

DRAFT

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



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

Drawing Title
**JUNCTION IMPROVEMENT A2_J_9
GENERAL ARRANGEMENT**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	06/12/19
Drawn	Ravikumar KN	Signed	R. KN	Date	08/03/19
Checked	Lisa Taylor	Signed	L. Taylor	Date	09/12/19
Approved	Stephen Abe	Signed	S. Abe	Date	09/12/19

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-A2_J_9-DR-CH-010001

KEY:

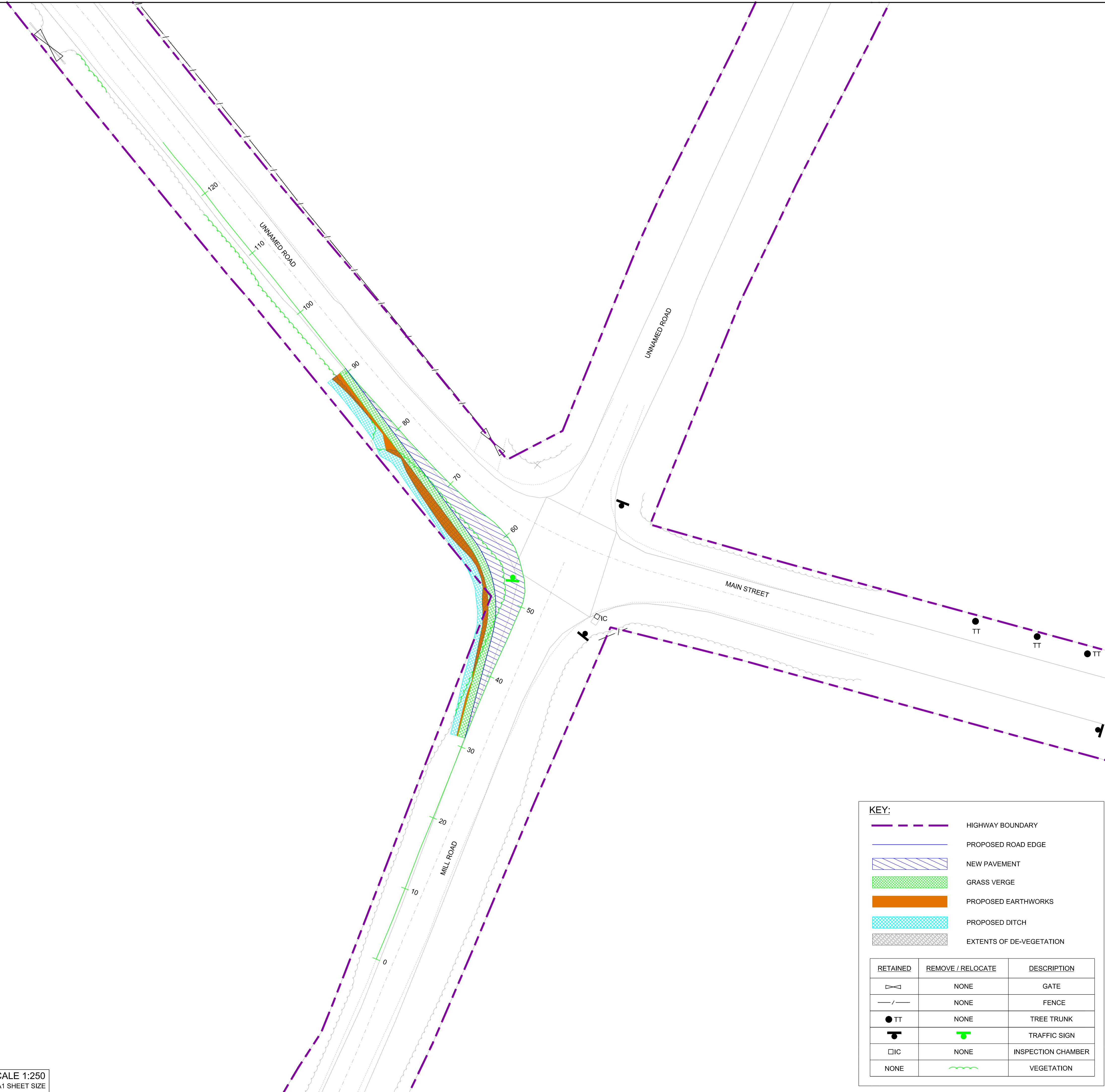
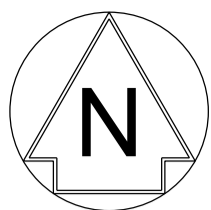
	HIGHWAY BOUNDARY
	EXISTING ROAD EDGE
	PROPOSED ROAD EDGE
	PROPOSED WHITE ROAD MARKING
	NEW PAVEMENT
	GRASS VERGE
	PROPOSED EARTHWORKS
	PROPOSED DITCH
	RELOCATED TRAFFIC SIGN
	PROPOSED POST & WIRE FENCE

