

East West Rail Phase 2

Planning Condition 6: Implementation and maintenance of railway fencing

Document Number: 133735_RW-EWR-XX-XX-RP-CA-009010 (Pwise no.)

133735-EWR-REP-ECV-000171 (eB no.)

Rev B01



East West Rail Phase 2

27th February 2020

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Document History

Project Number: 133735		DOCUMENT REF: 133735_RW-EWR-XX-XX-RP-CA-009010 133735-EWR-REP-ECV-000171 (eB no.)				
Revision	Purpose and description	Originated	Checked	Reviewed	Authorised	Date
B01	For Approval	F. Drew	R. Gallagher.	F. Drew	J. Baldock	27/02/20



Planning Drawings

The attached drawings are presented to discharge condition 6 of the deemed planning approval associated with the Network Rail (East West Rail Bicester to Bedford Improvements) Order 2020.

The drawings have been subdivided into the relevant Development Stages. The below table is a list of the fencing drawings:

Drawing No.	Development Stages	Local Authorities
133735_RW-EWR-XX-X-DR-CA-011200	2A1-2A4	Cherwell District Council Aylesbury Vale District Council
133735_RW-EWR-XX-X-DR-CA-011201	2B1-2B3	Aylesbury Vale District Council
133735_RW-EWR-XX-X-DR-CA-011202	2B3-2B6	Aylesbury Vale District Council Milton Keynes Council
133735_RW-EWR-XX-X-DR-CA-011203	2C1-2C2	Milton Keynes Council
133735_RW-EWR-XX-X-DR-CA-011204	2D Main Works	Milton Keynes Council Central Bedfordshire Council Bedford Borough Council
133735_RW-EWR-XX-X-DR-CA-011205	2E	Aylesbury Vale District Council

Each drawing contains a legend that outlines the various types of fencing to be used across the Development Stages. The below table lists the standard details with their drawing number and description of use. The Standard Details are also attached to this document.

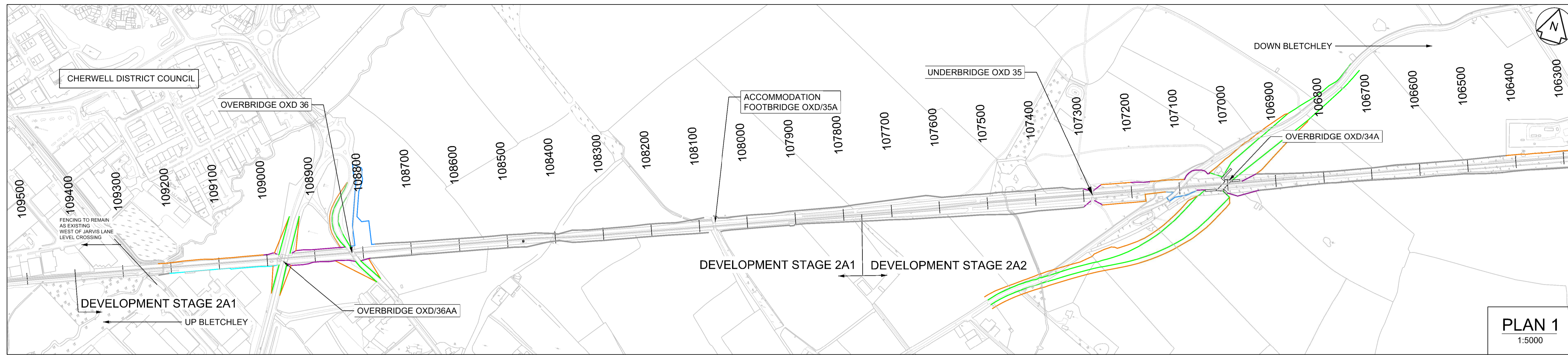
Standard Detail	Purpose of Use
NR-L2-TRK-5100-1-WM-2015_revA	Welded Mesh
NR-L2-TRK-5100-1-WP-2015_revA	Palisade (1.8m and/or 2.4m high)
NR-L2-TRK-5100-3-PSN-2015_revA	Stock Proof Fencing
133735_RW-EWR-XX-XX-DR-CA-00402	Acoustic Barrier
HCD_H3_D-2004	Timber Post and 4 (or 5) Rail Fences



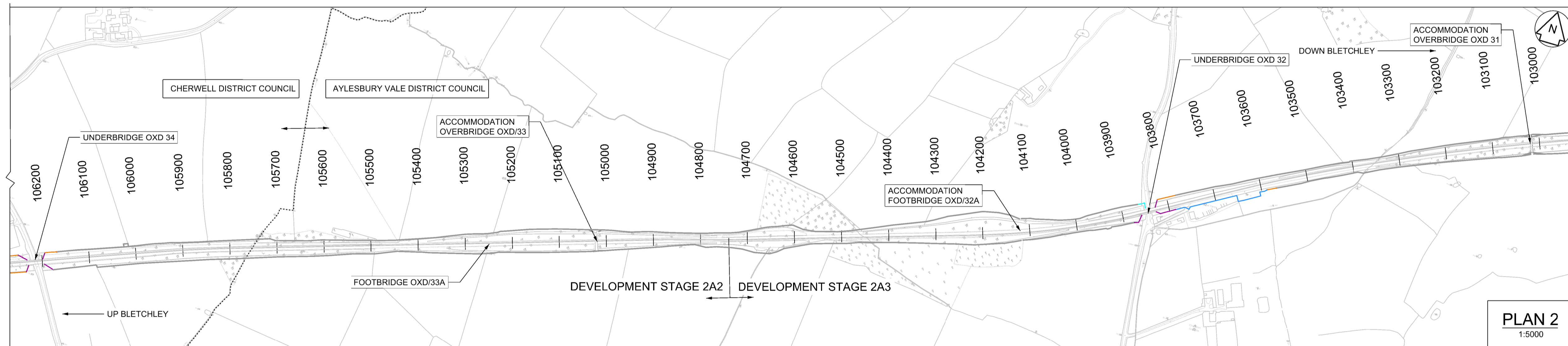
Additional fencing detail at a higher scale is provided at the structures set out in the table below, also provided with this submission.

Drawing No.	Purpose
133735_RW-EWR-XX-XX-DR-CA-011206	High scale fencing detail at OXD/36AA Charbridge Lane overbridge
133735_RW-EWR-XX-XX-DR-CA-011207	High scale fencing detail at OXD/34 Station Road, Launton

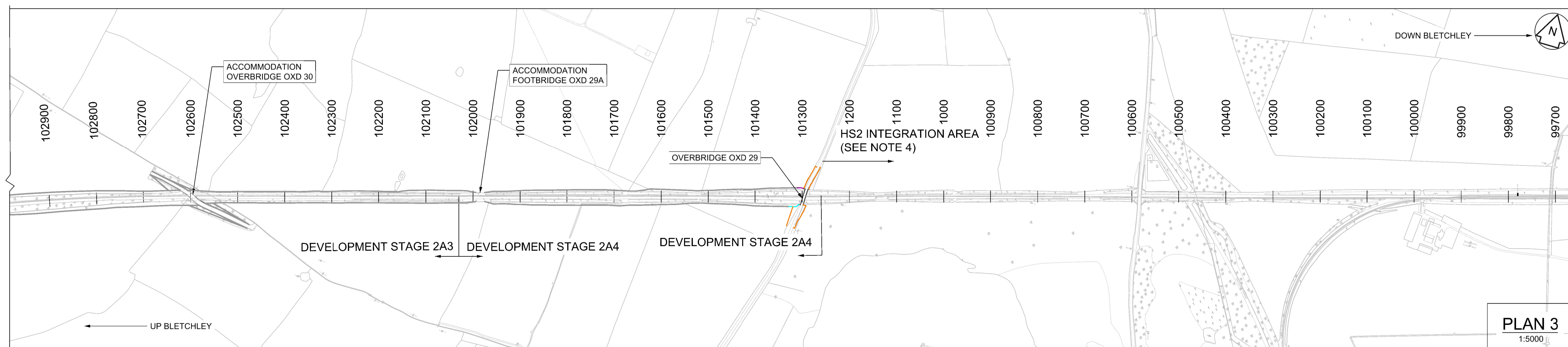




PLAN 1
1:5000



PLAN 2
1:5000

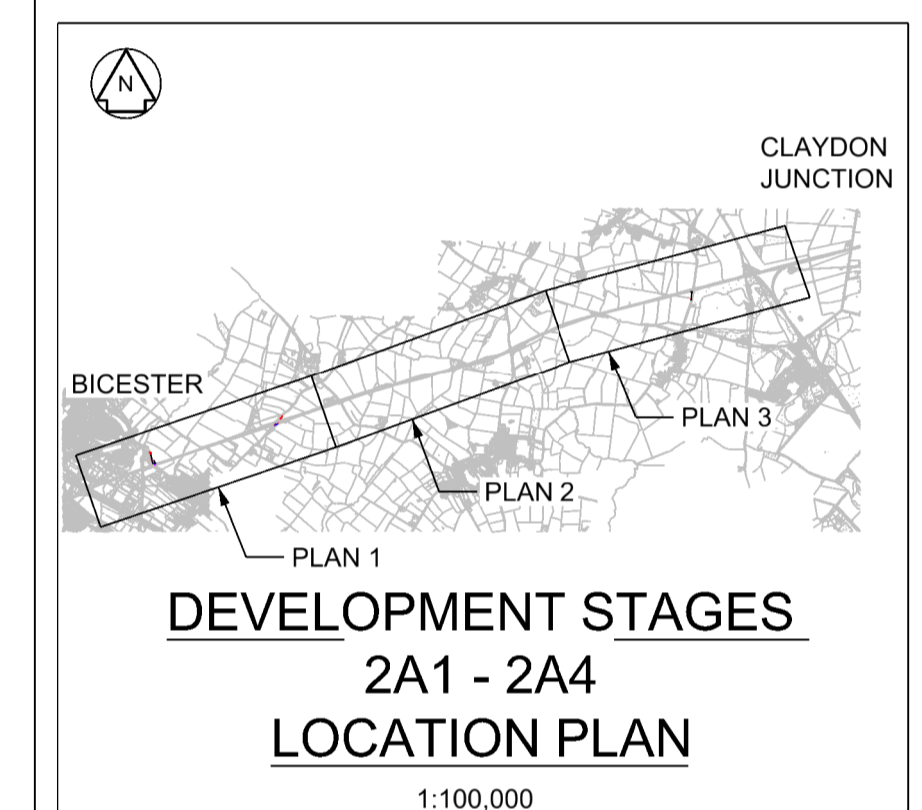


PLAN 3
1:5000

LEGEND

2.4m PALISADE	COUNTY BOUNDARY
1.8m WELDMESH	FENCING NOT SUBJECT TO TWAO CONDITION 6 (SEE NOTE 1)
1.8m PALISADE	1.4m POST AND RAIL
1.4m STOCK PROOF	
ACOUSTIC BARRIER	

- NOTES:
- DRAWING SHOWS LOCATION OF NEW PERMANENT BOUNDARY FENCING WHICH ABUTS A HIGHWAY, RESIDENTIAL OR COMMERCIAL LAND OR PREMISES.
 - ALL CHAINAGES IN METRES UNLESS SPECIFIED OTHERWISE.
 - DO NOT SCALE FROM THIS DRAWING.
 - BOUNDARY FENCING EAST OF OXD/29 - CHARNDON MAIN STREET WILL BE DELIVERED BY HS2 LTD.
 - FOLLOWING NETWORK RAIL STANDARD DETAILS SHALL BE INSTALLED:
 - WELDMESH - NR/L2/TRK/5100/1/WM 2015 rev A
 - 1800mm TO BE USED.
 - PALISADE - NR/L2/TRK/5100/WP/ 2015 rev A
 - 1800mm TO BE USED OTHER THAN VEHICULAR ACCESS POINTS, WHERE 2400mm USED.
 - STOCK FENCING - NR/L2/TRK/5100/2/PSN 2015 rev A
 - METAL POSTS SHALL NOT BE USED.
 - STRAINER POSTS AT MAXIMUM 500m INTERVALS.
 - ACOUSTIC BARRIER IS INSTALLED TO SATISFY REQUIREMENTS OF ENVIRONMENTAL STATEMENT AND PLANNING CONDITION 16. ACOUSTIC BARRIERS TO BE 2.5m ABOVE RAIL LEVEL - TYPICALLY 3.0m ABOVE GROUND LEVEL.



Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	27/02/20	FOR PLANNING	J.A.	R.G.	J.G.	

