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SCALE 1:250  
@ A1 SHEET SIZE

	PIPE-1	
	UPSTREAM	DOWNSTREAM
EASTINGS:	177002.452	176997.661
NORTHINGS:	141665.278	141646.174
EXISTING DITCH LEVELS:	70.260	70.259
PIPE INVERT:	70.260	70.217
HEADWALL:	NOTE 3	
PIPE TYPE:	300mm CARRIER PIPE	
MINIMUM COVER:	1.0m	

**NOTES:**

- REFER TO STANDARD DETAIL DRAWING 133735\_RW-EWR-XX-XX-DR-CH-000131 FOR PIPE SURROUND AND BEDDING TYPES.
- THE EXISTING DITCH INVERT LEVELS ARE TAKEN FROM AVAILABLE TOPOGRAPHIC SURVEY INFORMATION, WHERE AVAILABLE. THE DELIVERY TEAM WILL NEED TO CONFIRM DITCH LEVELS BEFORE INSTALLING CULVERT. ANY DISCREPANCIES IN LEVEL WILL NEED TO BE DISCUSSED WITH THE DESIGNER.
- PROPOSED COMPOUND ACCESS EARTHWORKS TO EXTEND INTO THE EXISTING DITCH. CULVERT PIPE TO EXTEND A MINIMUM OF 100mm BEYOND THE TOE OF THE EARTHWORKS.

**CULVERT REQUIREMENTS**

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

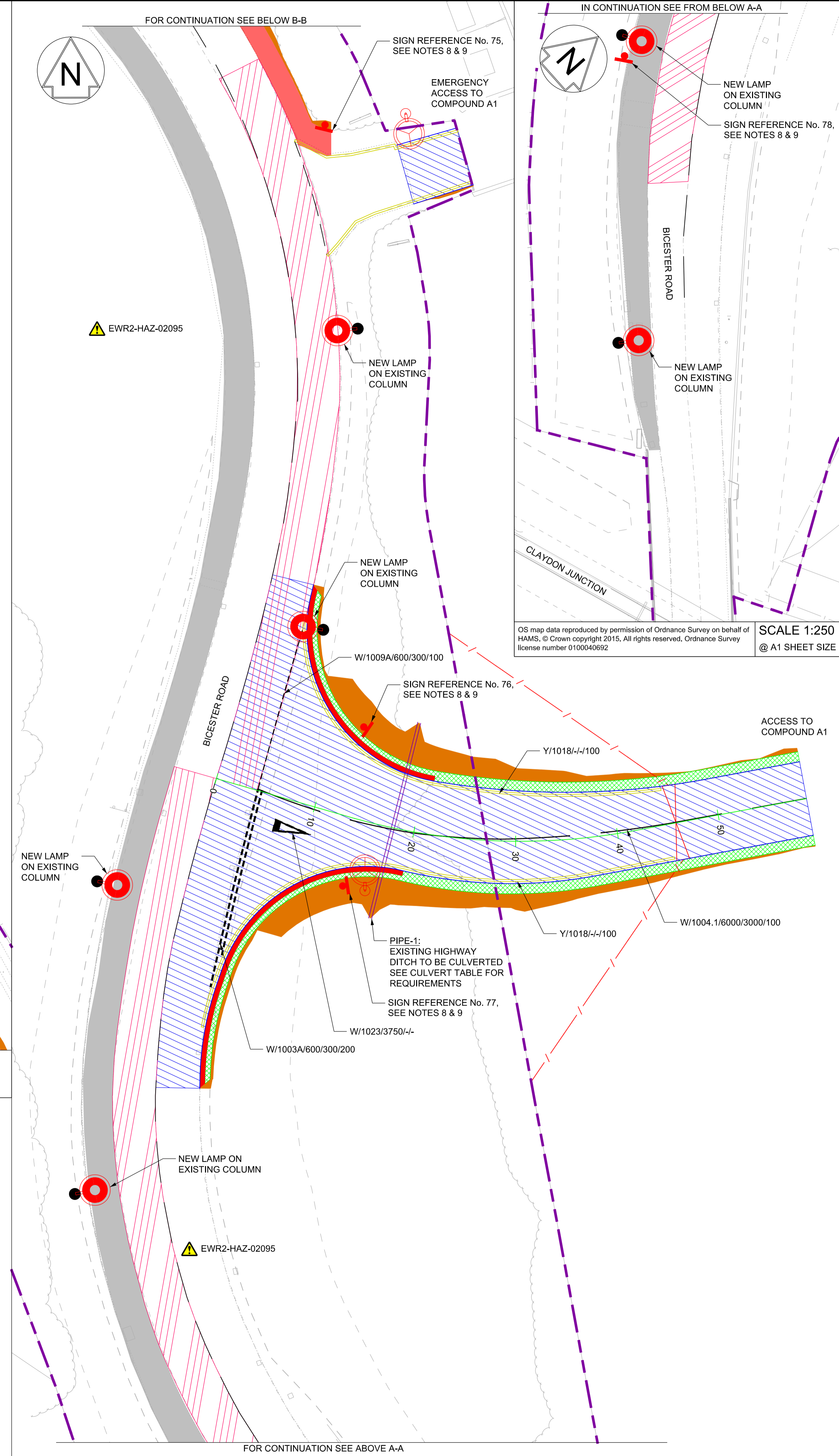
THE WORKS ARE TO BE UNDERTAKEN BY A COMPETENT DELIVERY TEAM, AND THEREFORE ONLY EXCEPTIONAL RISKS RELATING TO THE WORKS ASSOCIATED WITH THIS DRAWING ARE IDENTIFIED BELOW. FOR FURTHER DETAILS AND PROPOSED SAFETY MEASURES REFER 'EWR PHASE 2 HAZARD LOG WORKING COPY' EB DOC. REF: 133735-NWR-RSA-SSD-000001.

ID	HAZARD DESCRIPTION
EWR2-HAZ-02095	PRESENCE OF BURIED LV LINE

INDICATES PROJECT RISKS (EWR2-DRIS- .....)  
 INDICATES H&S RISKS (EWR2-HAZ- .....)

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SCALE 1:250  
@ A1 SHEET SIZE



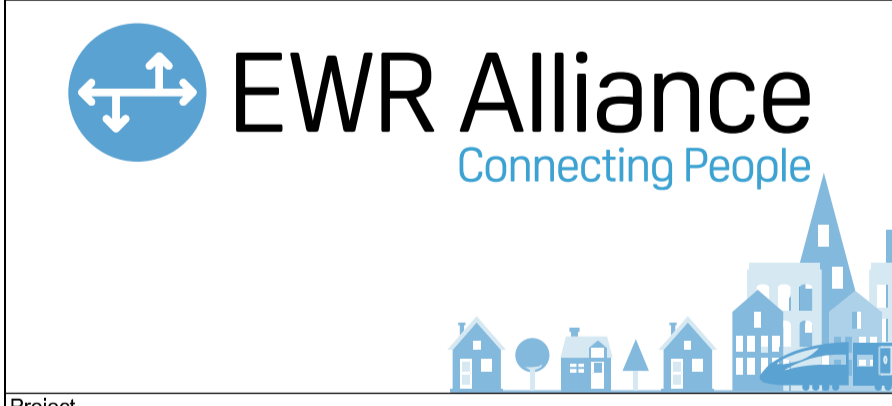
**NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**

- NOTES:**
- THIS DRAWING IS NOT TO BE SCALED.
  - ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.
  - WHEREVER REQUIRED, ROAD MARKINGS ARE TO BE LAID IN ACCORDANCE WITH THE TRAFFIC SIGN REGULATIONS AND GENERAL DIRECTIONS 2016 & 'TRAFFIC SIGNS MANUAL CHAPTER 5 (2003)'.
  - WHERE A FENCE IS PROPOSED IT SHALL TIE-IN TO THE EXISTING HEDGEROW OR BOUNDARY TREATMENT TO PROVIDE A SECURE BOUNDARY.
  - FOR POSITIONS OF UTILITY COMPANIES APPARATUS REFER TO DRAWING No. 133735\_2A-EWR-OXD-CC\_A1-DR-CH-002004.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH STANDARD DETAILS DRAWING No.S 133735\_RW-EWR-XX-XX-DR-CH-000103, 112, 114, 116, 122, 123, 215 & 218.
  - REFER TO DRAWING No.133735\_2A-EWR-OXD-XX-DR-CH-010256 FOR OFFLINE HIGHWAYS SIGNAGE STRATEGY.
  - FOR DETAILS OF SIGN FACES, POSTS AND FOUNDATION, SEE SIGNAGE STRATEGY SCHEDULE DRAWINGS 133735\_RW-EWR-XX-XX-DR-CH-000300 - 133735\_RW-EWR-XX-XX-DR-CH-000301.

Rev	Date	Description of Revisions	Desd	Chkd	Appr	
B01	19/05/20	FOR INFORMATION		N.T.	L.T.	G.J.

SHARED - for IDC Review

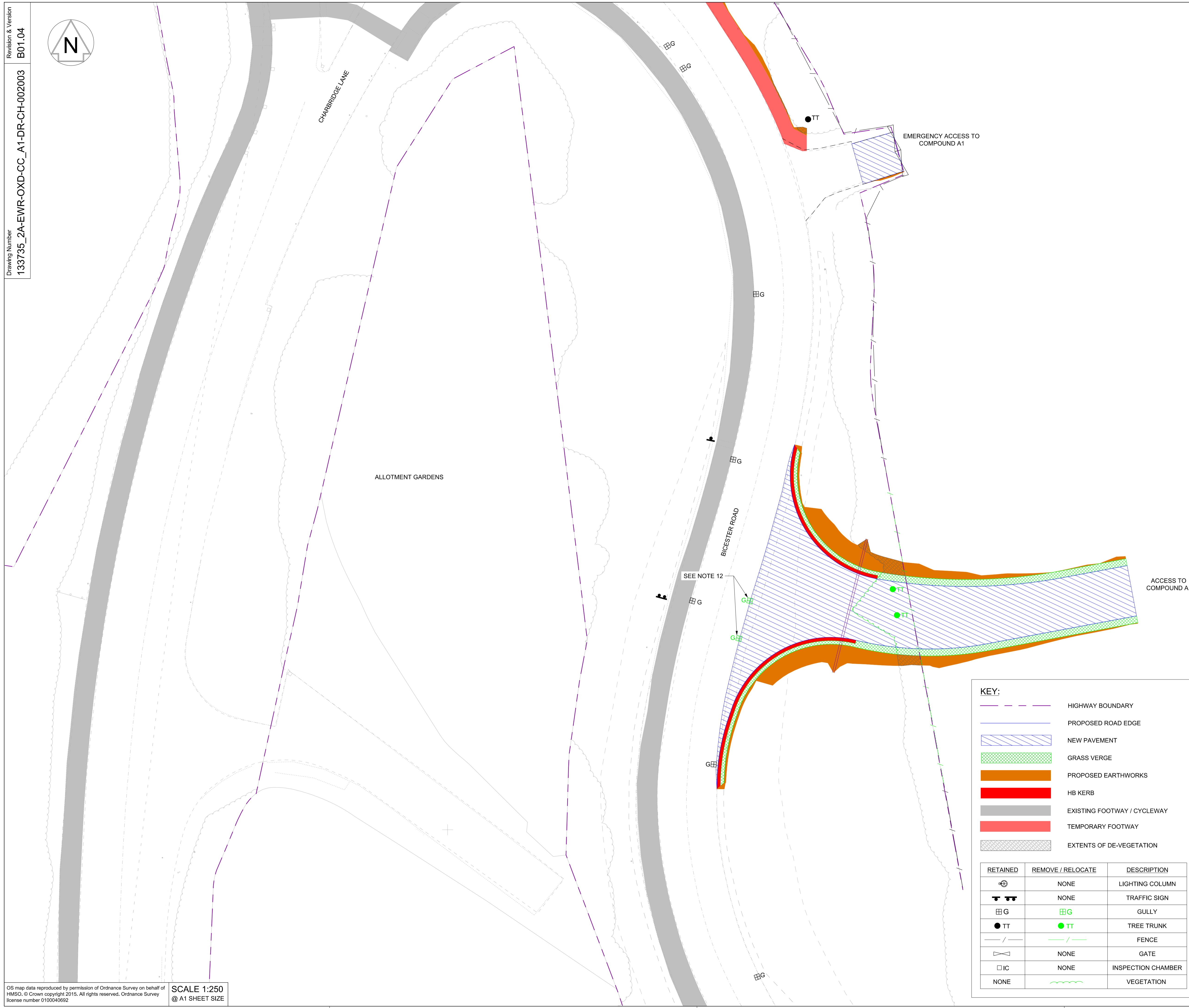
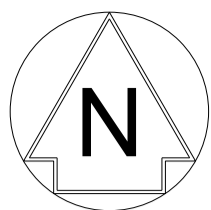
S3



**East West Rail (Western Section) Phase 2**

**ACCESS TO COMPOUND A1 INITIAL GENERAL ARRANGEMENT (TO BE KEPT UNDER REVIEW)**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	19/05/20
Drawn	Ravikumar KN	Signed	R. KN	Date	19/04/20
Checked	Lisa Taylor	Signed	L. Taylor	Date	19/05/20
Approved	Gareth Johnston	Signed	G. Johnston	Date	19/05/20
Scale(s)	1:250	ELR - Project Chainage (Miles Yards)	OXD -		
Design Package Risk Classification	Normal	Sheet	1 of 1		
Alternative Reference		Revision	B01		
Drawing Number	133735_2A-EWR-OXD-CC_A1-DR-CH-003001				



NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)

NOTES:

1. THIS DRAWING IS NOT TO BE SCALED.
2. ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.
4. PRIOR TO THE COMMENCEMENT OF WORKS, A SUITABLY QUALIFIED ECOLOGIST SHALL INSPECT THE SITE FOR THE PRESENCE OF PROTECTED SPECIES AND HABITAT. THE ECOLOGIST SHALL THEN ADVISE EWR ALLIANCE ON THE REQUIRED PRECAUTIONARY METHODS AND AREAS OF EXCLUSION.
5. WHERE SITE CLEARANCE WORKS HAVE THE POTENTIAL TO IMPACT TREES OR HEDGES WHICH ARE TO BE RETAINED, AN ARBORICULTURIST SHALL BE PRESENT TO ADVISE ON ROOT PROTECTION ZONE EXTENTS, ROOT PRUNING AND CROWN RAISING. WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH BS3998:2010.
6. SITE CLEARANCE, WHERE THERE IS PROXIMITY TO HABITAT OF PROTECTED SPECIES, SHALL BE CARRIED OUT UNDER THE SUPERVISION OF A SUITABLY QUALIFIED ECOLOGIST.
7. THE EXTENTS OF ALL SITE CLEARANCE WORKS SHALL BE RECORDED IN THE AS-BUILT SITE CLEARANCE DRAWINGS AND SHALL ALSO BE RECORDED, WITH PHOTOGRAPHS OF FEATURES PRIOR TO REMOVAL, IN THE SITE CLEARANCE REGISTER. THE SITE CLEARANCE REGISTER SHALL BE MAINTAINED BY EWR ALLIANCE AND WILL INFORM REINSTATEMENT DETERMINATION.
8. IN LOCATIONS WHERE EXISTING TREES OVERHANG THE PASSING PLACE CROWN LIFTING, TO GIVE 5m CLEARANCE ABOVE GROUND LEVEL, SHALL BE UNDERTAKEN TO THE BACK OF THE PROPOSED VERGE. THIS SHALL BE UNDERTAKEN UNDER THE SUPERVISION OF AN ARBORICULTURIST.
9. THE VEGETATION CLEARANCE SHOWN HERE ON THE DRAWING IS INDICATIVE ONLY. THE SITE TEAM NEEDS TO ASCERTAIN THE REQUIRED CLEARANCE BASED ON THE VISIBILITY SPLAY, INTERVISIBILITY ZONE AND OR WORKS REQUIRED FOR THIS SITE.
10. FOR CLARITY ONLY THE TRUNKS OF EXISTING TREES ARE SHOWN, FOR CANOPY EXTENTS THE TREE SURVEY MODEL AND MASTER SCHEDULE ARE TO BE REFERRED TO.
11. FOR DETAILS OF AMENDMENTS TO STREET LIGHTING REFER TO DRAWING No. 133735\_2A-EWR-OXD-CC\_A1-DR-CH-002012.
12. THE EXISTING GULLY AND SUMP IS TO BE REMOVED TO ALLOW INSTALLATION OF THE PAVEMENT. THE GULLY OUTLET PIPE IS TO BE RETAINED. A DRAIN TEST PLUG (OR SIMILAR AGREED METHOD) IS TO BE INSERTED INTO THE END OF THE EXPOSED PIPE TO PREVENT DEBRIS AND FILL MATERIAL FROM ENTERING THE PIPE. THE POSITION OF THE PIPE SHALL BE SURVEY AS A RECORD OF ITS POSITION TO ALLOW A NEW GULLY TO BE REINSTATED IN THE FUTURE.



Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	18/12/19	FOR INFORMATION				S2



Project  
**East West Rail (Western Section) Phase 2**  
 Drawing Title  
**ACCESS TO COMPOUND A1 SITE CLEARANCE**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	16/12/19
Drawn	Ravikumar KN	Signed	R. KN	Date	18/12/18
Checked	Garth Johnston	Signed	G. Johnston	Date	16/12/19
Approved	Stephen Abe	Signed	S. Abe	Date	16/12/19

Scale(s)	1:250	ELR - Project Chainage (Miles Yards)	OXD - 108820	Sheet	1 of 1
Design Package Risk Classification	Normal			Revision	B01
Alternative Reference				Revision	B01

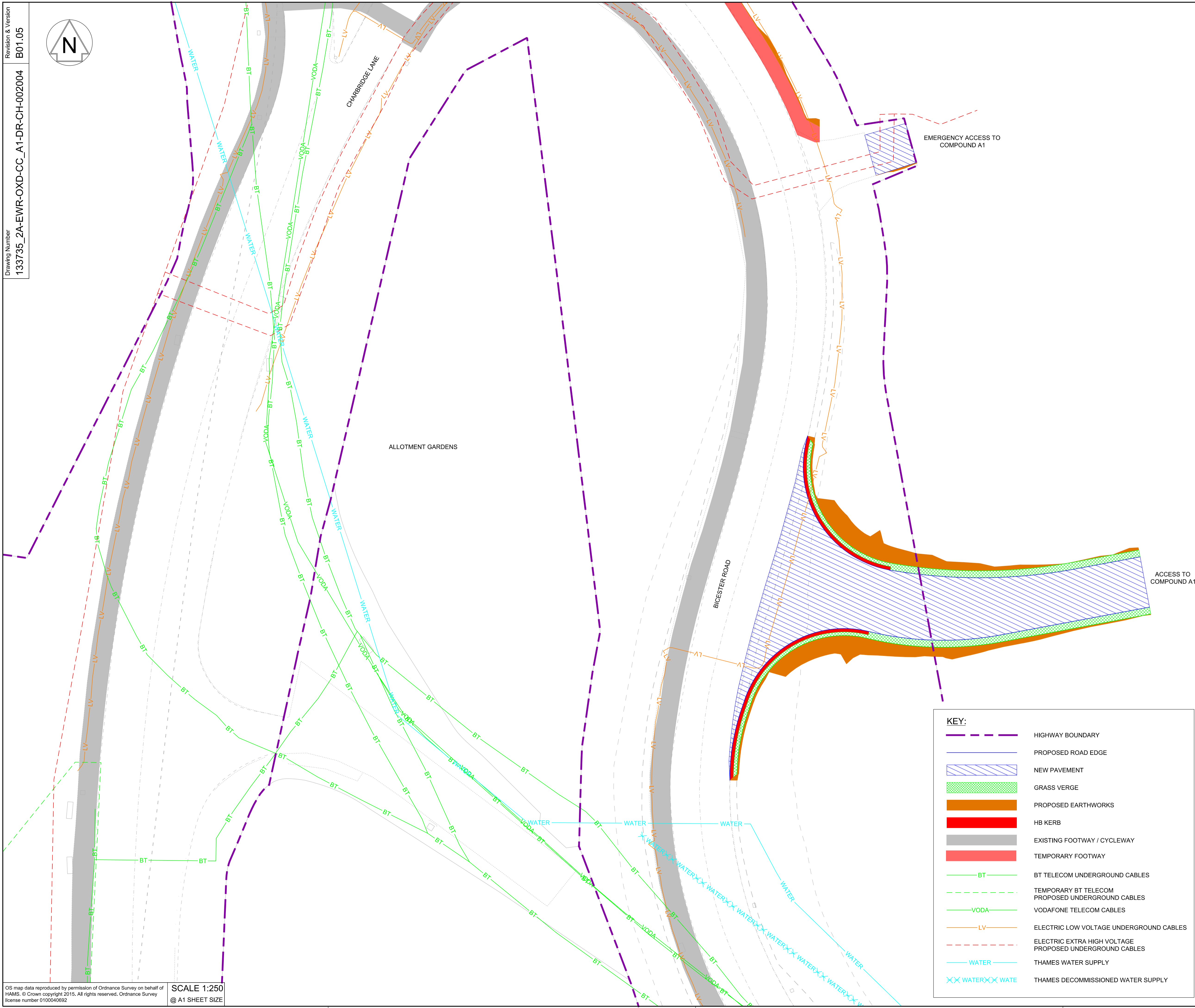
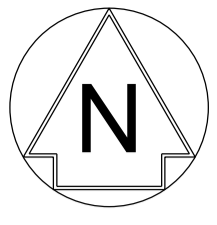
Drawing Number  
 133735\_2A-EWR-OXD-CC\_A1-DR-CH-002003

**KEY:**

	HIGHWAY BOUNDARY
	PROPOSED ROAD EDGE
	NEW PAVEMENT
	GRASS VERGE
	PROPOSED EARTHWORKS
	HB KERB
	EXISTING FOOTWAY / CYCLEWAY
	TEMPORARY FOOTWAY
	EXTENTS OF DE-VEGETATION

RETAINED	REMOVE / RELOCATE	DESCRIPTION
	NONE	LIGHTNING COLUMN
	NONE	TRAFFIC SIGN
		GULLY
		TREE TRUNK
		FENCE
	NONE	GATE
	NONE	INSPECTION CHAMBER
NONE		VEGETATION



**NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**

- NOTES:**
1. THIS DRAWING IS NOT TO BE SCALED.
  2. ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
  3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.
  4. THE EXACT LOCATION AND EXTENT OF BURIED SERVICES SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF THE WORKS. AGREEMENT WITH PRIVATE LANDOWNERS SHALL BE OBTAINED PRIOR TO WORKS WHERE ACCESS TO PRIVATE LAND IS REQUIRED.
  5. THIS DRAWING SHOWS THE POSITION OF UTILITY COMPANIES APPARATUS KNOWN TO OPERATE IN THE AREA IMMEDIATELY ADJACENT TO AND WITHIN THE LAND TAKE BOUNDARY FOR EAST WEST RAIL.
  6. THE POSITIONS INDICATED FOR THE APPARATUS ARE BASED ON RECORDS PROVIDED BY NETWORK RAIL. THE ACCURACY OF THE RECORDS MAINTAINED BY THE UTILITY COMPANIES, THE METHODS AVAILABLE TO PROCESS / REPRODUCE THIS INFORMATION IN THE DRAWINGS AND THE AGE OF THE INFORMATION, THERE IS THE POSSIBILITY THAT APPARATUS HAS BEEN ADDED OR REMOVED SINCE THE RECORDS WERE PROVIDED.
  7. ALL SEARCHES MUST BE VERIFIED AND ESTABLISHED ON SITE BEFORE WORK COMMENCES. IT IS THE RESPONSIBILITY OF THE EWR ALLIANCE TO IDENTIFY AND LOCATE UTILITY PLANT PRIOR TO WORK GOING AHEAD.

EMERGENCY ACCESS TO COMPOUND A1

ALLOTMENT GARDENS

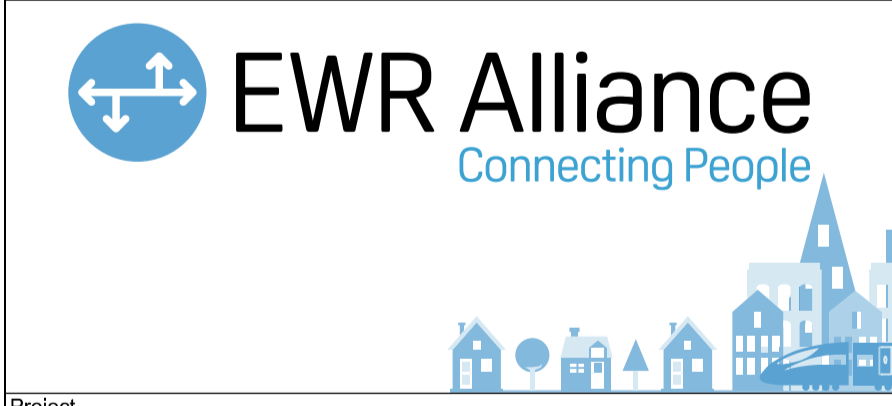
BICESTER ROAD

CHARBRIDGE LANE

ACCESS TO COMPOUND A1



Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	18/12/19	FOR INFORMATION				S2

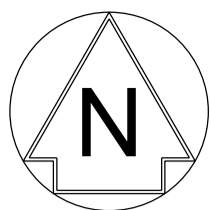


Project  
**East West Rail (Western Section) Phase 2**  
 Drawing Title  
**ACCESS TO COMPOUND A1 EXISTING UTILITIES**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	16/12/19	
Drawn	Ravikumar KN	Signed	R. KN	Date	18/12/18	
Checked	Gareth Johnston	Signed	G. Johnston	Date	16/12/19	
Approved	Stephen Abe	Signed	S. Abe	Date	16/12/19	
Scale(s)	1:250					
Design Package Risk Classification	Normal					
Alternative Reference	OXD - 108820					
Drawing Number	133735_2A-EWR-OXD-CC_A1-DR-CH-002004					
Sheet	1 of 1				Revision	B01

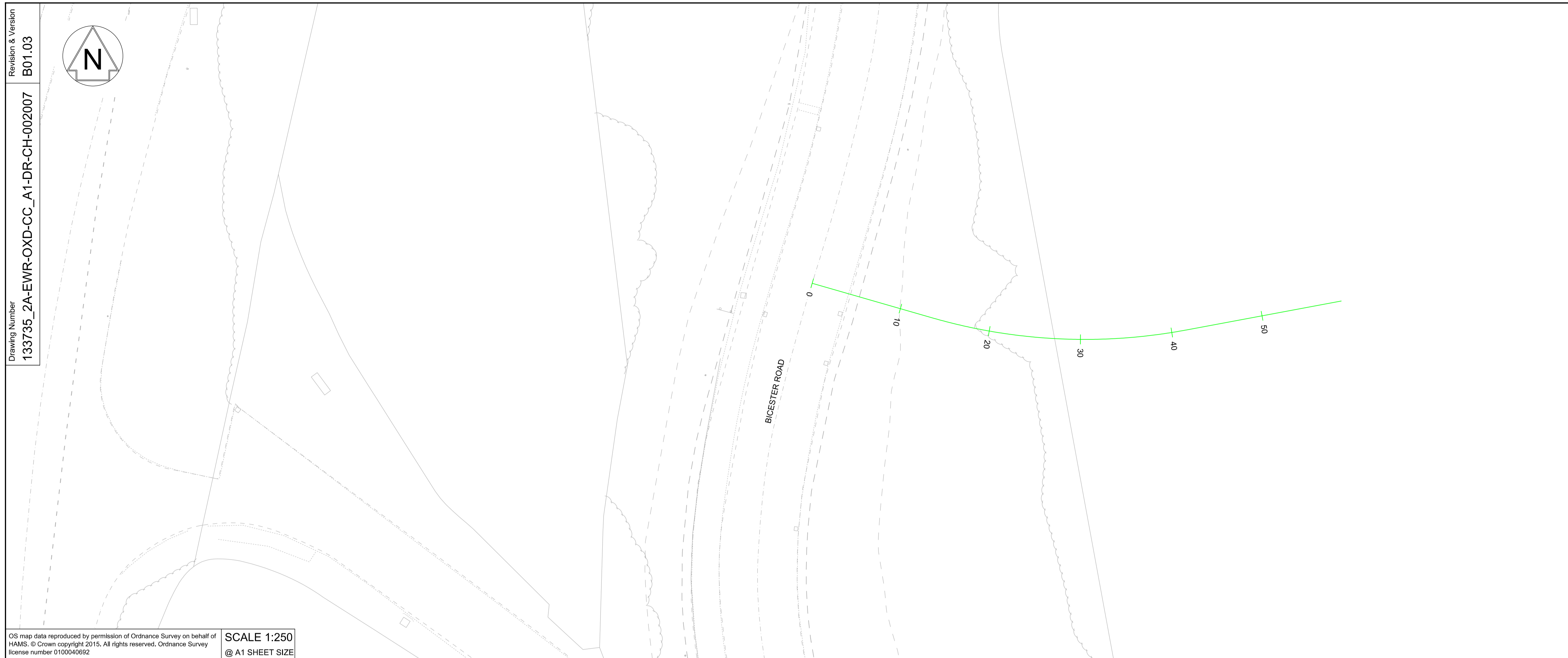
**KEY:**

	HIGHWAY BOUNDARY
	PROPOSED ROAD EDGE
	NEW PAVEMENT
	GRASS VERGE
	PROPOSED EARTHWORKS
	HB KERB
	EXISTING FOOTWAY / CYCLEWAY
	TEMPORARY FOOTWAY
	BT TELECOM UNDERGROUND CABLES
	TEMPORARY BT TELECOM PROPOSED UNDERGROUND CABLES
	VODAFONE TELECOM CABLES
	ELECTRIC LOW VOLTAGE UNDERGROUND CABLES
	ELECTRIC EXTRA HIGH VOLTAGE PROPOSED UNDERGROUND CABLES
	THAMES WATER SUPPLY
	THAMES DECOMMISSIONED WATER SUPPLY

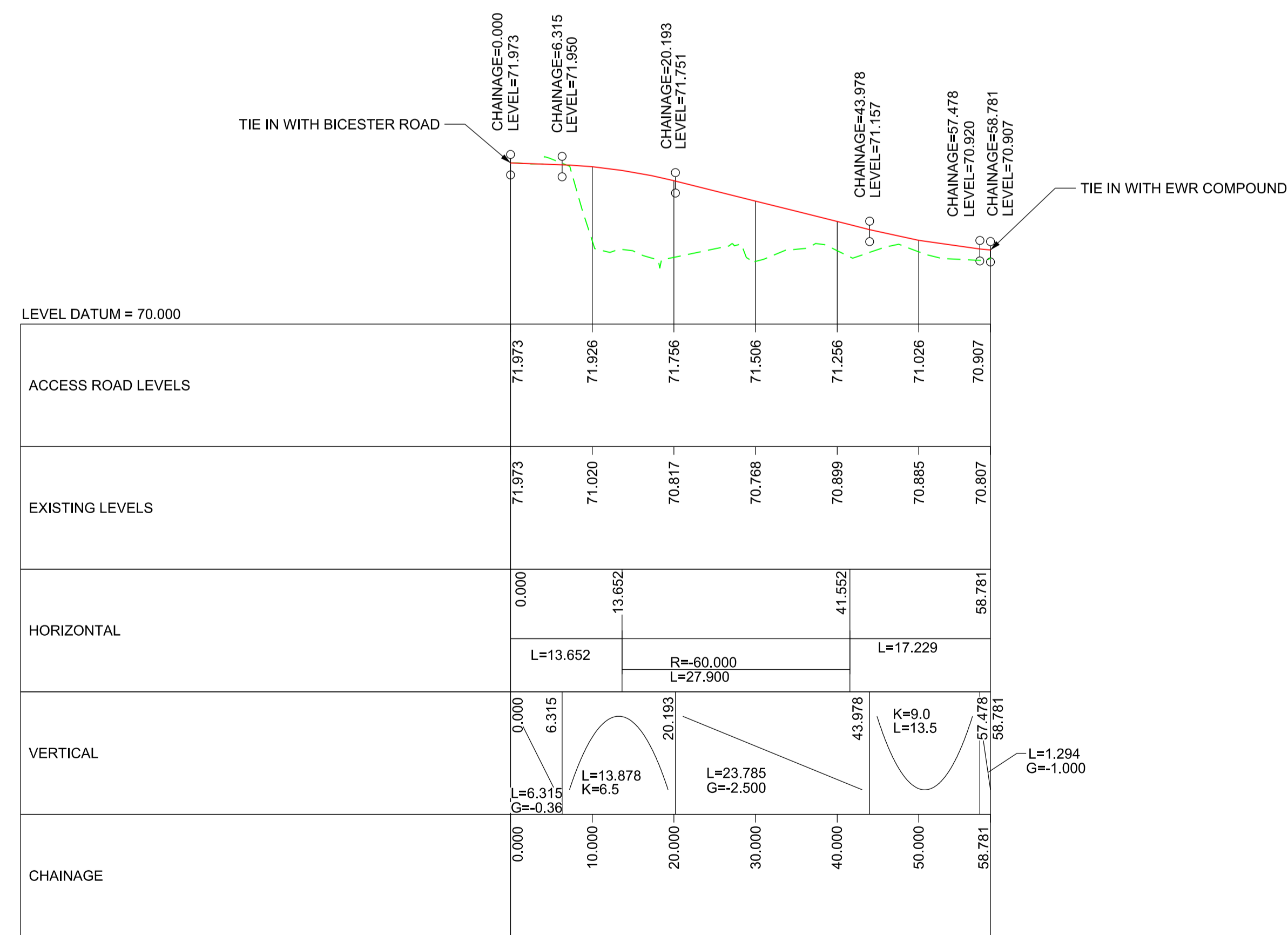


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SCALE 1:250  
 @ A1 SHEET SIZE



SCALE : AS SHOWN  
 @ A1 SHEET SIZE



ROAD PROFILE  
 SCALE = H - 1:500  
 V - 1:50

KEY:

	NEW ROAD EDGE LEVEL
	EXISTING SURFACE LEVEL

NETWORK RAIL (EAST WEST  
 RAIL WESTERN SECTION PHASE 2)

NOTES:

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- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.



Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	18/12/19	FOR INFORMATION	N.T.	G.J.	S.A	
Status						S2



Project  
 East West Rail  
 (Western Section)  
 Phase 2

Drawing Title  
 ACCESS TO COMPOUND A1  
 ROAD PLAN AND PROFILE

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	16/12/19
Drawn	Ravikumar KN	Signed	R. KN	Date	18/12/18
Checked	Gareth Johnston	Signed	G. Johnston	Date	16/12/19
Approved	Stephen Abe	Signed	S. Abe	Date	16/12/19

Scale(s)  
 AS SHOWN ELR - Project Chainage (Miles Yards)  
 OXD - 108820

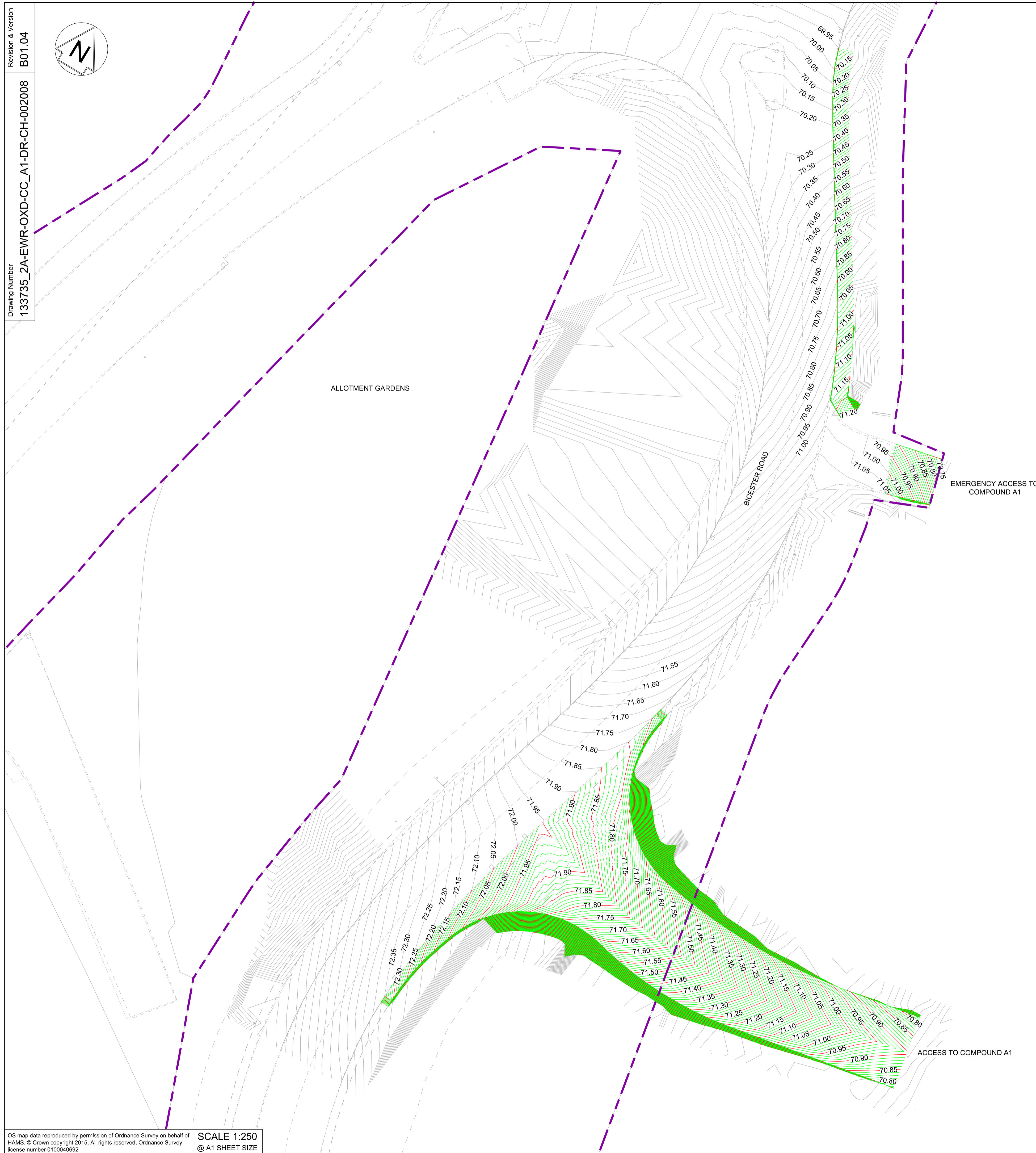
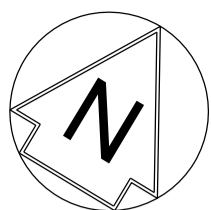
Design Package Risk Classification  
 Normal

Alternative Reference

Drawing Number  
 133735\_2A-EWR-OXD-CC\_A1-DR-CH-002007

Sheet  
 1 of 1

Revision  
 B01



**KEY:**

	HIGHWAY BOUNDARY
	EXISTING CONTOUR MAJOR @ 0.05m INTERVALS
	EXISTING CONTOUR MINOR @ 0.01m INTERVALS
	PROPOSED CONTOUR MAJOR @ 0.05m INTERVALS
	PROPOSED CONTOUR MINOR @ 0.01m INTERVALS

NETWORK RAIL (EAST WEST  
RAIL WESTERN SECTION PHASE 2)

NOTES:

1. THIS DRAWING IS NOT TO BE SCALED.
2. ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.
4. ALL WORKS TO BE IN ACCORDANCE WITH THE MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAYS WORKS VOL 1 (SPECIFICATION FOR HIGHWAY WORKS) AND STANDARD CONSTRUCTION DETAILS.
5. THE DELIVERY TEAM IS TO VERIFY DIMENSION ON SITE AND ADVISE OF ANY INFORMATION DISCREPANCIES. TIE-IN POINTS SHOULD BE VERIFIED ON SITE WITH THE ENGINEER PRIOR TO CONSTRUCTION.



Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	18/12/19	FOR INFORMATION				S2



Project  
**East West Rail  
(Western Section)  
Phase 2**

Drawing Title  
**ACCESS TO COMPOUND A1  
EXISTING AND PROPOSED  
CONTOURS**

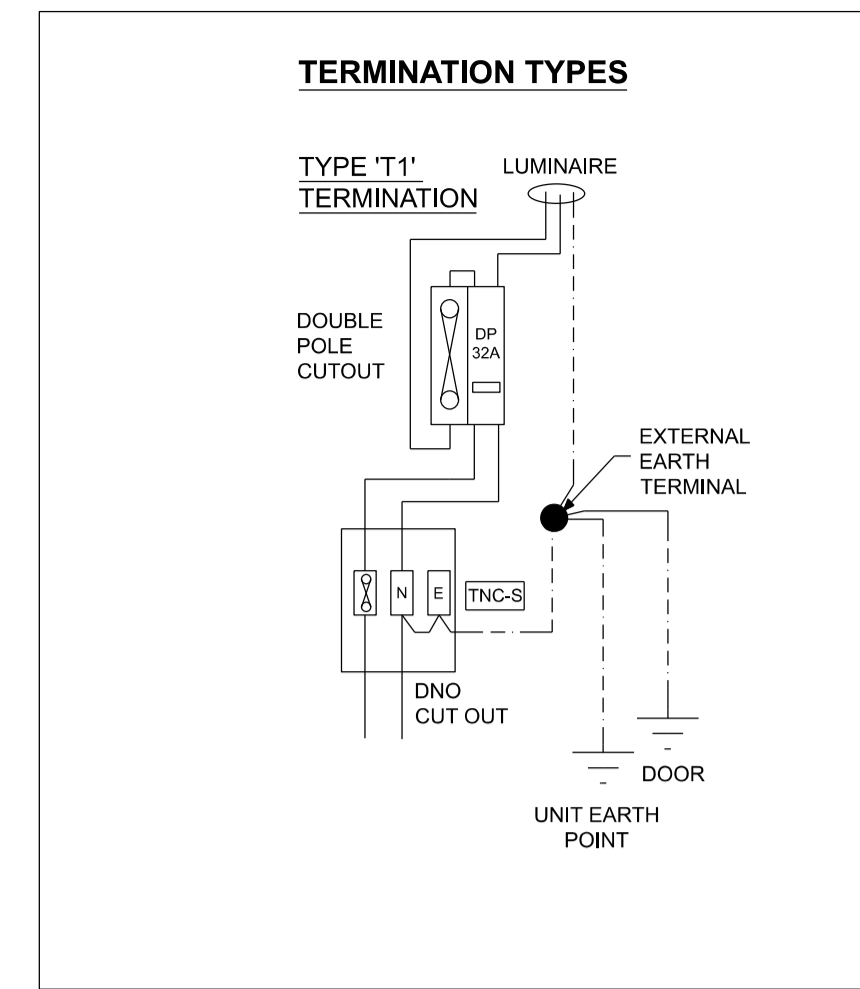
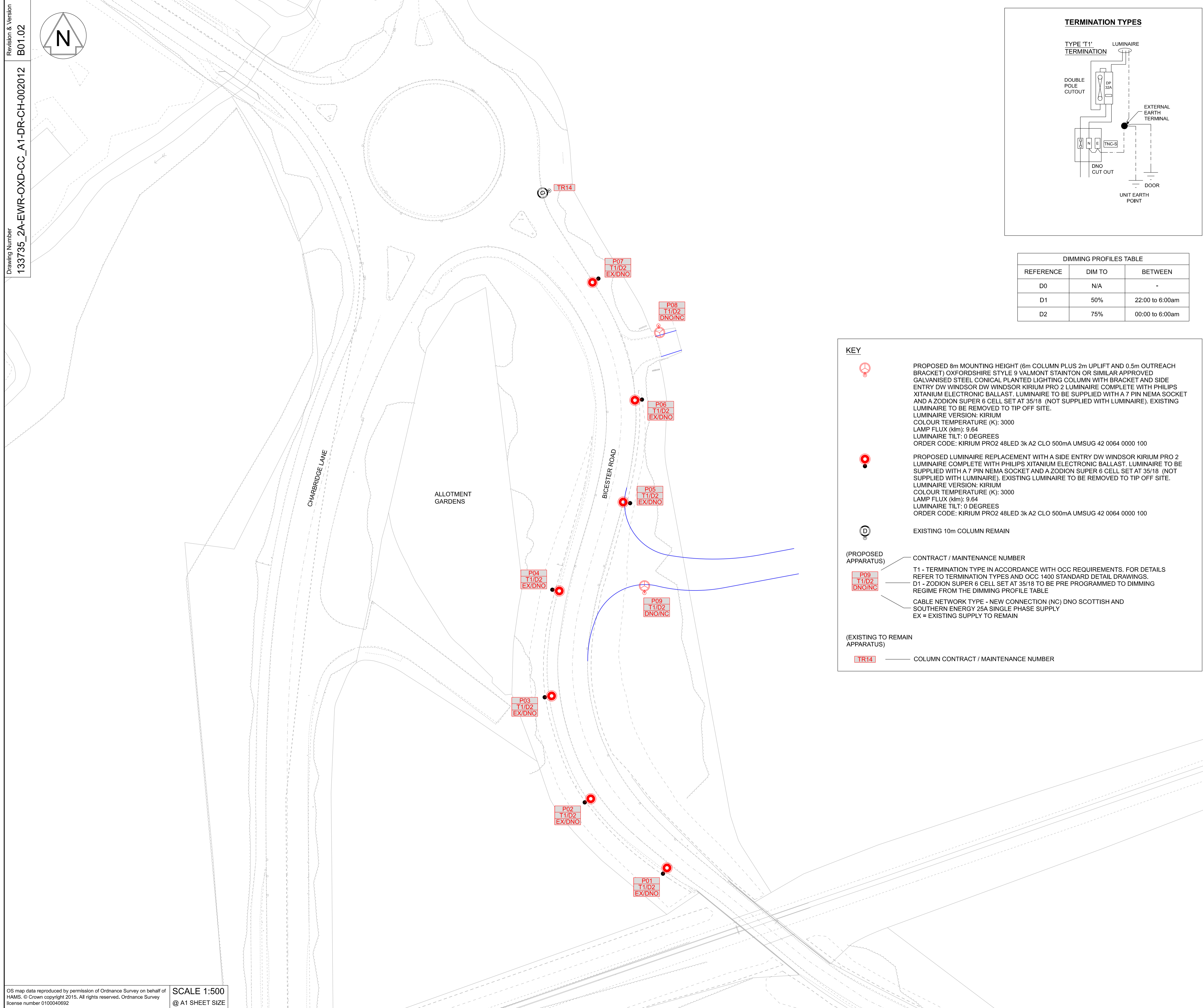
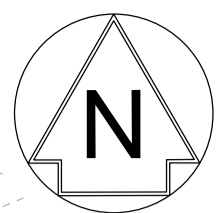
Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	16/12/19
Drawn	Ravikumar KN	Signed	R. KN	Date	17/12/18
Checked	Garth Johnston	Signed	G. Johnston	Date	16/12/19
Approved	Stephen Abe	Signed	S. Abe	Date	16/12/19

Scale(s)  
1:250  
ELR - Project Chainage (Miles Yards)  
OXD - 108820

Design Package Risk Classification  
**Normal**

Alternative Reference  
Revision  
B01

Drawing Number  
133735\_2A-EWR-OXD-CC\_A1-DR-CH-002008



REFERENCE	DIM TO	BETWEEN
D0	N/A	-
D1	50%	22:00 to 6:00am
D2	75%	00:00 to 6:00am

### KEY

- PROPOSED 8m MOUNTING HEIGHT (6m COLUMN PLUS 2m UPLIFT AND 0.5m OUTREACH BRACKET) OXFORDSHIRE STYLE 9 VALMONT STANTON OR SIMILAR APPROVED GALVANISED STEEL CONICAL PLANTED LIGHTING COLUMN WITH BRACKET AND SIDE ENTRY DW WINDSOR DW WINDSOR KIRIUM PRO 2 LUMINAIRE COMPLETE WITH PHILIPS TITANIUM ELECTRONIC BALLAST. LUMINAIRE TO BE SUPPLIED WITH A 7 PIN NEMA SOCKET AND A ZODION SUPER 6 CELL SET AT 35/18 (NOT SUPPLIED WITH LUMINAIRE). EXISTING LUMINAIRE TO BE REMOVED TO TIP OFF SITE.  
LUMINAIRE VERSION: KIRIUM  
COLOUR TEMPERATURE (K): 3000  
LAMP FLUX (klm): 9.64  
LUMINAIRE TILT: 0 DEGREES  
ORDER CODE: KIRIUM PRO2 48LED 3k A2 CLO 500mA UMSUG 42 0064 0000 100
- PROPOSED LUMINAIRE REPLACEMENT WITH A SIDE ENTRY DW WINDSOR KIRIUM PRO 2 LUMINAIRE COMPLETE WITH PHILIPS TITANIUM ELECTRONIC BALLAST. LUMINAIRE TO BE SUPPLIED WITH A 7 PIN NEMA SOCKET AND A ZODION SUPER 6 CELL SET AT 35/18 (NOT SUPPLIED WITH LUMINAIRE). EXISTING LUMINAIRE TO BE REMOVED TO TIP OFF SITE.  
LUMINAIRE VERSION: KIRIUM  
COLOUR TEMPERATURE (K): 3000  
LAMP FLUX (klm): 9.64  
LUMINAIRE TILT: 0 DEGREES  
ORDER CODE: KIRIUM PRO2 48LED 3k A2 CLO 500mA UMSUG 42 0064 0000 100
- EXISTING 10m COLUMN REMAIN
- (PROPOSED APPARATUS) CONTRACT / MAINTENANCE NUMBER
- T1 - TERMINATION TYPE IN ACCORDANCE WITH OCC REQUIREMENTS. FOR DETAILS REFER TO TERMINATION TYPES AND OCC 1400 STANDARD DETAIL DRAWINGS.  
D1 - ZODION SUPER 6 CELL SET AT 35/18 TO BE PRE PROGRAMMED TO DIMMING REGIME FROM THE DIMMING PROFILE TABLE
- CABLE NETWORK TYPE - NEW CONNECTION (NC) DNO SCOTTISH AND SOUTHERN ENERGY 25A SINGLE PHASE SUPPLY  
EX = EXISTING SUPPLY TO REMAIN
- (EXISTING TO REMAIN APPARATUS) COLUMN CONTRACT / MAINTENANCE NUMBER

## NETWORK RAIL (EAST WEST) RAIL WESTERN SECTION PHASE 2

- ### NOTES:
- ALL EQUIPMENT AND INSTALLATION WORK SHALL BE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE OCC ROAD LIGHTING GENERAL SPECIFICATION DOCUMENT AND THE MOST RECENT REVISION OF STANDARD DETAIL DRAWINGS HSD-13-002, HSD-13-006, HSD-13-007, HSD-13-008, HSD-13-021, HSD-14-005, HSD-14-015, HSD-14-017.
  - ALL LIGHTING COLUMNS SHALL BE SUITABLE FOR THE FITMENT, WEIGHT AND WINDAGE OF THE LUMINAIRE SPECIFIED AND DESIGNED IN ACCORDANCE WITH THE SPECIFICATION. LIGHTING COLUMN CONSTRUCTION NUMBERS SHOWN ON THE DRAWING. MAINTENANCE NUMBERS TO BE PROVIDED ON REQUEST BY THE MAINTAINING AUTHORITY.
  - LUMINAIRES TO BE FACTORY PAINTED GREEN (RAL 6013) PRIOR TO FITTING. SEE SPECIFICATION DOCUMENT
  - BOLLARDS TO BE INSTALLED AS PER STANDARD DETAIL DRAWINGS HSD/1200/003 AND 004.
  - ALL COLUMN POSITIONS TO BE AGREED BY THE MAINTAINING AUTHORITY PRIOR TO ERECTION.
  - ELECTRICAL WORK SHALL COMPLY IN ALL RESPECTS WITH THE 18TH EDITION OF THE I.E.T WIRING REGULATIONS BS:7671 AS AMENDED.
  - ON COMPLETION AN ELECTRICAL TEST CERTIFICATE FOR EACH LIGHTING COLUMN, ASSOCIATED WITH CABLE AND SWITCH GEAR SHALL BE COMPLETED AND RETURNED BY THE CONTRACTOR.
    - THE ILP CODE OF PRACTICE FOR ELECTRICAL SAFETY IN HIGHWAY ELECTRICAL OPERATIONS TOGETHER WITH THE ILP SUPPLEMENT ENTITLED "SAFETY DURING THE INSTALLATION AND REMOVAL OF LIGHTING COLUMNS AND SIMILAR STREET FURNITURE IN PROXIMITY TO HIGH VOLTAGE OVERHEAD LINES"
    - HEALTH AND SAFETY EXECUTIVE BOOKLET HS(G)47 "AVOIDING DANGER FROM UNDERGROUND SERVICES" AND H&SE GUIDANCE NOTE GS6 "AVOIDANCE OF DANGER FROM OVERHEAD ELECTRIC LINES" AND
    - THE ELECTRICITY ASSOCIATION ENGINEERING RECOMMENDATION G39/1 SAFETY CODE OF PRACTICE E4 COVERING ELECTRICAL SAFETY AND PLANNING. INSTALLATION, COMMISSIONING AND MAINTENANCE OF PUBLIC LIGHTING AND OTHER STREET FURNITURE.
  - THE CONTRACTOR IS TO INVESTIGATE PROPOSED LIGHTING COLUMN LOCATION TO ENSURE IT'S CLEAR OF ALL UNDERGROUND INFRASTRUCTURE. IF OBSTRUCTION IS FOUND, THEN REPORT THIS TO THE ENGINEER.
  - CONTRACTOR SHALL CONFIRM LIGHTING LEVELS IF AN ALTERNATIVE LUMINAIRE IS PROPOSED.
  - FINAL LOCATIONS OF STREET LIGHTING TO BE CONFIRMED WITH FINAL LOCATION OF TREES.



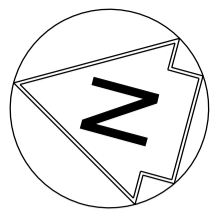
Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/03/20	FOR INFORMATION				



Project  
**East West Rail  
(Western Section)  
Phase 2**

Drawing Title  
**ACCESS TO COMPOUND A1  
STREET LIGHTING**

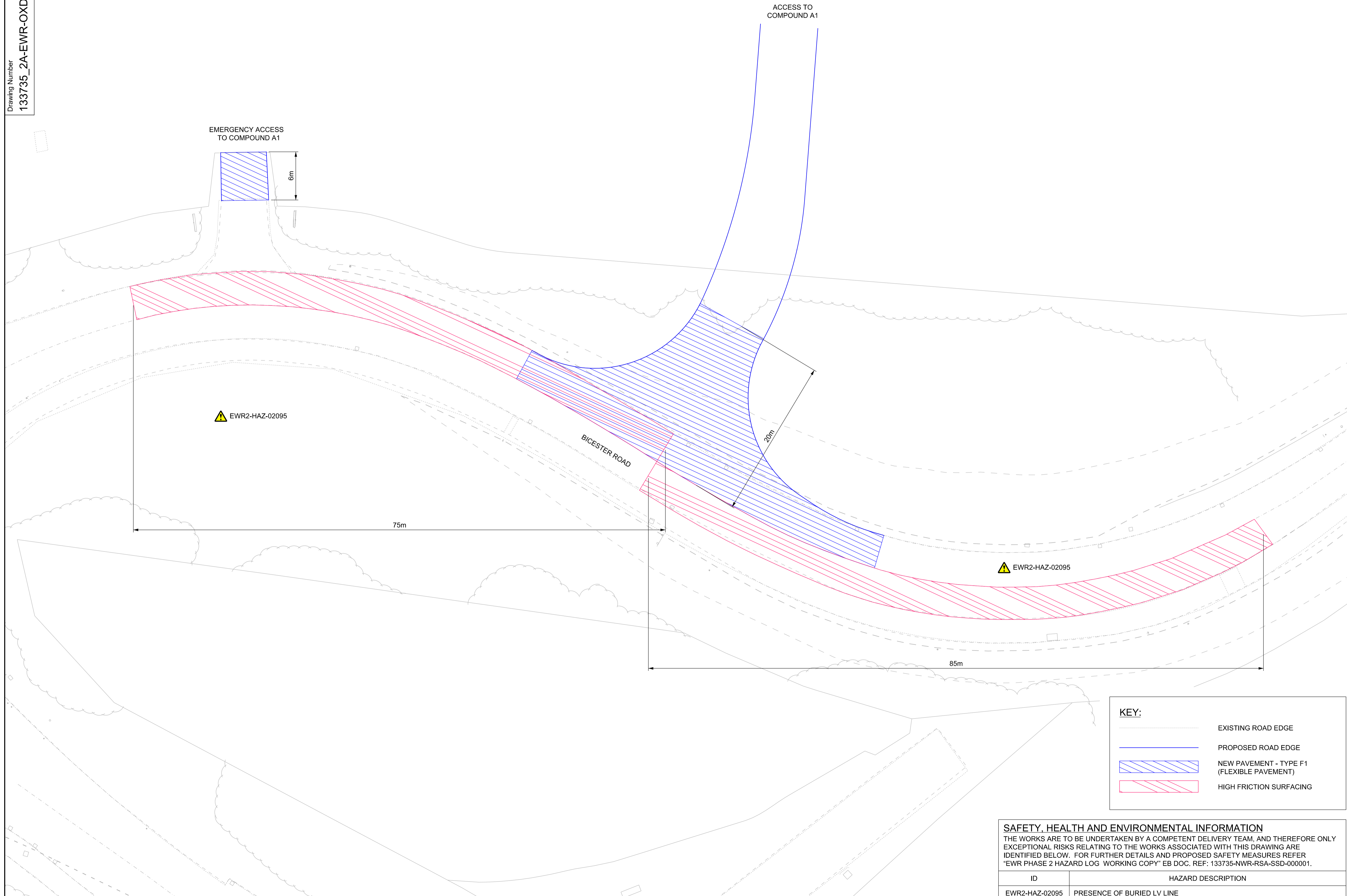
Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	11/03/20
Drawn	Nigel R Jones	Signed	N. Jones	Date	21/01/19
Checked	Lisa Taylor	Signed	L. Taylor	Date	13/03/20
Approved	Karen Wood	Signed	K. Wood	Date	13/03/20
Scale(s)	ELR - Project Chainage (Miles Yards) 1:500 OXD - 108820				
Design Package Risk Classification	Normal			Sheet	1 of 1
Alternative Reference					Revision B01
Drawing Number	133735_2A-EWR-OXD-CC_A1-DR-CH-002012				



NETWORK RAIL (EAST WEST  
RAIL WESTERN SECTION PHASE 2)

NOTES:

1. THIS DRAWING IS NOT TO BE SCALED.
2. ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING No.S 133735\_RW-EWR-XX-XX-DR-CH-000147 & 215.



Rev	Date	Description of Revisions	Desd	Chkd	Appr
B01	07/05/20	WIP - DESIGN	--	--	--

WIP - Design S0



Project  
**East West Rail  
(Western Section)  
Phase 2**

Drawing Title  
**ACCESS TO COMPOUND A1  
PAVEMENT LAYOUT**

Designed	---	Signed	---	Date	---
Drawn	Tamsin Leaman-Hewitt	Signed	T. Leaman-Hewitt	Date	22/01/20
Checked	---	Signed	---	Date	---
Approved	---	Signed	---	Date	---

Scale(s)  
1:250  
ELR - Project Chainage (Miles/Yards)  
OXD - 108820

Design Package Risk Classification  
**Normal**

Sheet  
1 of 1

Alternative Reference  
Revision  
B01

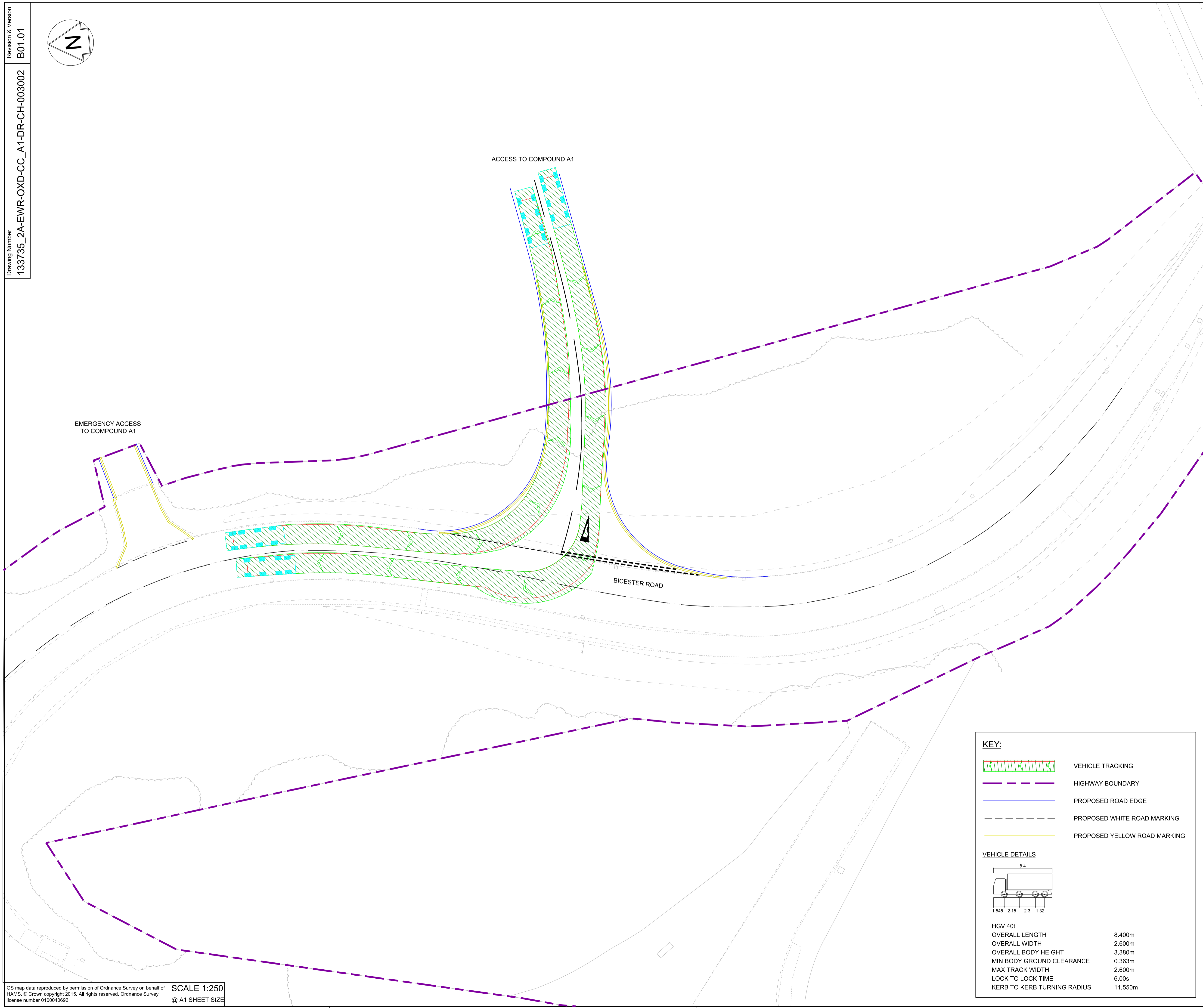
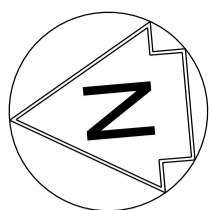
**KEY:**

	EXISTING ROAD EDGE
	PROPOSED ROAD EDGE
	NEW PAVEMENT - TYPE F1 (FLEXIBLE PAVEMENT)
	HIGH FRICTION SURFACING

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**  
THE WORKS ARE TO BE UNDERTAKEN BY A COMPETENT DELIVERY TEAM, AND THEREFORE ONLY EXCEPTIONAL RISKS RELATING TO THE WORKS ASSOCIATED WITH THIS DRAWING ARE IDENTIFIED BELOW. FOR FURTHER DETAILS AND PROPOSED SAFETY MEASURES REFER "EWR PHASE 2 HAZARD LOG WORKING COPY" EB DOC. REF: 133735-NWR-RSA-SSD-000001.

ID	HAZARD DESCRIPTION
EWR2-HAZ-02095	PRESENCE OF BURIED LV LINE

INDICATES PROJECT RISKS (EWR2-DRIS- .....)  
 INDICATES H&S RISKS (EWR2-HAZ- .....)



NETWORK RAIL (EAST WEST  
RAIL WESTERN SECTION PHASE 2)

NOTES:

1. THIS DRAWING IS NOT TO BE SCALED.
2. ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
3. VEHICLE TRACKING IS UNDERTAKEN WITH COMPUTER MODELLING SOFTWARE AND IS BASED ON IDEAL SITUATIONS WHERE REAL WORLD OBSTRUCTIONS ON THE ROAD NETWORK SUCH AS PARKING OR LOADING ACTIVITY WOULD NOT HAVE BEEN FORESEEN.
4. THE MODELLING IS BASED IN 2D PLAN WHERE SWEEPED PATHS ARE INFLUENCED BY ANTICIPATED MOVEMENTS AND THEREFORE LEAD TO IDEAL APPROACH ANGLES, WHICH MIGHT NOT BE OBVIOUS IN REALITY.
5. APPROACH SPEEDS, APPROACH ANGLES, ROAD SURFACE, WEATHER CONDITIONS AND TYRE WEAR ARE ALL FACTORS THAT WILL INFLUENCE VEHICLE PATHS.

EMERGENCY ACCESS  
TO COMPOUND A1

ACCESS TO COMPOUND A1

BICESTER ROAD

**KEY:**

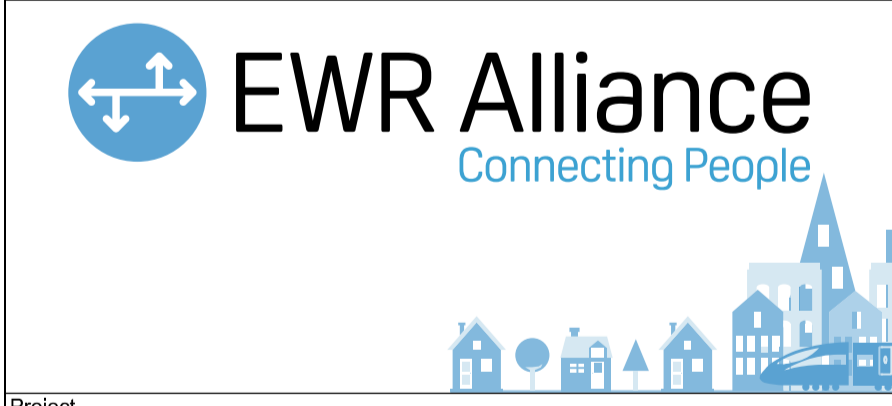
- VEHICLE TRACKING
- HIGHWAY BOUNDARY
- PROPOSED ROAD EDGE
- PROPOSED WHITE ROAD MARKING
- PROPOSED YELLOW ROAD MARKING

**VEHICLE DETAILS**

HGV 40t  
 OVERALL LENGTH 8.400m  
 OVERALL WIDTH 2.600m  
 OVERALL BODY HEIGHT 3.380m  
 MIN BODY GROUND CLEARANCE 0.363m  
 MAX TRACK WIDTH 2.600m  
 LOCK TO LOCK TIME 6.00s  
 KERB TO KERB TURNING RADIUS 11.550m

Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	19/05/20	FOR INFORMATION				

SHARED - for IDC Review S3

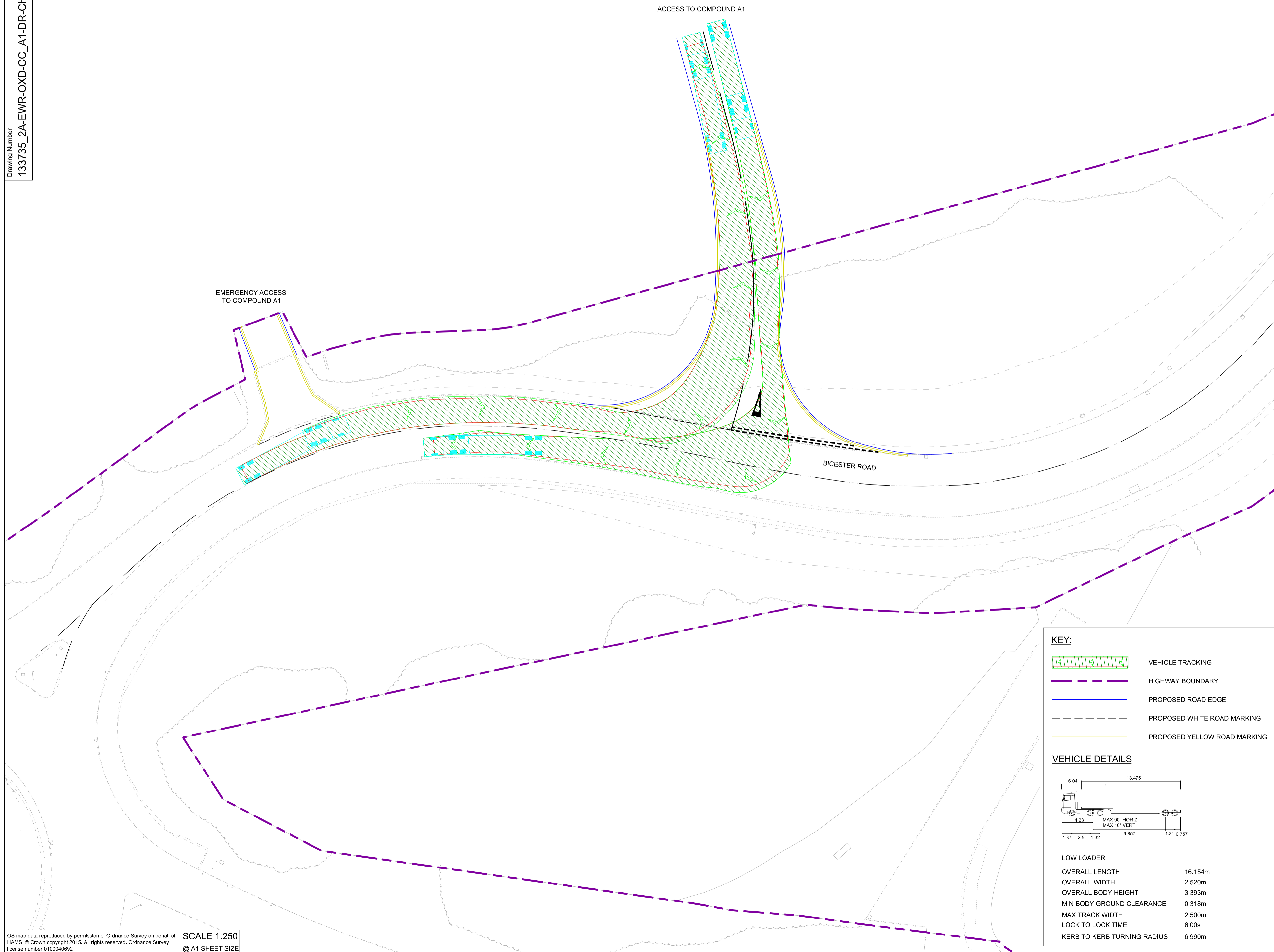
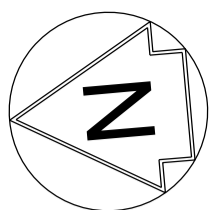


Project  
**East West Rail  
(Western Section)  
Phase 2**

Drawing Title  
**ACCESS TO COMPOUND A1  
INITIAL VEHICLE SWEEPED PATH  
ANALYSIS  
(TO BE KEPT UNDER REVIEW)**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	23/04/20
Drawn	Ravikumar KN	Signed	R. KN	Date	19/04/20
Checked	Lisa Taylor	Signed	L. Taylor	Date	24/04/20
Approved	Gareth Johnston	Signed	G. Johnston	Date	19/05/20
Scale(s)	1:250	ELR - Project Chainage (Miles Yards)	OXD -		
Design Package Risk Classification	Normal	Sheet	1 of 3		
Alternative Reference		Revision	B01		
Drawing Number	133735_2A-EWR-OXD-CC_A1-DR-CH-003002				





- NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**
- NOTES:**
1. THIS DRAWING IS NOT TO BE SCALED.
  2. ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
  3. VEHICLE TRACKING IS UNDERTAKEN WITH COMPUTER MODELLING SOFTWARE AND IS BASED ON IDEAL SITUATIONS WHERE REAL WORLD OBSTRUCTIONS ON THE ROAD NETWORK SUCH AS PARKING OR LOADING ACTIVITY WOULD NOT HAVE BEEN FORESEEN.
  4. THE MODELLING IS BASED IN 2D PLAN WHERE SWEEPED PATHS ARE INFLUENCED BY ANTICIPATED MOVEMENTS AND THEREFORE LEAD TO IDEAL APPROACH ANGLES, WHICH MIGHT NOT BE OBVIOUS IN REALITY.
  5. APPROACH SPEEDS, APPROACH ANGLES, ROAD SURFACE, WEATHER CONDITIONS AND TYRE WEAR ARE ALL FACTORS THAT WILL INFLUENCE VEHICLE PATHS.

Rev	Date	Description of Revisions	Desd	Chkd	Appr
B01	19/05/20	FOR INFORMATION	N.T.	L.T.	G.J.