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-02100	PRESENCE OF BURIED SERVICES/ UTILITIES

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. 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 NEW TEMPORARY CARRIAGEWAY EXTENTS 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.



Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	12/12/19	FOR INFORMATION				S2
Status						SHARED - for Information



Project
 East West Rail
 (Western Section)
 Phase 2

Drawing Title
 JUNCTION IMPROVEMENT A2_J_9
 SITE CLEARANCE

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	06/12/19
Drawn	Ravikumar KN	Signed	R. KN	Date	08/03/19
Checked	Garth Johnston	Signed	G. Johnston	Date	06/12/19
Approved	Stephen Abe	Signed	S. Abe	Date	09/12/19

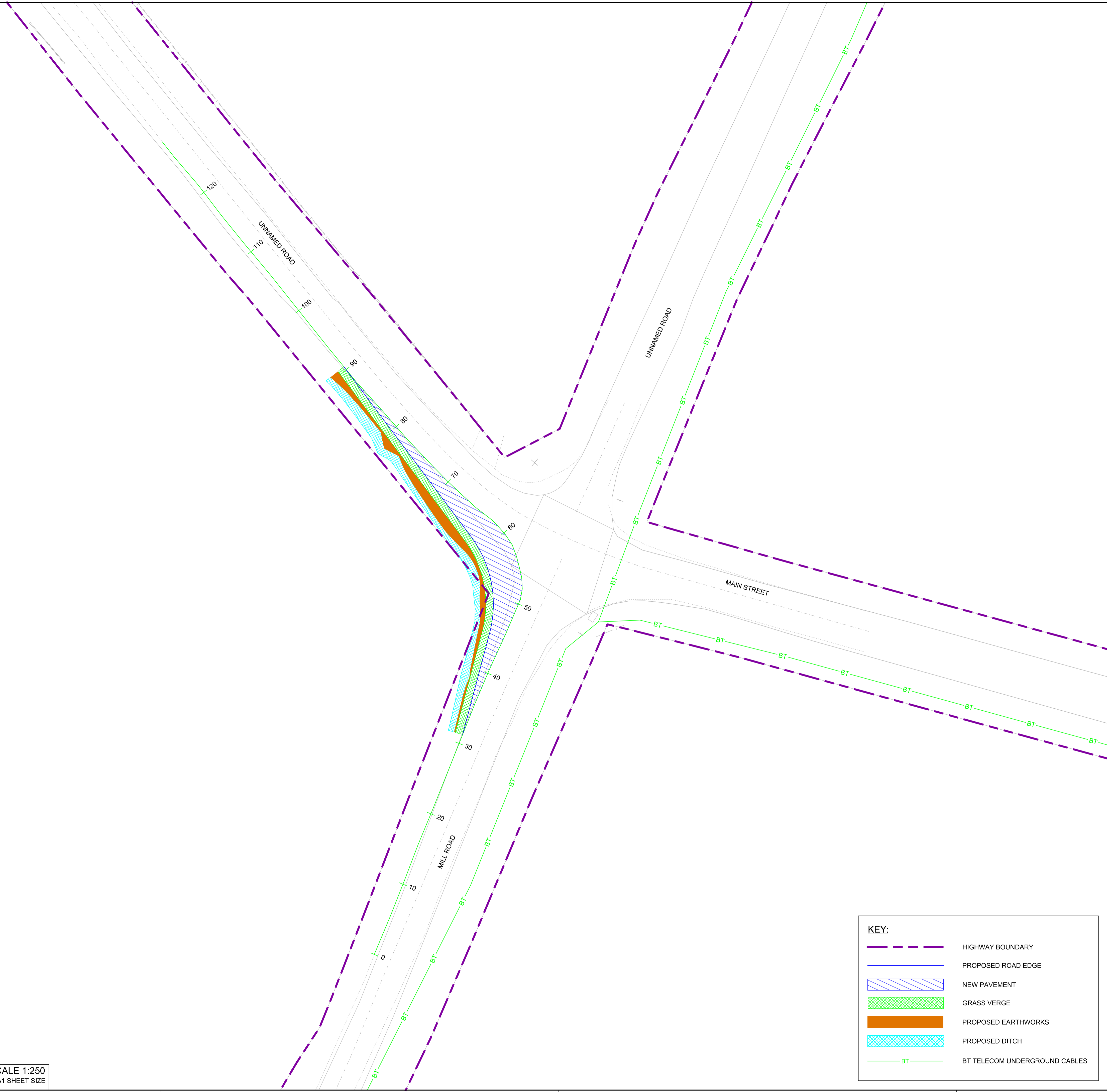
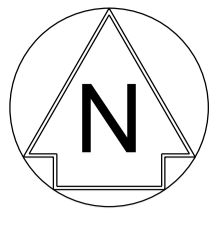
Scale(s)	1:250	ELR - Project Chainage (Miles Yards)	OXD -
Design Package Risk Classification	Normal	Sheet	1 of 1
Alternative Reference		Revision	B01