Accepted for Detailed Design A5



Project
East West Rail (Western Section) Phase 2

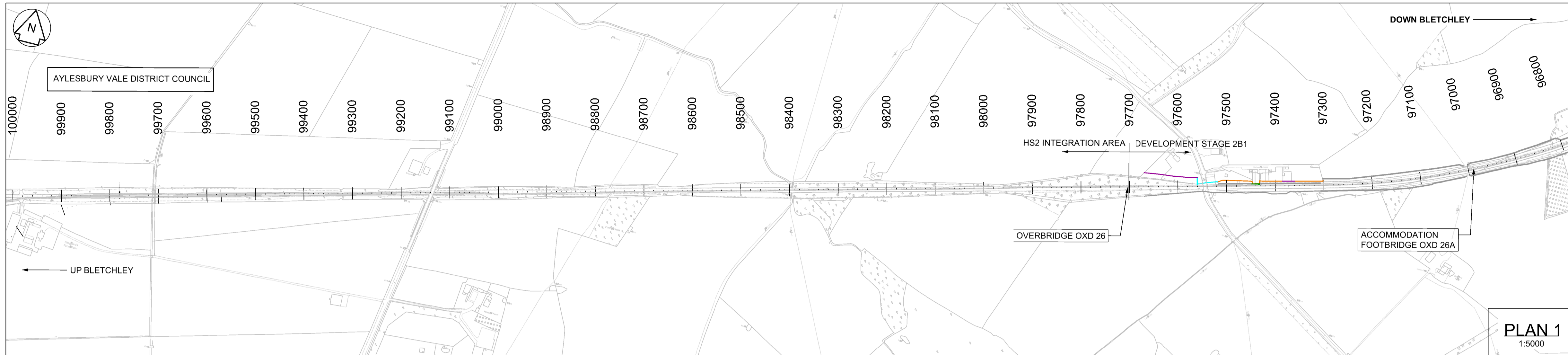
BOUNDARY FENCING LOCATION PLAN (TWAO CONDITION 6) DEVELOPMENT STAGES 2A1-2A4

Designed	Jessica Arnison	Signed	J. Arnison	Date	26/02/20
Drawn	Jessica Arnison	Signed	J. Arnison	Date	14/08/19
Checked	Richard Gallagher	Signed	R. Gallagher	Date	26/02/20
Approved	Julien Green	Signed	J. Green	Date	27/02/20

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

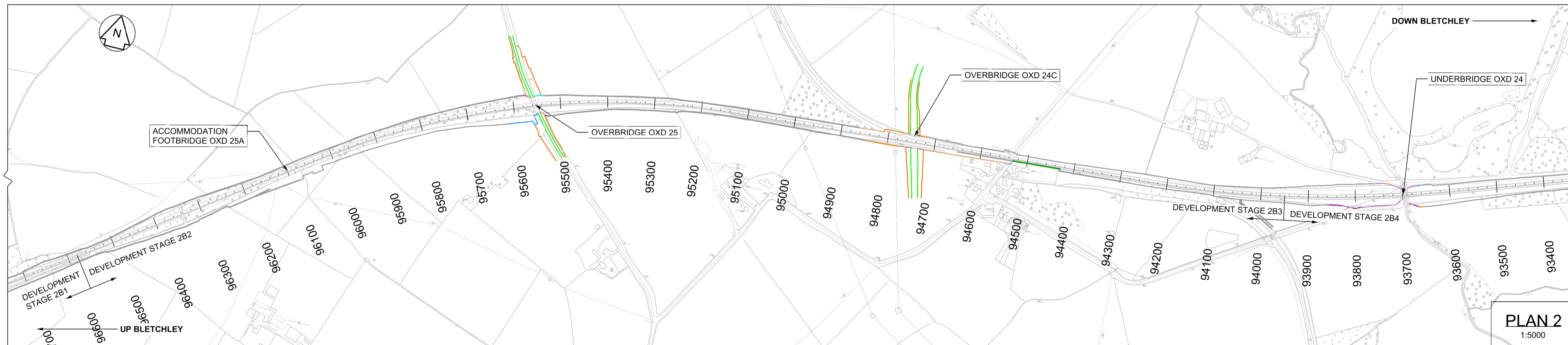
Drawing Number
133735_RW-EWR-XX-XX-DR-CA-011200

FOR SECTION 2A REFER TO DRAWING 133735_RW-EWR-XX-XX-DR-CA-011200

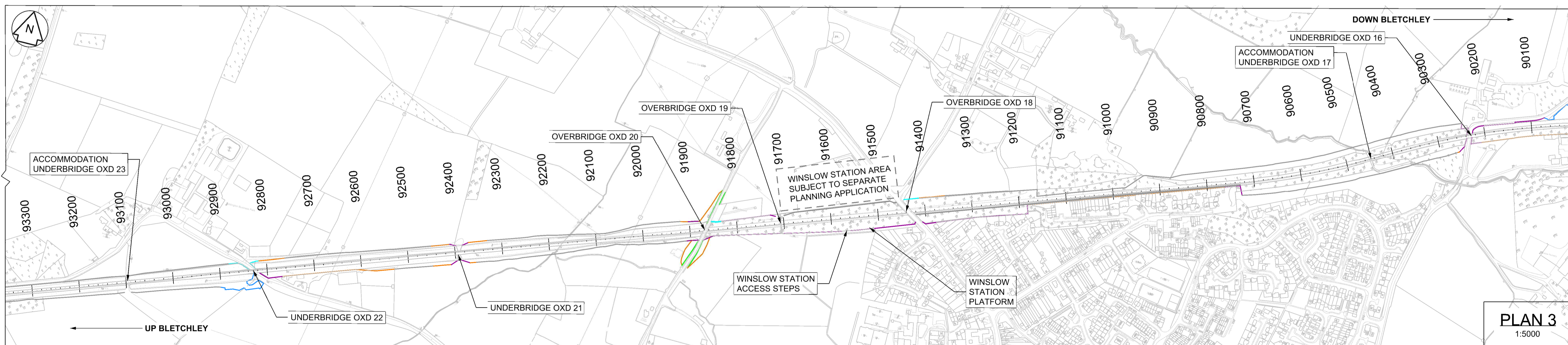
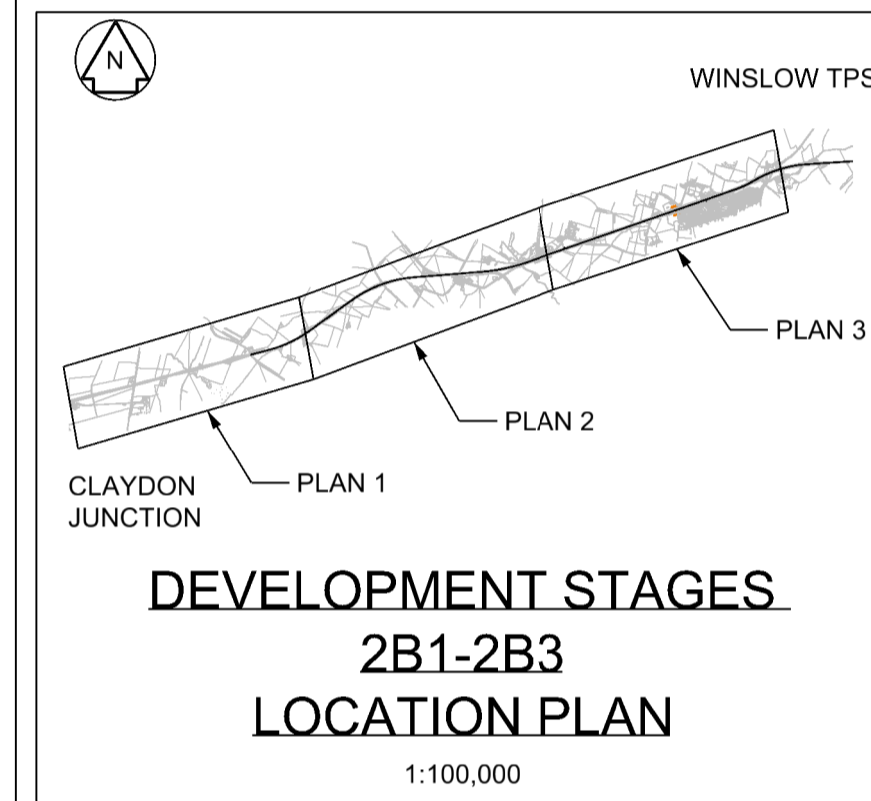


- NOTES:
- DRAWING SHOWS LOCATION OF NEW PERMANENT BOUNDARY FENCING WHICH ABUTS A HIGHWAY, RESIDENTIAL OR COMMERCIAL LAND OR PREMISES.
 - ALL CHAINAGES IN METRES UNLESS SPECIFIED OTHERWISE.
 - DO NOT SCALE FROM THIS DRAWING.
 - BOUNDARY FENCING WEST OF CHAINAGE 97865 WILL BE DELIVERED BY HS2 LTD.
 - FOLLOWING NETWORK RAIL STANDARD DETAILS SHALL BE INSTALLED.
 - WELDMESH - NR/L2/TRK/5100/11/WM 2015 rev A
 - 1800mm TO BE USED.
 - PALISADE - NR/L2/TRK/5100/WP/ 2015 rev A
 - 1800mm TO BE USED OTHER THAN VEHICULAR ACCESS POINTS, WHERE 2400mm USED.
 - STOCK FENCING - NR/L2/TRK/5100/2/PSN 2015 rev A
 - METAL POSTS SHALL NOT BE USED.
 - STRAINER POSTS AT MAXIMUM 500m INTERVALS.
 - ACOUSTIC BARRIER IS INSTALLED TO SATISFY REQUIREMENTS OF ENVIRONMENTAL STATEMENT AND PLANNING CONDITION 16. ACOUSTIC BARRIERS TO BE 2.5m ABOVE RAIL LEVEL - TYPICALLY 3.0m ABOVE GROUND LEVEL.

PLAN 1
1:5000



PLAN 2
1:5000



PLAN 3
1:5000

LEGEND	
	2.4m PALISADE
	1.8m WELDMESH
	1.8m PALISADE
	1.4m STOCK PROOF
	ACOUSTIC BARRIER
	FENCING NOT SUBJECT TO TWAO CONDITION 6 (SEE NOTE 1)
	1.4m POST AND RAIL

FOR CONTINUATION REFER TO 133735_RW-EWR-XX-XX-DR-CA-011202

B01	27/02/20	FOR PLANNING	J.A.	R.G.	J.G.
Rev	Date	Description of Revisions	Desd	Chkd	Appr
Status	Accepted for Detailed Design			A5	



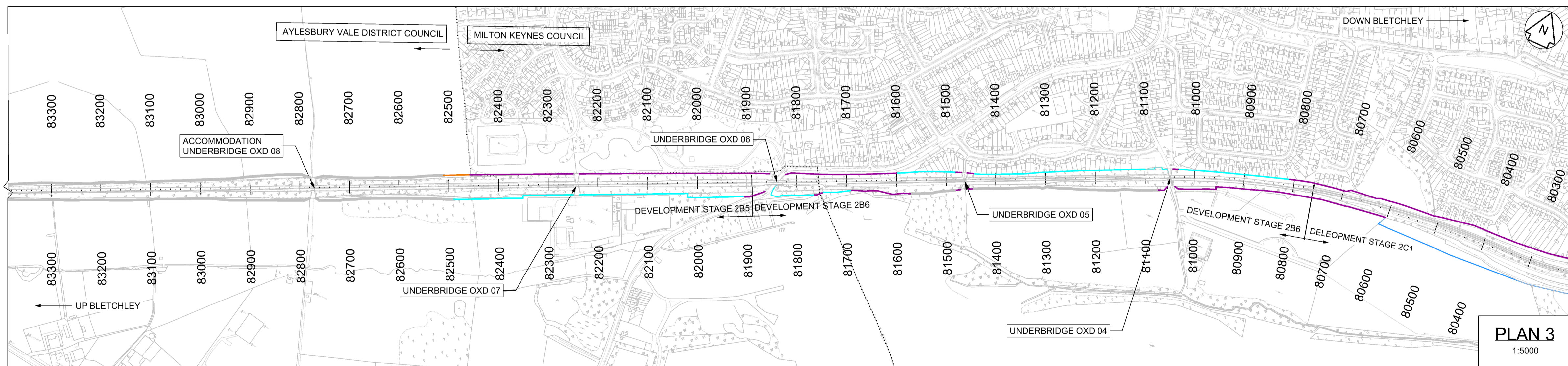
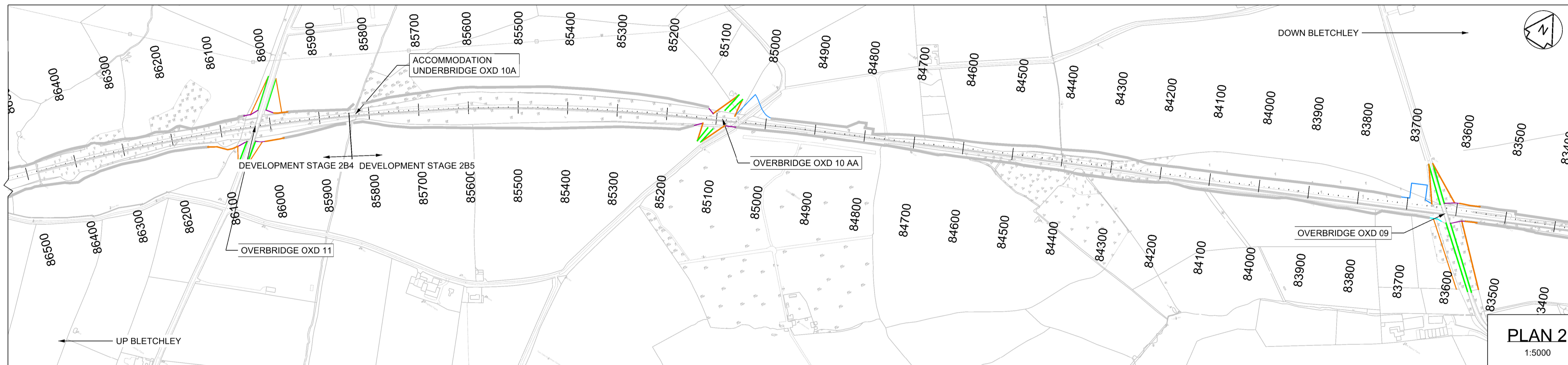
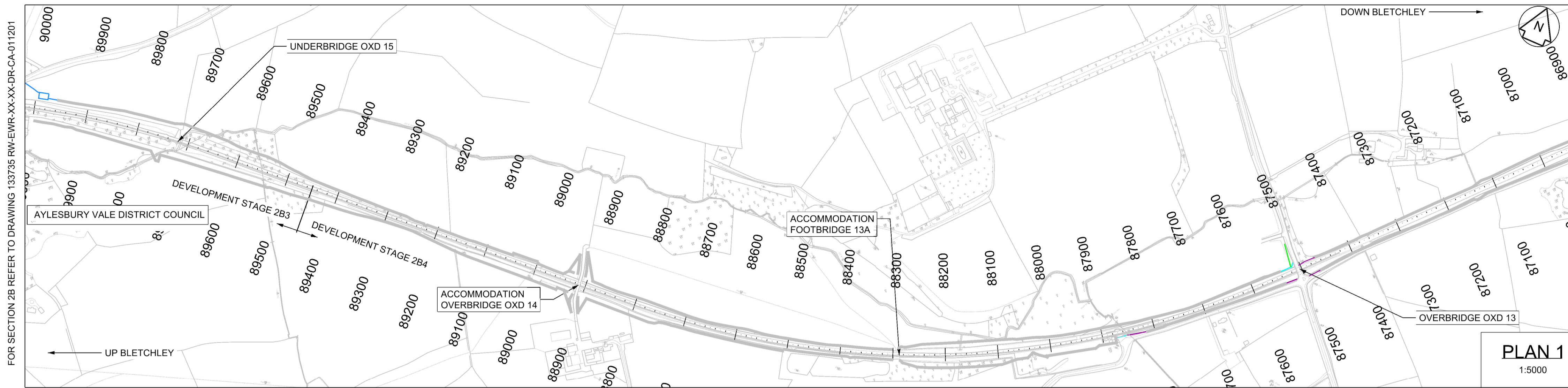
Project
East West Rail (Western Section) Phase 2

