrounding areas Workforce Distribution									
		Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS	Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
1	A12 (N)																				
2	A12 (S)																				
3	Ipswich Road at J29 Roundabout																				
4	A12 (S) offslip at J29 Roundabout																				
5	A12 (S) onslip at J29 Roundabout																				
6	A12 (N) offslip at J29 Roundabout																				
7	A12 (N) onslip at J29 Roundabout																				
8	A120 (E) offslip at J29 Roundabout																				
9	A120 (E) onslip at J29 Roundabout																				
10	A120 between J29 and A133																				
11	A120 between A133 and Harwich Road																				
12	A120 between Harwich Road and Bentley Road							50%	100%	100%	100%							50%	100%	100%	100%
13	A120 between Bentley Road and B1035							50%	100%	100%	100%							50%	100%	100%	100%
14	A120 East of B1035																				
15	A120 at Harwich																				
16	A133 between A120 and A133 Main Road																				
17	A133 between A133 Main Road and B1033																				
18	A133 between B1033 and B1027																				
19	A133 Clacton Road (Elmstead Market)																				
20	A133 Main Road																				
21	B1027 St John's Road (west of Clacton)																				
22	B1027 Colchester Road (St Osyth Park)																				
23	B1027 Valley Road (Clacton)																				
24	B1032 Frinton Road																				
25	B1032 Clacton Road	100%	100%									100%	100%								
26	B1033 Colchester Road (west of B1441)																				
27	B1441 Clacton Road																				
28	B1414 Harwich Road																				
29	B1033 Frinton Road			100%	100%	100%	100%	100%	100%	100%	100%			100%	100%						
30	B1033 Colchester Road (east of B1441)																				
31	B1035 Tendring Road					100%	100%	100%	100%	100%	100%					100%	100%	100%	100%	100%	100%
32	B1035 Thorpe Road					100%	100%	100%	100%	100%	100%					100%	100%	100%	100%	100%	100%
33	B1035 south of A120						100%	100%	100%	100%	100%						100%	100%	100%	100%	100%
34	B1035 Clacton Road							50%										50%			
35	Bentley Road							50%	100%	100%	100%							50%	100%	100%	100%
18	A133 between B1033 and B1027																				
36	Bentley Road (north of construction access)																				
37	B1035 Clacton Road (north of construction access)																				
38	B1441 via Little Clacton																				
39	Progress Way																				
40	B1029 Harwich Road																				
41	Harwich Road																				
42	B1032 Kirby Cross	100%	100%									100%	100%								
43	B1033 Thorpe Road			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%						
44	B1029 (norh of Harwich Road)										100%										100%
45	Waterhouse Lane										100%										100%

Link 36 - 25% of workforce vehicles for Route Sections 5,6,7 the OnSS and 400KV connection (sensitivity test)

Appendix T5: Scenario 1 (VE + NF OWF Ducts) Assessment A - HGV Distribution and Assignment

		Maximum									
		Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
		39	106	33	87	39	72	57	91	42	133

		Average									
		Beach	Beach and Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
		5	76	21	59	20	48	36	47	9	58