Drawing Number
 133735_2A-EWR-OXD-A2_J_9-DR-CH-010003

KEY:

- HIGHWAY BOUNDARY
- PROPOSED ROAD EDGE
- NEW PAVEMENT
- GRASS VERGE
- PROPOSED EARTHWORKS
- PROPOSED DITCH
- EXTENTS OF DE-VEGETATION

RETAINED	REMOVE / RELOCATE	DESCRIPTION
	NONE	GATE
	NONE	FENCE
	NONE	TREE TRUNK
		TRAFFIC SIGN
	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.



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



Project
East West Rail (Western Section) Phase 2

Drawing Title
JUNCTION IMPROVEMENT A2_J_9 EXISTING UTILITIES

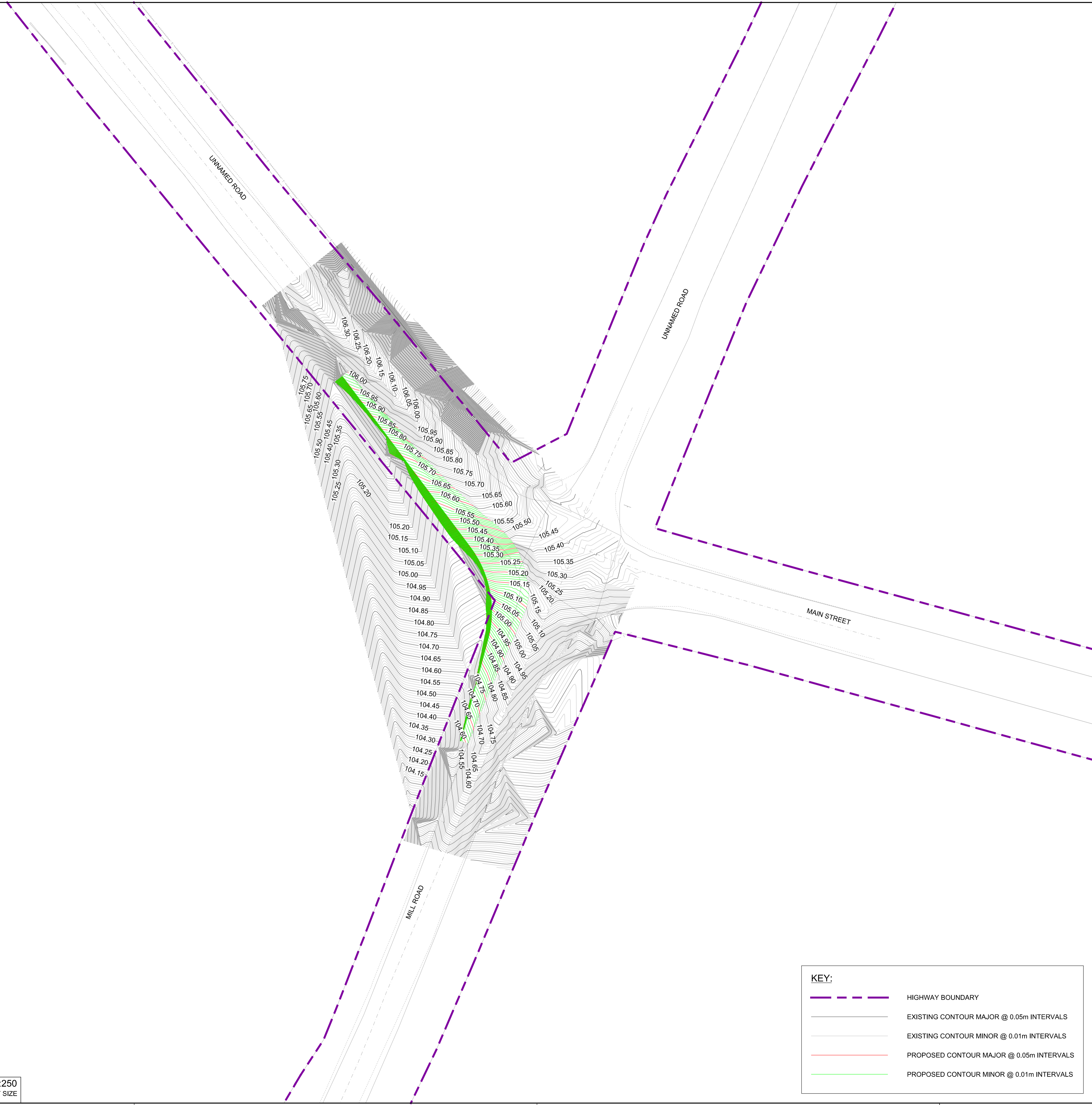
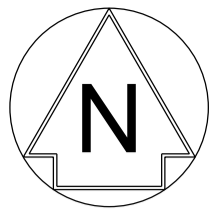
Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	06/12/19
Drawn	Ravikumar KN	Signed	R. KN	Date	08/03/19
Checked	Garth Johnston	Signed	G. Johnston	Date	06/12/19
Approved	Stephen Abe	Signed	S. Abe	Date	09/12/19