Drawing Title
BOUNDARY FENCING LOCATION PLAN (TWAO CONDITION 6) DEVELOPMENT STAGES 2B1-2B3

Designed	Jessica Arnison	Signed	J. Arnison	Date	26/02/20
Drawn	Jessica Arnison	Signed	J. Arnison	Date	14/08/19
Checked	Richard Gallagher	Signed	R. Gallagher	Date	26/02/20
Approved	Julien Green	Signed	J. Green	Date	27/02/20

Scale(s)	1 - 5000	ELR - Project Chainage (Miles Yards)	XX - XX
Design Package Risk Classification	Normal		
Alternative Reference	Sheet 1 of 2		
Drawing Number	Revision B01		

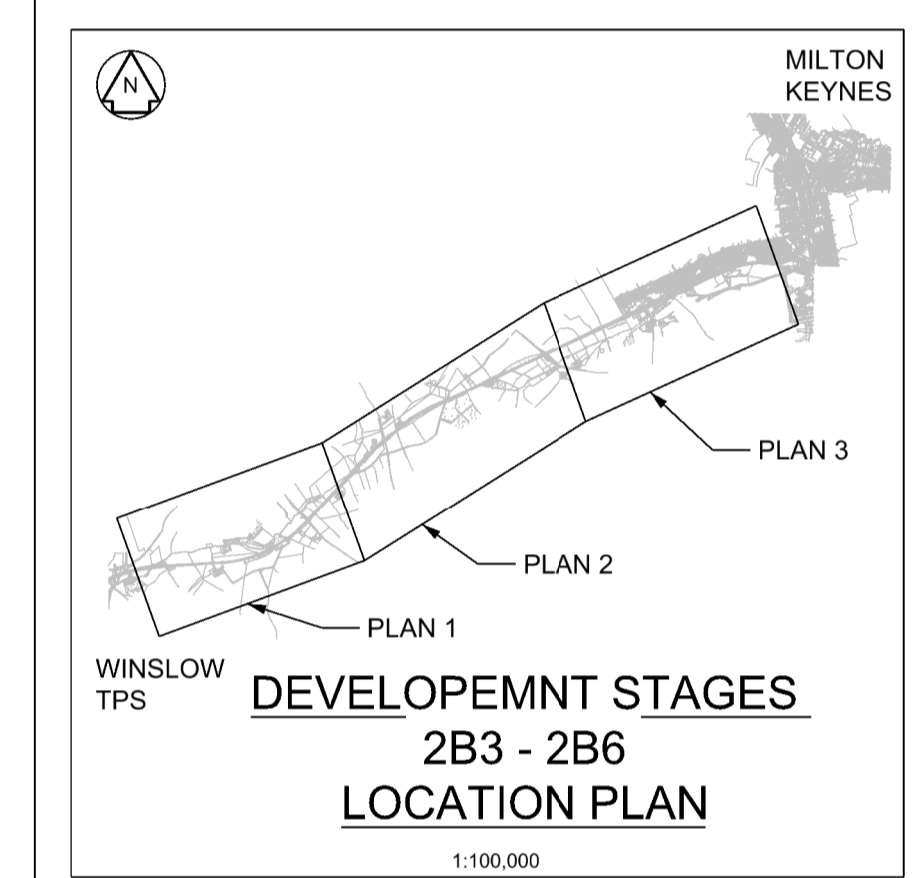
133735_RW-EWR-XX-XX-DR-CA-011201



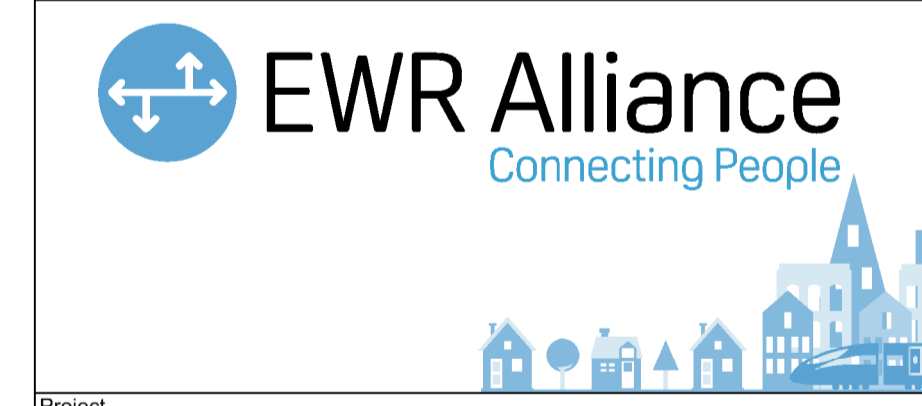
LEGEND

2.4m PALISADE	FENCING NOT SUBJECT TO TWAO CONDITION 6 (SEE NOTE 1)
1.8m WELDMESH	1.4m POST AND RAIL
1.8m PALISADE	COUNTY BOUNDARY
1.4m STOCK PROOF	
ACOUSTIC BARRIER	

- NOTES:
- DRAWING SHOWS LOCATION OF NEW PERMANENT BOUNDARY FENCING WHICH ABUTS A HIGHWAY, RESIDENTIAL OR COMMERCIAL LAND OR PREMISES.
 - ALL CHAINAGES IN METRES UNLESS SPECIFIED OTHERWISE.
 - DO NOT SCALE FROM THIS DRAWING.
 - FOLLOWING NETWORK RAIL STANDARD DETAILS SHALL BE INSTALLED.
 - WELDMESH - NR/L2/TRK/5100/1/WM 2015 rev A
 - 1800mm TO BE USED.
 - PALISADE - NR/L2/TRK/5100/WP/ 2015 rev A
 - 1800mm TO BE USED OTHER THAN VEHICULAR ACCESS POINTS, WHERE 2400mm USED.
 - STOCK FENCING - NR/L2/TRK/5100/2/PSN 2015 rev A
 - METAL POSTS SHALL NOT BE USED.
 - STRAINER POSTS AT MAXIMUM 500m INTERVALS.
 - ACOUSTIC BARRIER IS INSTALLED TO SATISFY REQUIREMENTS OF ENVIRONMENTAL STATEMENT AND PLANNING CONDITION 16. ACOUSTIC BARRIERS TO BE 2.5m ABOVE RAIL LEVEL - TYPICALLY 3.0m ABOVE GROUND LEVEL.



Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	27/02/20	FOR PLANNING	J.A.	R.G.	J.G.	
Accepted for Detailed Design						A5

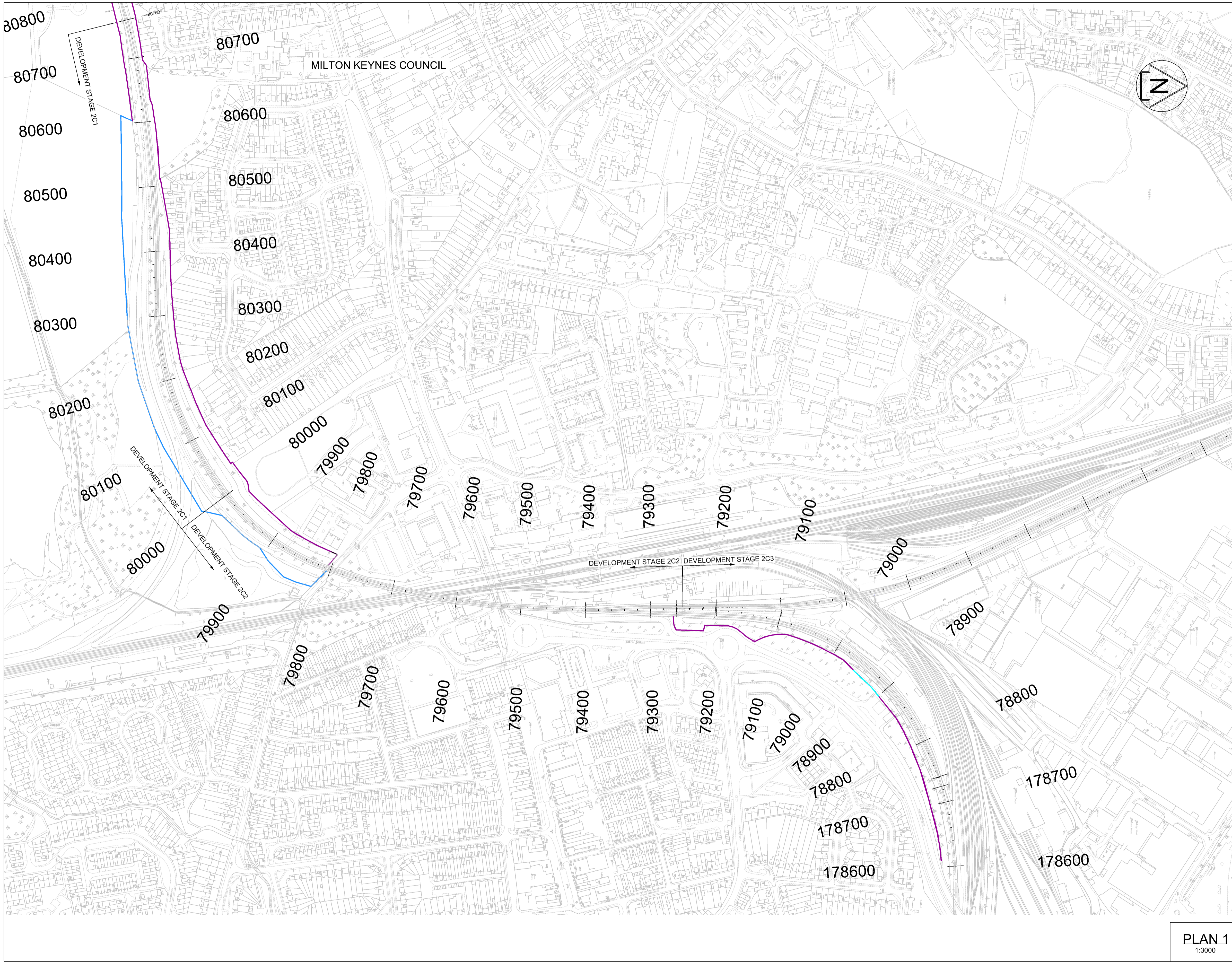


Project
East West Rail (Western Section) Phase 2

Drawing Title
BOUNDARY FENCING LOCATION PLAN (TWAO CONDITION 6) DEVELOPMENT STAGES 2B3-2B6

Designed	Jessica Arnison	Signed	J. Arnison	Date	26/02/20
Drawn	Jessica Arnison	Signed	J. Arnison	Date	15/08/19
Checked	Richard Gallagher	Signed	R. Gallagher	Date	26/02/20
Approved	Julien Green	Signed	J. Green	Date	27/02/20
Scale(s)	1 - 5000	ELR - Project Chainage (Miles Yards)	XX - XX		
Design Package Risk Classification	Normal		Sheet	2 of 2	
Alternative Reference			Revision	B01	
Drawing Number	133735_RW-EWR-XX-XX-DR-CA-011202				

FOR CONTINUATION REFER TO DRAWING 133735-RW-EWR-XX-XX-DR-CA-011202

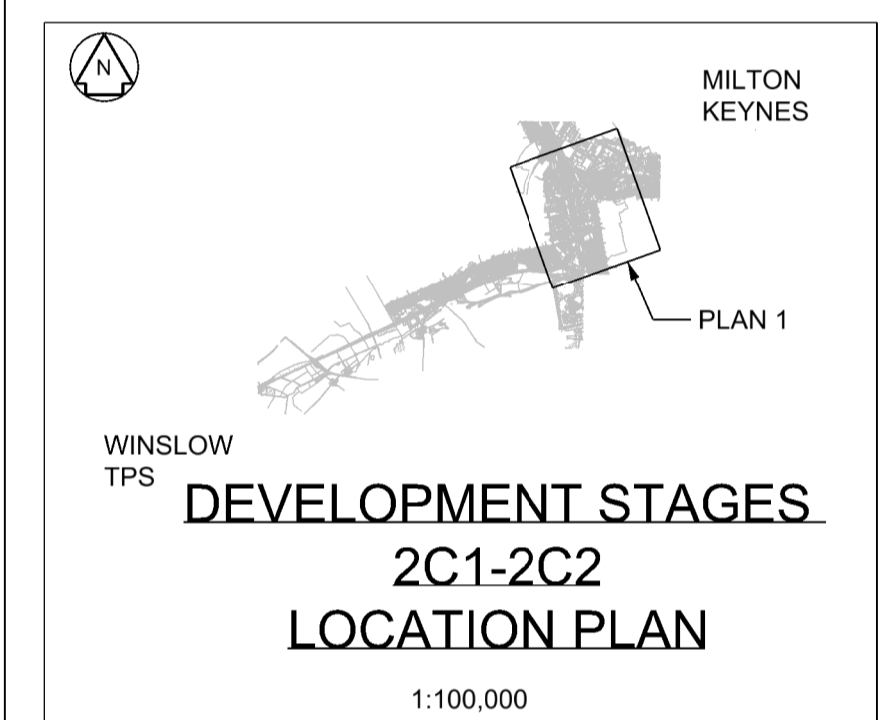


PLAN 1
1:3000

LEGEND

2.4m PALISADE	FENCING NOT SUBJECT TO TWAO CONDITION 6 (SEE NOTE 1)
1.8m WELDMESH	1.4m POST AND RAIL
1.8m PALISADE	
1.4m STOCK PROOF	
ACOUSTIC BARRIER	

- NOTES:
- DRAWING SHOWS LOCATION OF NEW PERMANENT BOUNDARY FENCING WHICH ABUTS A HIGHWAY, RESIDENTIAL OR COMMERCIAL LAND OR PREMISES.
 - ALL CHAINAGES IN METRES UNLESS SPECIFIED OTHERWISE.
 - DO NOT SCALE FROM THIS DRAWING.
 - FENCING NOT SHOWN IS TO REMAIN AS EXISTING.
 - FOLLOWING NETWORK RAIL STANDARD DETAILS SHALL BE INSTALLED.
 - WELDMESH - NR/L2/TRK/5100/1/MM 2015 rev A
 - 1800mm TO BE USED.
 - PALISADE - NR/L2/TRK/5100/WPI/ 2015 rev A
 - 1800mm TO BE USED OTHER THAN VEHICULAR ACCESS POINTS, WHERE 2400mm USED.
 - STOCK FENCING - NR/L2/TRK/5100/2/PSN 2015 rev A
 - METAL POSTS SHALL NOT BE USED.
 - STRAINER POSTS AT MAXIMUM 500m INTERVALS.