Link ID	Link	HGV Distribution									
		Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
1	A12 (N)	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
2	A12 (S)	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
6	A12 (N) offslip at J29 Roundabout	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
7	A12 (N) onslip at J29 Roundabout	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
8	A120 (E) offslip at J29 Roundabout	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
9	A120 (E) onslip at J29 Roundabout	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
10	A120 between J29 and A133	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
11	A120 between A133 and Harwich Road						100%	100%	100%	100%	100%
12	A120 between Harwich Road and Bentley Road						100%	100%	100%	100%	100%
13	A120 between Bentley Road and B1035						100%	100%	100%	100%	100%
14	A120 East of B1035										
15	A120 at Harwich										
16	A133 between A120 and A133 Main Road	100%	100%	100%	100%	100%					
17	A133 between A133 Main Road and B1033	100%	100%	100%	100%	100%					
18	A133 between B1033 and B1027	100%	100%								
19	A133 Clacton Road (Elmstead Market)										
20	A133 Main Road										
21	B1027 St John's Road (west of Clacton)										
22	B1027 Colchester Road (St Osyth Park)										
23	B1027 Valley Road (Clacton)	100%	100%								
24	B1032 Frinton Road	100%	100%								
25	B1032 Clacton Road	100%	100%								
26	B1033 Colchester Road (west of B1441)			100%	100%	100%					
27	B1441 Clacton Road			100%							
28	B1414 Harwich Road			100%							
29	B1033 Frinton Road			100%							
30	B1033 Colchester Road (east of B1441)					100%					
31	B1035 Tendring Road					100%					
32	B1035 Thorpe Road					100%					
33	B1035 south of A120						100%				
34	B1035 Clacton Road							50%			
35	Bentley Road							50%	100%	100%	100%
18	A133 between B1033 and B1027	100%	100%								
23	B1027 Valley Road (Clacton)										
36	Bentley Road (north of construction access)										
37	B1035 Clacton Road (north of construction access)										
38	B1441 via Little Clacton										
39	Progress Way										
40	B1029 Harwich Road										
41	Harwch Road										
42	B1032 Kirby Cross										
43	B1033 Thorpe Road										
44	B1029 Frating Road										
45	Waterhouse Lane										

	HGV Trips (Maximum)									
Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
20	53	17	44	20	36	29	46	21	67
20	53	17	44	20	36	29	46	21	67
10	27	8	22	10	18	14	23	11	33
10	27	8	22	10	18	14	23	11	33
10	27	8	22	10	18	14	23	11	33
10	27	8	22	10	18	14	23	11	33
39	106	33	87	39	72	57	91	42	133
					72	57	91	42	133
					72	57	91	42	133
					72	57	91	42	133
39	106	33	87	39					
39	106	33	87	39					
39	106								
39	106								
39	106								
39	106								
		33	87	39					
		33	44						
		33	44						
		33	44						
			44	39					
			44	39					
				39					
					72				
						29			
						29	91	42	133
39	106								

	HGV Trips (Average 18 / 19 Months)									
Beach	Beach and Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS
3	38	11	29	10	24	18	24	4	29
3	38	11	29	10	24	18	24	4	29
1	10	3	7	3	6	5	6	1	7
1	10	3	7	3	6	5	6	1	7
1	10	3	7	3	6	5	6	1	7
1	10	3	7	3	6	5	6	1	7
5	76	21	59	20	48	36	47	9	58
					48	36	47	9	58
					48	36	47	9	58
					48	36	47	9	58
5	76	21	59	20					
	76	21	59	20					
5	76								
5	76								
5	76								
5	76								
		21	59	20					
		21	29						
		21	29						
		21	29						
			29	20					
			29	20					
				20					
					48				
						18			
						18	47	9	58
5	76								

Total HGV Trips	
Maximum	Average
330	187
330	187
165	47
165	47
165	47
165	47
660	374
395	198
395	198
395	198
265	176
265	176
106	76
106	76
106	76
106	76
159	100
77	51
77	51
77	51
83	49
83	49
39	20
72	48
29	18
295	132
106	76