Status: SHARED - for IDC Review Suitability: S3



Project  
**East West Rail (Western Section) Phase 2**

Drawing Title  
**ACCESS TO COMPOUND A1 INITIAL VEHICLE SWEEPED PATH ANALYSIS (TO BE KEPT UNDER REVIEW)**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	23/04/20
Drawn	Ravikumar KN	Signed	R. KN	Date	19/04/20
Checked	Lisa Taylor	Signed	L. Taylor	Date	24/04/20
Approved	Gareth Johnston	Signed	G. Johnston	Date	19/05/20

Scale(s)	1:250	ELR - Project Chainage (Miles Yards)	OXD -
Design Package Risk Classification	Normal	Sheet	2 of 3
Alternative Reference		Revision	B01
Drawing Number	133735_2A-EWR-OXD-CC_A1-DR-CH-003003		

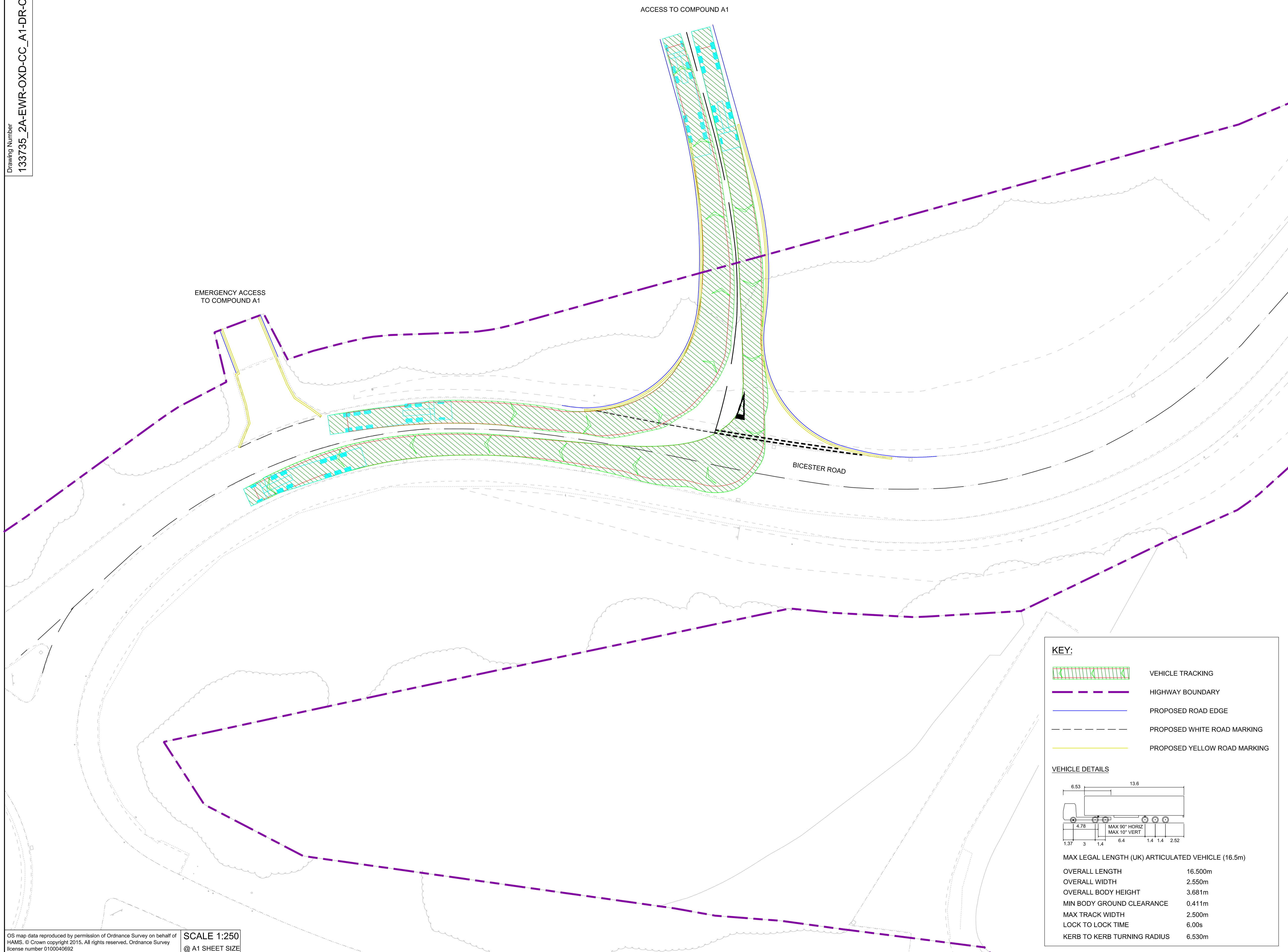
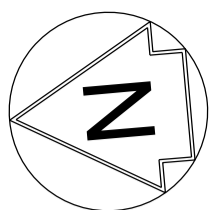
**KEY:**

- VEHICLE TRACKING
- HIGHWAY BOUNDARY
- PROPOSED ROAD EDGE
- PROPOSED WHITE ROAD MARKING
- PROPOSED YELLOW ROAD MARKING

**VEHICLE DETAILS**

**LOW LOADER**

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



- NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**
- NOTES:**
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  5. APPROACH SPEEDS, APPROACH ANGLES, ROAD SURFACE, WEATHER CONDITIONS AND TYRE WEAR ARE ALL FACTORS THAT WILL INFLUENCE VEHICLE PATHS.

Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	19/05/20	FOR INFORMATION		N.T.	L.T.	G.J.
Status						S3



Project  
**East West Rail (Western Section) Phase 2**

Drawing Title  
**ACCESS TO COMPOUND A1 INITIAL VEHICLE SWEEPED PATH ANALYSIS (TO BE KEPT UNDER REVIEW)**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	23/04/20
Drawn	Ravikumar KN	Signed	R. KN	Date	19/04/20
Checked	Lisa Taylor	Signed	L. Taylor	Date	24/04/20
Approved	Gareth Johnston	Signed	G. Johnston	Date	19/05/20

Scale(s)	1:250	ELR - Project Chainage (Miles Yards)	OXD -
Design Package Risk Classification	Normal	Sheet	3 of 3
Alternative Reference		Revision	B01
Drawing Number	133735_2A-EWR-OXD-CC_A1-DR-CH-003004		

**KEY:**

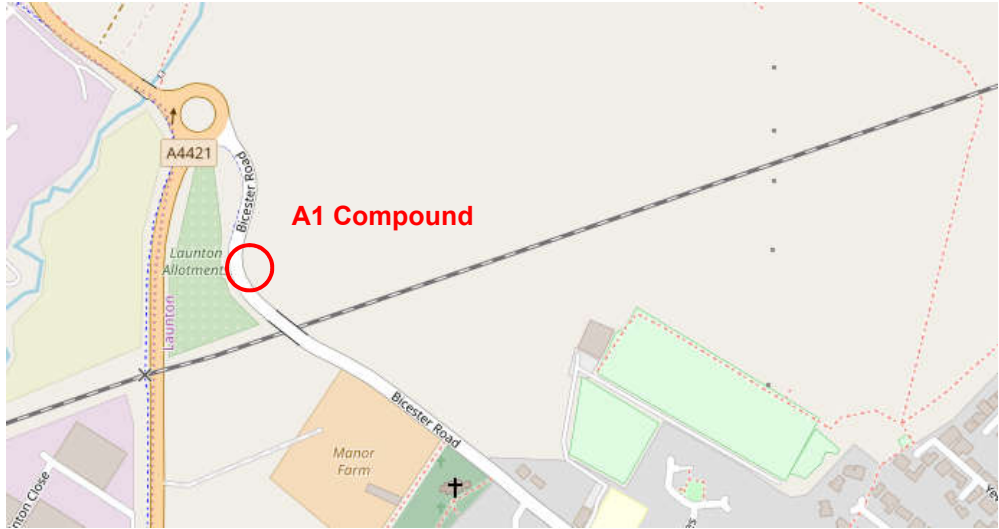
- VEHICLE TRACKING
- HIGHWAY BOUNDARY
- PROPOSED ROAD EDGE
- PROPOSED WHITE ROAD MARKING
- PROPOSED YELLOW ROAD MARKING

**VEHICLE DETAILS**

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

<b>Departure Reference:</b>	N019	<b>Departure Type:</b>	General
<b>Document File Name:</b>	133735_RW-EWR-XX-XX-RP-CH-000161 Rev02	<b>Local Highway Authority:</b>	Oxfordshire County Council

<b>Departure Title:</b>	Reduced visibility standard along the major road at A1 Compound (Bicester Road).
<b>Departure Location:</b>	 <p>Bicester Road (Oxfordshire)</p>
<b>Supporting Information:</b>	<p><b>General Arrangement Drawing Number</b> 133735_2A-EWR-OXD-CC_A1-DR-CH-003001</p> <p><b>Visibility Splay Drawing Number</b> 133735_2A-EWR-OXD-CC_A1-DR-CH-002018</p> <p><b>Road Safety Audit Response Report</b></p>
<b>Consultations:</b>	Oxfordshire County Council

DEPARTURE DETAILS

<b>Relevant Standards:</b>	DMRB, Volume 6, Section 2, Part 6, TD 42/95 DMRB, Volume 6, Section 2, Part 6, TD 9/93
<b>Clause/Paragraphs:</b>	<p>TD 42/95, Para. 7.6c</p> <p><b>Volume 6 Section 2 Part 6 TD 42/95</b></p> <div style="border: 2px solid black; padding: 10px;"> <p>c. The distance back along the minor road from which the full visibility is measured is known as the 'x' distance. It is measured back along the centreline of the minor road from the continuation of the line of the nearside edge of the running carriageway of the major road. The 'x' distance shall be desirably 9m (but see para 7.8). From this point an approaching driver shall be able to see clearly points to the left and right on the nearer edge of the major road running carriageway at a distance given in Table 7/1, measured from its intersection with the centreline</p> </div>

	<table border="1"> <thead> <tr> <th>Design Speed of Major Road (kph)</th> <th>'y' Distance (m)</th> </tr> </thead> <tbody> <tr> <td>50</td> <td>70</td> </tr> <tr> <td>60</td> <td>90</td> </tr> <tr> <td>70</td> <td>120</td> </tr> <tr> <td>85</td> <td>160</td> </tr> <tr> <td>100</td> <td>215</td> </tr> <tr> <td>120</td> <td>295</td> </tr> </tbody> </table>	Design Speed of Major Road (kph)	'y' Distance (m)	50	70	60	90	70	120	85	160	100	215	120	295
	Design Speed of Major Road (kph)	'y' Distance (m)													
50	70														
60	90														
70	120														
85	160														
100	215														
120	295														
<b>Table 7/1: 'y' Visibility Distances from the Minor Road (Relaxations not available - para 7.6c)</b>															
<b>Departure Description:</b>	Visibility from minor arm along major road is sub-standard.														
<b>Associated Departures:</b>	None														
<b>Reason for Departure:</b>	The junction listed above does not appear to provide the required visibility distance 'y' from the junction along the major road, for their respective posted speed limit.														

DESIGN DETAILS

<b>Design Year Traffic Flow (AADT):</b>	9,330 (2021)									
<b>Design Speed:</b>	<p>A speed survey was carried out by Oxfordshire County Council on the Bicester Road at two locations North and South of the compound access. The table below shows the results</p> <p>The 85th percentile speed survey results are as follows: -</p> <table border="1"> <thead> <tr> <th>Mph (kph)</th> <th>Northbound</th> <th>Southbound</th> </tr> </thead> <tbody> <tr> <td>Site 1</td> <td>32.7 (52.7)</td> <td><b>35.5 (57.2)</b></td> </tr> <tr> <td>Site 2</td> <td><b>30.5 (49.2)</b></td> <td>26.8 (43.2)</td> </tr> </tbody> </table> <p>The figures in red are used for the calculation of SSD. However, a further reduction of 4kph is to be applied in line with TD 22/81 Paragraph 3.4, which states;</p> <p><b>3.4 <u>Speeds (improvement of alignment and junctions)</u></b></p> <p>Whereas for speed limits the 85 percentile dry weather spot speed of cars is required, for improvement of alignments and major/minor junctions or accesses, and for new major/minor junctions or accesses on existing roads, the normal design methods are based on the 85 percentile wet weather journey speed of vehicles. The precise point at which the measurements are taken and the timing is important. A point just before the scheme length and a time of free flow are suitable. Measurements must be taken at both ends of the scheme so that traffic approaching from both directions is covered. If different values are obtained the higher speed value should be used in the design process. To get from the dry weather spot speed of vehicles measured to the wet weather journey speed used in design one of the following correction factors should be used -</p> <p style="padding-left: 40px;">For AP Dual carriageways ... deduct 8kph</p> <p style="padding-left: 40px;">For AP Single carriageways ... deduct 4kph</p> <p>The speed survey locations are shown in the figure below.</p>	Mph (kph)	Northbound	Southbound	Site 1	32.7 (52.7)	<b>35.5 (57.2)</b>	Site 2	<b>30.5 (49.2)</b>	26.8 (43.2)
Mph (kph)	Northbound	Southbound								
Site 1	32.7 (52.7)	<b>35.5 (57.2)</b>								
Site 2	<b>30.5 (49.2)</b>	26.8 (43.2)								



JUSTIFICATION

**Safety:**

TD 42/95, Paragraph 7.8 states:

7.8 In difficult circumstances, the 'x' distance may be taken as a Relaxation from 9.0m to 4.5m for lightly trafficked simple junctions, and in exceptionally difficult circumstances, to 2.4m back from the nearer edge of the major road running carriageway. The 'x' distance, from which full 'y' distance visibility is provided, shall not be more than 9m, as this induces high minor road approach speeds into the junction, and leads to excessive land take.

The construction compound junctions are temporary and will be removed when construction of EWR is complete. Vehicles using these junctions will be under the management of the EWR contractor who will have greater control on driver behaviour than if it were a public access. An 'x' distance of 4.5m is considered for visibility from the compound access roads.

TD 42/95, Paragraph 7.6, Table 7/1 provides distances ('y').

c. The distance back along the minor road from which the full visibility is measured is known as the 'x' distance. It is measured back along the centreline of the minor road from the continuation of the line of the nearside edge of the running carriageway of the major road. The 'x' distance shall be desirably 9m (but see para 7.8). From this point an approaching driver shall be able to see clearly points to the left and right on the nearer edge of the major road running carriageway at a distance given in Table 7/1, measured from its intersection with the centreline

of the minor road. This is called the 'y' distance and is defined in Fig 7/1. Relaxations are not available for this distance.

7.7 If the line of vision lies partially within the major road carriageway, it shall be made tangential to the nearer edge of the major road running carriageway, as shown in Fig 7/2.

	<table border="1"> <thead> <tr> <th>Design Speed of Major Road (kph)</th> <th>'y' Distance (m)</th> </tr> </thead> <tbody> <tr> <td>50</td> <td>70</td> </tr> <tr> <td>60</td> <td>90</td> </tr> <tr> <td>70</td> <td>120</td> </tr> <tr> <td>85</td> <td>160</td> </tr> <tr> <td>100</td> <td>215</td> </tr> <tr> <td>120</td> <td>295</td> </tr> </tbody> </table>	Design Speed of Major Road (kph)	'y' Distance (m)	50	70	60	90	70	120	85	160	100	215	120	295
	Design Speed of Major Road (kph)	'y' Distance (m)													
50	70														
60	90														
70	120														
85	160														
100	215														
120	295														
<p><b>Table 7/1: 'y' Visibility Distances from the Minor Road (Relaxations not available - para 7.6c)</b></p> <p>The specified and achievable SSD in each direction based on their design speed are shown in the table below (specified SSD has been calculated with reaction times and decelerations rates in line with TD 9/93, Table 3);</p> <table border="1"> <thead> <tr> <th rowspan="2">Location</th> <th rowspan="2">Speed Survey / TD22 Design Speed (kph)</th> <th colspan="2">'y' distance</th> </tr> <tr> <th>Specified (m)</th> <th>Achieved (m)</th> </tr> </thead> <tbody> <tr> <td><b>A1 Compound RHS</b></td> <td>53</td> <td>74</td> <td>65 (TAN)</td> </tr> <tr> <td><b>A1 Compound LHS</b></td> <td>45</td> <td>57</td> <td>71</td> </tr> </tbody> </table> <p>Visibility has been maximised as far as reasonably practicable. The constraints are beyond the control of EWR Alliance and it is not possible to amend the constraints or move the access location, due to requirements for maintenance and construction of EWR.</p> <p>Visibility to the LHS can be achieved. The RHS visibility is below the desirable minimum for the design speed. The reduced 'y' distance is due to the centre line of the road whereby vehicles travelling in the northbound direction may block visibility of oncoming southbound vehicles, hence limiting RHS visibility. In practice vehicle movements will be controlled and co-ordinated by the EWR contractor site team which will reduce the risk. Also, vehicles travelling in the northbound direction will not permanently block the vision of southbound traffic; therefore, when the northbound lane is free from traffic full visibility can be achieved.</p>	Location	Speed Survey / TD22 Design Speed (kph)	'y' distance		Specified (m)	Achieved (m)	<b>A1 Compound RHS</b>	53	74	65 (TAN)	<b>A1 Compound LHS</b>	45	57	71	
Location			Speed Survey / TD22 Design Speed (kph)	'y' distance											
	Specified (m)	Achieved (m)													
<b>A1 Compound RHS</b>	53	74	65 (TAN)												
<b>A1 Compound LHS</b>	45	57	71												
<b>Congestion/Delay:</b>	n/a														
<b>Environment/Sustainability:</b>	It is not proposed to provide the full 'y' distance, as this would involve road geometry improvements that would not be economically viable for a temporary access.														
<b>Accessibility:</b>	n/a														
<b>Maintenance:</b>	Any vegetation trimming required to provide the 'y' distances, will be maintained during the course of the works, with this carried out at the appropriate time of year.														
<b>Economic (whole life cost):</b>	n/a														

MITIGATION

<b>Risk Assessment Classification:</b>	n/a
<b>Other Options Considered:</b>	n/a
<b>Mitigation:</b>	As noted in OCC's initial review High Friction Surfacing (HFS) is being installed as part of the design and 'Construction traffic caution' signage included. Also as requested by OCC, EWR Alliance will commit to apply for a TRO to restrict speeds to 30or40mph to allow consultees to decide whether this might provide appropriate and enhanced mitigation.

**CONCLUDING COMMENTS**

The design speed calculated at this location was 45/53kph which was lower than the posted speed of 50mph/80kph. Observed 85<sup>th</sup> % survey speeds varied between 27mph and 36mph.

The sub-standard 'y' distance for A1 Compound in the RHS direction is due to the existing road geometry. It is considered that full visibility can be achieved across the highway centre line and that controlled vehicle movements from the site compound will reduce the risk at the junction. Also, it would not be economical to make highway alignment improvements for a temporary construction access.

As noted in OCC's initial review High Friction Surfacing (HFS) is being installed as part of the design as an additional mitigation.

Also as requested by OCC, EWR Alliance will commit to apply for a TRO to restrict speeds to 30or40mph to allow consultees to decide whether this might provide appropriate and enhanced mitigation. However, to date on the project EWR Alliance has been generally discouraged from applying for TROs and approval of this will not preclude works from commencing on site.

**ALLIANCE ASSURANCE**

	<b>Name</b>	<b>Signed</b>	<b>Date</b>
<b>Originator</b>	<b>Andrew Kirk</b>	<i>Andrew Kirk</i>	29/05/2020
<b>Reviewer</b>	<b>Lisa Taylor</b>	<i>Lisa Taylor</i>	29/05/2020
<b>Authorised</b>	<b>Gareth Johnston</b>	<i>Gareth Johnston</i>	29/05/2020

**LOCAL HIGHWAY AUTHORITY RESPONSE**

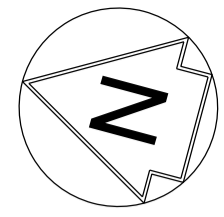
For completion by Local Highway Authority Representative

<b>Category</b>		<b>Tick</b>
<b>1</b>	<b>Approved</b>	
<b>2</b>	<b>Approved with comments*</b>	
<b>3</b>	<b>Rejected with comments*</b>	

<b>Name</b>	<b>Position</b>	<b>Signed</b>	<b>Date</b>

\*comments are to be provided on the form provided. Responses will be provided back to the LHA on these forms and close out monitored. Link to template: [133735\\_RW-EWR-XX-XX-CM-CH-000002](#)

Note: Where comments impact upon a design decision or have multidiscipline impacts, they will be entered into BIMCollab the projects online issues management system.



	PIPE-1	
	UPSTREAM	DOWNSTREAM
EASTINGS:	177000.349	176996.485
NORTHINGS:	141712.035	141725.131
EXISTING DITCH LEVELS:	70.250	69.940
PIPE INVERT:	70.250	69.940
HEADWALL:	TYPE 1	TYPE 1
PIPE TYPE:	FILTER PIPE	
MINIMUM COVER:	840mm	

NOTES:

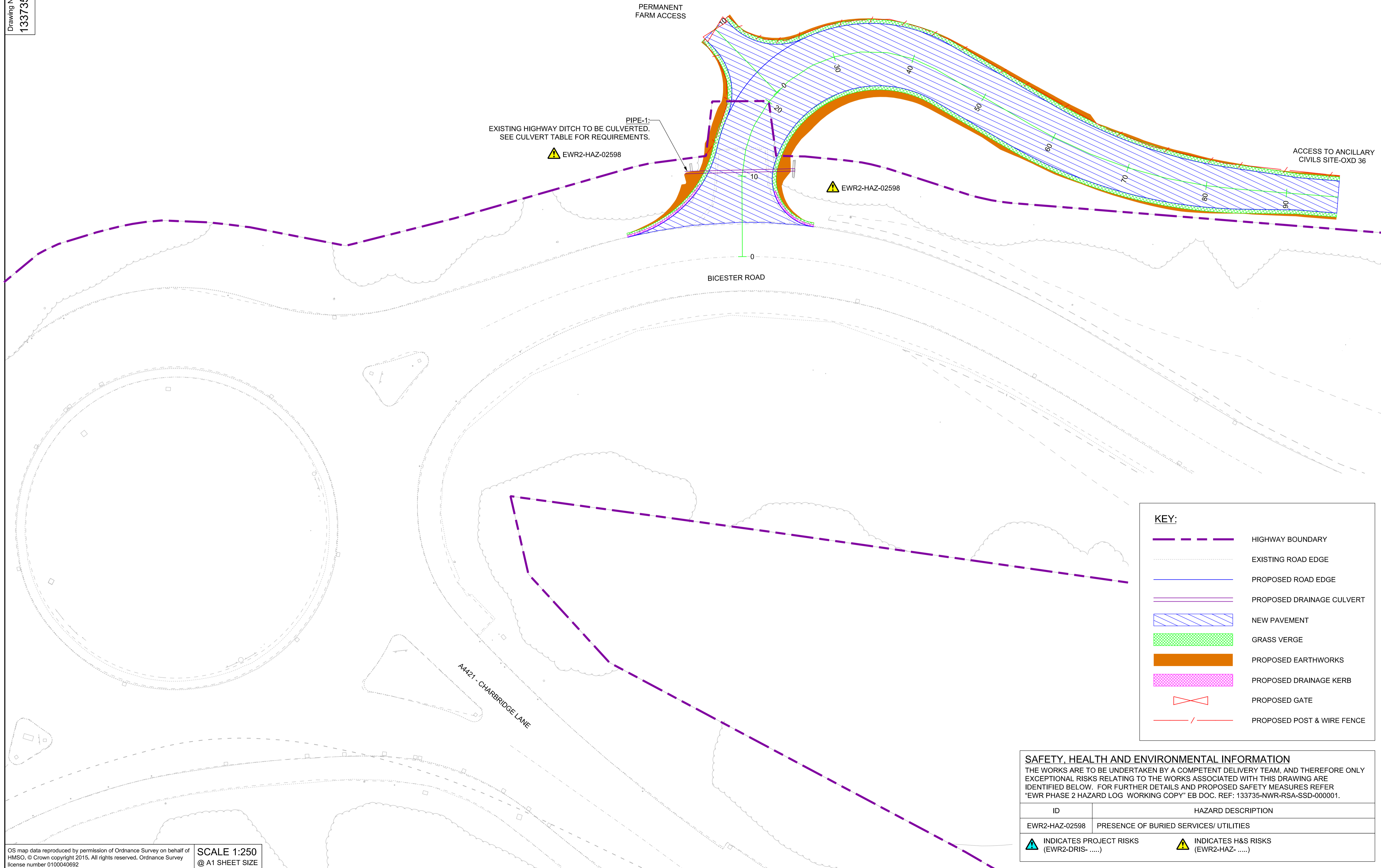
- PIPE PERFORATIONS ARE TO BE LAID FACING UPWARDS.
- REFER TO STANDARD DETAIL DRAWING 133735\_RW-EWR-XX-XX-DR-CH-000131 FOR PIPE SURROUND AND BEDDING TYPES.
- THE EXISTING DITCH INVERT LEVELS ARE TAKEN FROM AVAILABLE TOPOGRAPHIC SURVEY INFORMATION, WHERE AVAILABLE. THE DELIVERY TEAM WILL NEED TO CONFIRM DITCH LEVELS BEFORE INSTALLING CULVERT. ANY DISCREPANCIES IN LEVEL WILL NEED TO BE DISCUSSED WITH THE DESIGNER.

**CULVERT REQUIREMENTS**

**NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**

**NOTES:**

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- ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.
- WHEREVER REQUIRED, ROAD MARKINGS ARE TO BE LAID IN ACCORDANCE WITH THE TRAFFIC SIGN REGULATIONS AND GENERAL DIRECTIONS 2016 & TRAFFIC SIGNS MANUAL CHAPTER 5 (2003).
- WHERE A FENCE IS PROPOSED IT SHALL TIE-IN THE EXISTING HEDGEROW OR BOUNDARY TREATMENT TO PROVIDE A SECURE BOUNDARY.



Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/01/20	FOR INFORMATION				S2



Project  
**East West Rail (Western Section) Phase 2**

Drawing Title  
**OTHER ACCESS A1\_CA\_6 GENERAL ARRANGEMENT**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/01/20
Drawn	Jameela Nawaz	Signed	J. Nawaz	Date	02/08/19
Checked	Garth Johnston	Signed	G. Johnston	Date	10/01/20
Approved	Stephen Abe	Signed	S. Abe	Date	10/01/20

Scale(s)  
 1:250  
 ELR - Project Chainage (Miles/Yards)  
 OXD -  
 Design Package Risk Classification  
**Normal**

Alternative Reference  
 Drawing Number  
 133735\_2A-EWR-OXD-A1\_CA\_6-DR-CH-010001

Sheet 1 of 1  
 Revision B01

**KEY:**

	HIGHWAY BOUNDARY
	EXISTING ROAD EDGE
	PROPOSED ROAD EDGE
	PROPOSED DRAINAGE CULVERT
	NEW PAVEMENT
	GRASS VERGE
	PROPOSED EARTHWORKS
	PROPOSED DRAINAGE KERB
	PROPOSED GATE
	PROPOSED POST & WIRE FENCE

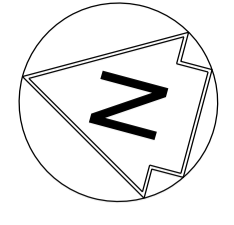
**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

THE WORKS ARE TO BE UNDERTAKEN BY A COMPETENT DELIVERY TEAM, AND THEREFORE ONLY EXCEPTIONAL RISKS RELATING TO THE WORKS ASSOCIATED WITH THIS DRAWING ARE IDENTIFIED BELOW. FOR FURTHER DETAILS AND PROPOSED SAFETY MEASURES REFER "EWR PHASE 2 HAZARD LOG WORKING COPY" EB DOC. REF: 133735-NWR-RSA-SSD-000001.

ID	HAZARD DESCRIPTION
EWR2-HAZ-02598	PRESENCE OF BURIED SERVICES/ UTILITIES

INDICATES PROJECT RISKS (EWR2-DRIS- .....)
 INDICATES H&S RISKS (EWR2-HAZ- .....)



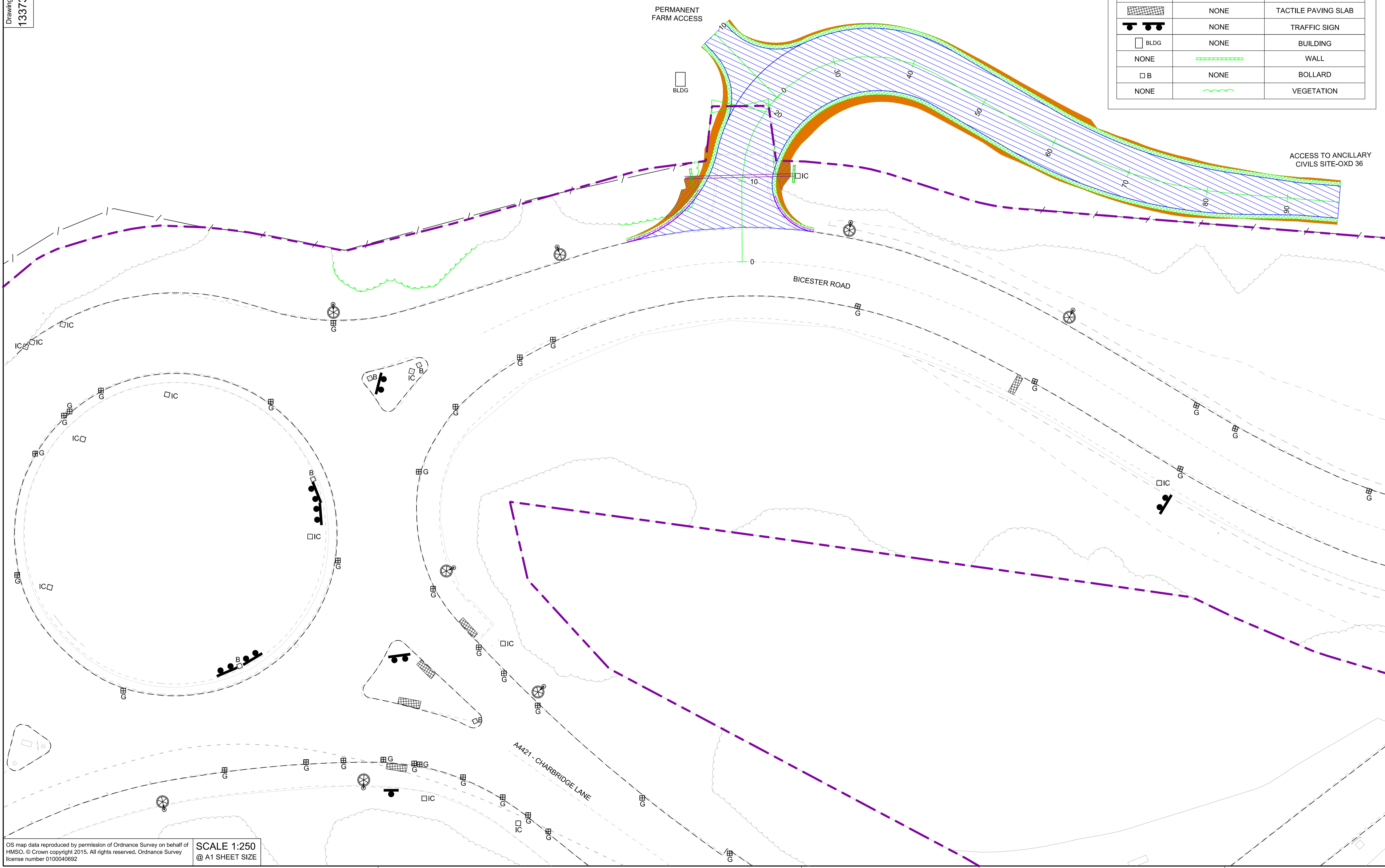


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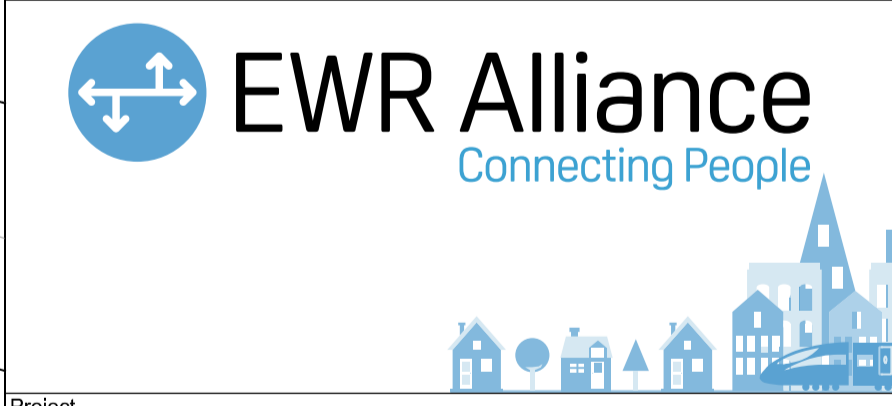
	HIGHWAY BOUNDARY
	PROPOSED ROAD EDGE
	PROPOSED DRAINAGE CULVERT
	NEW PAVEMENT
	GRASS VERGE
	PROPOSED EARTHWORKS
	PROPOSED DRAINAGE KERB
	EXTENTS OF DE-VEGETATION

RETAINED	REMOVE/ RELOCATE	DESCRIPTION
		FENCE
NONE		GATE
		KERB
	NONE	LIGHTING POLE
	NONE	GULLY
	NONE	INSPECTION COVER
	NONE	TACTILE PAVING SLAB
	NONE	TRAFFIC SIGN
	NONE	BUILDING
NONE		WALL
	NONE	BOLLARD
NONE		VEGETATION

- NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**
- NOTES:**
- THIS DRAWING IS NOT TO BE SCALED.
  - ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.
  - PRIOR TO THE COMMENCEMENT OF WORKS, A SUITABLY QUALIFIED ECOLOGIST SHALL INSPECT THE SITE FOR THE PRESENCE OF PROTECTED SPECIES AND HABITAT. THE ECOLOGIST SHALL THEN ADVISE EWR ALLIANCE ON THE REQUIRED PRECAUTIONARY METHODS AND AREAS OF EXCLUSION.
  - WHERE SITE CLEARANCE WORKS HAVE THE POTENTIAL TO IMPACT TREES OR HEDGES WHICH ARE TO BE RETAINED, AN ARBORICULTURALIST SHALL BE PRESENT TO ADVISE ON ROOT PROTECTION ZONE EXTENTS, ROOT PRUNING AND CROWN RAISING. WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH BS3998:2010.
  - SITE CLEARANCE, WHERE THERE IS PROXIMITY TO HABITAT OF PROTECTED SPECIES, SHALL BE CARRIED OUT UNDER THE SUPERVISION OF A SUITABLY QUALIFIED ECOLOGIST.
  - THE EXTENTS OF ALL SITE CLEARANCE WORKS SHALL BE RECORDED IN THE AS-BUILT SITE CLEARANCE DRAWINGS AND SHALL ALSO BE RECORDED, WITH PHOTOGRAPHS OF FEATURES PRIOR TO REMOVAL, IN THE SITE CLEARANCE REGISTER. THE SITE CLEARANCE REGISTER SHALL BE MAINTAINED BY EWR ALLIANCE AND WILL INFORM REINSTATEMENT DETERMINATION.
  - IN LOCATIONS WHERE EXISTING TREES OVERHANG THE PASSING PLACE CROWN LIFTING, TO GIVE 5m CLEARANCE ABOVE GROUND LEVEL, SHALL BE UNDERTAKEN TO THE BACK OF THE PROPOSED VERGE. THIS SHALL BE UNDERTAKEN UNDER THE SUPERVISION OF AN ARBORICULTURIST.
  - THE VEGETATION CLEARANCE SHOWN HERE ON THE DRAWING IS INDICATIVE ONLY. THE SITE TEAM NEEDS TO ASCERTAIN THE REQUIRED CLEARANCE BASED ON THE VISIBILITY SPLAY, INTERVISIBILITY ZONE AND OR WORKS REQUIRED FOR THIS SITE.
  - FOR CLARITY ONLY THE TRUNKS OF EXISTING TREES ARE SHOWN. FOR CANOPY EXTENTS THE TREE SURVEY MODEL AND MASTER SCHEDULE ARE TO BE REFERRED TO.