B01	27/02/20	FOR PLANNING	J.A.	R.G.	J.G.
Rev	Date	Description of Revisions	Desd	Chkd	Appr
Status	Accepted for Detailed Design				A5

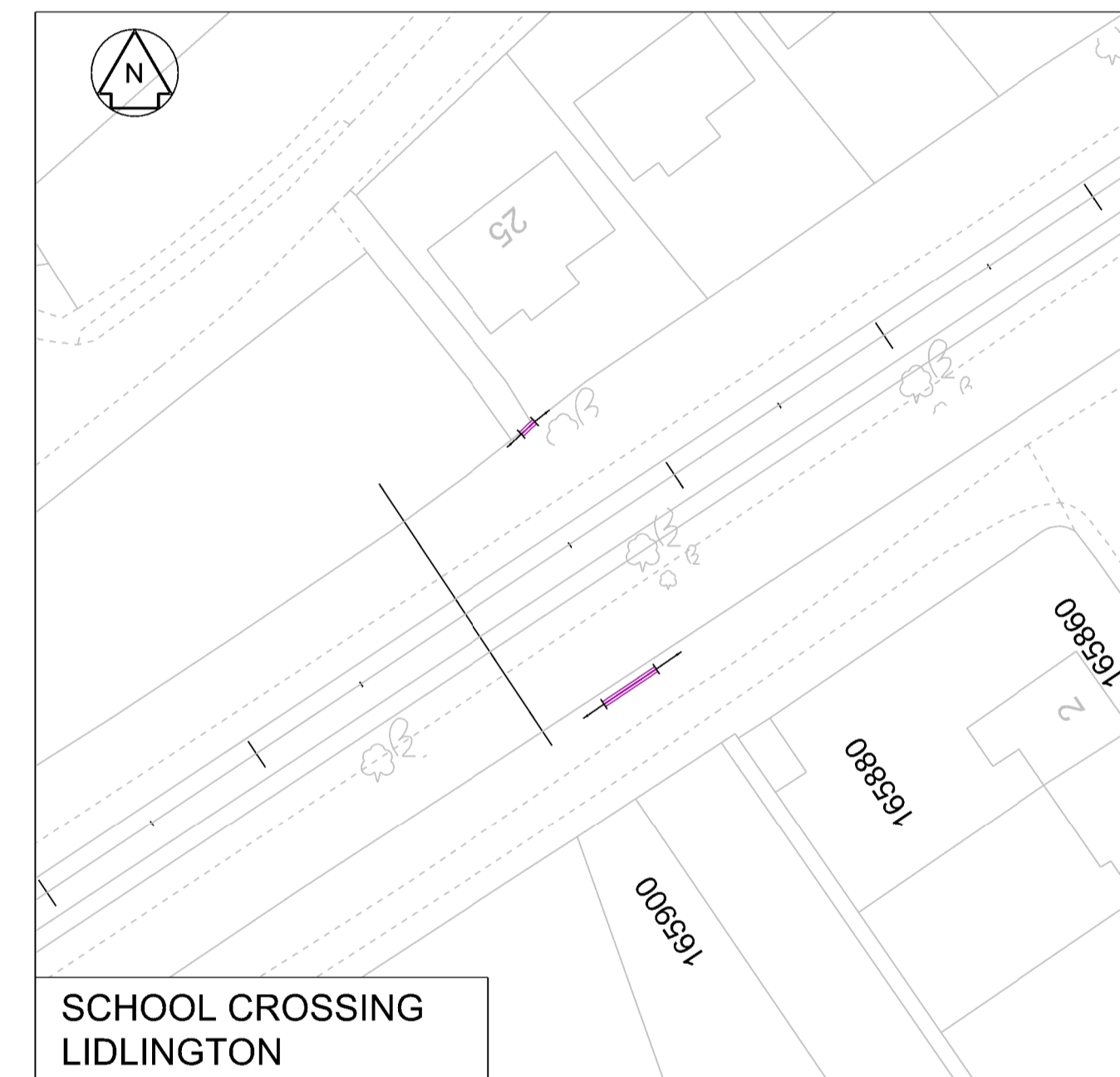
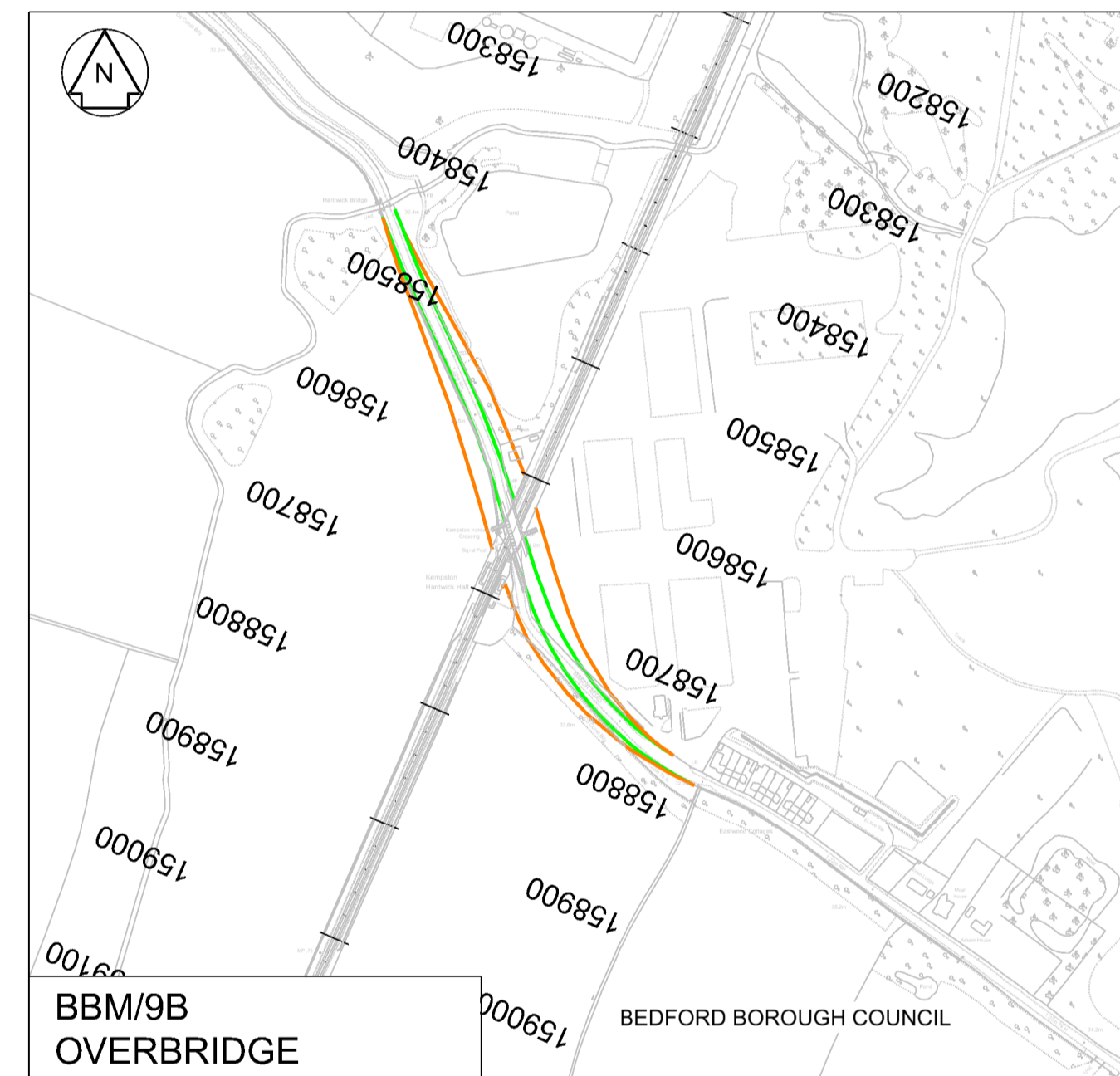
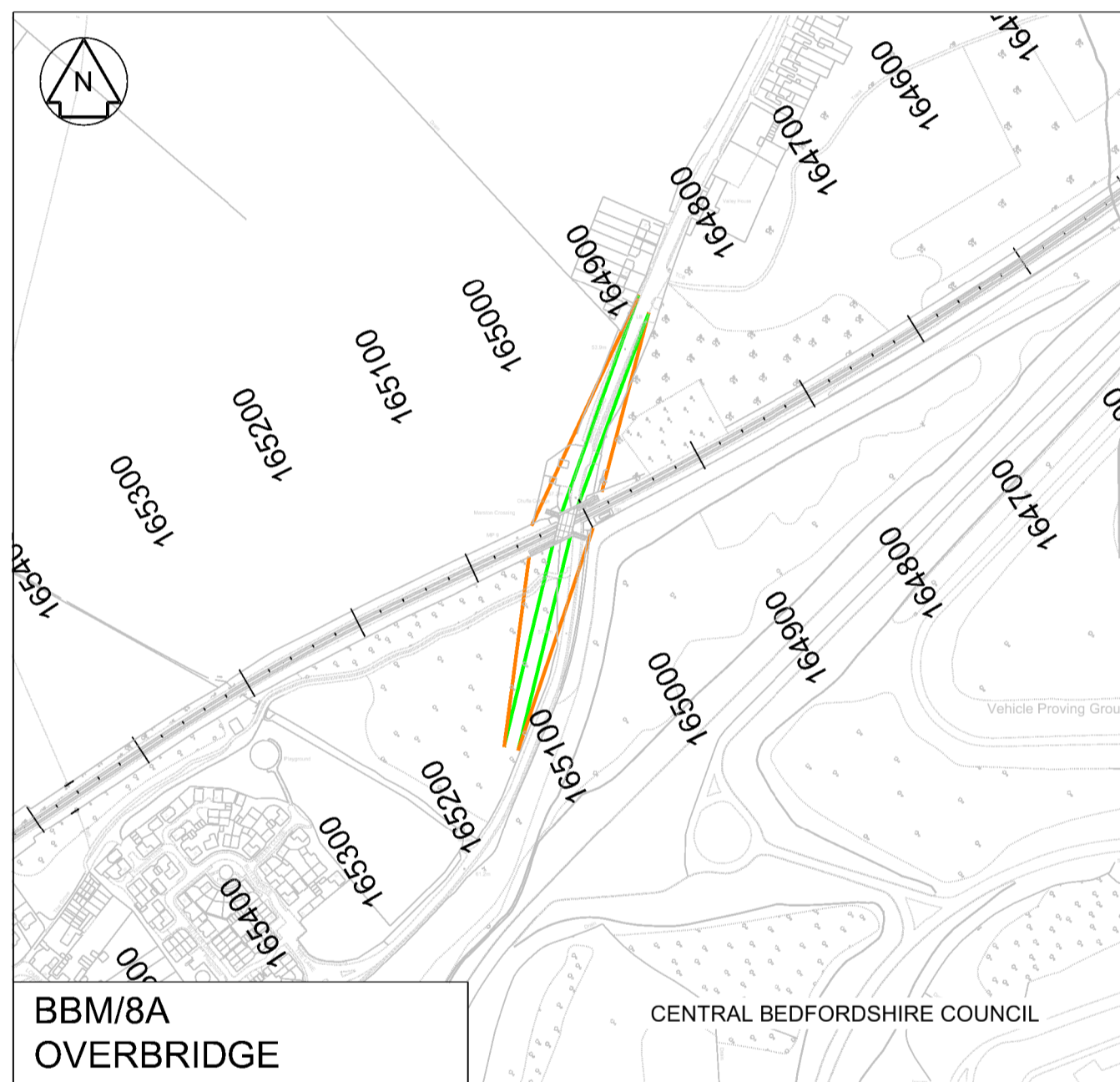
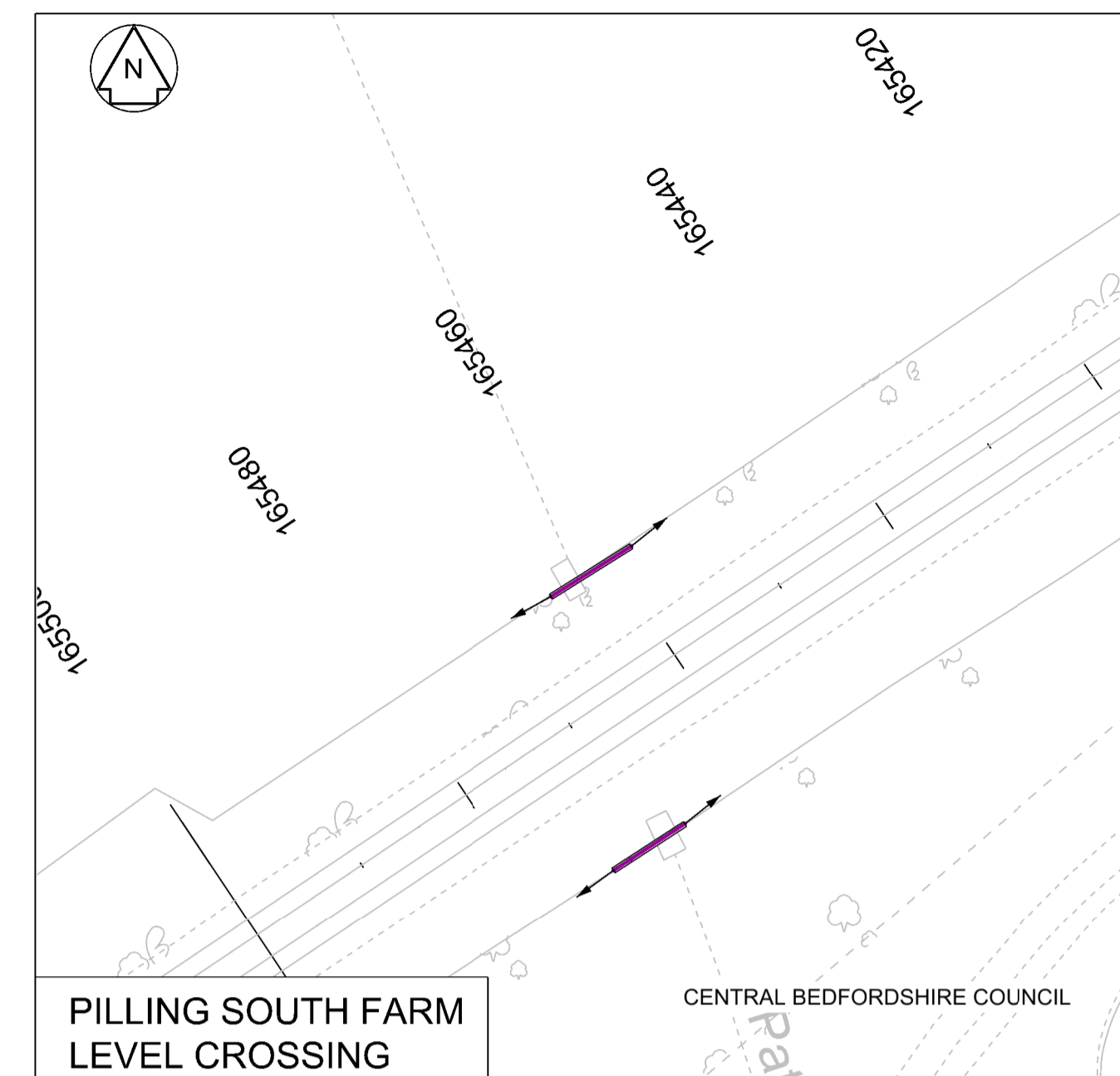
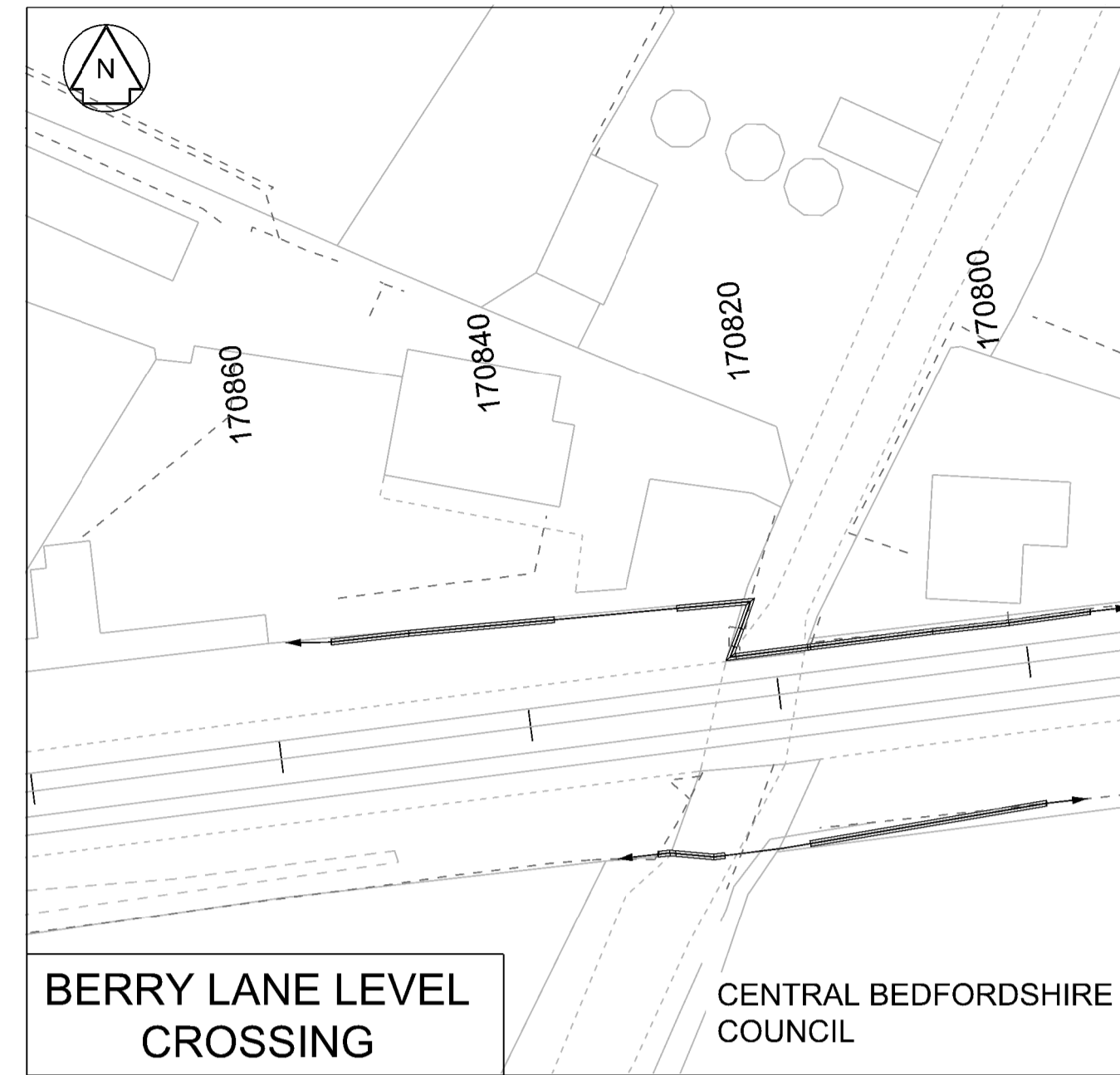
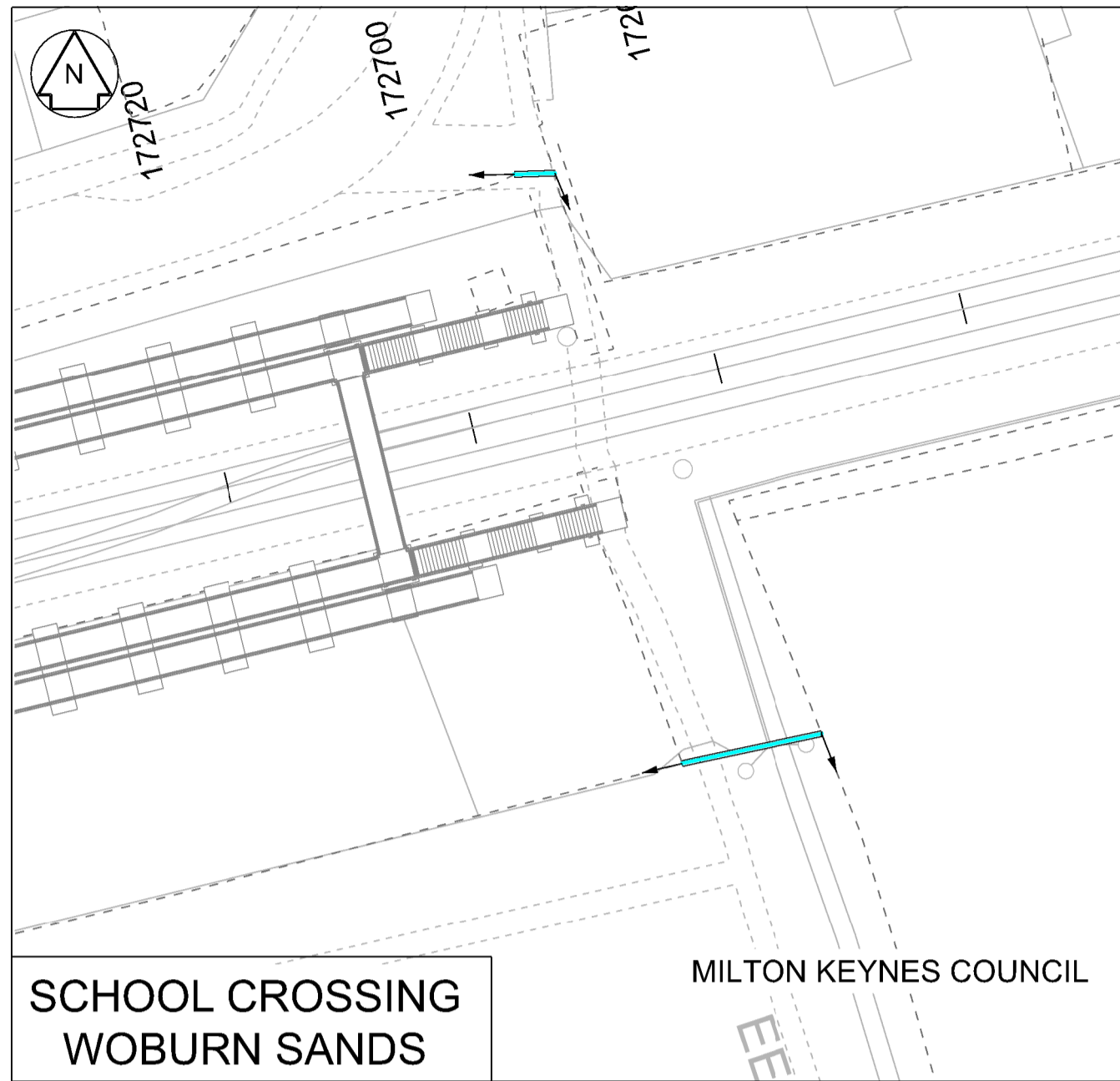