Appendix T10: Scenario 1 (VE + NF OWF Ducts) - Total Vehicles

Link ID	Link	Daily						Morning or Evening Peak Hours					
		Total Trips		Total HGV Trips		Total Workforce Trips		Peak Hour Total Trips		Hourly HGV Trips		Peak Hour Workforce Trips	
		Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average
1	A12 (N)	393	282	242	187	151	95	35	25	20	16	15	9
2	A12 (S)	388	278	242	187	146	91	35	25	20	16	15	9
6	A12 (N) offslip at J29 Roundabout	197	94	121	47	76	47	18	9	10	4	8	5
7	A12 (N) onslip at J29 Roundabout	197	94	121	47	76	47	18	9	10	4	8	5
8	A120 (E) offslip at J29 Roundabout	197	94	121	47	76	48	18	9	10	4	8	5
9	A120 (E) onslip at J29 Roundabout	197	94	121	47	76	48	18	9	10	4	8	5
10	A120 between J29 and A133	781	560	484	374	297	186	70	50	40	31	30	19
11	A120 between A133 and Harwich Road	448	333	290	198	158	135	40	30	24	17	16	14
12	A120 between Harwich Road and Bentley Road	790	512	290	198	500	314	74	48	24	17	50	31
13	A120 between Bentley Road and B1035	759	493	290	198	469	295	71	46	24	17	47	29
14	A120 East of B1035	156	98			156	98	16	10			16	10
15	A120 at Harwich	156	98			156	98	16	10			16	10
16	A133 between A120 and A133 Main Road	349	269	194	176	154	93	32	24	16	15	15	9
17	A133 between A133 Main Road and B1033	525	372	194	176	330	196	49	34	16	15	33	20
18	A133 between B1033 and B1027	321	215	78	76	243	139	31	20	6	6	24	14
19	A133 Clacton Road (Elmstead Market)	206	123			206	123	21	12			21	12
20	A133 Main Road	233	116			233	116	23	12			23	12
21	B1027 St John's Road (west of Clacton)	87	45			87	45	9	4			9	4
22	B1027 Colchester Road (St Osyth Park)	16	7			16	7	2				2	
23	B1027 Valley Road (Clacton)	329	176	106	76	223	100	31	16	9	6	22	10
24	B1032 Frinton Road	371	197	106	76	265	121	35	18	9	6	26	12
25	B1032 Clacton Road	374	196	106	76	268	120	36	18	9	6	27	12
26	B1033 Colchester Road (west of B1441)	368	219	159	100	209	119	34	20	13	8	21	12
27	B1441 Clacton Road	188	110	77	51	111	60	17	10	6	4	11	6
28	B1414 Harwich Road	189	111	77	51	113	60	18	10	6	4	11	6
29	B1033 Frinton Road	249	144	77	51	172	94	24	14	6	4	17	9
30	B1033 Colchester Road (east of B1441)	204	123	83	49	122	74	19	12	7	4	12	7
31	B1035 Tendring Road	317	187	83	49	235	137	30	18	7	4	23	14
32	B1035 Thorpe Road	224	128	39	20	185	108	22	13	3	2	18	11
33	B1035 south of A120	279	174	72	48	207	127	27	17	6	4	21	13
34	B1035 Clacton Road	71	42	29	18	42	24	7	4	2	2	4	2
35	Bentley Road	603	368	216	132	387	236	57	35	18	11	39	24
18	A133 between B1033 and B1027												
23	B1027 Valley Road (Clacton)												
36	Bentley Road (north of construction access)	17	9			17	9	2				2	
37	B1035 Clacton Road (north of construction access)												
38	B1441 via Little Clacton	4	2			4	2						
39	Progress Way	4	2			4	2						
40	B1029 Harwich Road	201	104			201	104	20	10			20	10
41	Harwch Road	203	108			203	108	20	11			20	11
42	B1032 Kirby Cross	24	11			24	11	2	1			2	1
43	B1033 Thorpe Road	114	60			114	60	11	6			11	6
44	B1029 Frating Road	124	124			124	124	12	12			12	12
45	Waterhouse Lane	124	124			124	124	12	12			12	12

Appendix T11: Scenario 1 (VE + NF OWF Ducts) Assignment (Maximum from Assessment A or B)