Scale(s)
1:250
ELR - Project Chainage (Miles Yards)
OXD -
Design Package Risk Classification
Normal
Alternative Reference
Drawing Number
133735_2A-EWR-OXD-A2_J_9-DR-CH-010004

Sheet 1 of 1
Revision B01

KEY:

	HIGHWAY BOUNDARY
	PROPOSED ROAD EDGE
	NEW PAVEMENT
	GRASS VERGE
	PROPOSED EARTHWORKS
	PROPOSED DITCH
	BT TELECOM UNDERGROUND CABLES



- 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.

DRAFT

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



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

Drawing Title
**JUNCTION IMPROVEMENT A2_J_9
 EXISTING AND PROPOSED
 CONTOURS**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	06/12/19
Drawn	Ravikumar KN	Signed	R. KN	Date	08/03/19
Checked	Garth Johnston	Signed	G. Johnston	Date	06/12/19
Approved	Stephen Abe	Signed	S. Abe	Date	09/12/19

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

Design Package Risk Classification
Normal

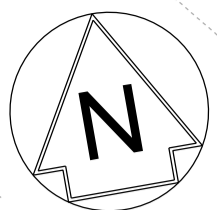
Alternative Reference

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



UNNAMED ROAD

UNNAMED ROAD

MAIN STREET

MILL ROAD

- 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	Suitability
B01	12/12/19	FOR INFORMATION				S2



Project
East West Rail (Western Section) Phase 2

Drawing Title
JUNCTION IMPROVEMENT A2_J_9 VEHICLE SWEEPED PATH ANALYSIS

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/12/19
Drawn	Ravikumar KN	Signed	R. KN	Date	08/03/19
Checked	Lisa Taylor	Signed	L. Taylor	Date	10/12/19
Approved	Stephen Abe	Signed	S. Abe	Date	10/12/19