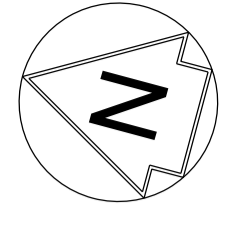
Rev	Date	Description of Revisions	N.T.	G.J.	S.A.
FOR INFORMATION					
Status					Appr
SHARED - for Information					S2



Project  
**East West Rail  
 (Western Section)  
 Phase 2**

Drawing Title  
**OTHER ACCESS A1\_CA\_6  
 SITE CLEARANCE**

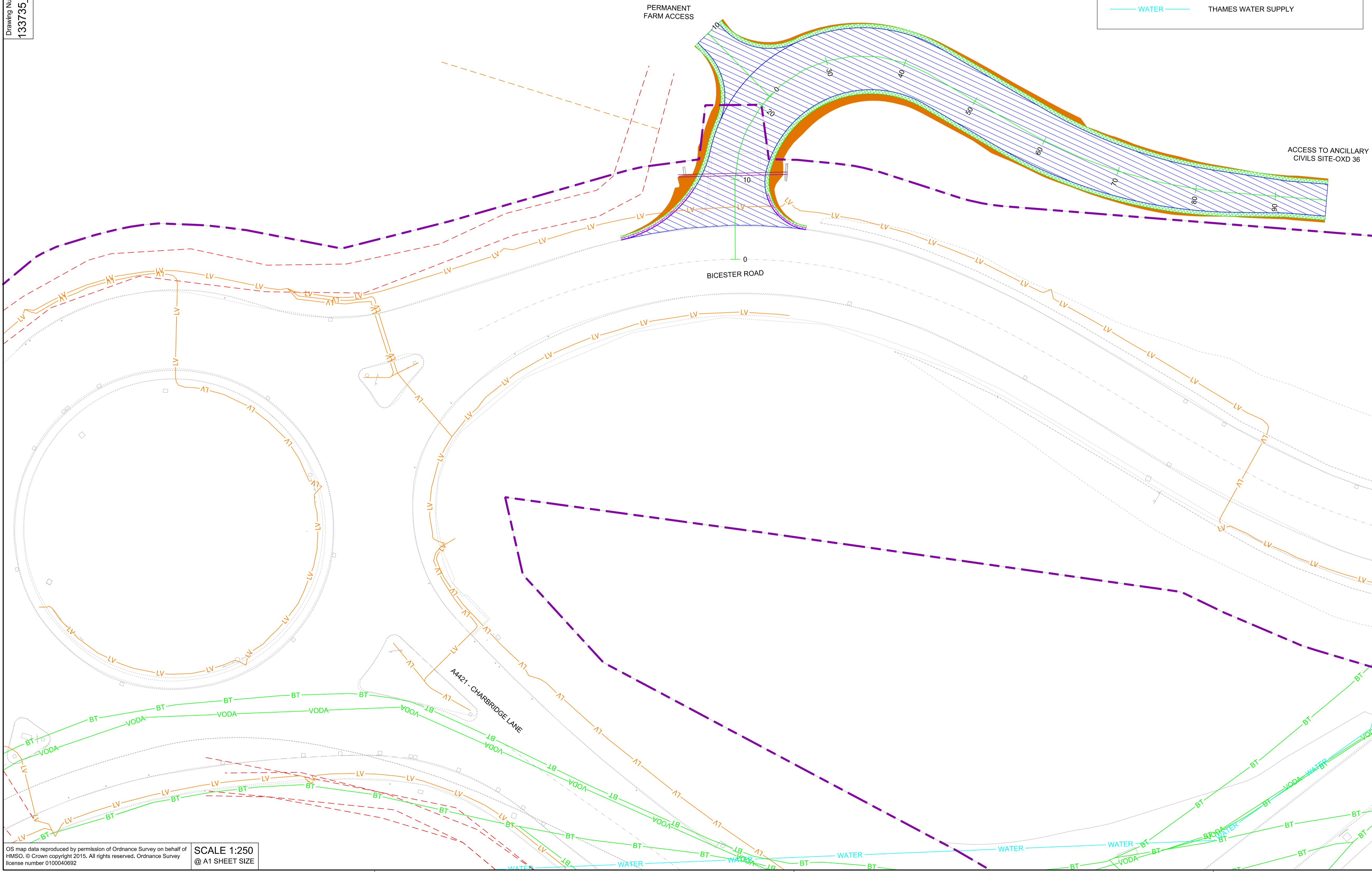
Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/01/20
Drawn	Siama Begum	Signed	S. Begum	Date	16/07/19
Checked	Gareth Johnston	Signed	G. Johnston	Date	10/01/20
Approved	Stephen Abe	Signed	S. Abe	Date	10/01/20
Scale(s)	1:250 ELR - Project Chainage (Miles Yards)				
Design Package Risk Classification	Normal				Sheet
Alternative Reference					Revision
Drawing Number	133735_2A-EWR-OXD-A1_CA_6-DR-CH-010002				B01



**KEY:**

	HIGHWAY BOUNDARY
	PROPOSED ROAD EDGE
	PROPOSED DRAINAGE CULVERT
	NEW PAVEMENT
	GRASS VERGE
	PROPOSED EARTHWORKS
	PROPOSED DRAINAGE KERB
	BT TELECOM UNDERGROUND CABLES
	VODAFONE TELECOM CABLES
	ELECTRIC LOW VOLTAGE UNDERGROUND CABLES
	PROPOSED ELECTRIC HIGH VOLTAGE UNDERGROUND CABLES
	PROPOSED ELECTRIC LOW VOLTAGE UNDERGROUND CABLES
	THAMES WATER SUPPLY

- NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**
- NOTES:**
1. THIS DRAWING IS NOT TO BE SCALED.
  2. ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
  3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.
  4. THE EXACT LOCATION AND EXTENT OF BURIED SERVICES SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF THE WORKS. AGREEMENT WITH PRIVATE LAND OWNERS SHALL BE OBTAINED PRIOR TO WORKS WHERE ACCESS TO PRIVATE LAND IS REQUIRED.
  5. THIS DRAWING SHOWS THE POSITION OF UTILITY COMPANIES APPARATUS KNOWN TO OPERATE IN THE AREA IMMEDIATELY ADJACENT TO AND WITHIN THE LAND TAKE BOUNDARY FOR EAST WEST RAIL.
  6. THE POSITIONS INDICATED FOR THE APPARATUS ARE BASED ON RECORDS PROVIDED BY NETWORK RAIL. THE ACCURACY OF THE DRAWING IS THEREFORE LIMITED BY THE ACCURACY OF THE RECORDS MAINTAINED BY THE UTILITY COMPANIES. THE METHODS AVAILABLE TO PROCESS / REPRODUCE THIS INFORMATION IN THE DRAWINGS AND THE AGE OF THE INFORMATION. THERE IS THE POSSIBILITY THAT APPARATUS HAS BEEN ADDED OR REMOVED SINCE THE RECORDS WERE PROVIDED.
  7. ALL SEARCHES MUST BE VERIFIED AND ESTABLISHED ON SITE BEFORE WORK COMMENCES. IT IS THE RESPONSIBILITY OF THE EWR ALLIANCE TO IDENTIFY AND LOCATE UTILITY PLANT PRIOR TO WORK GOING AHEAD.



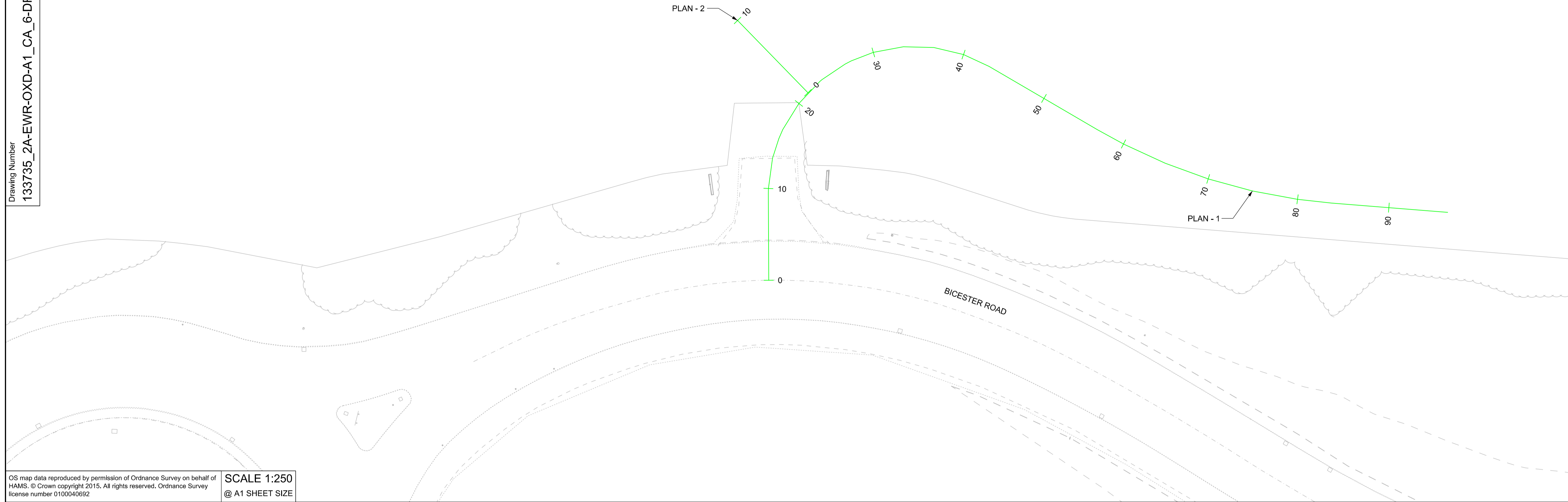
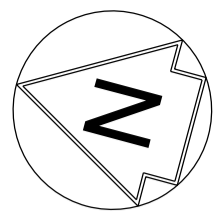
Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/01/20	FOR INFORMATION		N.T.	G.J.	S.A.
Status						S2



Project  
**East West Rail  
 (Western Section)  
 Phase 2**

Drawing Title  
**OTHER ACCESS A1\_CA\_6  
 EXISTING UTILITIES**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/01/20	
Drawn	Nigel R Jones	Signed	N. Jones	Date	17/07/19	
Checked	Gareth Johnston	Signed	G. Johnston	Date	10/01/20	
Approved	Stephen Abe	Signed	S. Abe	Date	10/01/20	
Scale(s)	1:250 (ELR - Project Chainage (Miles Yards))					
Design Package Risk Classification	Normal				Sheet	1 of 1
Alternative Reference					Revision	B01
Drawing Number	133735_2A-EWR-OXD-A1_CA_6-DR-CH-010003					



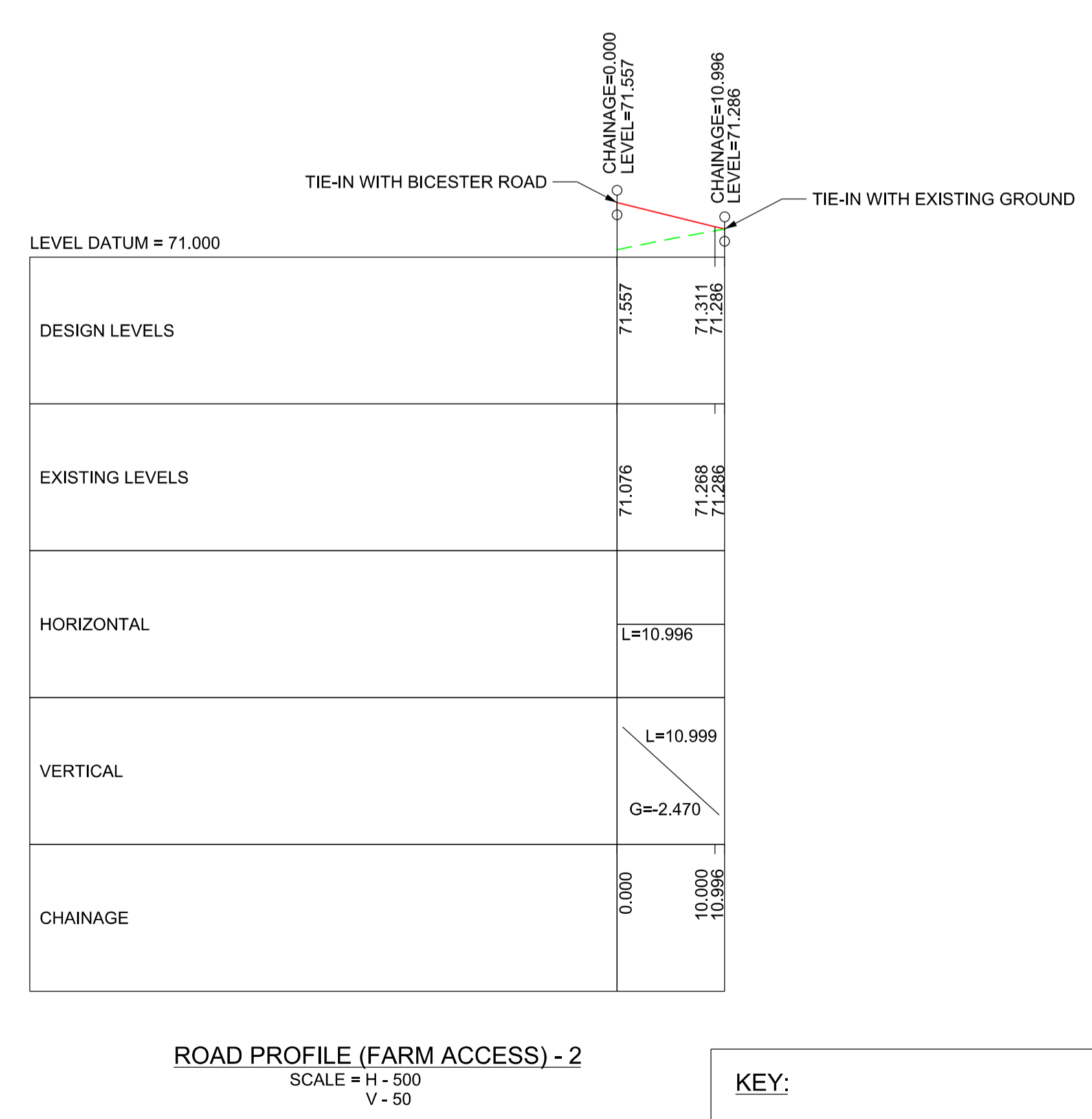
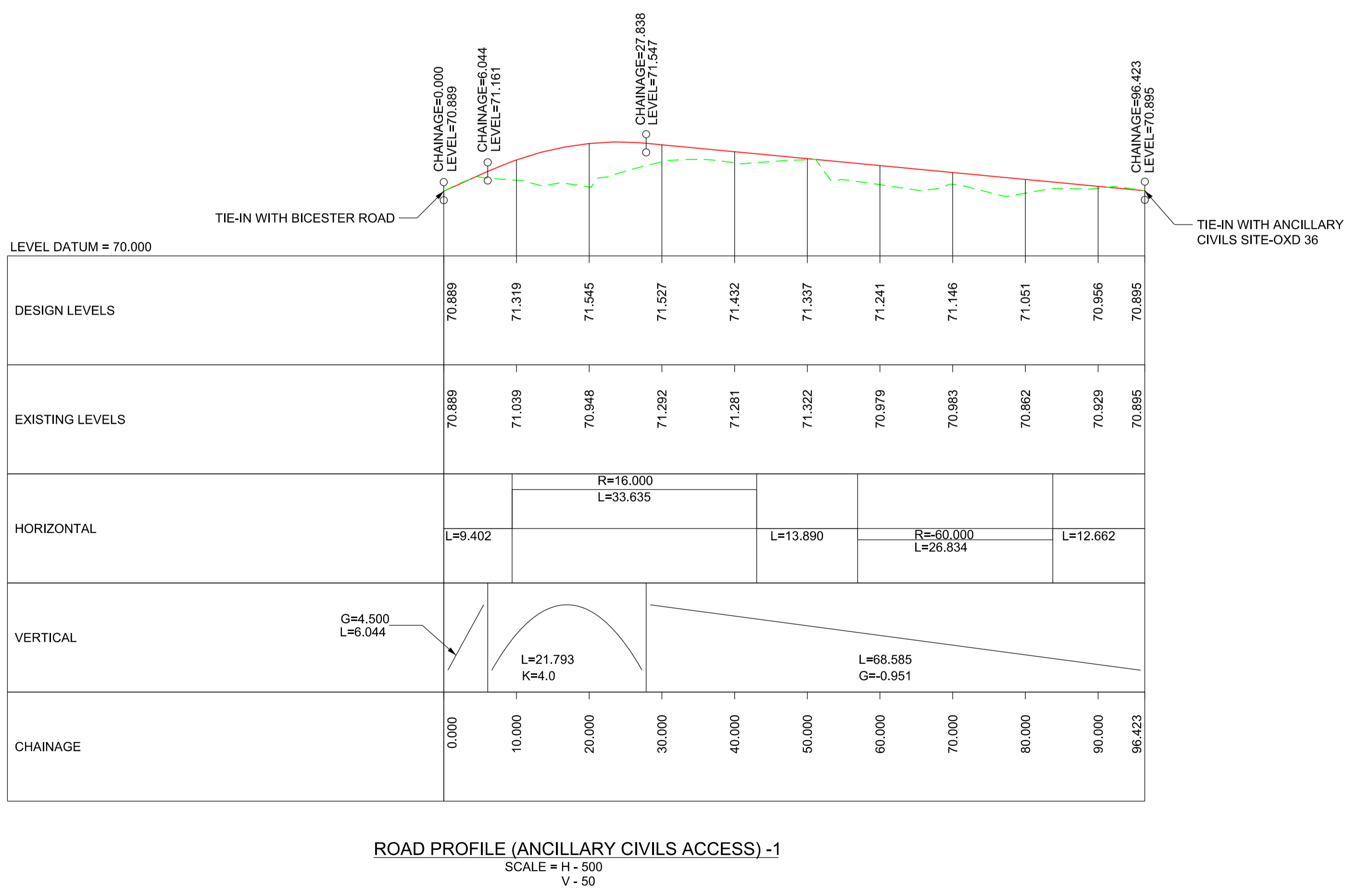
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license number 0100040692

SCALE 1:250  
@ A1 SHEET SIZE

**NETWORK RAIL (EAST WEST  
RAIL WESTERN SECTION PHASE 2)**

**NOTES:**

1. THIS DRAWING IS NOT TO BE SCALED.
2. ALL DIMENSIONS AND LEVELS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.



**ROAD PROFILE (ANCILLARY CIVILS ACCESS) -1**  
SCALE = H - 500  
V - 50

**ROAD PROFILE (FARM ACCESS) - 2**  
SCALE = H - 500  
V - 50

**KEY:**

	NEW ROAD EDGE LEVEL
	EXISTING SURFACE LEVEL

SCALE : AS SHOWN  
@ A1 SHEET SIZE



Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/01/20	FOR INFORMATION		N.T.	G.J.	S.A.
Status						S2

SHARED - for Information

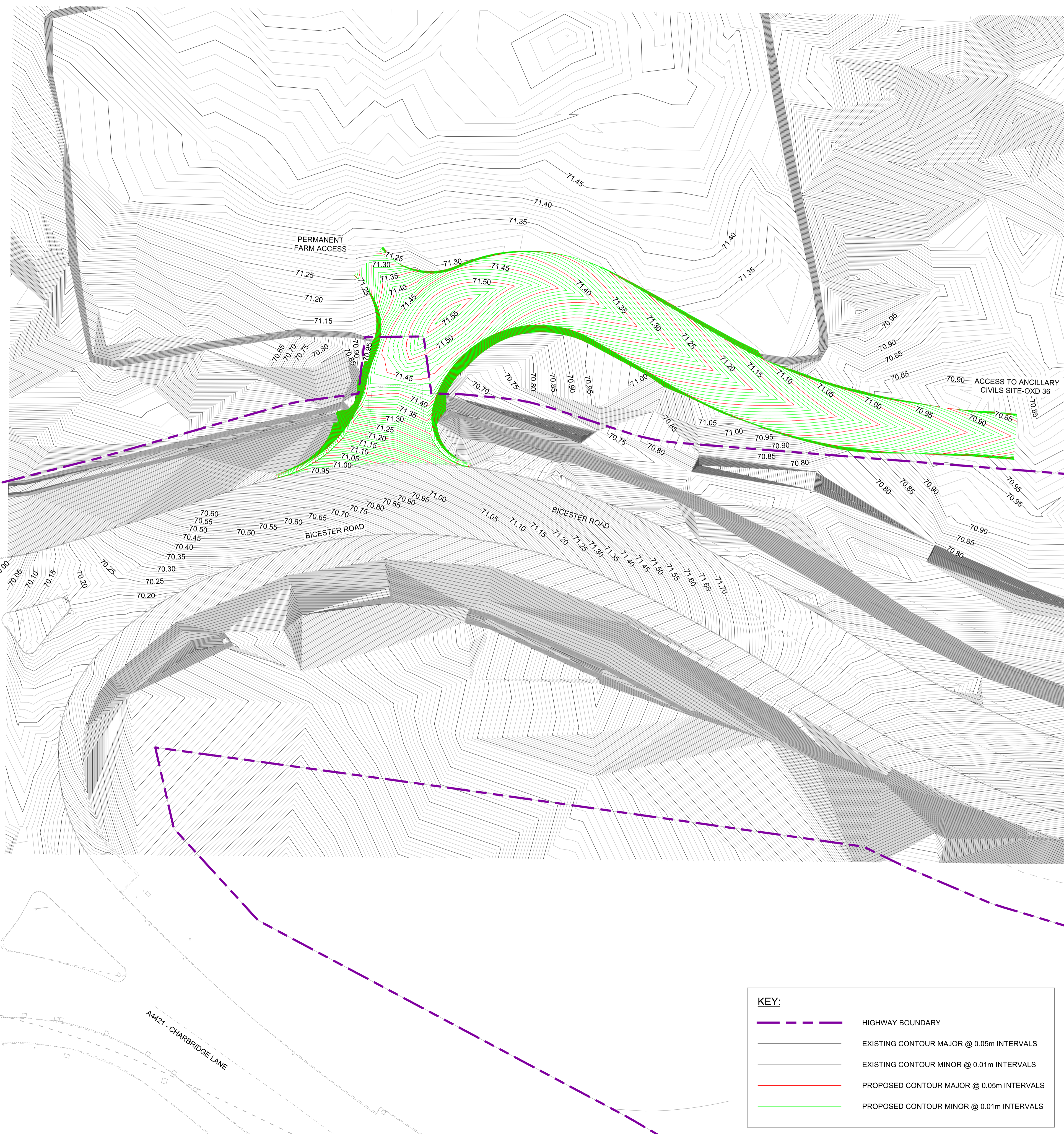
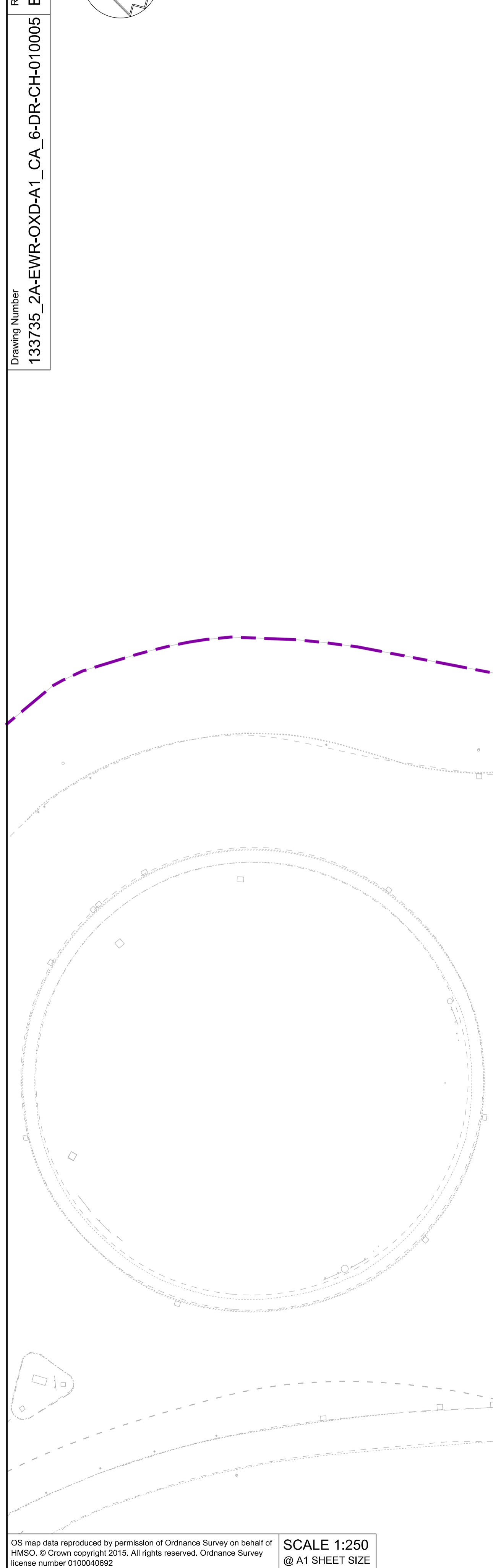
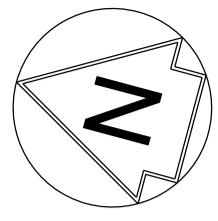


Project  
**East West Rail  
(Western Section)  
Phase 2**

Drawing Title  
**OTHER ACCESS A1\_CA\_6  
ROAD PLAN and PROFILE**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/01/20
Drawn	Jameela Nawaz	Signed	J. Nawaz	Date	14/08/19
Checked	Gareth Johnston	Signed	G. Johnston	Date	10/01/20
Approved	Stephen Abe	Signed	S. Abe	Date	10/01/20

Scale(s)	ELR - Project Chainage (Miles Yards)	AS SHOWN	OXD -
Design Package Risk Classification	Normal	Sheet	1 of 1
Alternative Reference		Revision	B01
Drawing Number	133735_2A-EWR-OXD-A1_CA_6-DR-CH-010004		



- NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**
- NOTES:**
1. THIS DRAWING IS NOT TO BE SCALED.
  2. ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
  3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.
  4. ALL WORKS TO BE IN ACCORDANCE WITH THE MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAYS WORKS VOL 1 (SPECIFICATION FOR HIGHWAY WORKS) AND STANDARD CONSTRUCTION DETAILS.
  5. THE DELIVERY TEAM IS TO VERIFY DIMENSION ON SITE AND ADVISE OF ANY INFORMATION DISCREPANCIES. TIE-IN POINTS SHOULD BE VERIFIED ON SITE WITH THE ENGINEER PRIOR TO CONSTRUCTION.



Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/01/20	FOR INFORMATION				S2



Project  
**East West Rail (Western Section) Phase 2**

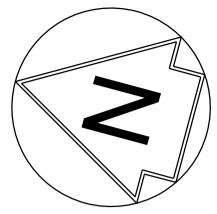
Drawing Title  
**OTHER ACCESS A1\_CA\_6 EXISTING AND PROPOSED CONTOURS**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/01/20
Drawn	Jameela Nawaz	Signed	J. Nawaz	Date	07/08/19
Checked	Gareth Johnston	Signed	G. Johnston	Date	10/01/20
Approved	Stephen Abe	Signed	S. Abe	Date	10/01/20
Scale(s)	1:250				
Design Package Risk Classification	ELR - Project Chainage (Miles Yards)				Sheet
Alternative Reference	OXD -				1 of 1
Drawing Number	133735_2A-EWR-OXD-A1_CA_6-DR-CH-010005				Revision
					B01

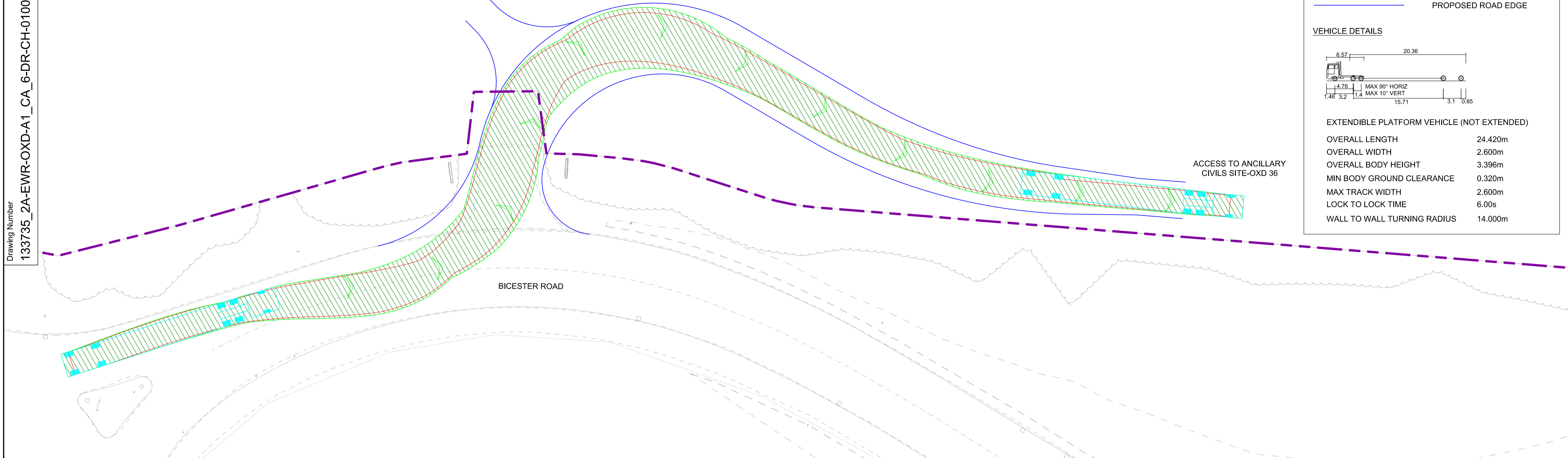
**KEY:**

	HIGHWAY BOUNDARY
	EXISTING CONTOUR MAJOR @ 0.05m INTERVALS
	EXISTING CONTOUR MINOR @ 0.01m INTERVALS
	PROPOSED CONTOUR MAJOR @ 0.05m INTERVALS
	PROPOSED CONTOUR MINOR @ 0.01m INTERVALS

Revision & Version  
B01.01  
Drawing Number  
133735\_2A-EWR-OXD-A1\_CA\_6-DR-CH-010006



PERMANENT FARM ACCESS



**KEY:**

- VEHICLE TRACKING
- HIGHWAY BOUNDARY
- PROPOSED ROAD EDGE

**VEHICLE DETAILS**

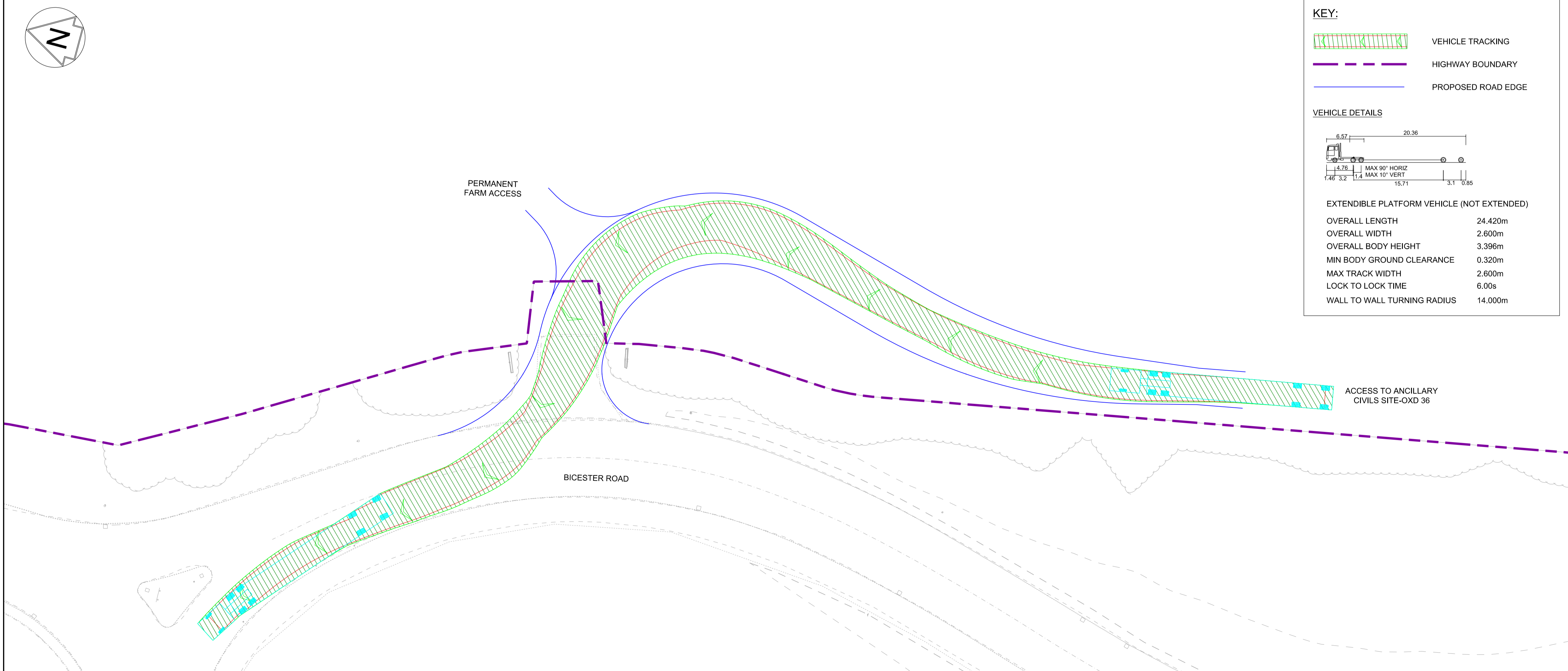
**EXTENDIBLE PLATFORM VEHICLE (NOT EXTENDED)**

OVERALL LENGTH	24.420m
OVERALL WIDTH	2.600m
OVERALL BODY HEIGHT	3.396m
MIN BODY GROUND CLEARANCE	0.320m
MAX TRACK WIDTH	2.600m
LOCK TO LOCK TIME	6.00s
WALL TO WALL TURNING RADIUS	14.000m

- NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**
- NOTES:**
1. THIS DRAWING IS NOT TO BE SCALED.
  2. ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
  3. VEHICLE TRACKING IS UNDERTAKEN WITH COMPUTER MODELLING SOFTWARE AND IS BASED ON IDEAL SITUATIONS WHERE REAL WORLD OBSTRUCTIONS ON THE ROAD NETWORK SUCH AS PARKING OR LOADING ACTIVITY WOULD NOT HAVE BEEN FORESEEN.
  4. THE MODELLING IS BASED IN 2D PLAN WHERE SWEEPED PATHS ARE INFLUENCED BY ANTICIPATED MOVEMENTS AND THEREFORE LEAD TO IDEAL APPROACH ANGLES, WHICH MIGHT NOT BE OBVIOUS IN REALITY.
  5. APPROACH SPEEDS, APPROACH ANGLES, ROAD SURFACE, WEATHER CONDITIONS AND TYRE WEAR ARE ALL FACTORS THAT WILL INFLUENCE VEHICLE PATHS.