Project
**East West Rail
(Western Section)
Phase 2**

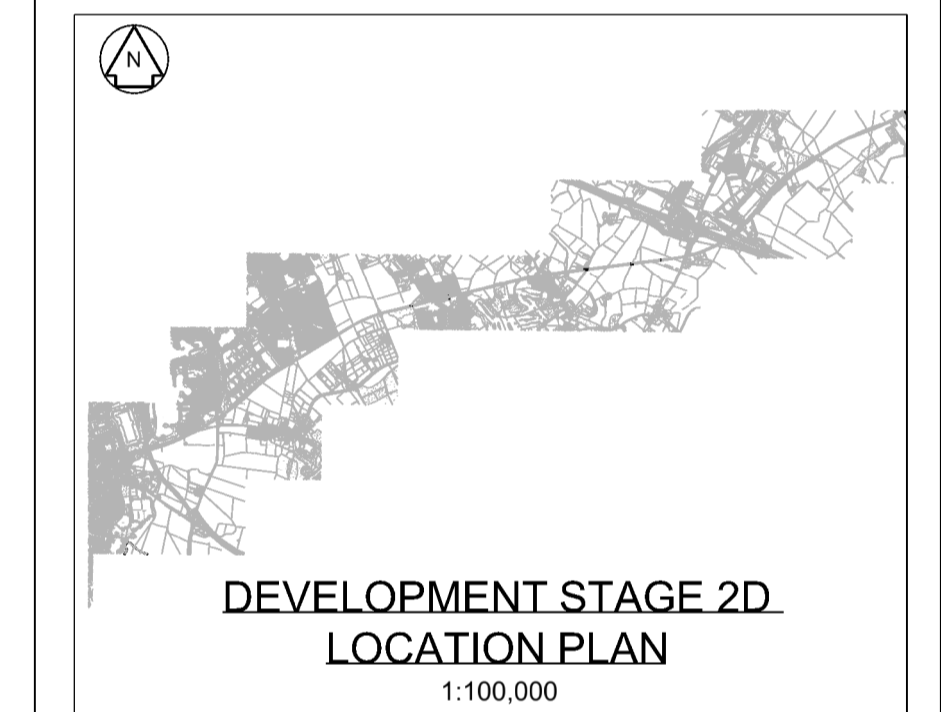
Drawing Title
**BOUNDARY FENCING
LOCATION PLAN
(TWO CONDITION 6)
DEVELOPMENT STAGES 2C1-2C2**

Designed	Jessica Arnison	Signed	J. Arnison	Date	26/02/20
Drawn	Jessica Arnison	Signed	J. Arnison	Date	15/08/19
Checked	Richard Gallagher	Signed	R. Gallagher	Date	26/02/20
Approved	Julien Green	Signed	J. Green	Date	27/02/20

Scale(s)	1 - 3000	ELR - Project Chainage (Miles Yards)	XX - XX
Design Package Risk Classification	Normal		
Alternative Reference	Revision B01		
Drawing Number	133735_RW-EWR-XX-XX-DR-CA-011203		



- NOTES:
- DRAWING SHOWS LOCATION OF NEW PERMANENT BOUNDARY FENCING WHICH ABUTS A HIGHWAY, RESIDENTIAL OR COMMERCIAL LAND OR PREMISES.
 - ALL CHAINAGES IN METRES UNLESS SPECIFIED OTHERWISE.
 - DO NOT SCALE FROM THIS DRAWING.
 - FOLLOWING NETWORK RAIL STANDARD DETAILS SHALL BE INSTALLED
 - WELDMESH - NR/L2/TRK/5100/1/WP 2015 rev A
 - 1800mm TO BE USED
 - PALISADE - NR/L2/TRK/5100/1/WP 2015 rev A
 - 1800mm TO BE USED OTHER THAN VEHICULAR ACCESS POINTS, WHERE 2400mm USED.
 - STOCK FENCING - NR/L2/TRK/5100/1/WP/PSN 2015 rev A
 - METAL POSTS SHALL NOT BE USED
 - STRAINER POSTS AT MAXIMUM 500m INTERVALS.