Link ID	Link	Daily						Morning or Evening Peak Hours					
		Total Trips		Total HGV Trips		Total Workforce Trips		Peak Hour Total Trips		Hourly HGV Trips		Peak Hour Workforce Trips	
		Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average
1	A12 (N)	393	282	242	187	151	95	35	25	20	16	15	9
2	A12 (S)	388	278	242	187	146	91	35	25	20	16	15	9
6	A12 (N) offslip at J29 Roundabout	197	94	121	47	76	47	18	9	10	4	8	5
7	A12 (N) onslip at J29 Roundabout	197	94	121	47	76	47	18	9	10	4	8	5
8	A120 (E) offslip at J29 Roundabout	270	136	194	88	76	48	24	12	16	7	8	5
9	A120 (E) onslip at J29 Roundabout	270	136	194	88	76	48	24	12	16	7	8	5
10	A120 between J29 and A133	781	560	484	374	297	186	70	50	40	31	30	19
11	A120 between A133 and Harwich Road	448	333	290	198	158	135	40	30	24	17	16	14
12	A120 between Harwich Road and Bentley Road	911	622	410	308	500	314	84	57	34	26	50	31
13	A120 between Bentley Road and B1035	880	603	410	308	469	295	81	55	34	26	47	29
14	A120 East of B1035	640	472	484	374	156	98	56	41	40	31	16	10
15	A120 at Harwich	640	472	484	374	156	98	56	41	40	31	16	10
16	A133 between A120 and A133 Main Road	349	269	194	176	154	93	32	24	16	15	15	9
17	A133 between A133 Main Road and B1033	525	372	194	176	330	196	49	34	16	15	33	20
18	A133 between B1033 and B1027	321	215	78	76	243	139	31	20	6	6	24	14
19	A133 Clacton Road (Elmstead Market)	206	123			206	123	21	12			21	12
20	A133 Main Road	233	116			233	116	23	12			23	12
21	B1027 St John's Road (west of Clacton)	87	45			87	45	9	4			9	4
22	B1027 Colchester Road (St Osyth Park)	16	7			16	7	2				2	
23	B1027 Valley Road (Clacton)	329	176	106	76	223	100	31	16	9	6	22	10
24	B1032 Frinton Road	371	197	106	76	265	121	35	18	9	6	26	12
25	B1032 Clacton Road	374	196	106	76	268	120	36	18	9	6	27	12
26	B1033 Colchester Road (west of B1441)	368	219	159	100	209	119	34	20	13	8	21	12
27	B1441 Clacton Road	188	110	77	51	111	60	17	10	6	4	11	6
28	B1414 Harwich Road	189	111	77	51	113	60	18	10	6	4	11	6
29	B1033 Frinton Road	249	144	77	51	172	94	24	14	6	4	17	9
30	B1033 Colchester Road (east of B1441)	204	123	83	49	122	74	19	12	7	4	12	7
31	B1035 Tendring Road	317	187	83	49	235	137	30	18	7	4	23	14
32	B1035 Thorpe Road	224	128	39	20	185	108	22	13	3	2	18	11
33	B1035 south of A120	279	174	72	48	207	127	27	17	6	4	21	13
34	B1035 Clacton Road	71	42	29	18	42	24	7	4	2	2	4	2
35	Bentley Road	603	368	216	132	387	236	57	35	18	11	39	24
18	A133 between B1033 and B1027												
23	B1027 Valley Road (Clacton)												
36	Bentley Road (north of construction access)	17	9			17	9	2				2	
37	B1035 Clacton Road (north of construction access)												
38	B1441 via Little Clacton	4	2			4	2						
39	Progress Way	4	2			4	2						
40	B1029 Harwich Road	201	104			201	104	20	10			20	10
41	Harwch Road	203	108			203	108	20	11			20	11
42	B1032 Kirby Cross	24	11			24	11	2	1			2	1
43	B1033 Thorpe Road	114	60			114	60	11	6			11	6
44	B1029 Frating Road	124	124			124	124	12	12			12	12
45	Waterhouse Lane	124	124			124	124	12	12			12	12