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SCALE 1:250  
@ A1 SHEET SIZE



**KEY:**

- VEHICLE TRACKING
- HIGHWAY BOUNDARY
- PROPOSED ROAD EDGE

**VEHICLE DETAILS**

**EXTENDIBLE PLATFORM VEHICLE (NOT EXTENDED)**

OVERALL LENGTH	24.420m
OVERALL WIDTH	2.600m
OVERALL BODY HEIGHT	3.396m
MIN BODY GROUND CLEARANCE	0.320m
MAX TRACK WIDTH	2.600m
LOCK TO LOCK TIME	6.00s
WALL TO WALL TURNING RADIUS	14.000m

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SCALE 1:250  
@ A1 SHEET SIZE



Rev	Date	Description of Revisions	Desd	Chkd	Appr
B01	13/01/20	FOR INFORMATION		N.T.	G.J.
Status	SHARED - for Information				S2



Project  
**East West Rail (Western Section) Phase 2**

Drawing Title  
**OTHER ACCESS A1\_CA\_6 VEHICLE SWEEPED PATH ANALYSIS**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/01/20
Drawn	Siama Begum	Signed	S. Begum	Date	22/08/19
Checked	Garth Johnston	Signed	G. Johnston	Date	10/01/20
Approved	Stephen Abe	Signed	S. Abe	Date	10/01/20

Scale(s)  
1:250

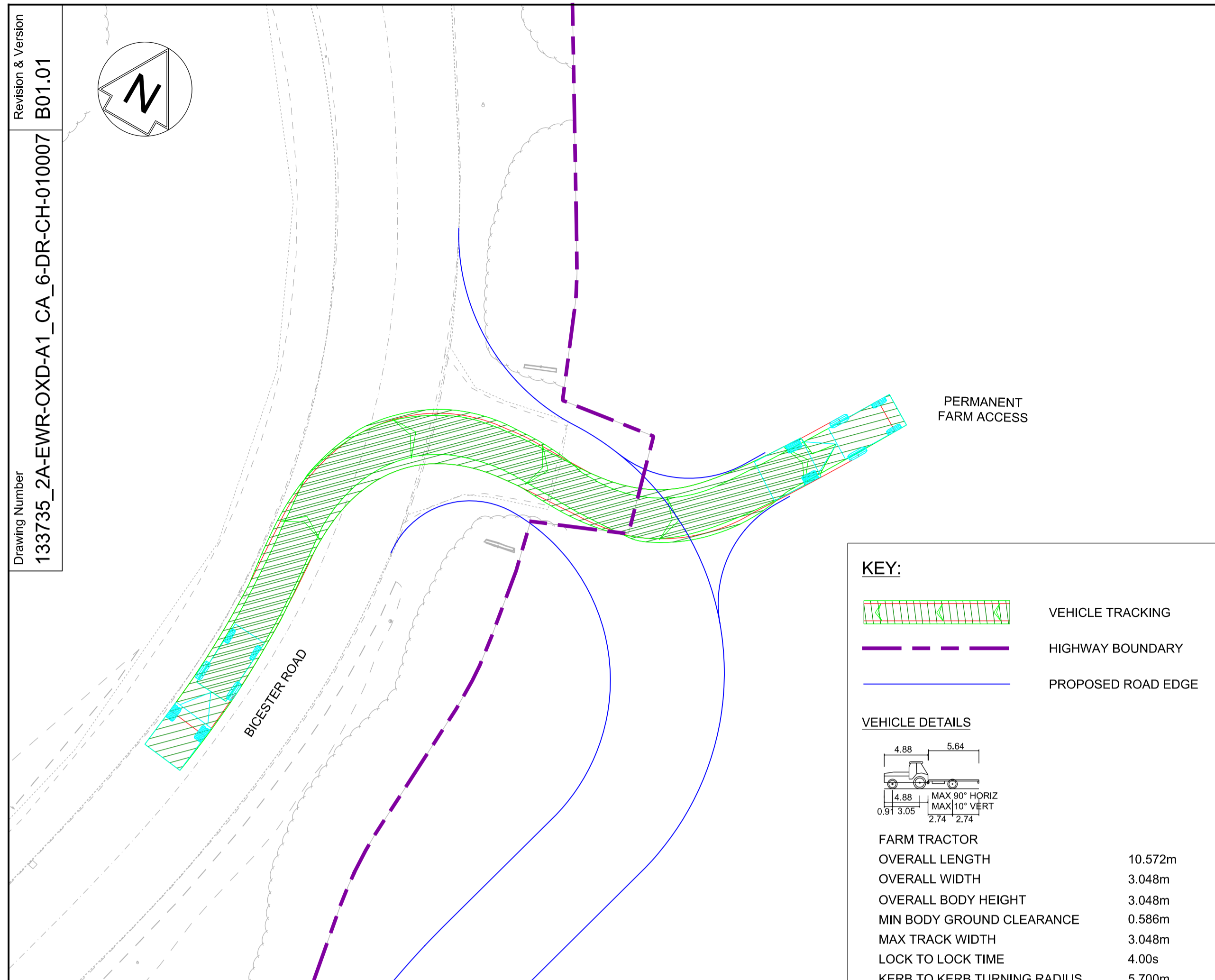
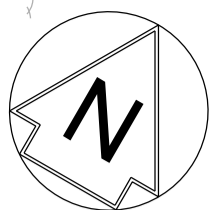
ELR - Project Chainage (Miles/Yards)  
OXD -

Design Package Risk Classification  
**Normal**

Sheet  
1 of 2

Alternative Reference  
Revision  
B01

Drawing Number  
133735\_2A-EWR-OXD-A1\_CA\_6-DR-CH-010006



**KEY:**

- VEHICLE TRACKING
- HIGHWAY BOUNDARY
- PROPOSED ROAD EDGE

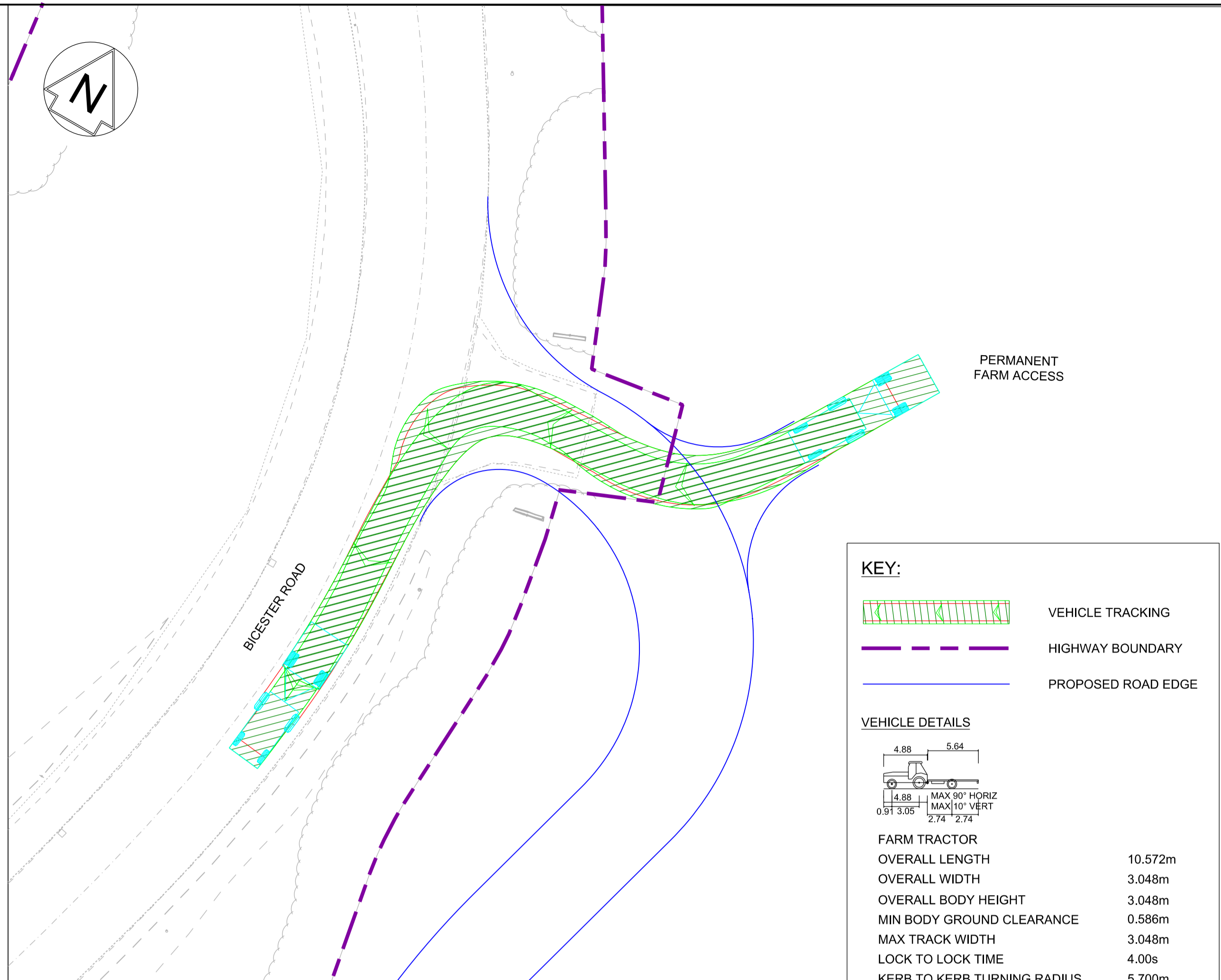
**VEHICLE DETAILS**

FARM TRACTOR  
 OVERALL LENGTH 10.572m  
 OVERALL WIDTH 3.048m  
 OVERALL BODY HEIGHT 3.048m  
 MIN BODY GROUND CLEARANCE 0.586m  
 MAX TRACK WIDTH 3.048m  
 LOCK TO LOCK TIME 4.00s  
 KERB TO KERB TURNING RADIUS 5.700m

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SCALE 1:250  
 @ A1 SHEET SIZE

ACCESS TO ANCILLARY CIVILS SITE-OXD 36



**KEY:**

- VEHICLE TRACKING
- HIGHWAY BOUNDARY
- PROPOSED ROAD EDGE

**VEHICLE DETAILS**

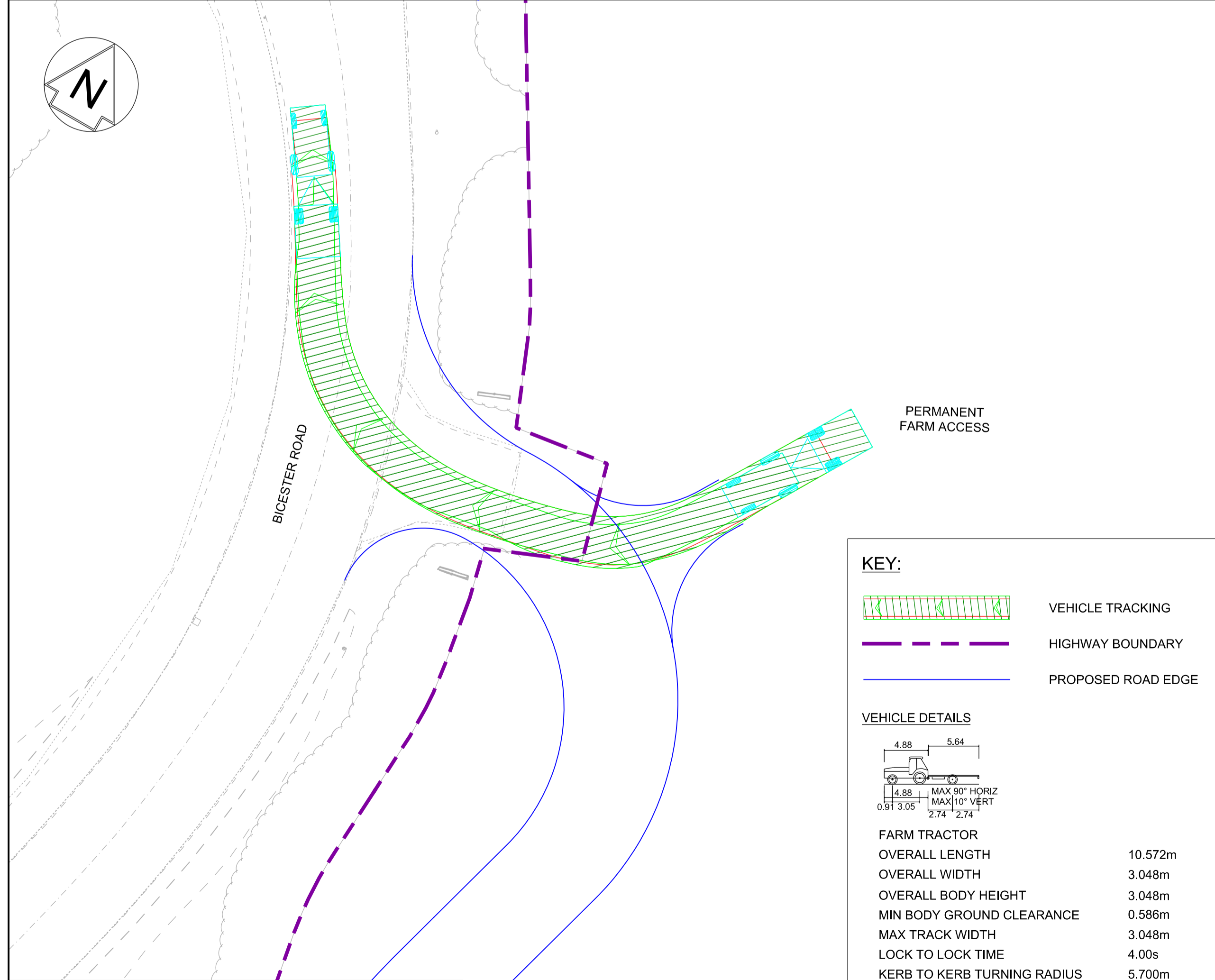
FARM TRACTOR  
 OVERALL LENGTH 10.572m  
 OVERALL WIDTH 3.048m  
 OVERALL BODY HEIGHT 3.048m  
 MIN BODY GROUND CLEARANCE 0.586m  
 MAX TRACK WIDTH 3.048m  
 LOCK TO LOCK TIME 4.00s  
 KERB TO KERB TURNING RADIUS 5.700m

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SCALE 1:250  
 @ A1 SHEET SIZE

ACCESS TO ANCILLARY CIVILS SITE-OXD 36

- NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**
- NOTES:**
- THIS DRAWING IS NOT TO BE SCALED.
  - ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
  - VEHICLE TRACKING IS UNDERTAKEN WITH COMPUTER MODELLING SOFTWARE AND IS BASED ON IDEAL SITUATIONS WHERE REAL WORLD OBSTRUCTIONS ON THE ROAD NETWORK SUCH AS PARKING OR LOADING ACTIVITY WOULD NOT HAVE BEEN FORESEEN.
  - THE MODELLING IS BASED IN 2D PLAN WHERE SWEEPED PATHS ARE INFLUENCED BY ANTICIPATED MOVEMENTS AND THEREFORE LEAD TO IDEAL APPROACH ANGLES, WHICH MIGHT NOT BE OBVIOUS IN REALITY.
  - APPROACH SPEEDS, APPROACH ANGLES, ROAD SURFACE, WEATHER CONDITIONS AND TYRE WEAR ARE ALL FACTORS THAT WILL INFLUENCE VEHICLE PATHS.



**KEY:**

- VEHICLE TRACKING
- HIGHWAY BOUNDARY
- PROPOSED ROAD EDGE

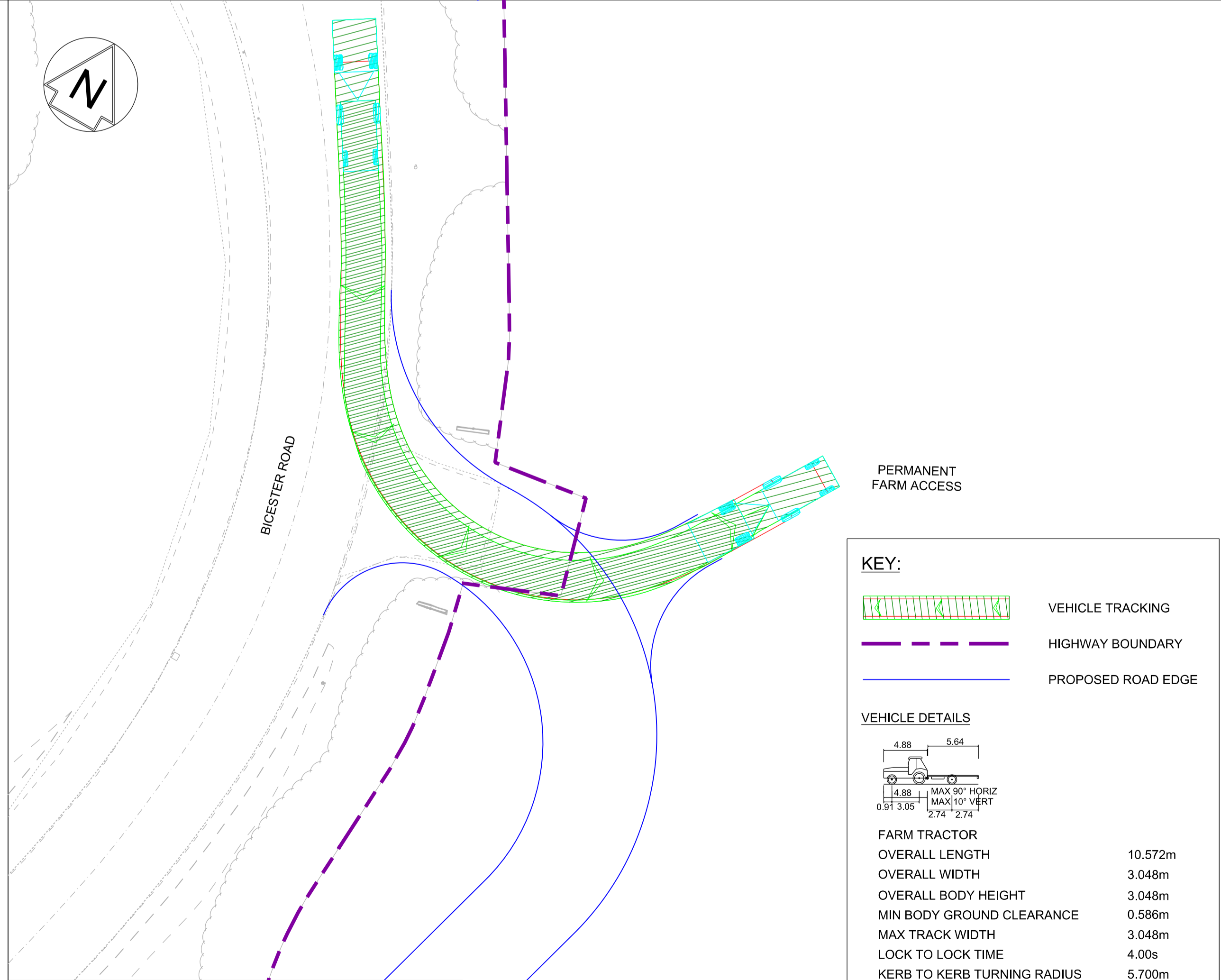
**VEHICLE DETAILS**

FARM TRACTOR  
 OVERALL LENGTH 10.572m  
 OVERALL WIDTH 3.048m  
 OVERALL BODY HEIGHT 3.048m  
 MIN BODY GROUND CLEARANCE 0.586m  
 MAX TRACK WIDTH 3.048m  
 LOCK TO LOCK TIME 4.00s  
 KERB TO KERB TURNING RADIUS 5.700m

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SCALE 1:250  
 @ A1 SHEET SIZE

ACCESS TO ANCILLARY CIVILS SITE-OXD 36



**KEY:**

- VEHICLE TRACKING
- HIGHWAY BOUNDARY
- PROPOSED ROAD EDGE

**VEHICLE DETAILS**

FARM TRACTOR  
 OVERALL LENGTH 10.572m  
 OVERALL WIDTH 3.048m  
 OVERALL BODY HEIGHT 3.048m  
 MIN BODY GROUND CLEARANCE 0.586m  
 MAX TRACK WIDTH 3.048m  
 LOCK TO LOCK TIME 4.00s  
 KERB TO KERB TURNING RADIUS 5.700m

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SCALE 1:250  
 @ A1 SHEET SIZE

ACCESS TO ANCILLARY CIVILS SITE-OXD 36



Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/01/20	FOR INFORMATION		N.T.	G.J.	S.A.
Status						S2

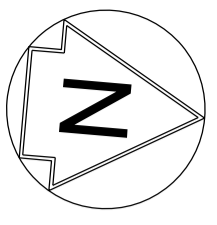


Project  
**East West Rail (Western Section) Phase 2**

Drawing Title  
**OTHER ACCESS A1\_CA\_6 VEHICLE SWEEPED PATH ANALYSIS**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/01/20	
Drawn	Ravikumar KN	Signed	R. KN	Date	03/12/19	
Checked	Gareth Johnston	Signed	G. Johnston	Date	10/01/20	
Approved	Stephen Abe	Signed	S. Abe	Date	10/01/20	
Scale(s)	1:250 ELR - Project Chainage (Miles Yards)					
Design Package Risk Classification	Normal				Sheet	2 of 2
Alternative Reference					Revision	B01
Drawing Number	133735_2A-EWR-OXD-A1_CA_6-DR-CH-010007					

Revision & Version  
 Drawing Number  
 133735\_2A-EWR-OXD-A1\_CA\_6-DR-CH-010008  
 B01.01



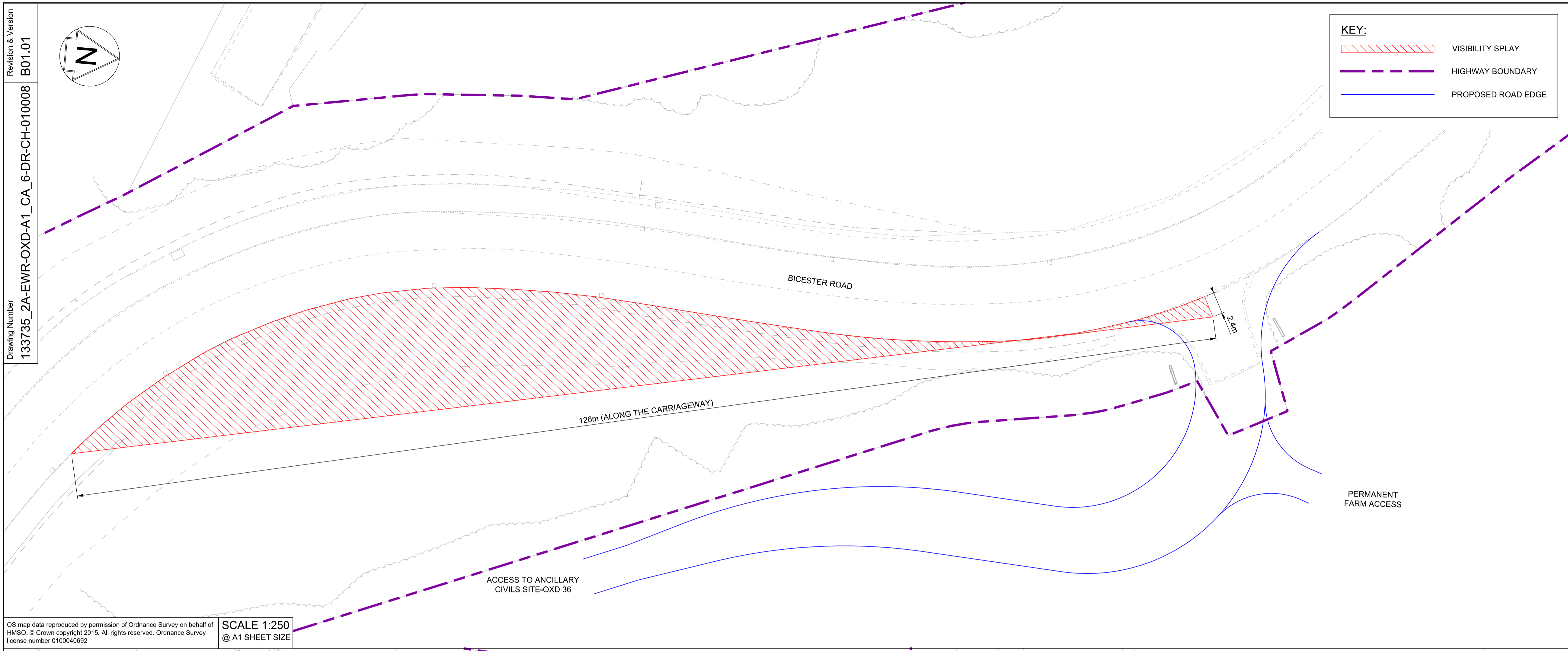
**KEY:**

- VISIBILITY SPLAY
- HIGHWAY BOUNDARY
- PROPOSED ROAD EDGE

**NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**

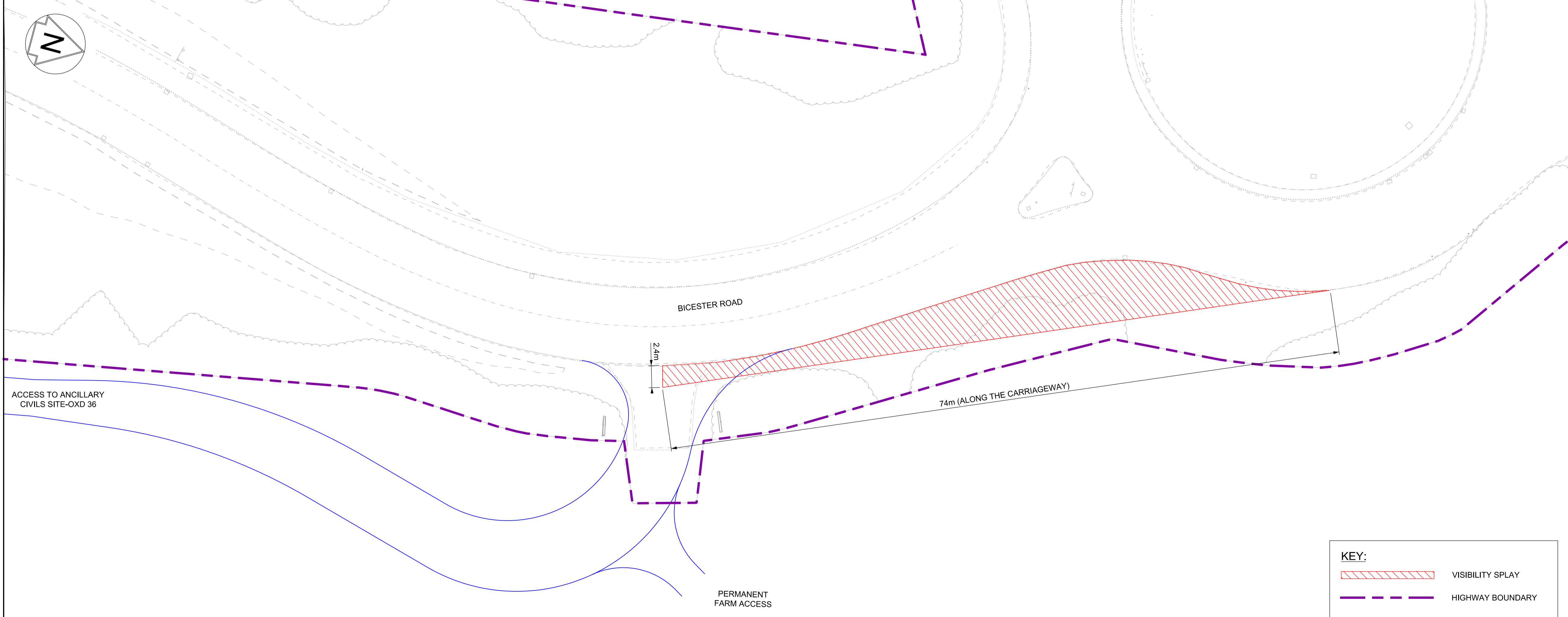
**NOTES:**

- THIS DRAWING IS NOT TO BE SCALED.
- ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
- THE SITE TEAM NEEDS TO ASCERTAIN THE REQUIRED CLEARANCE BASED ON THE VISIBILITY SPLAY, INTERVISIBILITY ZONE AND OR WORKS REQUIRED FOR THIS SITE.



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**SCALE 1:250**  
 @ A1 SHEET SIZE



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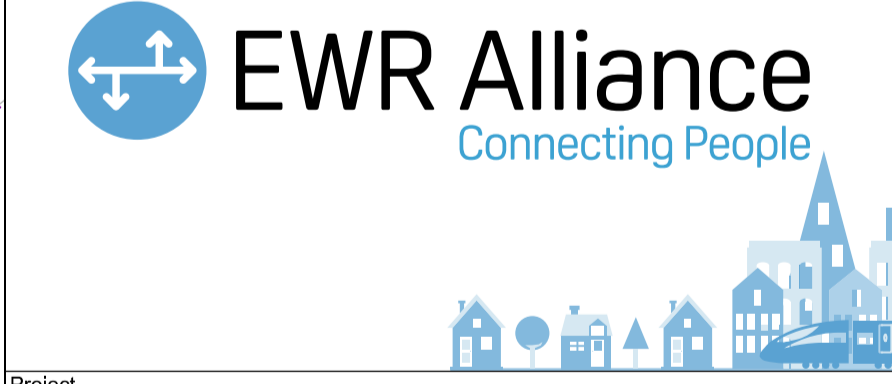
**SCALE 1:250**  
 @ A1 SHEET SIZE

**KEY:**

- VISIBILITY SPLAY
- HIGHWAY BOUNDARY
- PROPOSED ROAD EDGE

**DRAFT**

Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/01/20	FOR INFORMATION		N.T.	G.J.	S.A.
Status						S2



Project  
**East West Rail (Western Section) Phase 2**

Drawing Title  
**OTHER ACCESS A1\_CA\_6 VISIBILITY SPLAY**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/01/20
Drawn	Jameela Nawaz	Signed	J. Nawaz	Date	15/08/19
Checked	Gareth Johnston	Signed	G. Johnston	Date	10/01/20
Approved	Stephen Abe	Signed	S. Abe	Date	10/01/20

Scale(s)  
 1:250

Design Package Risk Classification  
**Normal**

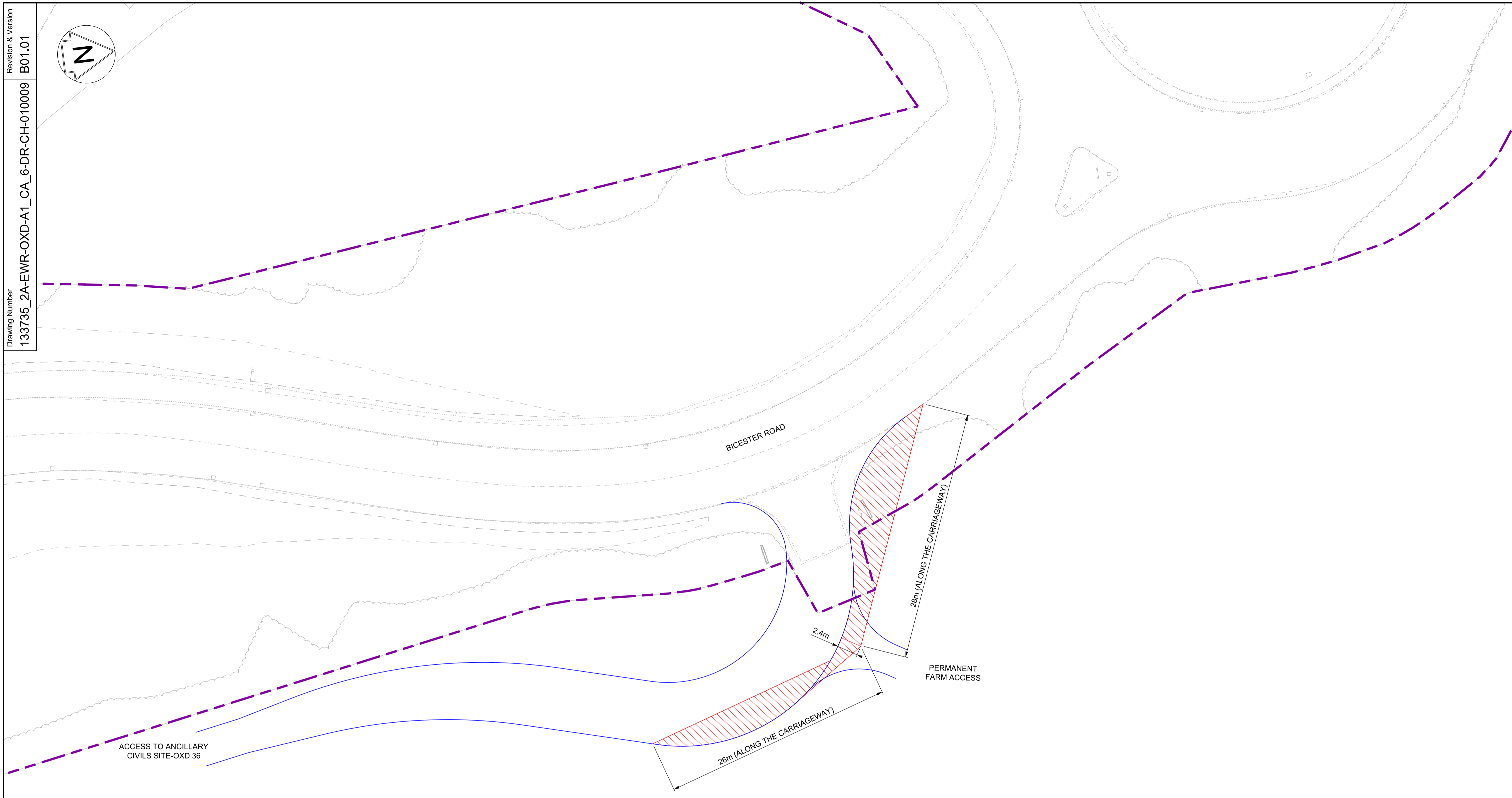
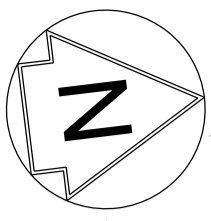
Alternative Reference

Sheet  
 1 of 2

Revision  
 B01

Drawing Number  
 133735\_2A-EWR-OXD-A1\_CA\_6-DR-CH-010008

Revision & Version  
B01.01  
Drawing Number  
133735\_2A-EWR-OXD-A1\_CA\_6-DR-CH-010009



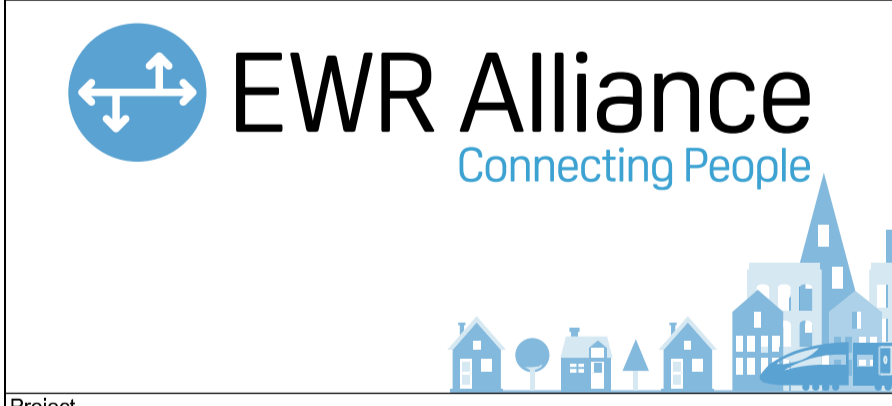
**NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**

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Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/01/20	FOR INFORMATION				S2



Project  
**East West Rail (Western Section) Phase 2**

Drawing Title  
**OTHER ACCESS A1\_CA\_6 VISIBILITY SPLAY**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/01/20
Drawn	Ravikumar KN	Signed	R. KN	Date	03/12/19
Checked	Gareth Johnston	Signed	G. Johnston	Date	10/01/20
Approved	Stephen Abe	Signed	S. Abe	Date	10/01/20

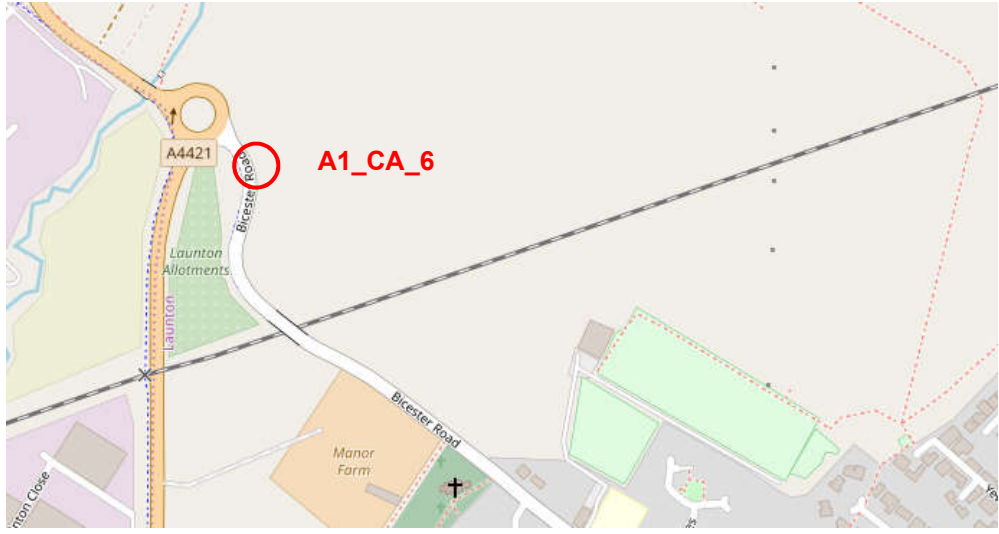
Scale(s)	1:250	ELR - Project Chainage (Miles Yards)	OXD -
Design Package Risk Classification	Normal	Sheet	2 of 2
Alternative Reference		Revision	B01

**KEY:**

	VISIBILITY SPLAY
	HIGHWAY BOUNDARY
	PROPOSED ROAD EDGE



<b>Departure Reference:</b>	N016	<b>Departure Type:</b>	General
<b>Document File Name:</b>	133735_RW-EWR-XX-XX-RP-CH-000153	<b>Local Highway Authority:</b>	Oxfordshire County Council

<b>Departure Title:</b>	Reduced visibility standard along the major road at A1_CA_6 Permanent Compound (Bicester Road).
<b>Departure Location:</b>	
<b>Supporting Information:</b>	<p><b>General Arrangement Drawing Number</b>          133735_2A-EWR-OXD-A1_CA_6-DR-CH-010001</p> <p><b>Visibility Splay Drawing Numbers</b>          133735_2A-EWR-OXD-A1_CA_6-DR-CH-010008          133735_2A-EWR-OXD-A1_CA_6-DR-CH-010009</p>
<b>Consultations:</b>	Oxfordshire County Council

DEPARTURE DETAILS

<b>Relevant Standards:</b>	DMRB, Volume 6, Section 2, Part 6, TD 41/95 DMRB, Volume 6, Section 2, Part 6, TD 9/93
<b>Clause/Paragraphs:</b>	TD 41/95, Paragraph 2.22

	<p>2.22 The "Y" distance along the major road, the all purpose trunk road, shall be determined from Table 2/1:</p> <table border="1" data-bbox="459 383 963 483"> <tr> <td>Design speed of major road (kph)</td> <td>120</td> <td>100</td> <td>85</td> <td>70</td> <td>60</td> <td>50</td> </tr> <tr> <td>"Y" Distance (m)</td> <td>295</td> <td>215</td> <td>160</td> <td>120</td> <td>90</td> <td>70</td> </tr> </table> <p><b>Table 2/1: Value of "Y" Distance</b></p> <p>Note, these figures correspond to the Desirable Minimum Stopping Sight Distances set out in Table 3 in TD9 (DMRB 6.1.1). Relaxations are not available on these figures.</p>	Design speed of major road (kph)	120	100	85	70	60	50	"Y" Distance (m)	295	215	160	120	90	70
Design speed of major road (kph)	120	100	85	70	60	50									
"Y" Distance (m)	295	215	160	120	90	70									
<b>Departure Description:</b>	Visibility from minor arm along major road is sub-standard.														
<b>Associated Departures:</b>	None														
<b>Reason for Departure:</b>	The junction listed above does not appear to provide the required visibility distance 'y' from the junction along the major road, for their respective posted speed limit.														