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-A2_J_9-DR-CH-010010

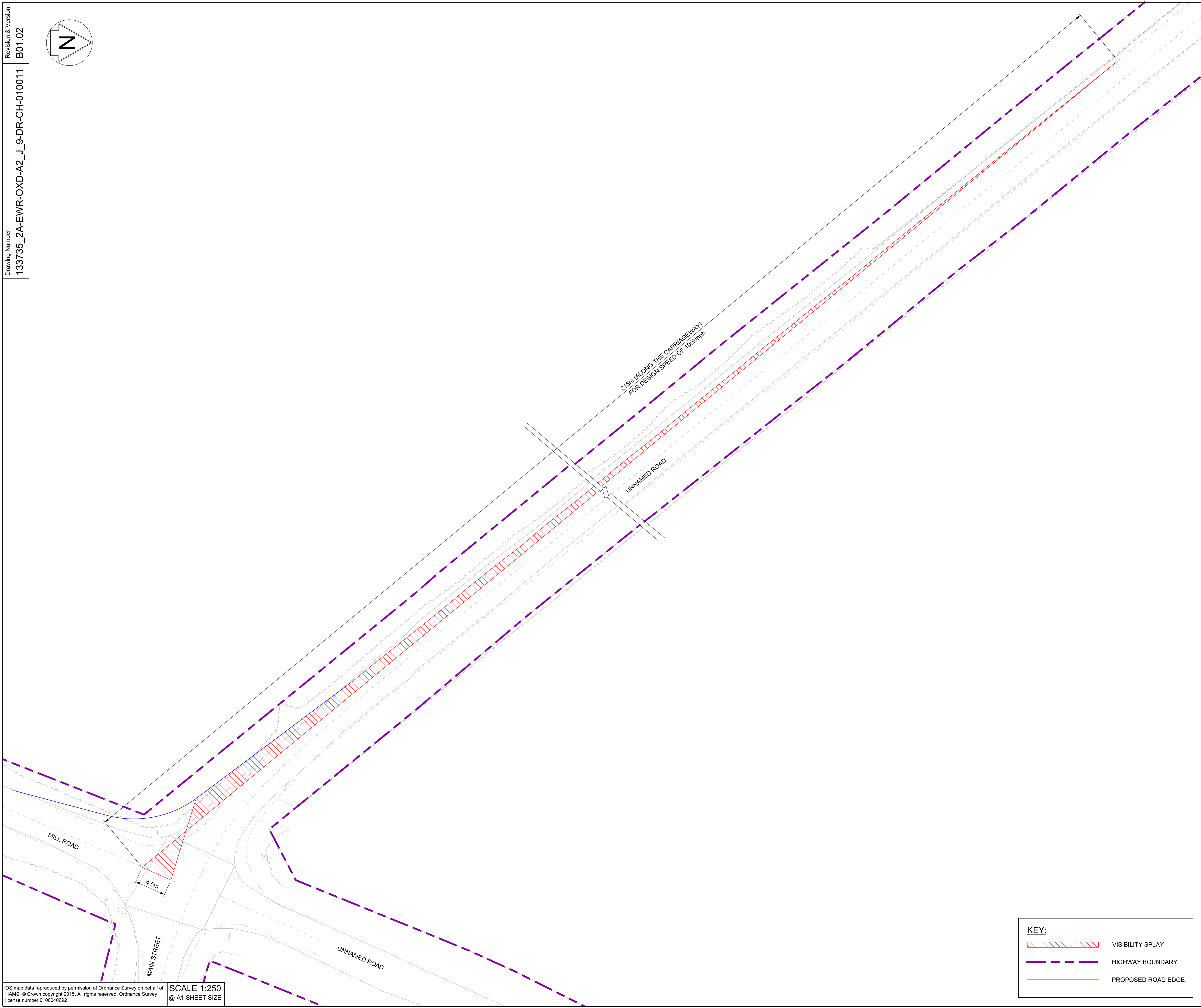
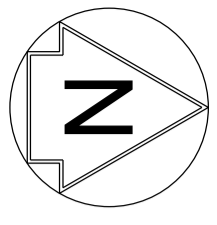
KEY:

- VEHICLE TRACKING
- HIGHWAY BOUNDARY
- PROPOSED ROAD EDGE

VEHICLE DETAILS

FTA DESIGN LG RIGID VEHICLE (1998)

- OVERALL LENGTH 7.170m
- OVERALL WIDTH 2.300m
- OVERALL BODY HEIGHT 3.580m
- MIN BODY GROUND CLEARANCE 0.375m
- TRACK WIDTH 2.120m
- LOCK TO LOCK TIME 3.00s
- KERB TO KERB TURNING RADIUS 7.000m