Appendix T12: Scenario 1 (VE + NF OWF) - Workforce Assignment

Link ID	Link	Workforce Trips (Maximum)										Workforce Trips (Average)										Total Workforce Trips	
		Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS	Beach	Section 1	Section 2	Section 3	Section 4a	Section 4b	Section 5	Section 6/7	400kV	OnSS	Max	Av
1	A12 (N)	10	28	14	21	11	17	17	15	10	76	2	16	7	14	7	12	10	11	3	42	221	123
2	A12 (S)	10	27	14	20	11	17	16	15	10	73	2	15	7	14	7	11	9	11	3	41	213	119
6	A12 (N) offslip at J29 Roundabout	5	14	11	11	6	9	9	8	5	38		8	6	7	3	6	5	6	1	21	114	64
7	A12 (N) onslip at J29 Roundabout	5	14	11	11	6	9	9	8	5	38		8	6	7	3	6	5	6	1	21	114	64
8	A120 (E) offslip at J29 Roundabout	5	14	7	18	6	9	9	8	5	38	2	15	5	19	7	12	9	11	3	42	118	124
9	A120 (E) onslip at J29 Roundabout	5	14	7	11	6	9	14	8	5	38	2	15	5	14	7	12	12	11	3	42	116	122
10	A120 between J29 and A133	20	55	21	42	22	34	33	30	20	149	3	31	11	28	14	23	19	22	5	83	426	238
11	A120 between A133 and Harwich Road				8		45	33	40	27	197				5		31	19	29	7	110	349	200
12	A120 between Harwich Road and Bentley Road	10	29				68	85	92	65	481	2	16				47	48	67	17	268	831	464
13	A120 between Bentley Road and B1035	10	29		8		68	76	85	61	448	2	16		5		47	43	62	15	249	784	439
14	A120 East of B1035	10	29	15	30	11	18	18	16	11	79	2	16	8	20	7	12	10	11	3	44	236	132
15	A120 at Harwich	10	29	15	22	11	18	18	16	11	79	2	16	8	15	7	12	10	11	3	44	228	127
16	A133 between A120 and A133 Main Road	22	61	32	46	24						4	34	16	31	15						185	100
17	A133 between A133 Main Road and B1033	45	127	52	78	41		6	11	8	56	8	71	26	52	25		4	8	2	31	424	227
18	A133 between B1033 and B1027	45	127	15	22	12	13	12	11	8	56	8	71	8	15	7	9	7	8	2	31	321	165
19	A133 Clacton Road (Elmstead Market)	13	36	19	27	14	22	22	20	13	99	2	20	10	18	9	15	12	14	3	55	286	160
20	A133 Main Road	26	72	27	39	20		6	11	8	56	4	40	14	26	13		4	8	2	31	264	141
21	B1027 St John's Road (west of Clacton)	8	23	7	10	5	6	6	6	4	28	1	13	3	7	3	4	4	4		15	103	56
22	B1027 Colchester Road (St Osyth Park)	4	12										7									17	8
23	B1027 Valley Road (Clacton)	54	120	5	8	4	6	6	6	4	28	9	67	3	5	3	4	4	4		15	241	115
24	B1032 Frinton Road	57	160	5	8	4	6	6	6	4	28	10	89	3	5	3	4	4	4		15	283	138
25	B1032 Clacton Road	64	178	10	14	7						11	99	5	9	5						273	129
26	B1033 Colchester Road (west of B1441)			66	79	49	13	6						33	53	31	9	4				213	129
27	B1441 Clacton Road			66	47									33	31							113	65
28	B1414 Harwich Road			67	47									34	31							114	65
29	B1033 Frinton Road			77	61	4	6	6	5	4	27			39	40	2	4	3	4		15	189	109
30	B1033 Colchester Road (east of B1441)			3	51	52	13	6						2	34	32	9	4				125	80
31	B1035 Tendring Road			15	73	70	24	17	10	7	49			8	49	44	16	10	7	2	27	265	162
32	B1035 Thorpe Road			15	22	70	27	17	10	7	49			8	15	44	19	10	7	2	27	217	131
33	B1035 south of A120			15	22	11	105	23	10	7	49			8	15	7	73	13	7	2	27	242	151
34	B1035 Clacton Road							46										26				46	26
35	Bentley Road	2	6	3	5	2	4	52	93	63	465		3	2	3	1	3	29	67	16	258	695	384