Rev	Date	Description of Revisions	Desd	Chkd	Appr
B01	27/02/20	FOR PLANNING	J.A.	R.G.	J.G.
Status			Accepted for Detailed Design		A5



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

Drawing Title
**BOUNDARY FENCING LOCATION PLAN
(TWO CONDITION 6)
DEVELOPMENT STAGE 2D
MAIN WORKS**

Designed	Jessica Arnison	Signed	J. Arnison	Date	26/02/20
Drawn	Jessica Arnison	Signed	J. Arnison	Date	15/08/19
Checked	Richard Gallagher	Signed	R. Gallagher	Date	26/02/20
Approved	Julien Green	Signed	J. Green	Date	27/02/20

Scale(s)	1 - 500	ELR - Project Chainage (Miles Yards)	XX - XX
Design Package Risk Classification	Normal		Sheet
Alternative Reference			Revision
Drawing Number	133735_RW-EWR-XX-XX-DR-CA-011204		B01

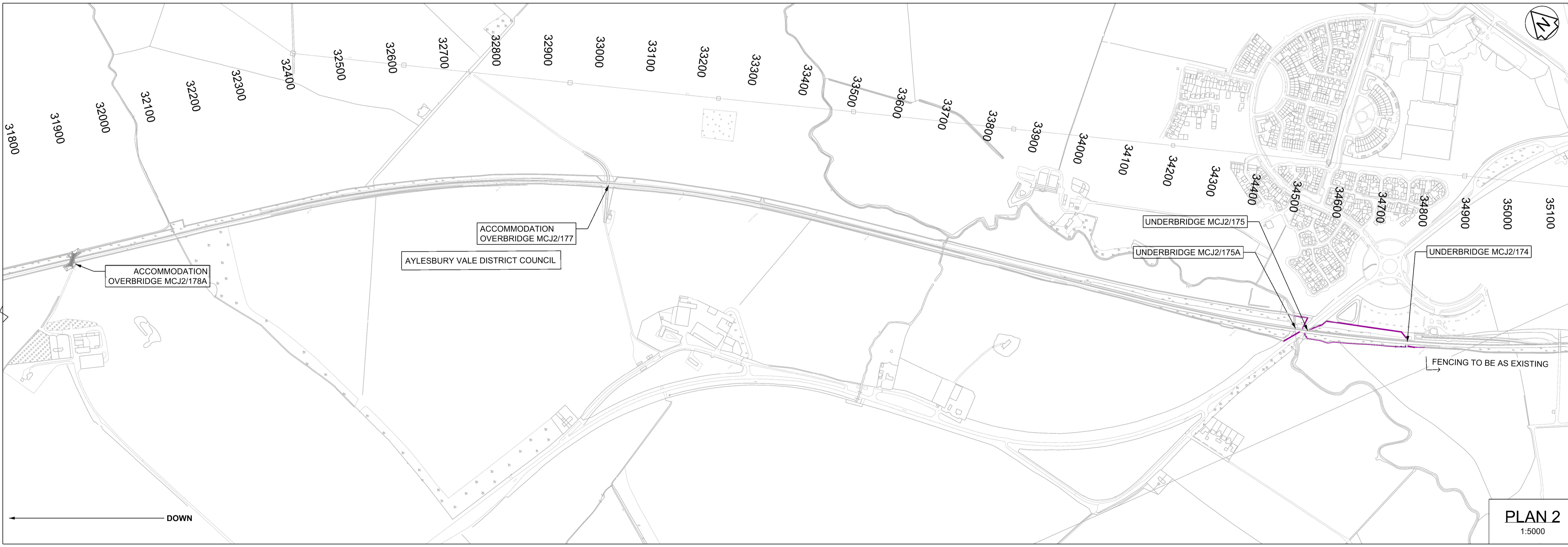
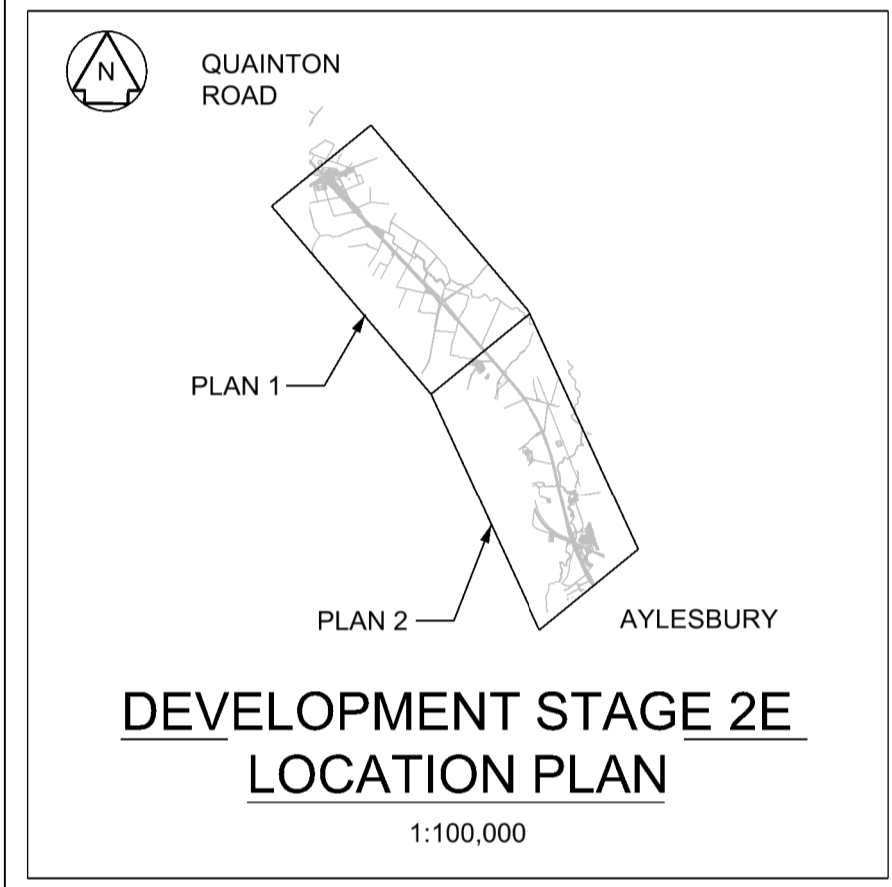
LEGEND

	2.4m PALISADE		FENCING NOT SUBJECT TO TWO CONDITION 6 (SEE NOTE 1)
	1.8m WELDMESH		1.4m POST AND RAIL
	1.8m PALISADE		INDICATES CONNECTION TO EXISTING FENCELINE
	1.4m STOCK PROOF		
	ACOUSTIC BARRIER		

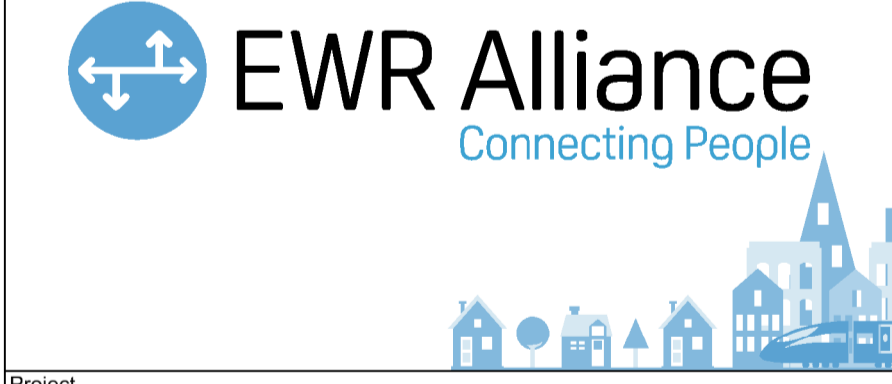
FOR CONTINUATION REFER TO DRAWING 133735_RW-EWR-XX-XX-DR-CA-017950



- NOTES:
- DRAWING SHOWS LOCATION OF NEW PERMANENT BOUNDARY FENCING WHICH ABUTS A HIGHWAY, RESIDENTIAL OR COMMERCIAL LAND OR PREMISES.
 - ALL CHAINAGES IN METRES UNLESS SPECIFIED OTHERWISE.
 - DO NOT SCALE FROM THIS DRAWING.
 - FOLLOWING NETWORK RAIL STANDARD DETAILS SHALL BE INSTALLED:
 - WELDMESH - NR/L2/TRK/5100/1/WM 2015 rev A
i) 1800mm TO BE USED
 - PALISADE - NR/L2/TRK/5100/1/WP 2015 rev A
i) 1800mm TO BE USED OTHER THAN VEHICULAR ACCESS POINTS WHERE 2400mm USED
 - STOCK FENCING - NR/L2/TRK/5100/1/WMP/PSN 2015 rev A
i) METAL POSTS SHALL NOT BE USED
ii) STRAINER POSTS AT MAXIMUM 500m INTERVALS.
 - NO BOUNDARY FENCING IS TO BE IMPLEMENTED UNDER THE TWAO BY THE PROJECT NORTH OF OVERBRIDGE MCJ2/184A.



Rev	Date	Description of Revisions	Dend	Chkd	Appr	Suitability
B01	27/02/20	FOR PLANNING	J.A.	R.G.	J.G.	
Accepted for Detailed Design						A5



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

Drawing Title
**BOUNDARY FENCING
LOCATION PLAN
(TWAO CONDITION 6)
DEVELOPMENT STAGE 2E**

Designed	Jessica Arnison	Signed	J. Arnison	Date	26/02/20
Drawn	Jessica Arnison	Signed	J. Arnison	Date	20/08/19
Checked	Richard Gallagher	Signed	R. Gallagher	Date	26/02/20
Approved	Julien Green	Signed	J. Green	Date	27/02/20

Scale(s)	1 - 5000	ELR - Project Chainage (Miles Yards)	XX - XX
Design Package Risk Classification	Normal		
Alternative Reference	Revision B01		
Drawing Number	133735_RW-EWR-XX-XX-DR-CA-011205		

LEGEND

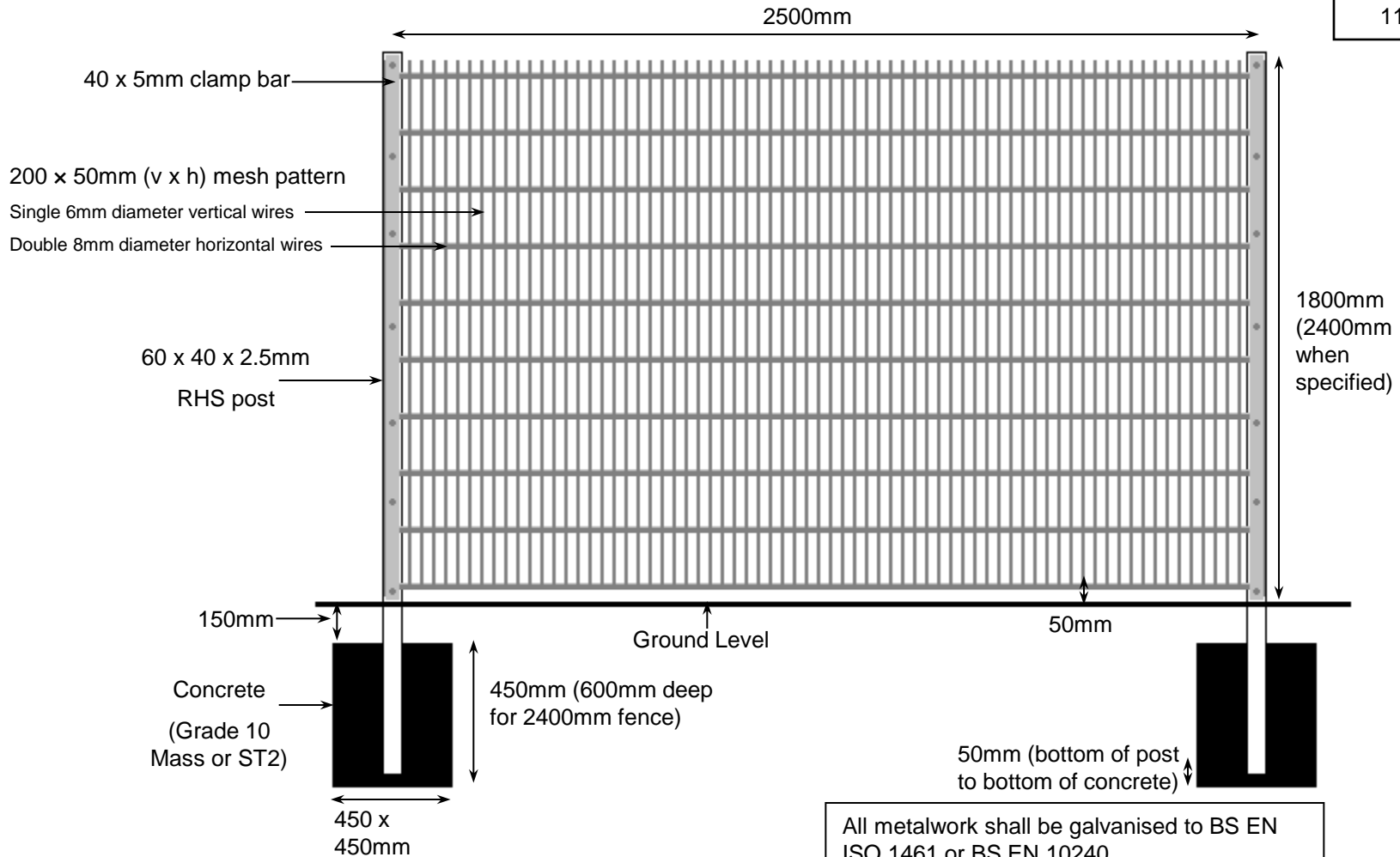
	2.4m PALISADE		FENCING NOT SUBJECT TO TWAO CONDITION 6 (SEE NOTE 1)
	1.8m WELDMESH		1.4m POST AND RAIL
	1.8m PALISADE		
	1.4m STOCK PROOF		
	ACOUSTIC BARRIER		