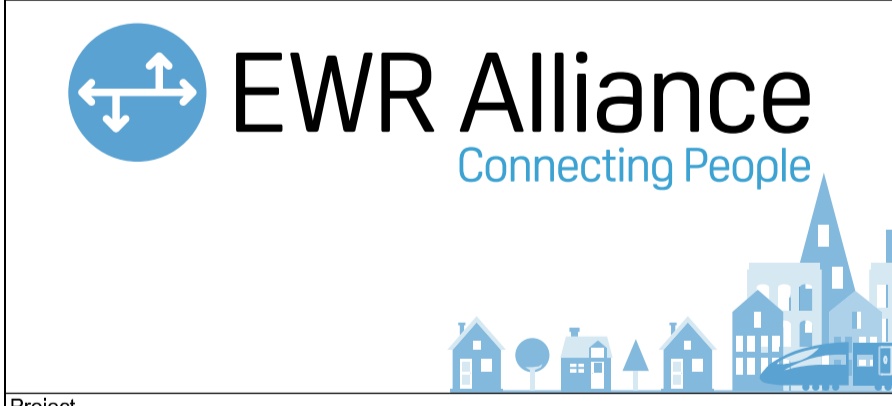


NETWORK RAIL (EAST WEST
RAIL WESTERN SECTION PHASE 2)

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



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



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

Drawing Title
**JUNCTION IMPROVEMENT A2_J_9
VISIBILITY SPLAY**

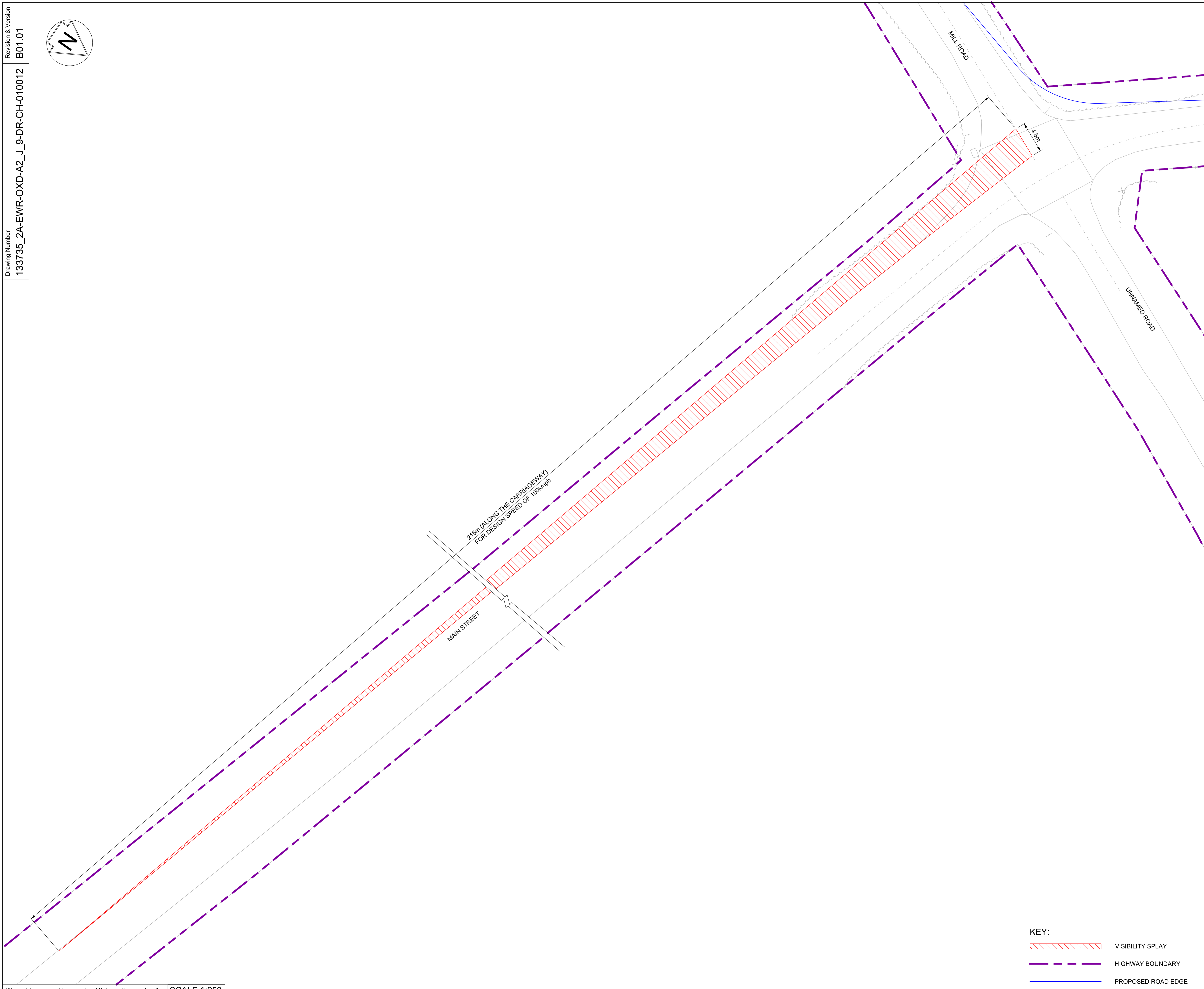
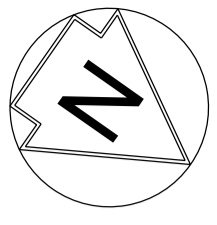
Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/12/19
Drawn	Ravikumar KN	Signed	R. KN	Date	29/03/19
Checked	Lisa Taylor	Signed	L. Taylor	Date	10/12/19
Approved	Stephen Abe	Signed	S. Abe	Date	10/12/19