Appendix T13: Scenario 1 (VE + NF OWF) - Total Vehicles

		Total Numbers (VE + NF Coordinated)						Total Numbers (VE only)						Total Numbers (VE + NF Coordinated)							
		Total Trips		Total HGV Trips		Total Workforce Trips		Total Trips		Total HGV Trips		Total Workforce Trips		Peak Hour Total Trips		Hourly HGV Trips		Peak Hour Workforce Trips		Vehicles per Approach	
Link ID	Link	Max	Av	Max	Av	Max	Av	Max	Av	Max	Av	Max	Av	Max	Av	Max	Av	Max	Av	Max	Av
1	A12 (N)	505	361	307	238	198	123	332	219	198	146	134	73	45	32	26	20	20	12	33	22
2	A12 (S)	498	357	307	238	190	119	327	217	198	146	129	70	45	32	26	20	19	12	32	22
6	A12 (N) offslip at J29 Roundabout	256	121	154	57	102	64	127	73	58	36	69	38	23	11	13	5	10	6	17	9
7	A12 (N) onslip at J29 Roundabout	256	121	154	57	102	64	127	73	58	36	69	38	23	11	13	5	10	6	17	9
8	A120 (E) offslip at J29 Roundabout	430	253	324	129	106	124	281	156	146	83	135	74	38	23	27	11	11	12	24	18
9	A120 (E) onslip at J29 Roundabout	428	251	324	129	104	122	278	155	146	83	132	72	37	23	27	11	10	12	24	18
10	A120 between J29 and A133	1224	877	842	639	382	238	816	540	558	400	258	141	108	77	70	53	38	24	73	50
11	A120 between A133 and Harwich Road	927	654	614	454	313	200	590	387	396	279	194	108	82	58	51	38	31	20	57	39
12	A120 between Harwich Road and Bentley Road	1358	918	614	454	744	464	844	528	396	279	448	249	126	84	51	38	74	46	100	65
13	A120 between Bentley Road and B1035	1317	893	614	454	702	439	822	515	396	279	427	236	121	82	51	38	70	44	96	63
14	A120 East of B1035	825	586	614	454	211	132	539	358	396	279	144	79	72	51	51	38	21	13	47	32
15	A120 at Harwich	818	581	614	454	204	127	534	355	396	279	138	75	72	51	51	38	20	13	46	32
16	A133 between A120 and A133 Main Road	393	284	228	185	166	100	291	188	162	121	129	68	36	25	19	15	17	10	26	18
17	A133 between A133 Main Road and B1033	607	406	228	179	380	227	441	262	162	116	278	147	57	38	19	15	38	23	47	30
18	A133 between B1033 and B1027	397	242	110	77	287	165	274	158	71	52	203	106	38	23	9	6	29	17	33	20
19	A133 Clacton Road (Elmstead Market)	256	160			256	160	173	95			173	95	26	16			26	16	26	16
20	A133 Main Road	236	141			236	141	167	88			167	88	24	14			24	14	24	14
21	B1027 St John's Road (west of Clacton)	103	56			103	56	64	34			64	34	10	6			10	6	10	6
22	B1027 Colchester Road (St Osyth Park)	17	8			17	8	11	5			11	5	2				2		2	
23	B1027 Valley Road (Clacton)	389	192	148	77	241	115	263	129	108	52	155	76	36	18	12	6	24	12	30	15
24	B1032 Frinton Road	431	215	148	77	283	138	289	144	108	52	181	92	41	20	12	6	28	14	35	17
25	B1032 Clacton Road	421	206	148	77	273	129	288	142	108	52	180	90	40	19	12	6	27	13	33	16
26	B1033 Colchester Road (west of B1441)	372	236	159	107	213	129	294	154	139	68	155	85	35	22	13	9	21	13	28	17
27	B1441 Clacton Road	189	119	77	54	113	65	141	78	66	34	76	44	18	11	6	5	11	6	14	9
28	B1414 Harwich Road	191	120	77	54	114	65	142	79	66	34	77	44	18	11	6	5	11	7	15	9
29	B1033 Frinton Road	265	163	77	54	189	109	187	104	66	34	122	70	25	15	6	5	19	11	22	13
30	B1033 Colchester Road (east of B1441)	207	133	83	53	125	80	171	86	74	34	98	52	19	12	7	4	12	8	16	10
31	B1035 Tendring Road	347	215	83	53	265	162	259	134	74	34	185	100	33	21	7	4	26	16	30	18
32	B1035 Thorpe Road	256	152	39	21	217	131	191	94	41	14	150	80	25	15	3	2	22	13	23	14
33	B1035 south of A120	314	202	72	51	242	151	228	126	59	33	169	93	30	19	6	4	24	15	27	17
34	B1035 Clacton Road	75	46	29	19	46	26	53	30	29	12	24	17	7	4	2	2	5	3	6	3
35	Bentley Road	934	583	312	199	622	384	532	311	175	113	357	198	88	55	26	17	62	38	75	47

FIVE ESTUARIES
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