NR/L2/TRK/5100/1/WM 2015 rev A

Class I: Welded Mesh Panel & RHS Post

Not to scale

11/07/2015



Weldmesh panel to post fixings shall conform to requirements of BS1722-14: 2006, Clause 5, minimum "Category 2" fence

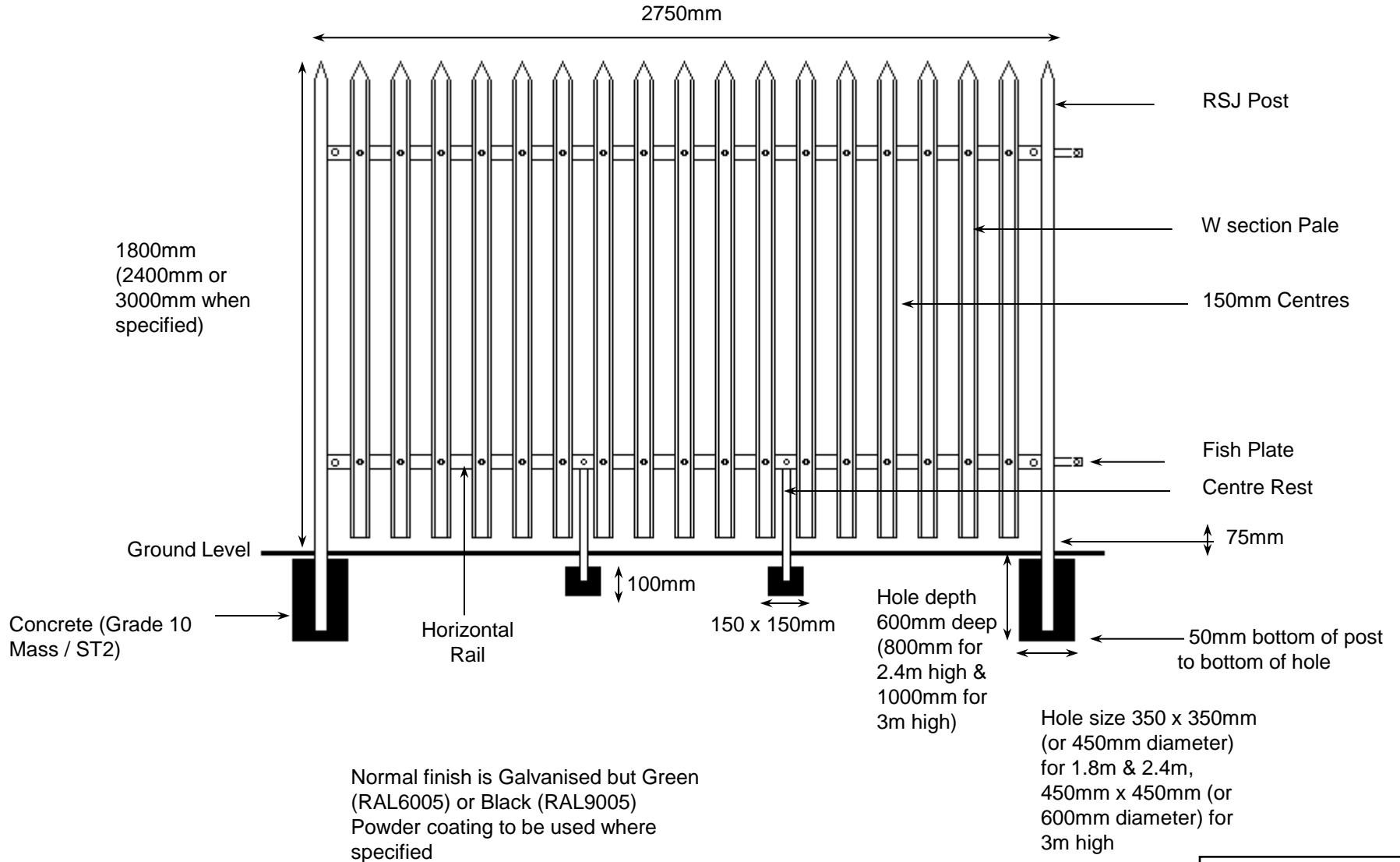
M8 x 40mm stainless steel anti-vandal security (shear) fixings

All metalwork shall be galvanised to BS EN ISO 1461 or BS EN 10240

Powder coating (if required) shall be black (RAL9005) or green (RAL6005) to BS1722-16: 2009 and applied after galvanising

Posts shall have welded (or push fit plastic) caps

Steel Palisade fence detail sheet



Not to scale

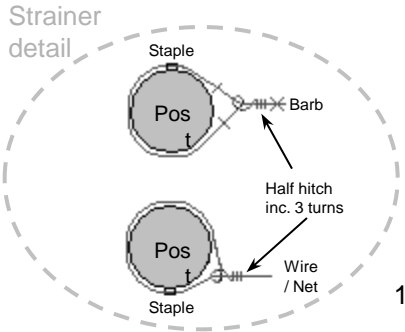
11/07/2015

NR/L2/TRK/5100/3/PSN 2015 rev A

Not to scale 11/07/2015

This specification detail is the **DEFAULT** CIII fence for **ALL** types of agricultural land

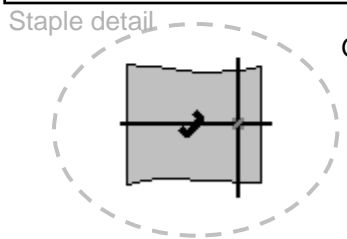
Hi-Tensile Agricultural stock fence



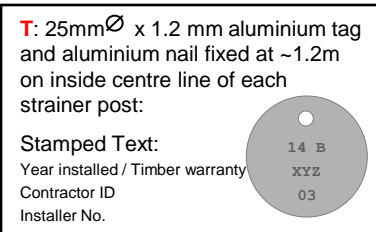
All wires and net returned and stapled around end strainers per detail above

High tensile half hitch, HT spiral connector or "Gripple T-Clip" to tie off each horizontal wire (including net)

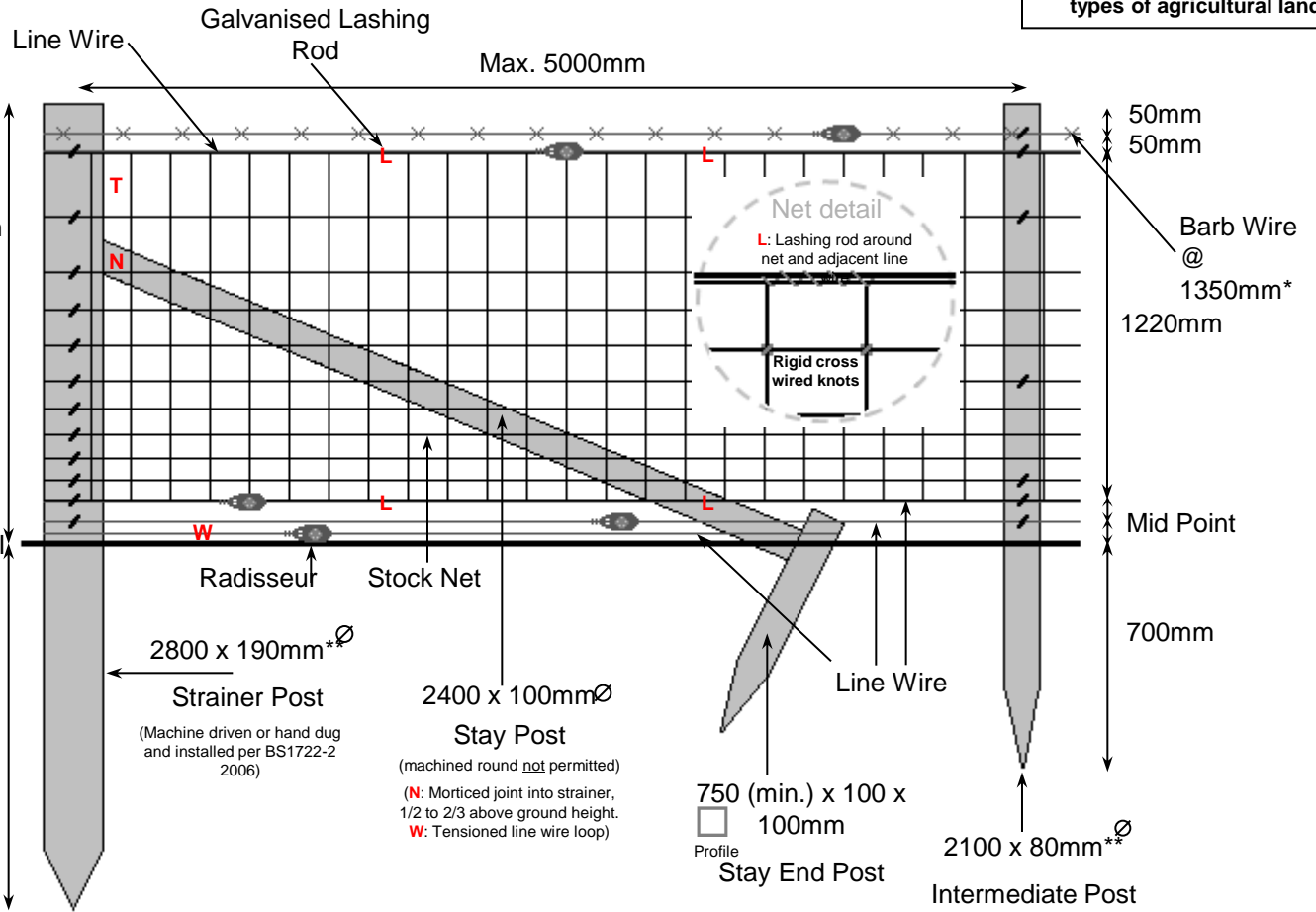
All wires and net strained "piano wire" taught



Staples shall be offset between 33° and 45° then driven into the post leaving a 2mm to 5mm "running fit" over all wires



Specification drawing or component deviations require pre-installation approval (in writing) from the Employer's Representative



All timber components shall have traceable certificated origin, auditable treatment and a stated underwritten minimum warranty as installed:

Class B: UC4 and 15 years **Class A:** UC4 and 25 years +

Alternative materials (e.g. steel) allowable to same strength and Class A (above)

UC4 end grain preservative to **all** timber cuts, notches, scoring or damage

Ø = Min. diameter ** (machined rounds +20mm and chamfered top edges)

Concrete posts only if authorised in writing by Employer's Representative

Fixings deployed as detailed

2.50mm HT galvanised line wire

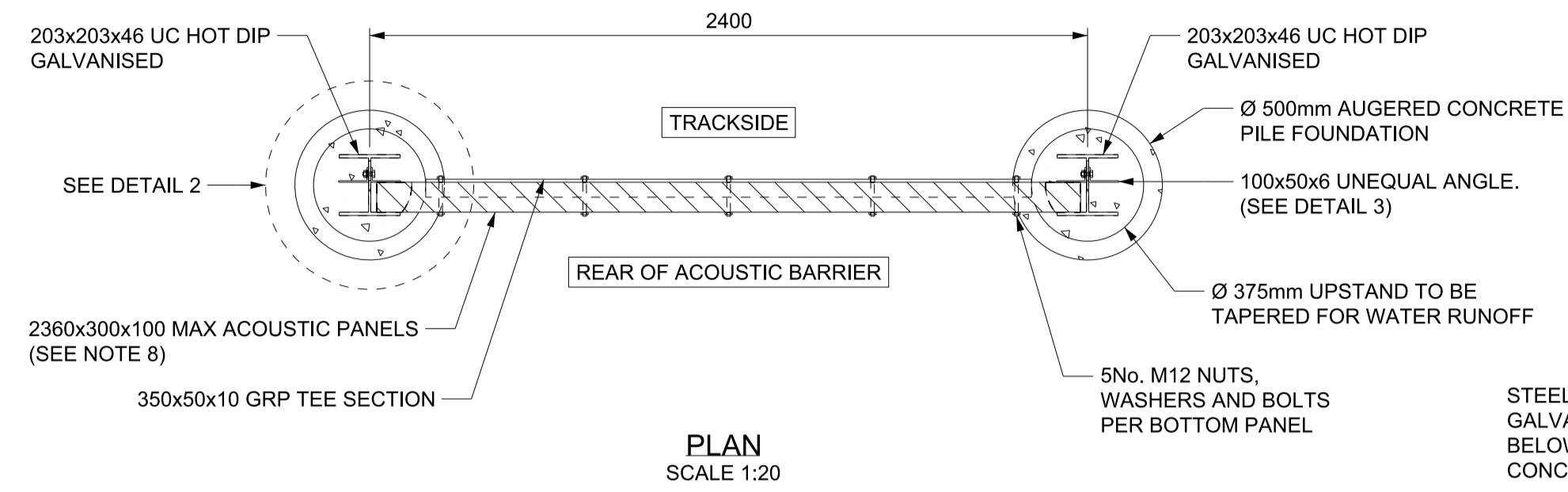
*2.00mm 2 ply HT galvanised barb wire (only with landowner's permission) or additional line wire