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-A2_J_9-DR-CH-010011

KEY:

	VISIBILITY SPLAY
	HIGHWAY BOUNDARY
	PROPOSED ROAD EDGE



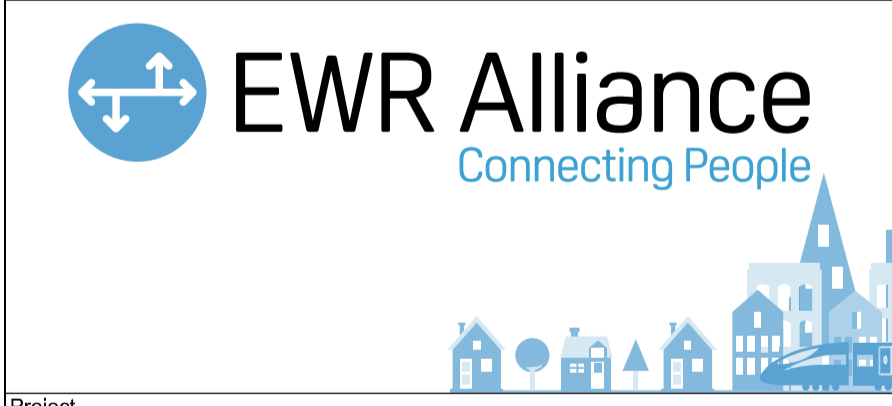
NETWORK RAIL (EAST WEST RAIL WESTERN SECTION PHASE 2)

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	12/12/19	FOR INFORMATION				S2