DESIGN DETAILS

<b>Design Year Traffic Flow (AADT):</b>	Unknown						
<b>Design Speed:</b>	<p>A speed survey was carried out by Oxfordshire County Council on the Bicester Road at two locations North and South of the proposed temporary A1 compound access. Site 1 is deemed to be the most appropriate location given its close proximity to Compound Access A1_CA_6.</p> <p>The 85th percentile speed survey results are as follows: -</p> <table border="1" data-bbox="427 1352 1008 1473"> <thead> <tr> <th>Mph (kph)</th> <th>Northbound</th> <th>Southbound</th> </tr> </thead> <tbody> <tr> <td>Site 1</td> <td>32.7 (52.7)</td> <td>35.5 (57.2)</td> </tr> </tbody> </table> <p>These figures are used for the calculation of SSD. However, a further reduction of 4kph is to be applied in line with TD 22/81 Paragraph 3.4, which states;</p> <p>3.4 <u>Speeds (improvement of alignment and junctions)</u></p> <p>Whereas for speed limits the 85 percentile dry weather spot speed of cars is required, for improvement of alignments and major/minor junctions or accesses, and for new major/minor junctions or accesses on existing roads, the normal design methods are based on the 85 percentile wet weather journey speed of vehicles. The precise point at which the measurements are taken and the timing is important. A point just before the scheme length and a time of free flow are suitable. Measurements must be taken at both ends of the scheme so that traffic approaching from both directions is covered. If different values are obtained the higher speed value should be used in the design process. To get from the dry weather spot speed of vehicles measured to the wet weather journey speed used in design one of the following correction factors should be used -</p> <p style="padding-left: 40px;">For AP Dual carriageways ... deduct 8kph</p> <p style="padding-left: 40px;">For AP Single carriageways ... deduct 4kph</p> <p>The speed survey locations are shown in the figure below.</p>	Mph (kph)	Northbound	Southbound	Site 1	32.7 (52.7)	35.5 (57.2)
Mph (kph)	Northbound	Southbound					
Site 1	32.7 (52.7)	35.5 (57.2)					



JUSTIFICATION

<p><b>Safety:</b></p>	<p>TD 41/95, Paragraph 2.21 states:</p> <div data-bbox="443 1189 967 1704" style="border: 2px solid black; padding: 5px;"><p>2.21 Normally, an "X" distance of 4.5m shall be provided for a direct access where use in the design year is forecast not to exceed 500 AADT. The choice of set back distance is related to the forecast traffic using the access. For lightly used accesses, for example those serving a single dwelling or a small cul-de-sac of a half a dozen dwellings, the set back "X" may be reduced to 2.4m. The 2.4m set back relates to normally only one vehicle wishing to join the trunk road at one time. The 4.5m covers the situation where two light vehicles may want to accept the same gap in the trunk road traffic. Where in the case of lightly used accesses the site conditions are particularly difficult, then the set back "X" may be reduced to 2.0m as a Relaxation. Any further reduction would be a Departure from Standard under para 1.15.</p></div> <p>The access has been designed with an 'x' distance of 2.4m, in line with TD41/95 Paragraph 2.21 which is deemed appropriate due to the low volumes of traffic that is anticipated to use this access.</p>
-----------------------	--

2.22 The "Y" distance along the major road, the all purpose trunk road, shall be determined from Table 2/1:

Design speed of major road (kph)	120	100	85	70	60	50
"Y" Distance (m)	295	215	160	120	90	70

**Table 2/1: Value of "Y" Distance**

Note, these figures correspond to the Desirable Minimum Stopping Sight Distances set out in Table 3 in TD9 (DMRB 6.1.1). Relaxations are not available on these figures.

The specified and achievable SSD in each direction based on their design speed are shown in the table below (specified SSD has been calculated with reaction times and decelerations rates in line with TD 9/93, Table 3);

Location	Speed Survey / TD22 Design Speed (kph)	'y' distance		
		Specified (m)	Proposed Achieved (m)	Current Achieved (m)
<b>A1_CA_6 RHS (towards roundabout)</b>	57	74	55	55
<b>A1_CA_6 LHS (towards overbridge)</b>	53	64	126	126

Visibility has been maximised as far as reasonably practicable. The constraints are beyond the control of EWR Alliance and it is not possible to amend the constraints or move the access location, due to the requirements of future maintenance.

Visibility to the LHS can be achieved. The RHS visibility is below the desirable minimum for the design speed. The reduced 'y' distance is due to the existing vegetation and the close proximity to the existing roundabout.

<b>Congestion/Delay:</b>	n/a
<b>Environment/Sustainability:</b>	It is not proposed to provide the full 'y' distance, as this would involve heavy vegetation clearance, including several mature trees.
<b>Accessibility:</b>	n/a
<b>Maintenance:</b>	Any vegetation trimming required to provide the 'y' distances will be carried out at the appropriate time of year and will be maintained during period of the construction works.
<b>Economic (whole life cost):</b>	n/a

MITIGATION

<b>Risk Assessment Classification:</b>	n/a
--	-----

<b>Other Options Considered:</b>	n/a
<b>Mitigation:</b>	To ensure the 'y' distances stated are achieved regular vegetation trimming will take place along the verge for the duration of the construction period.

**CONCLUDING COMMENTS**

The design speed calculated at this location is 53/57kph which is lower than the posted speed of 50mph/80kph. Observed 85<sup>th</sup>% survey speeds varied between 33mph and 36mph.

The sub-standard 'y' distance for A1\_CA\_6 in the RHS direction is due to the existing road geometry, the close proximity to the existing roundabout and the existing well-established vegetation.

As the works to be undertaken in this location is the upgrading of an existing access and there is no reduction to the existing visibility from this junction it is not proposed to implement any mitigations other than the vegetation trimming.

**ALLIANCE ASSURANCE**

	<b>Name</b>	<b>Signed</b>	<b>Date</b>
<b>Originator</b>	Andrew Kirk	<i>Andrew Kirk</i>	09/06/2020
<b>Reviewer</b>	Lisa Taylor	<i>Lisa Taylor</i>	09/06/2020
<b>Authorised</b>	Gareth Johnston	<i>Gareth Johnston</i>	09/06/2020

**LOCAL HIGHWAY AUTHORITY RESPONSE**

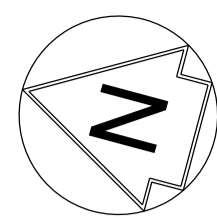
For completion by Local Highway Authority Representative

<b>Category</b>		<b>Tick</b>
1	Approved	
2	Approved with comments*	
3	Rejected with comments*	

<b>Name</b>	<b>Position</b>	<b>Signed</b>	<b>Date</b>

\*comments are to be provided on the form provided. Responses will be provided back to the LHA on these forms and close out monitored. Link to template: [133735\\_RW-EWR-XX-XX-CM-CH-000002](#)

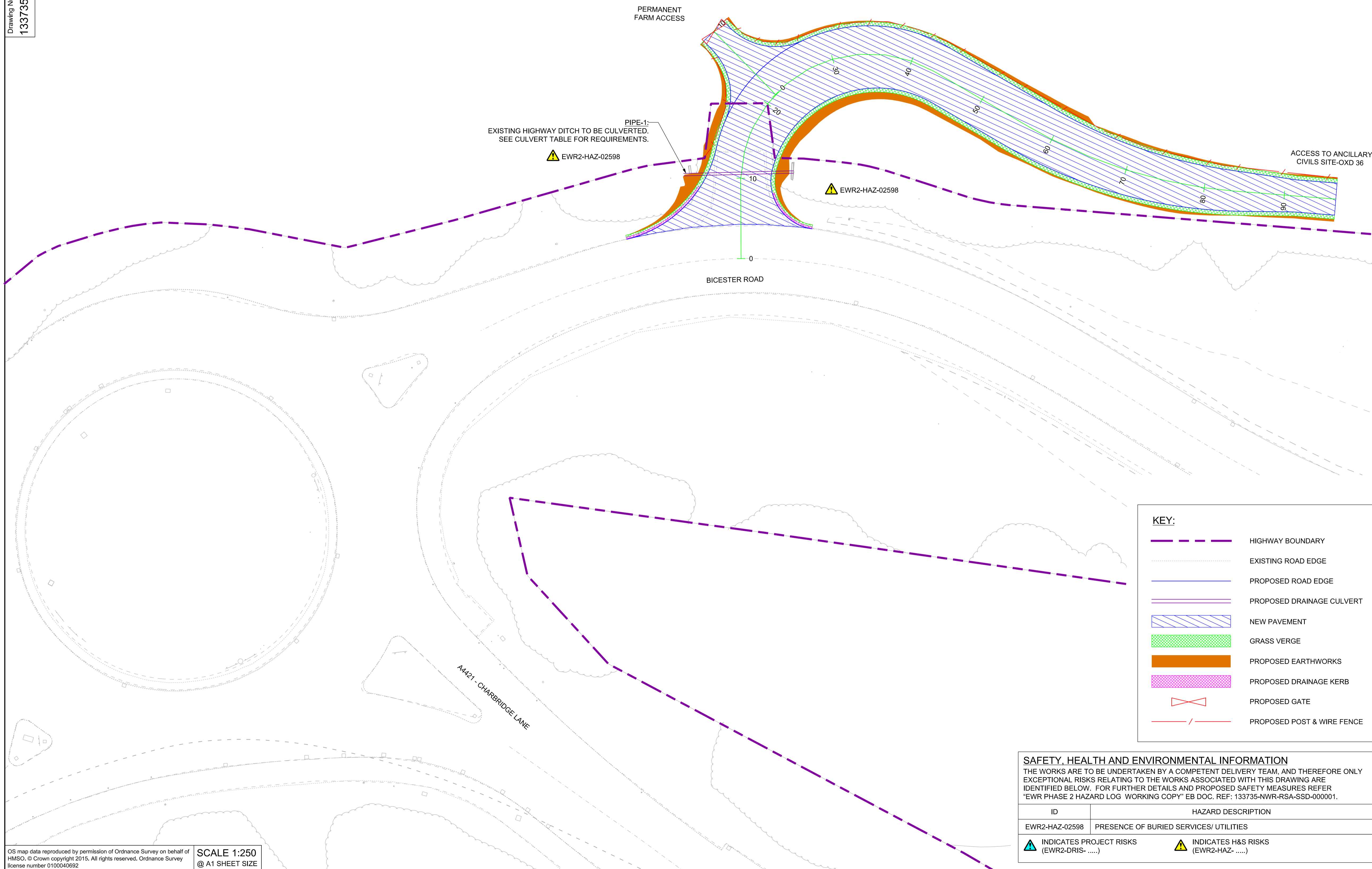
Note: Where comments impact upon a design decision or have multidiscipline impacts, they will be entered into BIMCollab the projects online issues management system.



	PIPE-1	
	UPSTREAM	DOWNSTREAM
EASTINGS:	177000.349	176996.485
NORTHINGS:	141712.035	141725.131
EXISTING DITCH LEVELS:	70.250	69.940
PIPE INVERT:	70.250	69.940
HEADWALL:	TYPE 1	TYPE 1
PIPE TYPE:	FILTER PIPE	
MINIMUM COVER:	840mm	

- NOTES:**
1. PIPE PERFORATIONS ARE TO BE LAID FACING UPWARDS.
  2. REFER TO STANDARD DETAIL DRAWING 133735\_RW-EWR-XX-XX-DR-CH-000131 FOR PIPE SURROUND AND BEDDING TYPES.
  3. THE EXISTING DITCH INVERT LEVELS ARE TAKEN FROM AVAILABLE TOPOGRAPHIC SURVEY INFORMATION, WHERE AVAILABLE. THE DELIVERY TEAM WILL NEED TO CONFIRM DITCH LEVELS BEFORE INSTALLING CULVERT. ANY DISCREPANCIES IN LEVEL WILL NEED TO BE DISCUSSED WITH THE DESIGNER.

**CULVERT REQUIREMENTS**



Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/01/20	FOR INFORMATION				S2



Project  
**East West Rail  
 (Western Section)  
 Phase 2**

Drawing Title  
**OTHER ACCESS A1\_CA\_6  
 GENERAL ARRANGEMENT**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/01/20
Drawn	Jameela Nawaz	Signed	J. Nawaz	Date	02/08/19
Checked	Garth Johnston	Signed	G. Johnston	Date	10/01/20
Approved	Stephen Abe	Signed	S. Abe	Date	10/01/20

Scale(s)	1:250	ELR - Project Chainage (Miles/Yards)	OXD -
Design Package Risk Classification	Normal		Sheet
Alternative Reference			Revision
Drawing Number	133735_2A-EWR-OXD-A1_CA_6-DR-CH-010001		B01

**KEY:**

	HIGHWAY BOUNDARY
	EXISTING ROAD EDGE
	PROPOSED ROAD EDGE
	PROPOSED DRAINAGE CULVERT
	NEW PAVEMENT
	GRASS VERGE
	PROPOSED EARTHWORKS
	PROPOSED DRAINAGE KERB
	PROPOSED GATE
	PROPOSED POST & WIRE FENCE

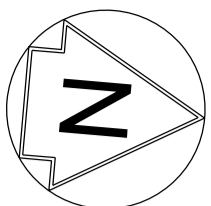
**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

THE WORKS ARE TO BE UNDERTAKEN BY A COMPETENT DELIVERY TEAM, AND THEREFORE ONLY EXCEPTIONAL RISKS RELATING TO THE WORKS ASSOCIATED WITH THIS DRAWING ARE IDENTIFIED BELOW. FOR FURTHER DETAILS AND PROPOSED SAFETY MEASURES REFER "EWR PHASE 2 HAZARD LOG WORKING COPY" EB DOC. REF: 133735-NWR-RSA-SSD-000001.

ID	HAZARD DESCRIPTION
EWR2-HAZ-02598	PRESENCE OF BURIED SERVICES/ UTILITIES

INDICATES PROJECT RISKS (EWR2-DRIS- .....)     
 INDICATES H&S RISKS (EWR2-HAZ- .....)

Revision & Version  
B01.01  
Drawing Number  
133735\_2A-EWR-OXD-A1\_CA\_6-DR-CH-010008



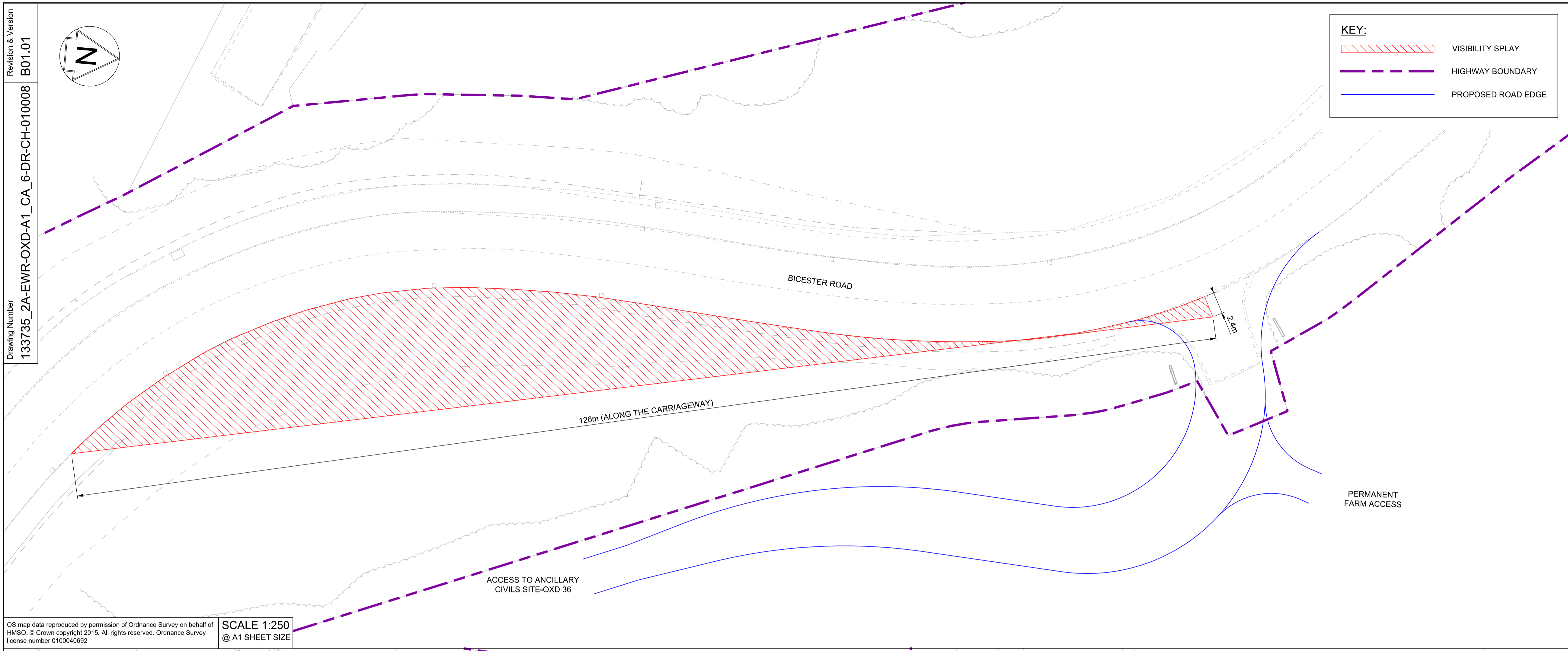
**KEY:**

	VISIBILITY SPLAY
	HIGHWAY BOUNDARY
	PROPOSED ROAD EDGE

**NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**

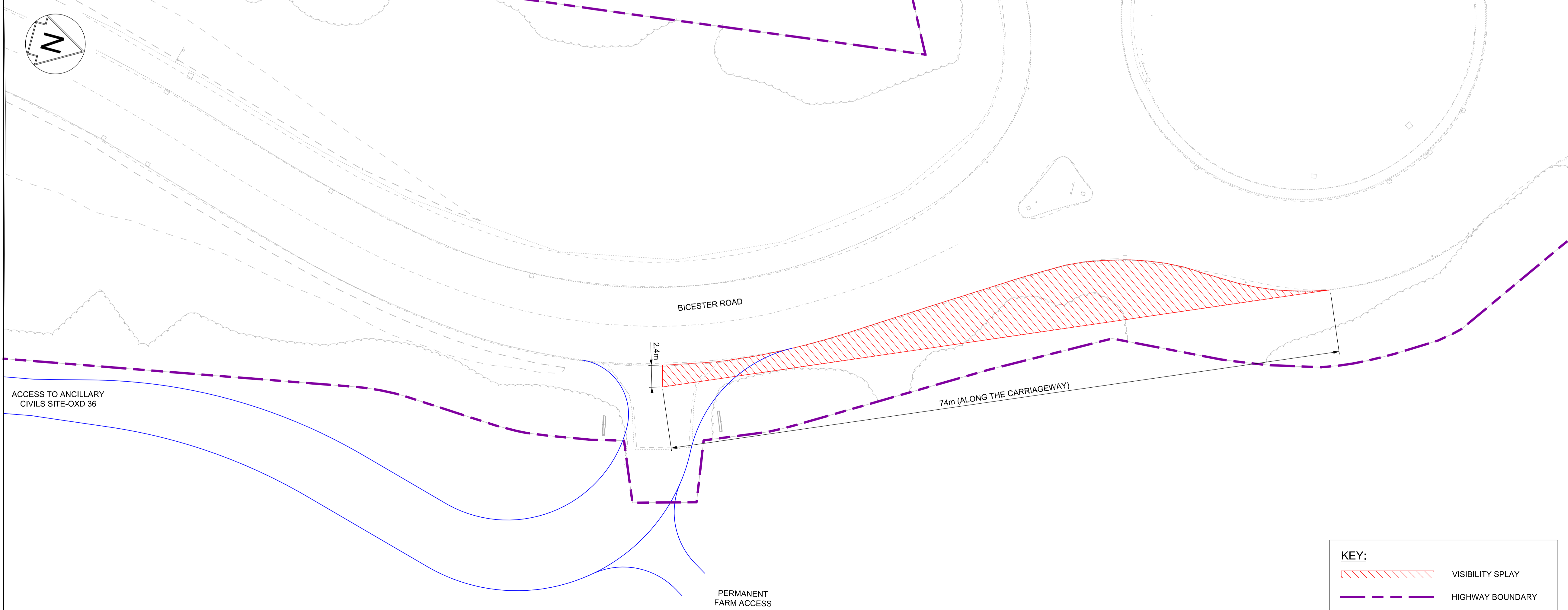
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SCALE 1:250  
@ A1 SHEET SIZE



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**KEY:**

	VISIBILITY SPLAY
	HIGHWAY BOUNDARY
	PROPOSED ROAD EDGE



Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/01/20	FOR INFORMATION		N.T.	G.J.	S.A.
Status						S2



Project  
**East West Rail (Western Section) Phase 2**

Drawing Title  
**OTHER ACCESS A1\_CA\_6 VISIBILITY SPLAY**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/01/20
Drawn	Jameela Nawaz	Signed	J. Nawaz	Date	15/08/19
Checked	Gareth Johnston	Signed	G. Johnston	Date	10/01/20
Approved	Stephen Abe	Signed	S. Abe	Date	10/01/20

Scale(s)  
1:250

ELR - Project Chainage (Miles Yards)  
OXD -

Design Package Risk Classification  
**Normal**

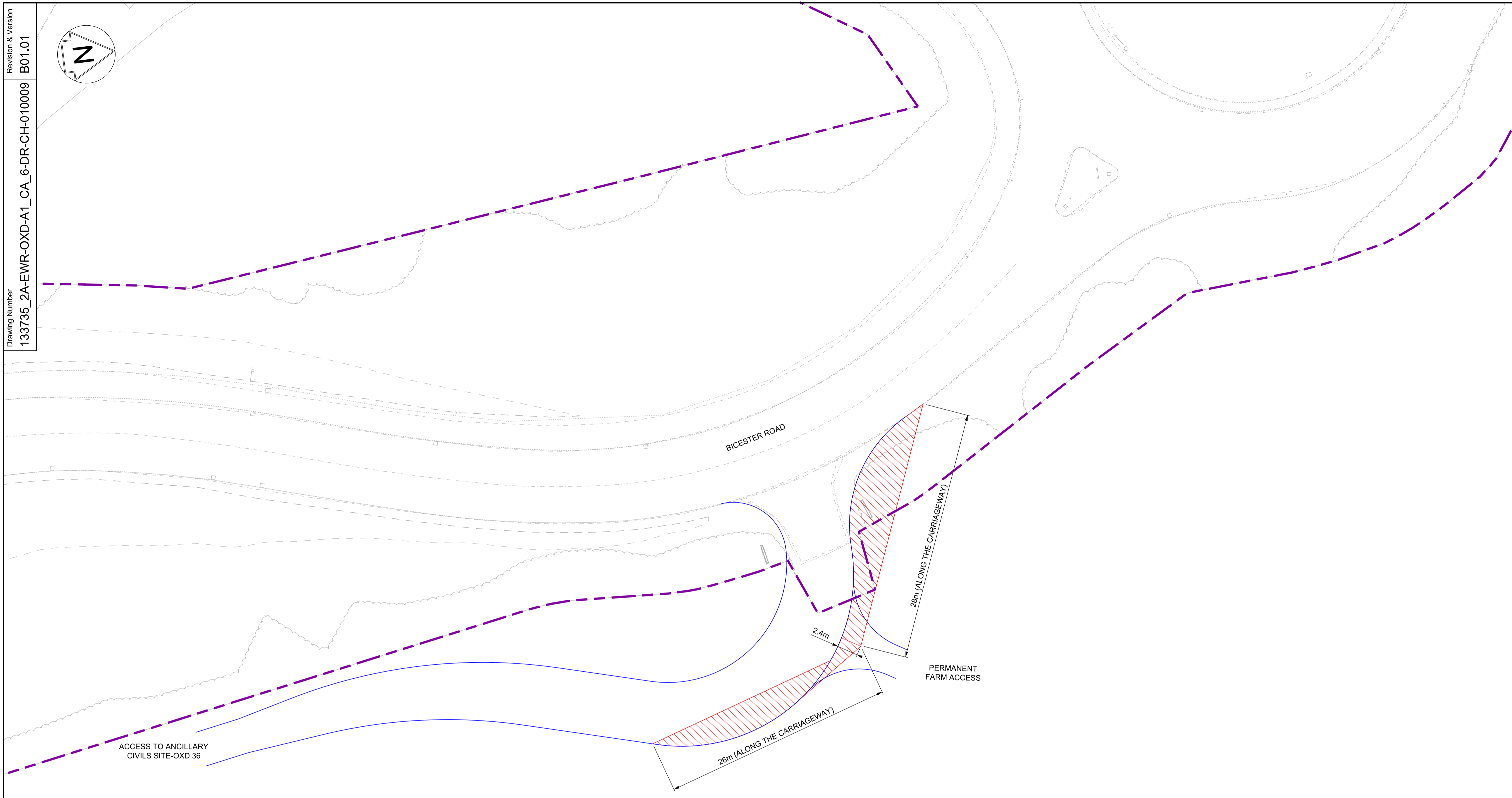
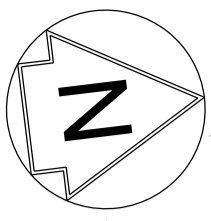
Alternative Reference

Sheet  
1 of 2

Revision  
B01

Drawing Number  
133735\_2A-EWR-OXD-A1\_CA\_6-DR-CH-010008

Revision & Version  
B01.01  
Drawing Number  
133735\_2A-EWR-OXD-A1\_CA\_6-DR-CH-010009



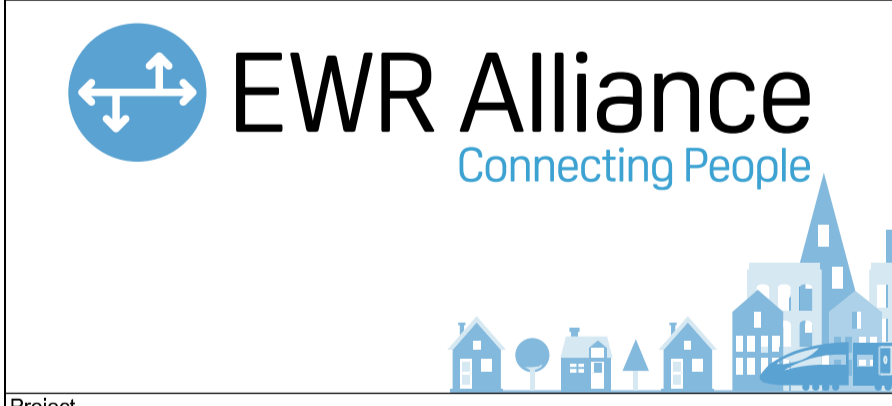
**NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**

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Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/01/20	FOR INFORMATION				S2



Project  
**East West Rail (Western Section) Phase 2**

Drawing Title  
**OTHER ACCESS A1\_CA\_6 VISIBILITY SPLAY**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/01/20
Drawn	Ravikumar KN	Signed	R. KN	Date	03/12/19
Checked	Gareth Johnston	Signed	G. Johnston	Date	10/01/20
Approved	Stephen Abe	Signed	S. Abe	Date	10/01/20

Scale(s)  
1:250

Design Package Risk Classification  
**Normal**

Alternative Reference

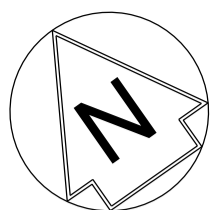
Sheet  
**2 of 2**

Revision  
**B01**

**KEY:**

	VISIBILITY SPLAY
	HIGHWAY BOUNDARY
	PROPOSED ROAD EDGE





	PIPE-1	
	UPSTREAM	DOWNSTREAM
EASTINGS:	178975.968	176973.487
NORTHINGS:	141706.979	141716.530
EXISTING DITCH LEVELS:	70.151	69.792
PIPE INVERT:	69.383	69.354
HEADWALL:	TYPE 1	TYPE 1
PIPE TYPE:	FILTER PIPE	
MINIMUM COVER:	350mm	

- NOTES:
1. PIPE PERFORATIONS ARE TO BE LAID FACING UPWARDS.
  2. REFER TO STANDARD DETAIL DRAWING 133735\_RW-EWR-XX-XX-DR-CH-000131 FOR PIPE SURROUND AND BEDDING TYPES.
  3. THE EXISTING DITCH INVERT LEVELS ARE TAKEN FROM AVAILABLE TOPOGRAPHIC SURVEY INFORMATION, WHERE AVAILABLE. THE DELIVERY TEAM WILL NEED TO CONFIRM DITCH LEVELS BEFORE INSTALLING CULVERT. ANY DISCREPANCIES IN LEVEL WILL NEED TO BE DISCUSSED WITH THE DESIGNER.

**CULVERT REQUIREMENTS**

- NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**
- NOTES:**
1. THIS DRAWING IS NOT TO BE SCALED.
  2. ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
  3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.
  4. WHEREVER REQUIRED, ROAD MARKINGS ARE TO BE LAID IN ACCORDANCE WITH THE TRAFFIC SIGN REGULATIONS AND GENERAL DIRECTIONS 2016 & 'TRAFFIC SIGNS MANUAL CHAPTER 5 (2003)'.
  5. GULLY POSITIONS SHOWN ARE INDICATIVE ONLY. REFER DRAINAGE DRAWINGS FOR THEIR FINAL LOCATIONS.

PLEASE REFER TO SIGN DIA 612 WITH NO BACKING BOARD.

PIPE-1:  
REPROFILED HIGHWAY DITCH TO BE CULVERTED.  
SEE CULVERT TABLE FOR REQUIREMENTS.

⚠ EWR2-HAZ-02599

⚠ EWR2-HAZ-02599

⚠ EWR2-HAZ-02599

⚠ EWR2-HAZ-02599

⚠ EWR2-HAZ-02599

**KEY:**

	HIGHWAY BOUNDARY
	APPLICATION SITE BOUNDARY
	EXISTING ROAD EDGE
	PROPOSED ROAD EDGE
	PROPOSED DRAINAGE CULVERT
	NEW PAVEMENT
	GRASS VERGE
	PROPOSED EARTHWORKS
	PROPOSED DITCH
	BULL NOSED KERB
	CDKU KERB
	REPROFILED CYCLE TRACK
	PROPOSED TRAFFIC SIGN
	PROPOSED GULLY

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**  
THE WORKS ARE TO BE UNDERTAKEN BY A COMPETENT DELIVERY TEAM, AND THEREFORE ONLY EXCEPTIONAL RISKS RELATING TO THE WORKS ASSOCIATED WITH THIS DRAWING ARE IDENTIFIED BELOW. FOR FURTHER DETAILS AND PROPOSED SAFETY MEASURES REFER 'EWR PHASE 2 HAZARD LOG WORKING COPY' EB DOC. REF: 133735-NWR-RSA-SSD-000001.

ID	HAZARD DESCRIPTION
EWR2-HAZ-02599	PRESENCE OF BURIED SERVICES / UTILITIES
	INDICATES PROJECT RISKS (EWR2-DRIS-.....)
	INDICATES H&S RISKS (EWR2-HAZ-.....)



Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/02/20	FOR INFORMATION				S2

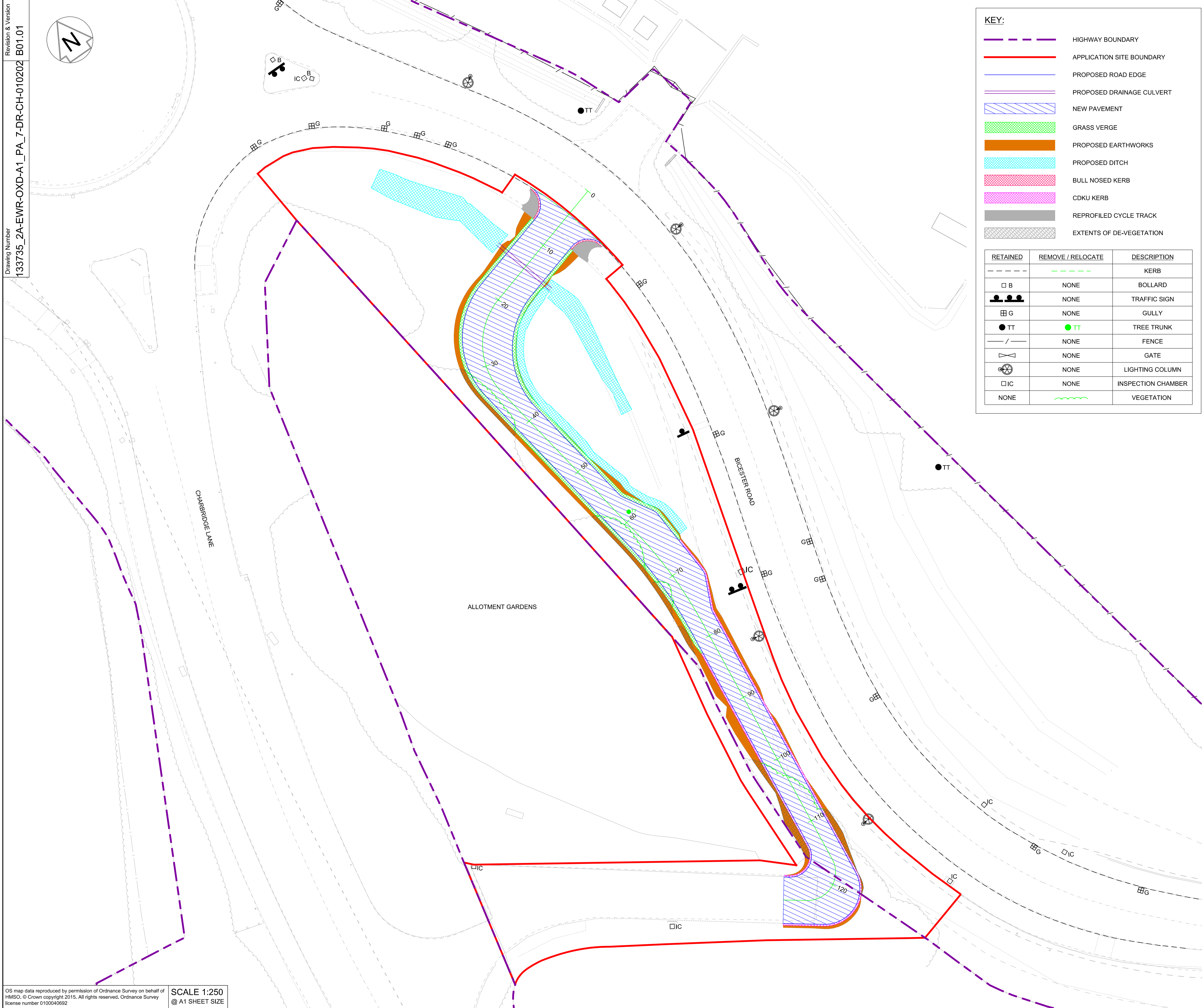
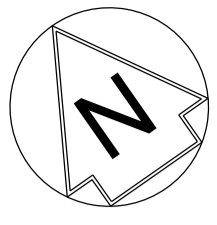


Project  
**East West Rail (Western Section) Phase 2**

Drawing Title  
**ALTERNATIVE ACCESS TO CHARBRIDGE LANE ALLOTMENTS SITE PLAN - PROPOSED**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	12/02/20
Drawn	Ravikumar KN	Signed	R. KN	Date	28/11/19
Checked	Lisa Taylor	Signed	L. Taylor	Date	12/02/20
Approved	Stephen Abe	Signed	S. Abe	Date	13/02/20

Scale(s)	1:250	ELR - Project Chainage (Miles/Yards)	OXD -
Design Package Risk Classification	Normal		
Alternative Reference	Sheet 1 of 1		
Drawing Number	Revision B01		



**KEY:**

- HIGHWAY BOUNDARY
- APPLICATION SITE BOUNDARY
- PROPOSED ROAD EDGE
- PROPOSED DRAINAGE CULVERT
- NEW PAVEMENT
- GRASS VERGE
- PROPOSED EARTHWORKS
- PROPOSED DITCH
- BULL NOSED KERB
- CDKU KERB
- REPROFILED CYCLE TRACK
- EXTENTS OF DE-VEGETATION

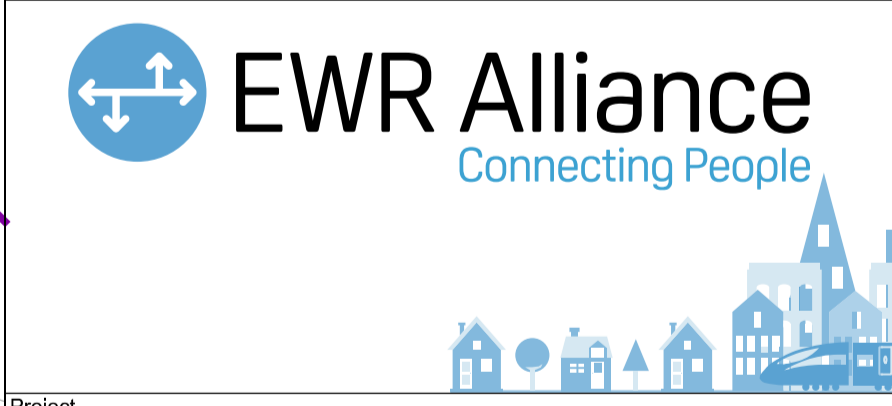
RETAINED	REMOVE / RELOCATE	DESCRIPTION
		KERB
	NONE	BOLLARD
	NONE	TRAFFIC SIGN
	NONE	GULLY
		TREE TRUNK
	NONE	FENCE
	NONE	GATE
	NONE	LIGHTING COLUMN
	NONE	INSPECTION CHAMBER
NONE		VEGETATION

- NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**
- NOTES:**
- THIS DRAWING IS NOT TO BE SCALED.
  - ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.
  - PRIOR TO THE COMMENCEMENT OF WORKS, A SUITABLY QUALIFIED ECOLOGIST SHALL INSPECT THE SITE FOR THE PRESENCE OF PROTECTED SPECIES AND HABITAT. THE ECOLOGIST SHALL THEN ADVISE EWR ALLIANCE ON THE REQUIRED PRECAUTIONARY METHODS AND AREAS OF EXCLUSION.
  - WHERE SITE CLEARANCE WORKS HAVE THE POTENTIAL TO IMPACT TREES OR HEDGES WHICH ARE TO BE RETAINED, AN ARBORICULTURIST SHALL BE PRESENT TO ADVISE ON ROOT PROTECTION ZONE EXTENTS, ROOT PRUNING AND CROWN RAISING. WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH BS3998:2010.
  - SITE CLEARANCE, WHERE THERE IS PROXIMITY TO HABITAT OF PROTECTED SPECIES, SHALL BE CARRIED OUT UNDER THE SUPERVISION OF A SUITABLY QUALIFIED ECOLOGIST.
  - THE EXTENTS OF ALL SITE CLEARANCE WORKS SHALL BE RECORDED IN THE AS-BUILT SITE CLEARANCE DRAWINGS AND SHALL ALSO BE RECORDED, WITH PHOTOGRAPHS OF FEATURES PRIOR TO REMOVAL, IN THE SITE CLEARANCE REGISTER. THE SITE CLEARANCE REGISTER SHALL BE MAINTAINED BY EWR ALLIANCE AND WILL INFORM REINSTATEMENT DETERMINATION.
  - IN LOCATIONS WHERE EXISTING TREES OVERHANG THE PASSING PLACE CROWN LIFTING, TO GIVE 5m CLEARANCE ABOVE GROUND LEVEL, SHALL BE UNDERTAKEN TO THE BACK OF THE PROPOSED VERGE. THIS SHALL BE UNDERTAKEN UNDER THE SUPERVISION OF AN ARBORICULTURIST.
  - THE VEGETATION CLEARANCE SHOWN HERE ON THE DRAWING IS INDICATIVE ONLY. THE SITE TEAM NEEDS TO ASCERTAIN THE REQUIRED CLEARANCE BASED ON THE VISIBILITY SPLAY, INTERVISIBILITY ZONE AND OR WORKS REQUIRED FOR THIS SITE.
  - FOR CLARITY ONLY THE TRUNKS OF EXISTING TREES ARE SHOWN, FOR CANOPY EXTENTS THE TREE SURVEY MODEL AND MASTER SCHEDULE ARE TO BE REFERRED TO.