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

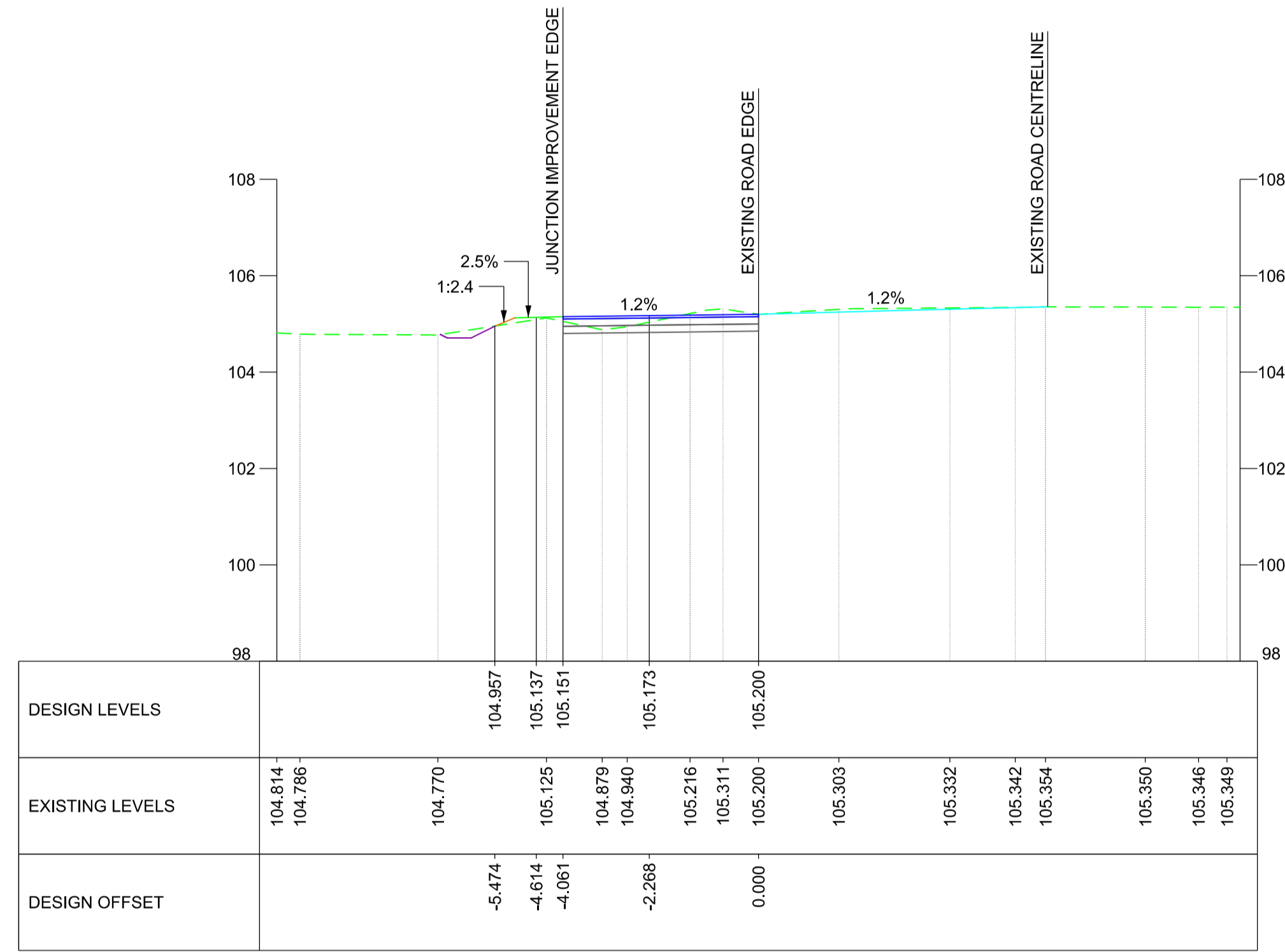
Drawing Title
**JUNCTION IMPROVEMENT A2_J_9
 VISIBILITY SPLAY**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	10/12/19
Drawn	MuraliMohan Govarathanan	Signed	M. Govarathanan	Date	06/12/19
Checked	Lisa Taylor	Signed	L. Taylor	Date	10/12/19
Approved	Stephen Abe	Signed	S. Abe	Date	10/12/19

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



CHAINAGE - 55.0000

KEY:

	EXISTING GROUND
	EXISTING CARRIAGEWAY
	PROPOSED CARRIAGEWAY
	PROPOSED ROAD PAVEMENT
	PROPOSED GRASS VERGE
	PROPOSED EARTHWORKS
	PROPOSED DITCH

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. CHAINAGES SHOWN ON THIS DRAWING ARE ALONG THE ROAD CENTRELINE AS SEEN ON GENERAL ARRANGEMENT DRAWING.



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



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

Drawing Title
**JUNCTION IMPROVEMENT A2_J_9
CROSS-SECTIONS**

Designed	Nagoth Thomas Ravi Kumar	Signed	N. T. R. Kumar	Date	06/12/19
Drawn	Ravikumar KN	Signed	R. KN	Date	13/11/19
Checked	Lisa Taylor	Signed	L. Taylor	Date	09/12/19
Approved	Stephen Abe	Signed	S. Abe	Date	09/12/19

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-A2_J_9-DR-CH-030001		