Rev	Date	Description of Revisions	Dend	Chkd	Appr	S.A.
B01	13/02/20	FOR INFORMATION				

Rev Status: SHARED - for Information S2

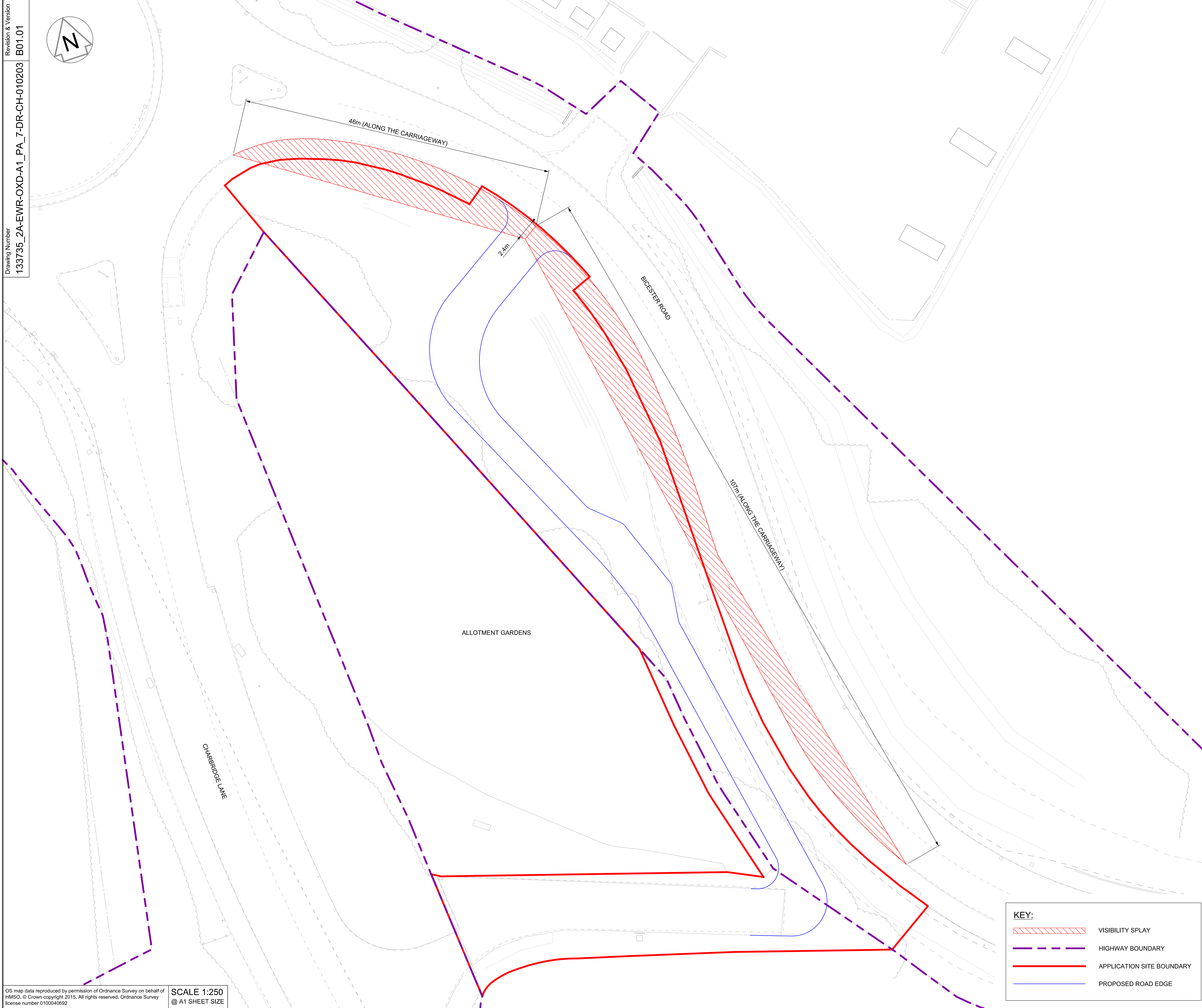
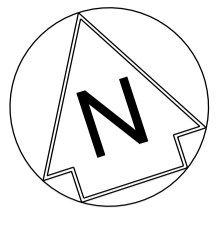


Project  
**East West Rail (Western Section) Phase 2**

Drawing Title  
**ALTERNATIVE ACCESS TO CHARBRIDGE LANE ALLOTMENTS SITE CLEARANCE**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	12/02/20
Drawn	Ravikumar KN	Signed	R. KN	Date	28/11/19
Checked	Lisa Taylor	Signed	L. Taylor	Date	12/02/20
Approved	Stephen Abe	Signed	S. Abe	Date	13/02/20

Scale(s)  
 1:250  
 ELR - Project Chainage (Miles Yards)  
 OXD -  
 Design Package Risk Classification  
**Normal**  
 Sheet 1 of 1  
 Alternative Reference  
 Revision B01



**NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**

**NOTES:**

1. THIS DRAWING IS NOT TO BE SCALED.
2. ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
3. THE SITE TEAM NEEDS TO ASCERTAIN THE REQUIRED CLEARANCE BASED ON THE VISIBILITY SPLAY, INTERVISIBILITY ZONE AND OR WORKS REQUIRED FOR THIS SITE.

**DRAFT**

Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/02/20	FOR INFORMATION				N.T. L.T. S.A
Status						S2



Project  
**East West Rail (Western Section) Phase 2**

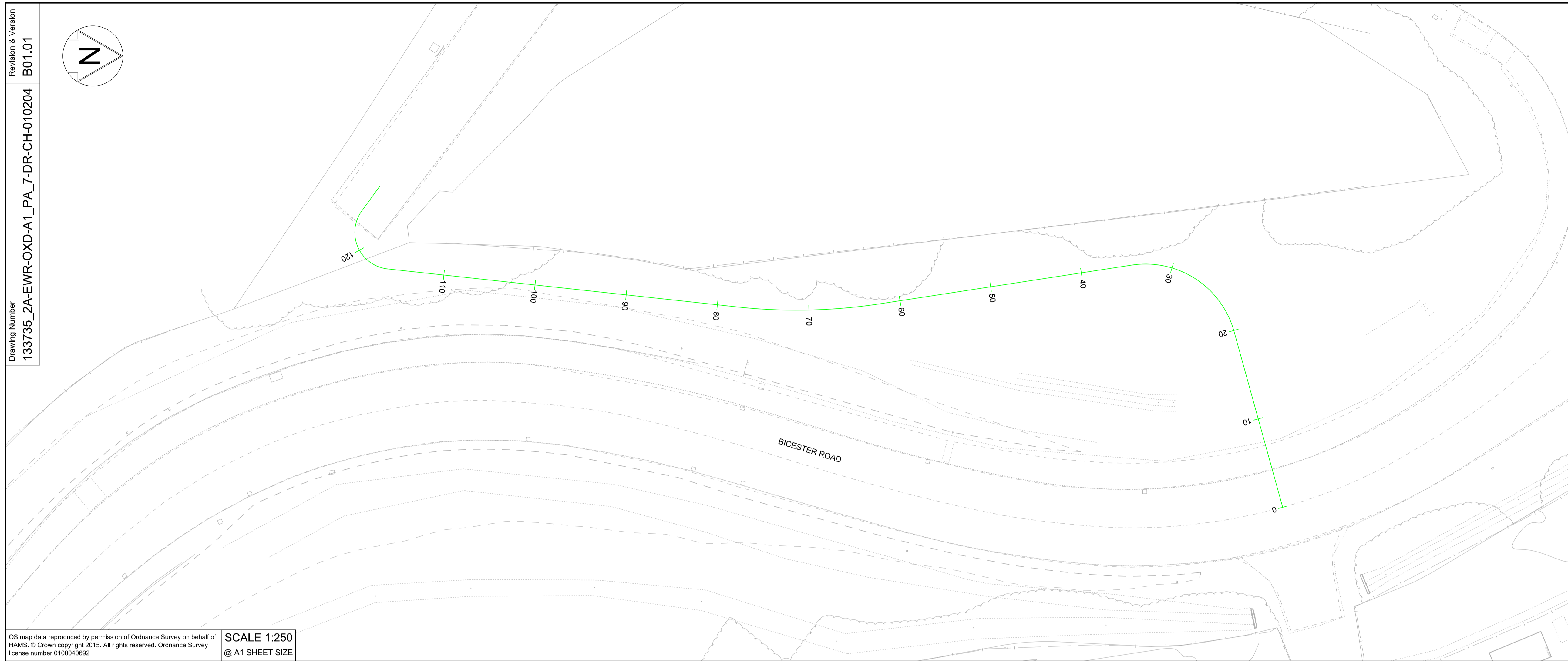
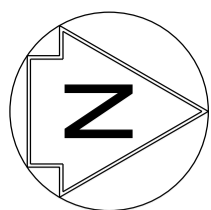
Drawing Title  
**ALTERNATIVE ACCESS TO CHARBRIDGE LANE ALLOTMENTS VISIBILITY SPLAY**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	12/02/20
Drawn	Ravikumar KN	Signed	R. KN	Date	28/11/19
Checked	Lisa Taylor	Signed	L. Taylor	Date	12/02/20
Approved	Stephen Abe	Signed	S. Abe	Date	13/02/20

Scale(s)	1:250	ELR - Project Chainage (Miles Yards)	OXD -
Design Package Risk Classification	Normal		Sheet
Alternative Reference			Revision
Drawing Number	133735_2A-EWR-OXD-A1_PA_7-DR-CH-010203		B01

**KEY:**

	VISIBILITY SPLAY
	HIGHWAY BOUNDARY
	APPLICATION SITE BOUNDARY
	PROPOSED ROAD EDGE



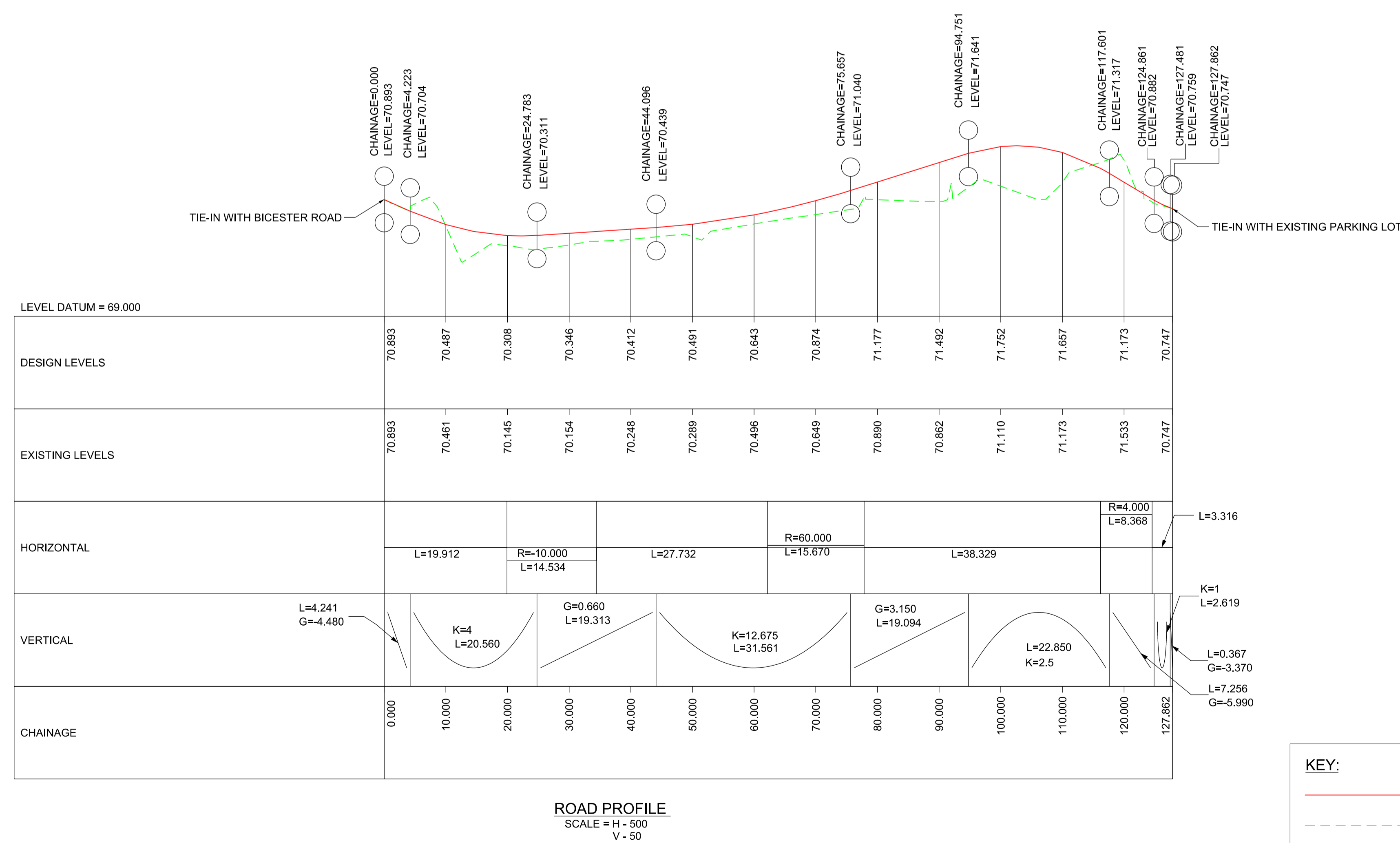
OS map data reproduced by permission of Ordnance Survey on behalf of  
HAMS. © Crown copyright 2015. All rights reserved. Ordnance Survey  
license number 0100040692

SCALE 1:250  
@ A1 SHEET SIZE

**NETWORK RAIL (EAST WEST  
RAIL WESTERN SECTION PHASE 2)**

**NOTES:**

1. THIS DRAWING IS NOT TO BE SCALED.
2. ALL DIMENSIONS AND LEVELS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.



**DRAFT**

Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/02/20	FOR INFORMATION				S.A
Status						S2



Project  
**East West Rail  
(Western Section)  
Phase 2**

Drawing Title  
**ALTERNATIVE ACCESS TO  
CHARBRIDGE LANE ALLOTMENTS  
EXISTING AND PROPOSED ROAD  
PLAN AND PROFILE**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	12/02/20
Drawn	Ravikumar KN	Signed	R. KN	Date	17/12/19
Checked	Lisa Taylor	Signed	L. Taylor	Date	12/02/20
Approved	Stephen Abe	Signed	S. Abe	Date	13/02/20

Scale(s)  
AS SHOWN  
Design Package Risk Classification  
Normal  
Alternative Reference  
Drawing Number  
133735\_2A-EWR-OXD-A1\_PA\_7-DR-CH-010204

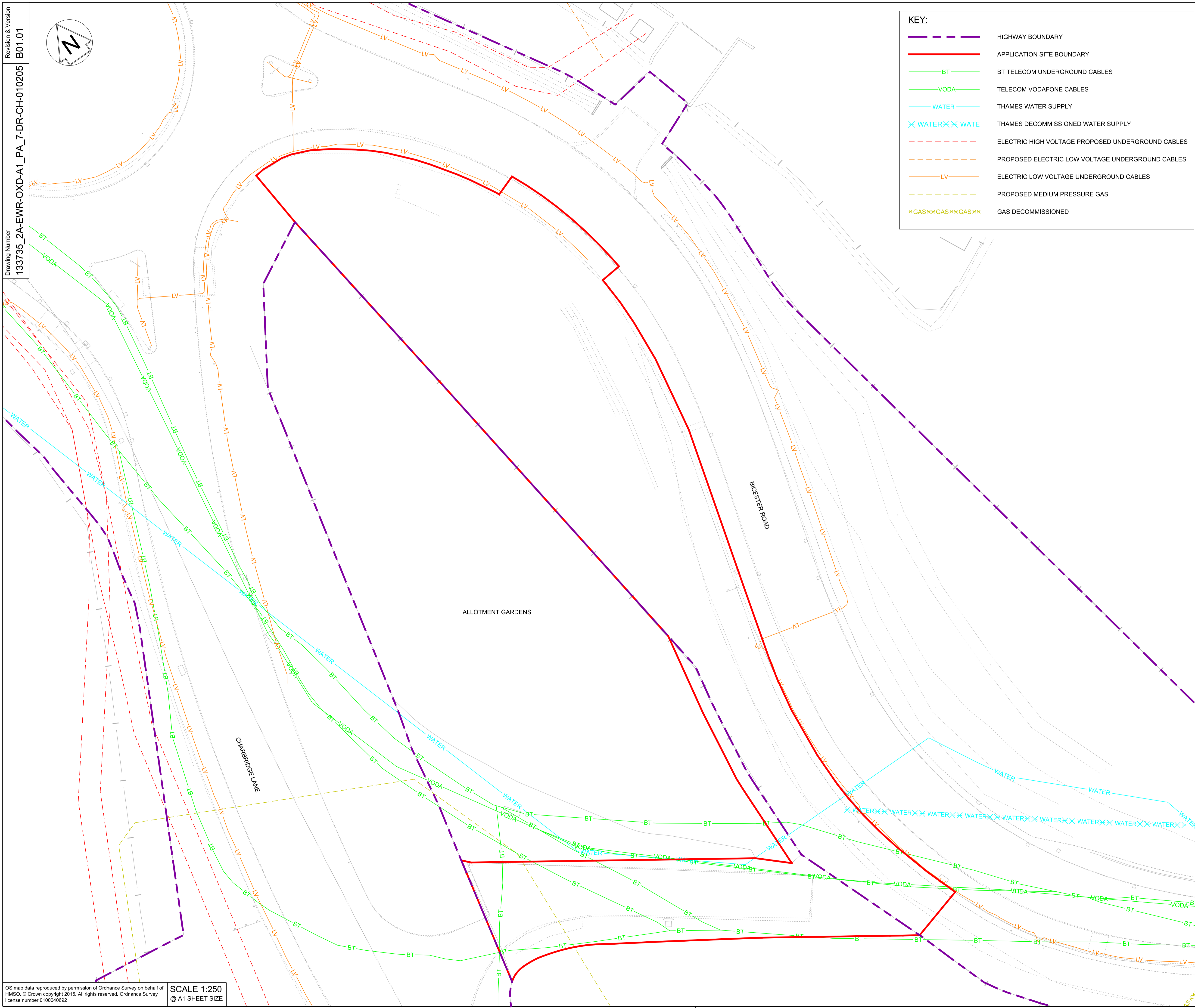
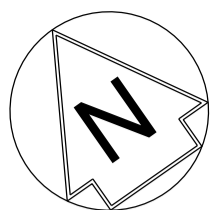
Sheet  
1 of 1  
Revision  
B01

SCALE : AS SHOWN  
@ A1 SHEET SIZE

**KEY:**

— NEW ROAD EDGE LEVEL

- - - EXISTING SURFACE LEVEL



**KEY:**

	HIGHWAY BOUNDARY
	APPLICATION SITE BOUNDARY
	BT TELECOM UNDERGROUND CABLES
	TELECOM VODAFONE CABLES
	THAMES WATER SUPPLY
	THAMES DECOMMISSIONED WATER SUPPLY
	ELECTRIC HIGH VOLTAGE PROPOSED UNDERGROUND CABLES
	PROPOSED ELECTRIC LOW VOLTAGE UNDERGROUND CABLES
	ELECTRIC LOW VOLTAGE UNDERGROUND CABLES
	PROPOSED MEDIUM PRESSURE GAS
	GAS DECOMMISSIONED

- NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**
- NOTES:**
1. THIS DRAWING IS NOT TO BE SCALED.
  2. ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
  3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.
  4. THE EXACT LOCATION AND EXTENT OF BURIED SERVICES SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF THE WORKS. AGREEMENT WITH PRIVATE LAND OWNERS SHALL BE OBTAINED PRIOR TO WORKS WHERE ACCESS TO PRIVATE LAND IS REQUIRED.
  5. THIS DRAWING SHOWS THE POSITION OF UTILITY COMPANIES APPARATUS KNOWN TO OPERATE IN THE AREA IMMEDIATELY ADJACENT TO AND WITHIN THE LAND TAKE BOUNDARY FOR EAST WEST RAIL.
  6. THE POSITIONS INDICATED FOR THE APPARATUS ARE BASED ON RECORDS PROVIDED BY NETWORK RAIL. THE ACCURACY OF THE DRAWING IS THEREFORE LIMITED BY THE ACCURACY OF THE RECORDS MAINTAINED BY THE UTILITY COMPANIES. THE METHODS AVAILABLE TO PROCESS / REPRODUCE THIS INFORMATION IN THE DRAWINGS AND THE AGE OF THE INFORMATION. THERE IS THE POSSIBILITY THAT APPARATUS HAS BEEN ADDED OR REMOVED SINCE THE RECORDS WERE PROVIDED.
  7. ALL SEARCHES MUST BE VERIFIED AND ESTABLISHED ON SITE BEFORE WORK COMMENCES. IT IS THE RESPONSIBILITY OF THE EWR ALLIANCE TO IDENTIFY AND LOCATE UTILITY PLANT PRIOR TO WORK GOING AHEAD.

**DRAFT**

B01	13/02/20	FOR INFORMATION	N.T.	L.T.	S.A.
Rev	Date	Description of Revisions	Dend	Chkd	Appr
Status	SHARED - for Information				S2

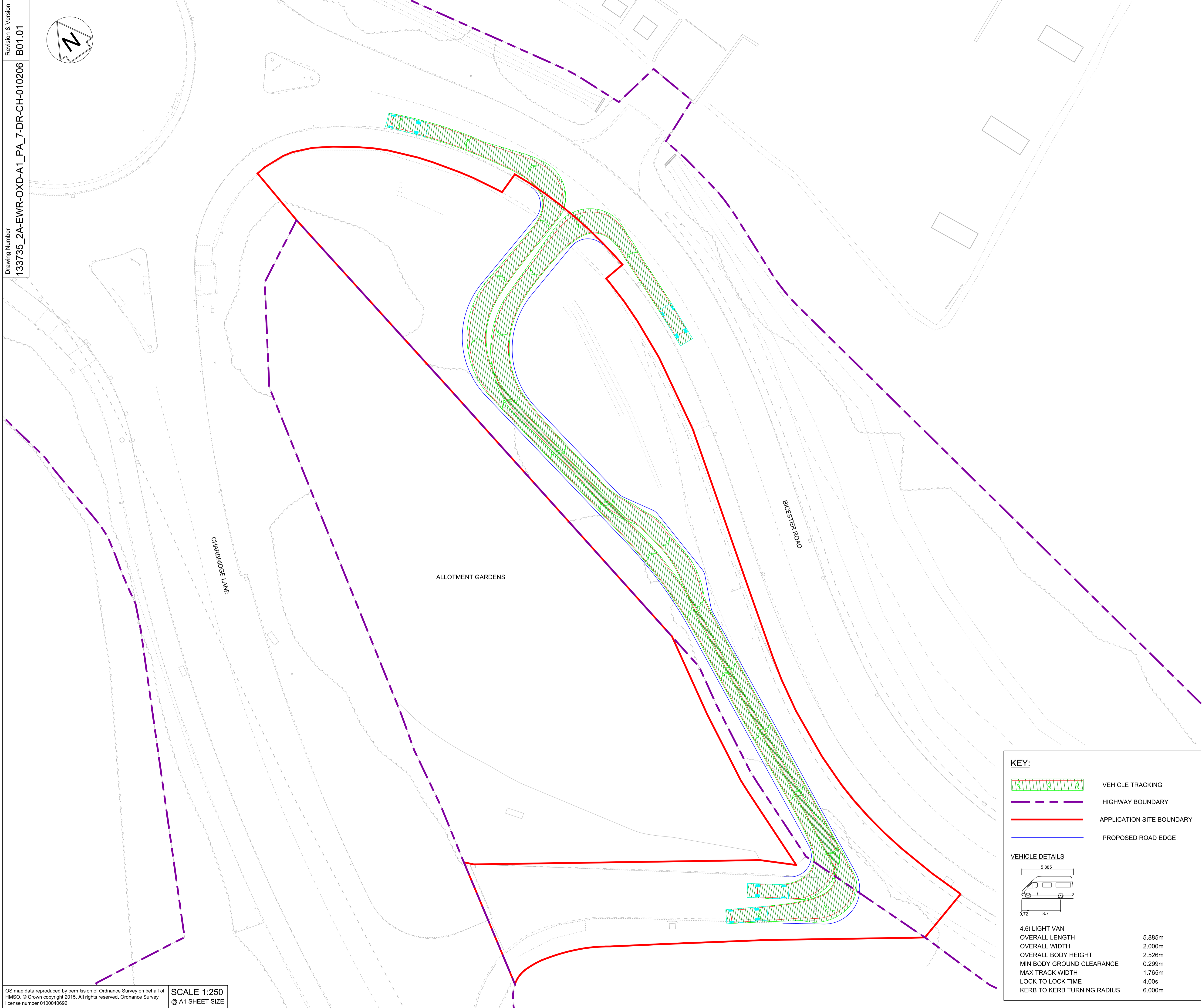
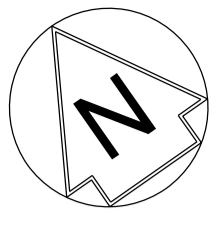


Project  
**East West Rail (Western Section) Phase 2**

Drawing Title  
**ALTERNATIVE ACCESS TO CHARBRIDGE LANE ALLOTMENTS SITE PLAN - EXISTING**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	12/02/20
Drawn	Ravikumar KN	Signed	R. KN	Date	18/12/19
Checked	Lisa Taylor	Signed	L. Taylor	Date	12/02/20
Approved	Stephen Abe	Signed	S. Abe	Date	13/02/20

Scale(s)	1:250	ELR - Project Chainage (Miles Yards)	OXD -
Design Package Risk Classification	Normal		Sheet
Alternative Reference			1 of 1
Drawing Number	133735_2A-EWR-OXD-A1_PA_7-DR-CH-010205		Revision
			B01



- NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**
- NOTES:**
1. THIS DRAWING IS NOT TO BE SCALED.
  2. ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
  3. VEHICLE TRACKING IS UNDERTAKEN WITH COMPUTER MODELLING SOFTWARE AND IS BASED ON IDEAL SITUATIONS WHERE REAL WORLD OBSTRUCTIONS ON THE ROAD NETWORK SUCH AS PARKING OR LOADING ACTIVITY WOULD NOT HAVE BEEN FORESEEN.
  4. THE MODELLING IS BASED IN 2D PLAN WHERE SWEEPED PATHS ARE INFLUENCED BY ANTICIPATED MOVEMENTS AND THEREFORE LEAD TO IDEAL APPROACH ANGLES, WHICH MIGHT NOT BE OBVIOUS IN REALITY.
  5. APPROACH SPEEDS, APPROACH ANGLES, ROAD SURFACE, WEATHER CONDITIONS AND TYRE WEAR ARE ALL FACTORS THAT WILL INFLUENCE VEHICLE PATHS.
  6. THE ACCESS IS SIGNAL CONTROLLED AND WILL OPERATE AS ONE VEHICLE IN AND ONE VEHICLE OUT AT A TIME.

**DRAFT**

Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/02/20	FOR INFORMATION				S2



**East West Rail (Western Section) Phase 2**

**ALTERNATIVE ACCESS TO CHARBRIDGE LANE ALLOTMENTS VEHICLE SWEEPED PATH ANALYSIS**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	12/02/20
Drawn	Ravikumar KN	Signed	R. KN	Date	18/12/19
Checked	Lisa Taylor	Signed	L. Taylor	Date	12/02/20
Approved	Stephen Abe	Signed	S. Abe	Date	13/02/20

Scale(s)	1:250	ELR - Project Chainage (Miles/Yards)	OXD -
Design Package Risk Classification	Normal	Sheet	1 of 1
Alternative Reference		Revision	B01

Drawing Number  
 133735\_2A-EWR-OXD-A1\_PA\_7-DR-CH-010206

**KEY:**

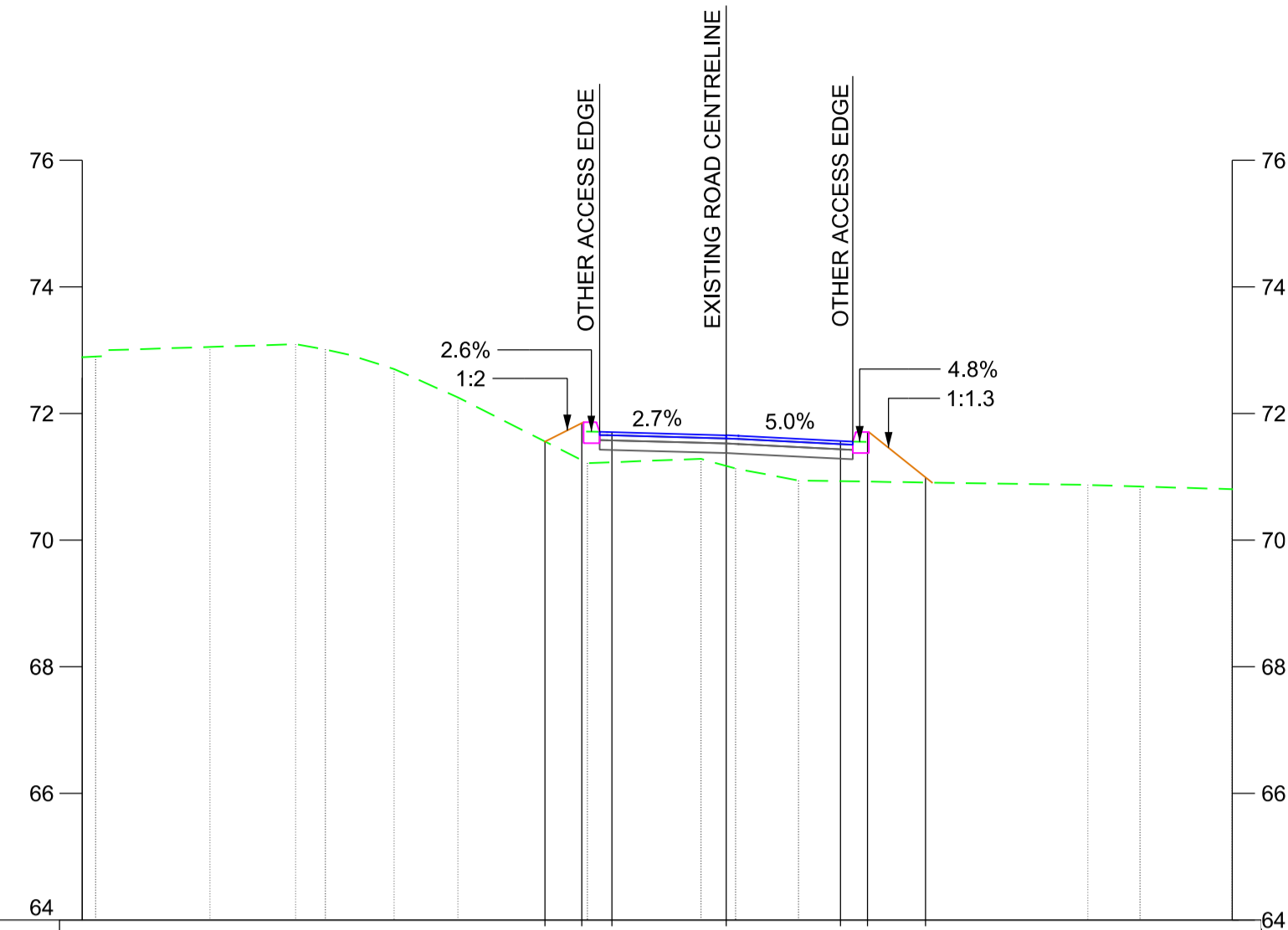
- VEHICLE TRACKING
- HIGHWAY BOUNDARY
- APPLICATION SITE BOUNDARY
- PROPOSED ROAD EDGE

**VEHICLE DETAILS**

4.6t LIGHT VAN  
 OVERALL LENGTH 5.885m  
 OVERALL WIDTH 2.000m  
 OVERALL BODY HEIGHT 2.526m  
 MIN BODY GROUND CLEARANCE 0.299m  
 MAX TRACK WIDTH 1.765m  
 LOCK TO LOCK TIME 4.00s  
 KERB TO KERB TURNING RADIUS 6.000m

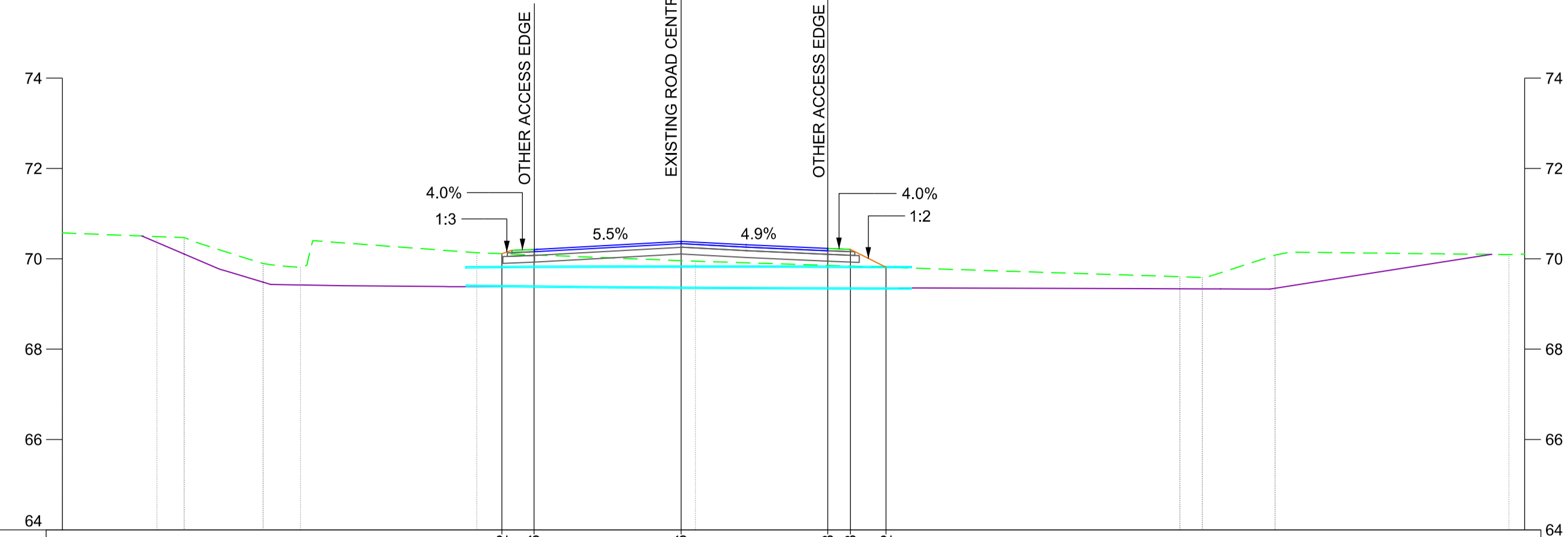
**NOTES:**

1. THIS DRAWING IS NOT TO BE SCALED.
2. ALL DIMENSIONS AND LEVELS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.



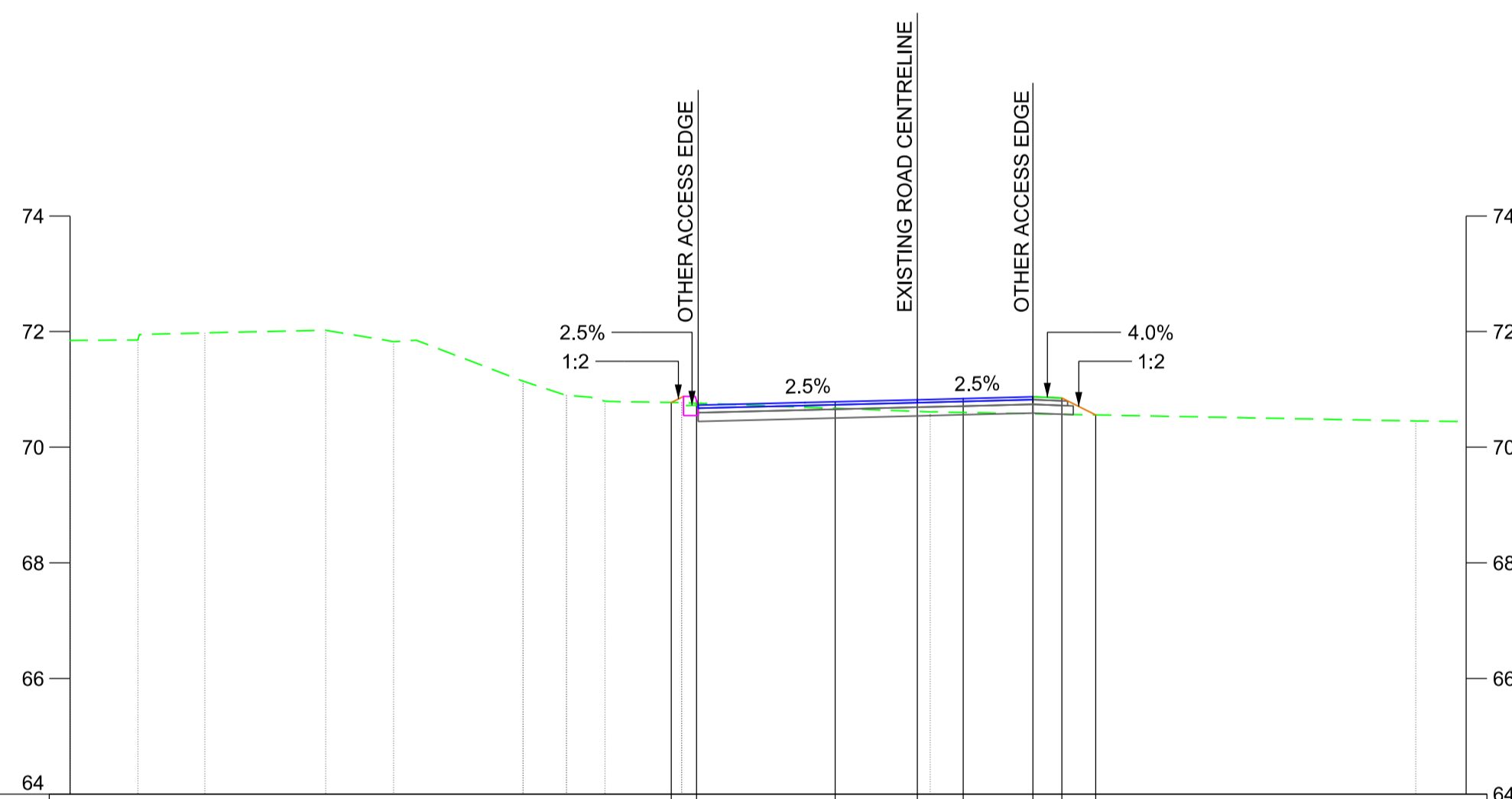
DESIGN LEVELS						71.557	71.848	71.705	71.656	71.566	71.709	70.991	
EXISTING LEVELS	72.899	73.052	73.095	73.012	72.703	72.255	71.216	71.283	71.131	70.940		70.872	70.846
DESIGN OFFSET						-2.865	-2.283	-1.807	-0.000	1.807	2.235	3.152	

CHAINAGE - 10.0000



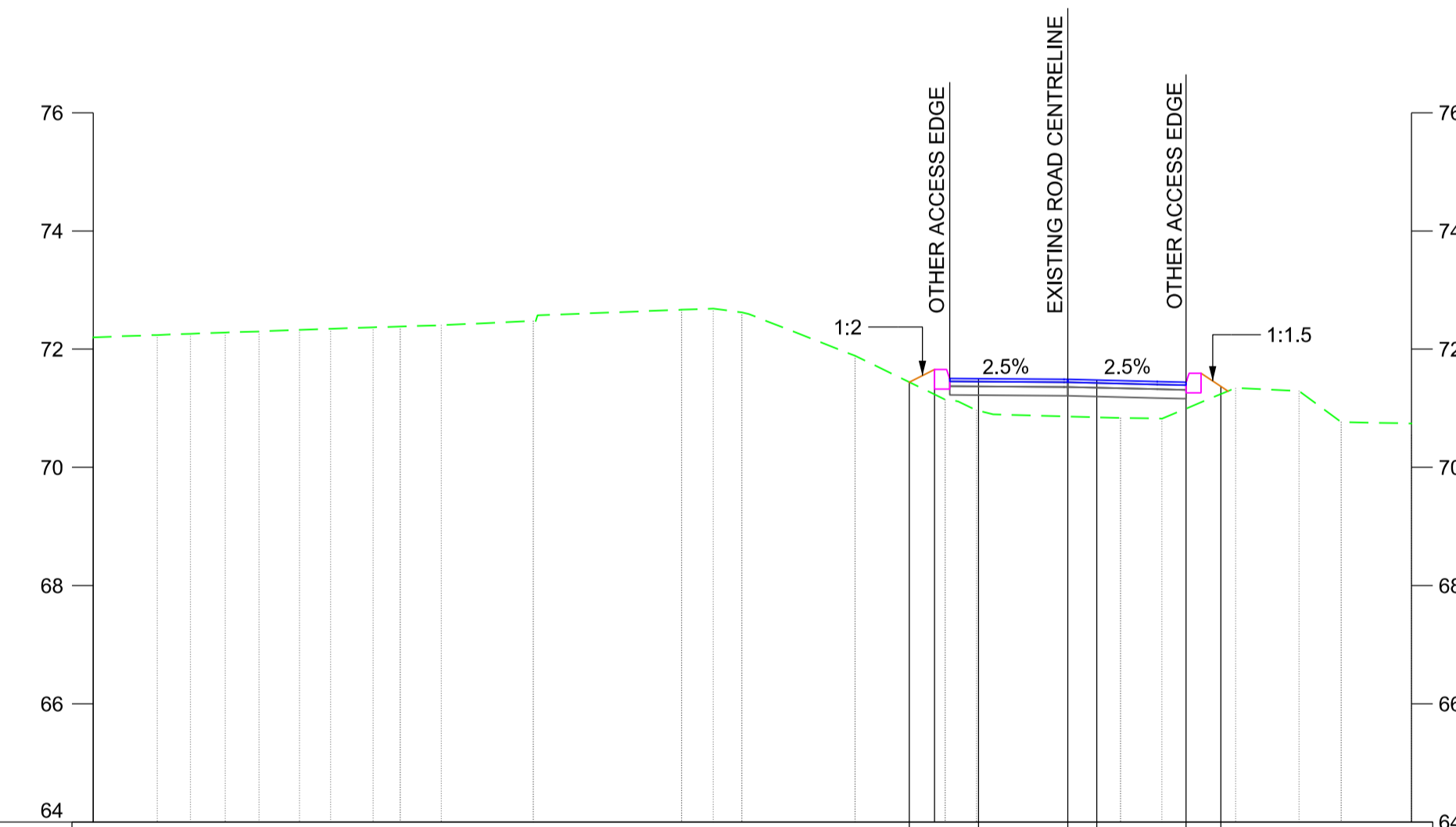
DESIGN LEVELS							70.112	70.206	70.386	70.228	70.208	69.812		
EXISTING LEVELS	70.491	70.468	69.892	69.813		70.134			69.947		69.604	69.587	70.080	70.093
DESIGN OFFSET						-3.971	-3.259	0.000	3.250	3.750	4.541			

CHAINAGE - 14.0000



DESIGN LEVELS							70.775	70.807	70.786	70.821	70.841	70.871	70.851	70.558
EXISTING LEVELS	71.854	71.977	72.024	71.827	71.143	70.897	70.795	70.773		70.612				70.454
DESIGN OFFSET							-4.255	-3.818	-1.419	0.000	0.797	2.001	2.501	3.088

CHAINAGE - 68.0000



DESIGN LEVELS										71.442	71.656	71.501	71.491	71.475	71.441	71.371							
EXISTING LEVELS	72.239	72.260	72.281	72.299	72.327	72.344	72.369	72.382	72.405	72.477	72.667	72.686	72.621	71.888	71.146	70.966	70.836	70.825	71.343	71.283	70.765		
DESIGN OFFSET											-2.683	-2.294	-1.511	-0.000	0.469	2.000	2.588						

CHAINAGE - 90.0000

**KEY:**

- EXISTING GROUND
- PROPOSED CARRIAGEWAY
- PROPOSED ROAD PAVEMENT
- PROPOSED GRASS VERGE
- PROPOSED EARTHWORKS
- PROPOSED DITCH
- PROPOSED CULVERT
- BULL NOSED KERB



B01	13/02/20	FOR INFORMATION		N.T.	L.T.	S.A.
Rev	Date	Description of Revisions	Desd	Chkd	Appr	
Status	SHARED - for Information					S2



Project  
**East West Rail  
(Western Section)  
Phase 2**

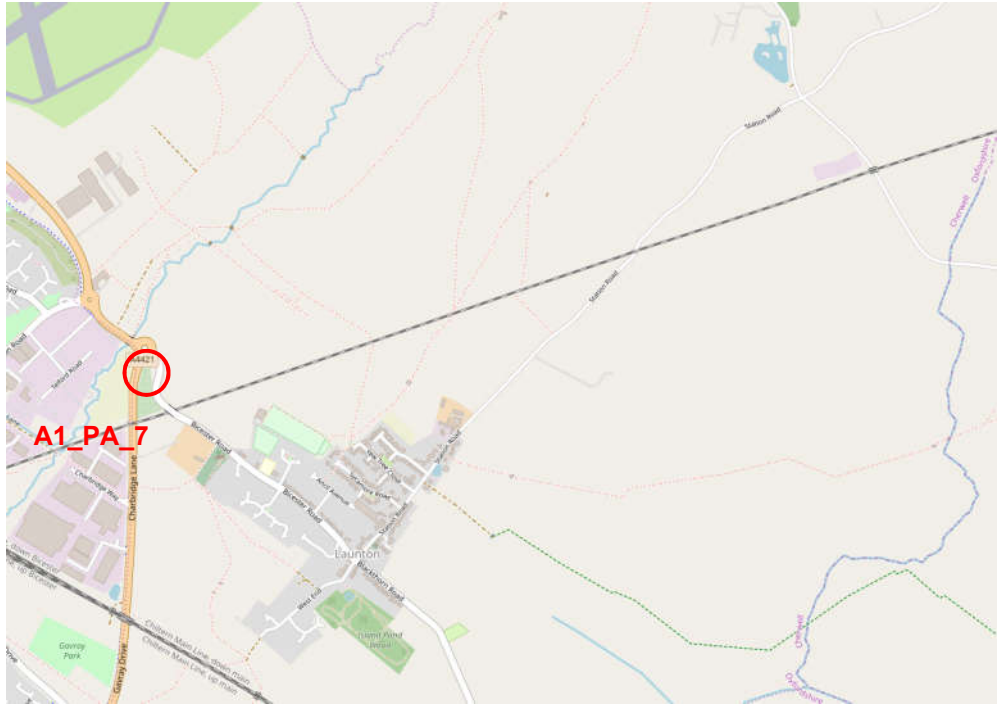
**ALTERNATIVE ACCESS TO  
CHARBRIDGE LANE ALLOTMENTS  
EXISTING AND PROPOSED  
SITE SECTION PLANS**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	12/02/20
Drawn	Ravikumar KN	Signed	R. KN	Date	06/01/20
Checked	Lisa Taylor	Signed	L. Taylor	Date	12/02/20
Approved	Stephen Abe	Signed	S. Abe	Date	13/02/20

Scale(s)	ELR - Project Chainage (Miles Yards)	Sheet	1 of 1
AS SHOWN	OXD -	Design Package Risk Classification	Normal
Alternative Reference		Revision	B01

Drawing Number  
133735\_2A-EWR-OXD-A1\_PA\_7-DR-CH-010207

<b>Departure Reference:</b>	N003	<b>Departure Type:</b>	General
<b>Document File Name:</b>	133735_RW-EWR-XX-XX-RP-CH-000108	<b>Local Highway Authority:</b>	Oxfordshire County Council

<b>Departure Title:</b>	Reduced visibility standard at the junction with the highway network at: <ul style="list-style-type: none"> <li>Other Access - A1_PA_7 (Bicester Road)</li> </ul>
<b>Departure Location:</b>	
<b>Supporting Information:</b>	<p><b>General Arrangement Drawing Numbers</b>          133735_2A-EWR-OXD-A1_PA_7-DR-CH-010001</p> <p><b>Visibility Splay Drawing Numbers</b>          133735_2A-EWR-OXD-A1_PA_7-DR-CH-010008</p>
<b>Consultations:</b>	Oxfordshire County Council

DEPARTURE DETAILS

<b>Relevant Standards:</b>	DMRB, Volume 6, Section 2, Part 6, TD 41/95 DMRB, Volume 6, Section 2, Part 6, TD 9/93
<b>Clause/Paragraphs:</b>	TD 41/95, Paragraph 2.22



	<p>2.22 The "Y" distance along the major road, the all purpose trunk road, shall be determined from Table 2/1:</p> <table border="1" data-bbox="448 383 963 483"> <tr> <td>Design speed of major road (kph)</td> <td>120</td> <td>100</td> <td>85</td> <td>70</td> <td>60</td> <td>50</td> </tr> <tr> <td>"Y" Distance (m)</td> <td>295</td> <td>215</td> <td>160</td> <td>120</td> <td>90</td> <td>70</td> </tr> </table> <p><b>Table 2/1: Value of "Y" Distance</b></p> <p>Note, these figures correspond to the Desirable Minimum Stopping Sight Distances set out in Table 3 in TD9 (DMRB 6.1.1). Relaxations are not available on these figures.</p>	Design speed of major road (kph)	120	100	85	70	60	50	"Y" Distance (m)	295	215	160	120	90	70
Design speed of major road (kph)	120	100	85	70	60	50									
"Y" Distance (m)	295	215	160	120	90	70									
<b>Departure Description:</b>	Visibility from minor arm along major road is sub-standard.														
<b>Associated Departures:</b>	None														
<b>Reason for Departure:</b>	It is not possible to provide the full visibility at the access listed above.														

DESIGN DETAILS

<b>Design Year Traffic Flow (AADT):</b>	Unknown						
<b>Design Speed:</b>	<p>A speed survey was carried out by Oxfordshire County Council on the Bicester Road at two locations North and South of the proposed temporary A1 compound access. Site 1 is deemed to be the most appropriate location given its close proximity to Compound Access A1_CA_6.</p> <p>The 85th percentile speed survey results are as follows: -</p> <table border="1" data-bbox="429 1352 1008 1473"> <thead> <tr> <th>Mph (kph)</th> <th>Northbound</th> <th>Southbound</th> </tr> </thead> <tbody> <tr> <td>Site 1</td> <td>32.7 (52.7)</td> <td>35.5 (57.2)</td> </tr> </tbody> </table> <p>These figures are used for the calculation of SSD. However, a further reduction of 4kph is to be applied in line with TD 22/81 Paragraph 3.4, which states;</p> <p>3.4 <u>Speeds (improvement of alignment and junctions)</u></p> <p>Whereas for speed limits the 85 percentile dry weather spot speed of cars is required, for improvement of alignments and major/minor junctions or accesses, and for new major/minor junctions or accesses on existing roads, the normal design methods are based on the 85 percentile wet weather journey speed of vehicles. The precise point at which the measurements are taken and the timing is important. A point just before the scheme length and a time of free flow are suitable. Measurements must be taken at both ends of the scheme so that traffic approaching from both directions is covered. If different values are obtained the higher speed value should be used in the design process. To get from the dry weather spot speed of vehicles measured to the wet weather journey speed used in design one of the following correction factors should be used -</p> <p style="padding-left: 40px;">For AP Dual carriageways ... deduct 8kph</p> <p style="padding-left: 40px;">For AP Single carriageways ... deduct 4kph</p> <p>The speed survey locations are shown in the figure below.</p>	Mph (kph)	Northbound	Southbound	Site 1	32.7 (52.7)	35.5 (57.2)
Mph (kph)	Northbound	Southbound					
Site 1	32.7 (52.7)	35.5 (57.2)					



#### JUSTIFICATION

<p><b>Safety:</b></p>	<p>TD 41/95, Paragraph 2.21 states:</p> <div data-bbox="443 1019 965 1534" style="border: 2px solid black; padding: 5px;"><p>2.21 Normally, an "X" distance of 4.5m shall be provided for a direct access where use in the design year is forecast not to exceed 500 AADT. The choice of set back distance is related to the forecast traffic using the access. For lightly used accesses, for example those serving a single dwelling or a small cul-de-sac of a half a dozen dwellings, the set back "X" may be reduced to 2.4m. The 2.4m set back relates to normally only one vehicle wishing to join the trunk road at one time. The 4.5m covers the situation where two light vehicles may want to accept the same gap in the trunk road traffic. Where in the case of lightly used accesses the site conditions are particularly difficult, then the set back "X" may be reduced to 2.0m as a Relaxation. Any further reduction would be a Departure from Standard under para 1.15.</p></div> <p>The access has been designed with an 'x' distance of 2.4m, in line with TD41/95 Paragraph 2.21 which is deemed appropriate due to the low volumes of traffic that is anticipated to use this access.</p>
-----------------------	--

2.22 The "Y" distance along the major road, the all purpose trunk road, shall be determined from Table 2/1:

Design speed of major road (kph)	120	100	85	70	60	50
"Y" Distance (m)	295	215	160	120	90	70

**Table 2/1: Value of "Y" Distance**

Note, these figures correspond to the Desirable Minimum Stopping Sight Distances set out in Table 3 in TD9 (DMRB 6.1.1). Relaxations are not available on these figures.

The specified and achievable SSD in each direction based on their design speed are shown in the table below (specified SSD has been calculated with reaction times and decelerations rates in line with TD 9/93, Table 3);

Location	Speed Survey / TD22 Design Speed (kph)	Distance ('y')		'x' Distance Achieved (m)
		Specified (m)	Achieved (m)	
<b>A1_PA_7 RHS (towards overbridge)</b>	53	64	74	2.4
<b>A1_PA_7 LHS (towards roundabout)</b>	57	74	46	2.4

Visibility has been maximised as far as reasonably practicable. The constraints are beyond the control of EWR Alliance and it is not possible to amend the constraints or move the access location, due to the requirements of maintenance and construction of EWR2.

A1\_PA\_7 visibility to the left is restricted due to its proximity to the existing roundabout on Bicester Road. It is recognised that in both directions, vehicles will be travelling slower than the design speed of the road. In the northern direction, vehicles will be travelling slower exiting the roundabout and in the southern direction, vehicles will be slowing on approach to the roundabout - getting ready to stop, if necessary.

<b>Congestion/Delay:</b>	n/a
<b>Environment/Sustainability:</b>	It is not proposed to provide the full 'y' distance, as this would involve heavy vegetation clearance, including several mature trees.
<b>Accessibility:</b>	n/a
<b>Maintenance:</b>	Any vegetation trimming required to provide the 'y' distances, will be maintained during the course of the works, with this carried out at the appropriate time of year.
<b>Economic (whole life cost):</b>	n/a

MITIGATION

<b>Risk Assessment Classification:</b>	n/a
--	-----

<b>Other Options Considered:</b>	n/a
<b>Mitigation:</b>	n/a

**CONCLUDING COMMENTS**

The design speed calculated along the Bicester Road is 57kph heading southbound and 53kph heading northbound using the speed survey data and TD22/81. The sub-standard 'y' distance at A1\_PA\_7 is due to its proximity to the roundabout. It is recognised at these locations; vehicles will be slower approaching the roundabout and also travelling slower on exit from the roundabout. Therefore, the proposed 'y' distance is commensurate with the road layout and vehicle movements at the roundabout.

**ALLIANCE ASSURANCE**

	<b>Name</b>	<b>Signed</b>	<b>Date</b>
<b>Originator</b>	<b>Andrew Kirk</b>	<i>Andrew Kirk</i>	<b>09/06/2020</b>
<b>Reviewer</b>	<b>Lisa Taylor</b>	<i>Lisa Taylor</i>	<b>09/06/2020</b>
<b>Authorised</b>	<b>Gareth Johnston</b>	<i>Gareth Johnston</i>	<b>09/06/2020</b>

**LOCAL HIGHWAY AUTHORITY RESPONSE**

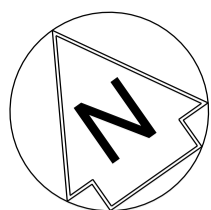
For completion by Local Highway Authority Representative

<b>Category</b>		<b>Tick</b>
<b>1</b>	<b>Approved</b>	
<b>2</b>	<b>Approved with comments*</b>	
<b>3</b>	<b>Rejected with comments*</b>	

<b>Name</b>	<b>Position</b>	<b>Signed</b>	<b>Date</b>

\*comments are to be provided on the form provided. Responses will be provided back to the LHA on these forms and close out monitored. Link to template: [133735\\_RW-EWR-XX-XX-CM-CH-000002](#)

Note: Where comments impact upon a design decision or have multidiscipline impacts, they will be entered into BIMCollab the projects online issues management system.



	PIPE-1	
	UPSTREAM	DOWNSTREAM
EASTINGS:	178975.968	176973.487
NORTHINGS:	141706.979	141716.530
EXISTING DITCH LEVELS:	70.151	69.792
PIPE INVERT:	69.383	69.354
HEADWALL:	TYPE 1	TYPE 1
PIPE TYPE:	FILTER PIPE	
MINIMUM COVER:	350mm	

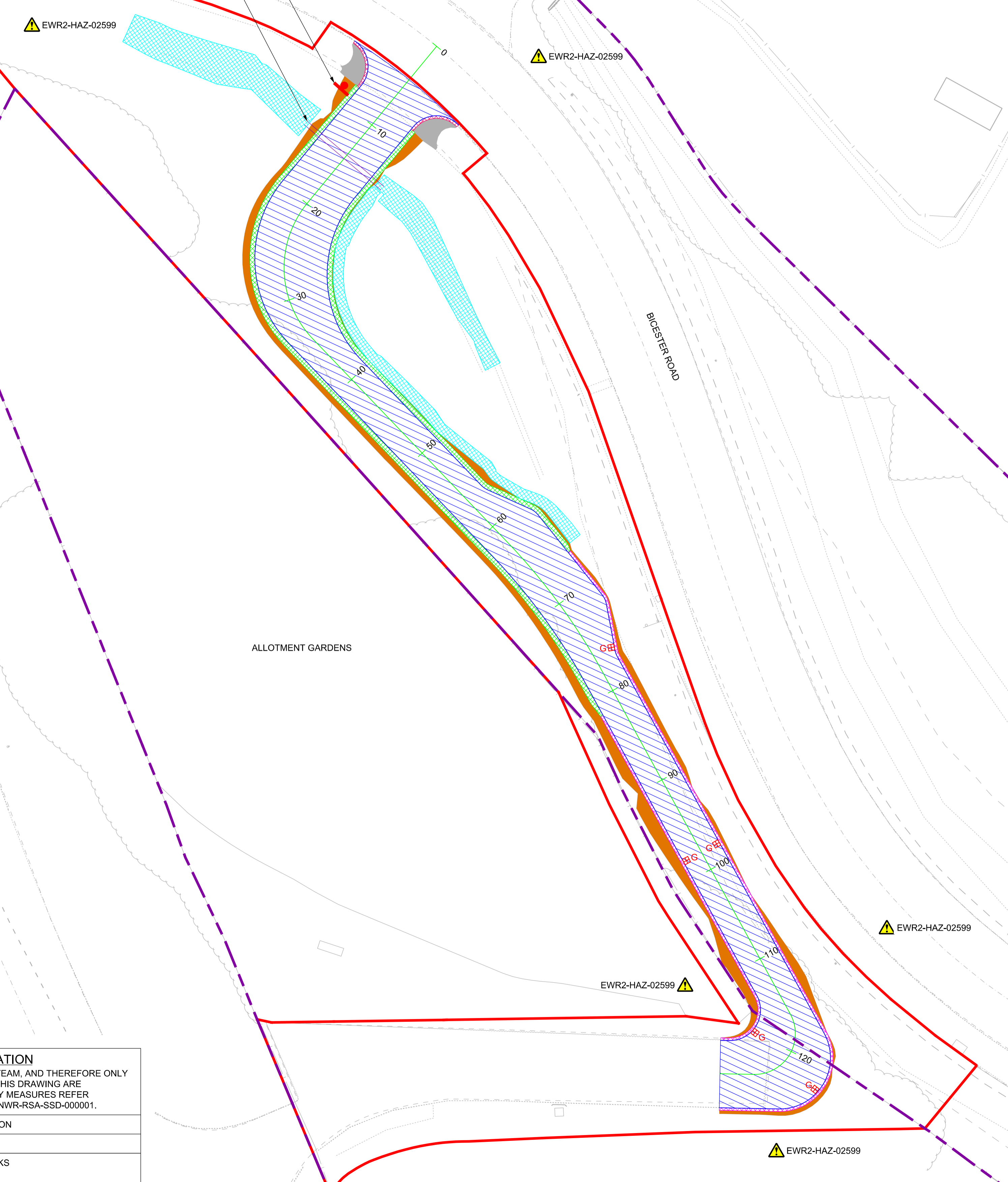
NOTES:

- PIPE PERFORATIONS ARE TO BE LAID FACING UPWARDS.
- REFER TO STANDARD DETAIL DRAWING 133735\_RW-EWR-XX-XX-DR-CH-000131 FOR PIPE SURROUND AND BEDDING TYPES.
- THE EXISTING DITCH INVERT LEVELS ARE TAKEN FROM AVAILABLE TOPOGRAPHIC SURVEY INFORMATION, WHERE AVAILABLE. THE DELIVERY TEAM WILL NEED TO CONFIRM DITCH LEVELS BEFORE INSTALLING CULVERT. ANY DISCREPANCIES IN LEVEL WILL NEED TO BE DISCUSSED WITH THE DESIGNER.

**CULVERT REQUIREMENTS**

- NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**
- NOTES:**
- THIS DRAWING IS NOT TO BE SCALED.
  - ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE HIGHWAY DESIGN PACKAGE OF DRAWINGS AND DOCUMENTS.
  - WHEREVER REQUIRED, ROAD MARKINGS ARE TO BE LAID IN ACCORDANCE WITH THE TRAFFIC SIGN REGULATIONS AND GENERAL DIRECTIONS 2016 & 'TRAFFIC SIGNS MANUAL CHAPTER 5 (2003)'.
  - GULLY POSITIONS SHOWN ARE INDICATIVE ONLY. REFER DRAINAGE DRAWINGS FOR THEIR FINAL LOCATIONS.

PLEASE REFER TO SIGN DIA 612 WITH NO BACKING BOARD.  
PIPE-1: REPROFILED HIGHWAY DITCH TO BE CULVERTED. SEE CULVERT TABLE FOR REQUIREMENTS.



**KEY:**

	HIGHWAY BOUNDARY
	APPLICATION SITE BOUNDARY
	EXISTING ROAD EDGE
	PROPOSED ROAD EDGE
	PROPOSED DRAINAGE CULVERT
	NEW PAVEMENT
	GRASS VERGE
	PROPOSED EARTHWORKS
	PROPOSED DITCH
	BULL NOSED KERB
	CDKU KERB
	REPROFILED CYCLE TRACK
	PROPOSED TRAFFIC SIGN
	PROPOSED GULLY

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**  
THE WORKS ARE TO BE UNDERTAKEN BY A COMPETENT DELIVERY TEAM, AND THEREFORE ONLY EXCEPTIONAL RISKS RELATING TO THE WORKS ASSOCIATED WITH THIS DRAWING ARE IDENTIFIED BELOW. FOR FURTHER DETAILS AND PROPOSED SAFETY MEASURES REFER 'EWR PHASE 2 HAZARD LOG WORKING COPY' EB DOC. REF: 133735-NWR-RSA-SSD-000001.

ID	HAZARD DESCRIPTION
EWR2-HAZ-02599	PRESENCE OF BURIED SERVICES / UTILITIES
	INDICATES PROJECT RISKS (EWR2-DRIS-.....)
	INDICATES H&S RISKS (EWR2-HAZ-.....)



B01	13/02/20	FOR INFORMATION	N.T.	L.T.	S.A.
Rev	Date	Description of Revisions	Desd	Chkd	Appr
Status	SHARED - for Information				S2

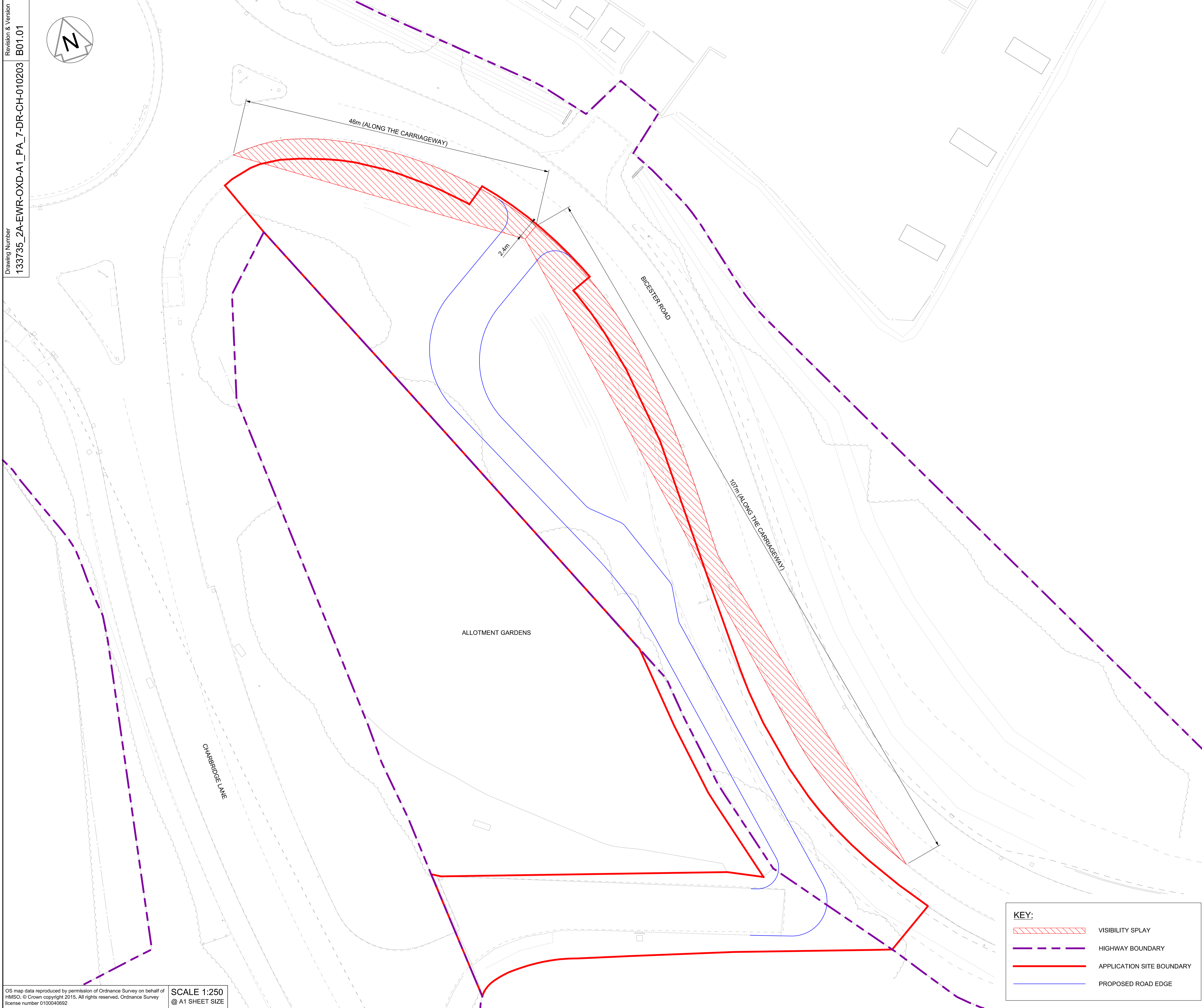
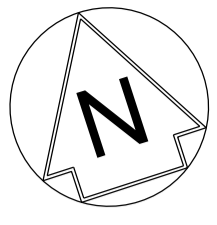


Project  
**East West Rail (Western Section) Phase 2**

Drawing Title  
**ALTERNATIVE ACCESS TO CHARBRIDGE LANE ALLOTMENTS SITE PLAN - PROPOSED**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	12/02/20
Drawn	Ravikumar KN	Signed	R. KN	Date	28/11/19
Checked	Lisa Taylor	Signed	L. Taylor	Date	12/02/20
Approved	Stephen Abe	Signed	S. Abe	Date	13/02/20

Scale(s)	1:250	ELR - Project Chainage (Miles Yards)	OXD -
Design Package Risk Classification	Normal		
Alternative Reference	Sheet 1 of 1		
Drawing Number	Revision B01		



**NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)**

**NOTES:**

1. THIS DRAWING IS NOT TO BE SCALED.
2. ALL DIMENSIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.
3. THE SITE TEAM NEEDS TO ASCERTAIN THE REQUIRED CLEARANCE BASED ON THE VISIBILITY SPLAY, INTERVISIBILITY ZONE AND OR WORKS REQUIRED FOR THIS SITE.

**DRAFT**

Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	13/02/20	FOR INFORMATION				N.T. L.T. S.A
Status						S2



Project  
**East West Rail (Western Section) Phase 2**

Drawing Title  
**ALTERNATIVE ACCESS TO CHARBRIDGE LANE ALLOTMENTS VISIBILITY SPLAY**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	12/02/20
Drawn	Ravikumar KN	Signed	R. KN	Date	28/11/19
Checked	Lisa Taylor	Signed	L. Taylor	Date	12/02/20
Approved	Stephen Abe	Signed	S. Abe	Date	13/02/20

Scale(s)	1:250	ELR - Project Chainage (Miles Yards)	OXD -	Sheet	1 of 1
Design Package Risk Classification	Normal			Revision	B01

Drawing Number  
 133735\_2A-EWR-OXD-A1\_PA\_7-DR-CH-010203

**KEY:**

	VISIBILITY SPLAY
	HIGHWAY BOUNDARY
	APPLICATION SITE BOUNDARY
	PROPOSED ROAD EDGE