HT11/122/15 or HT11/120/15 galvanised livestock net

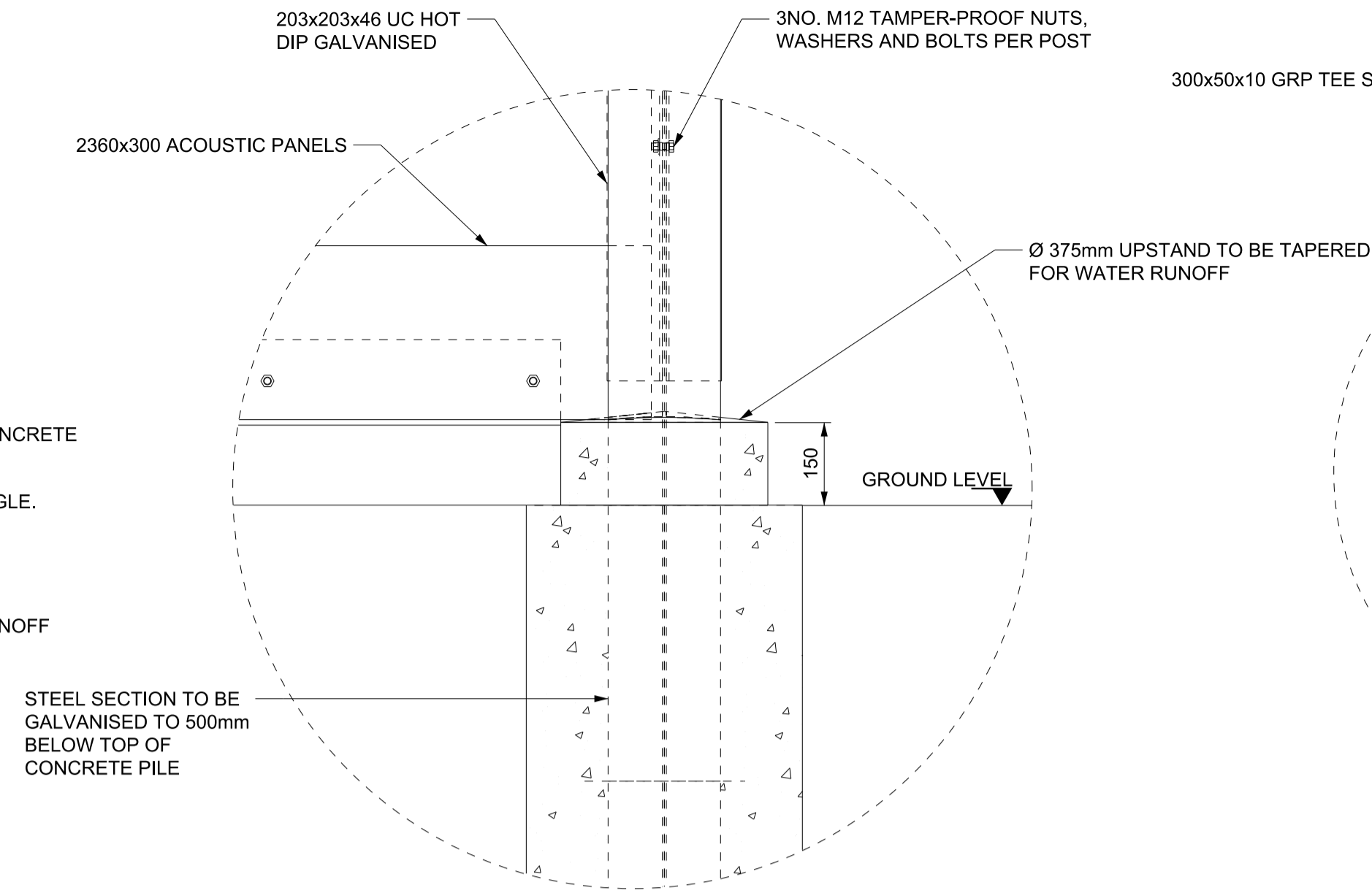
40 x 4mm galvanised barbed staples

120mm galvanised radisseurs

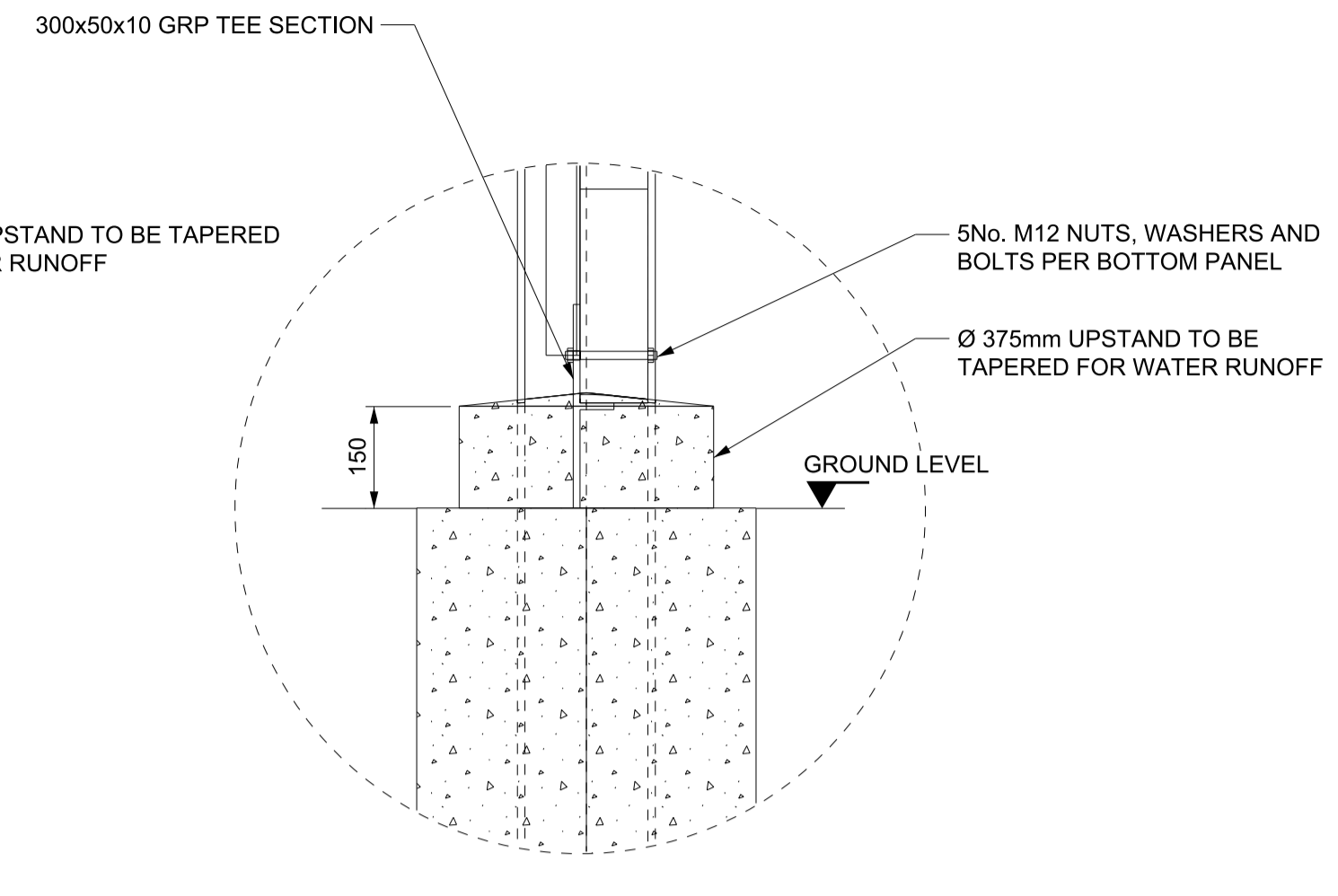
Safety, Health and Environmental Information	
The works are to be undertaken by a competent contractor, and therefore only exceptional risks relating to the works associated with this drawing are identified below. For further details and proposed safety measures refer to EWR Phase 2 Hazard Log Working Copy v5 doc. Ref: 133735-EWR-LOG-SSD-000004.	
ID	Hazard description
EWR2-HAZ-02387	DAMAGE TO THE ACOUSTIC PANELS
INDICATES H&S RISKS (EWR2-HAZ-.....)	



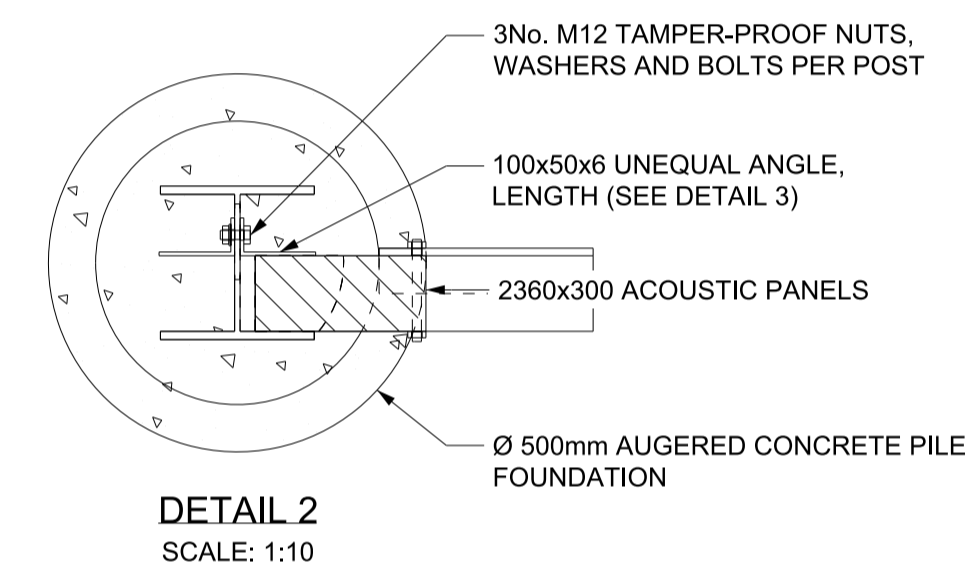
PLAN SCALE 1:20



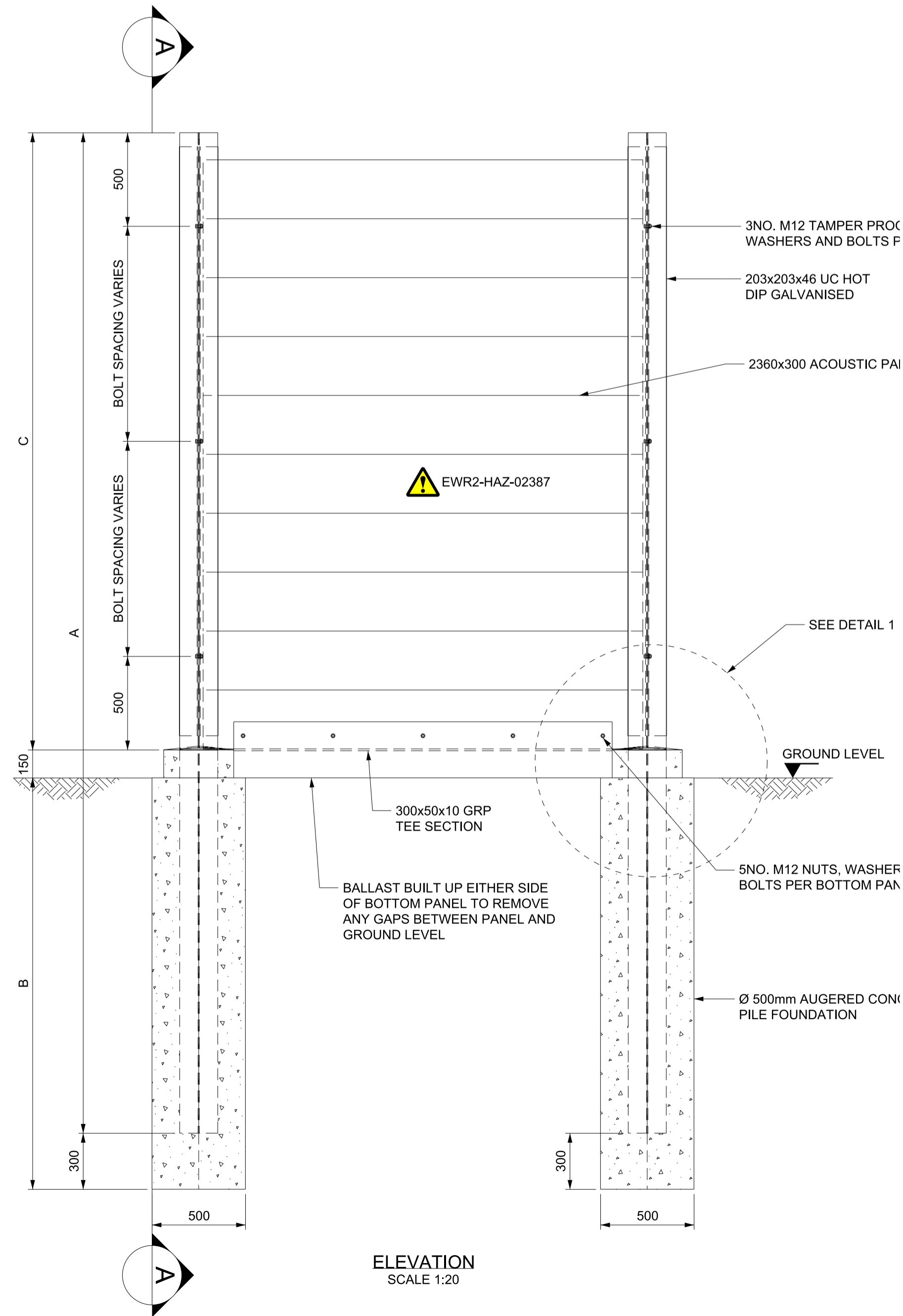
DETAIL 1 SCALE 1:10



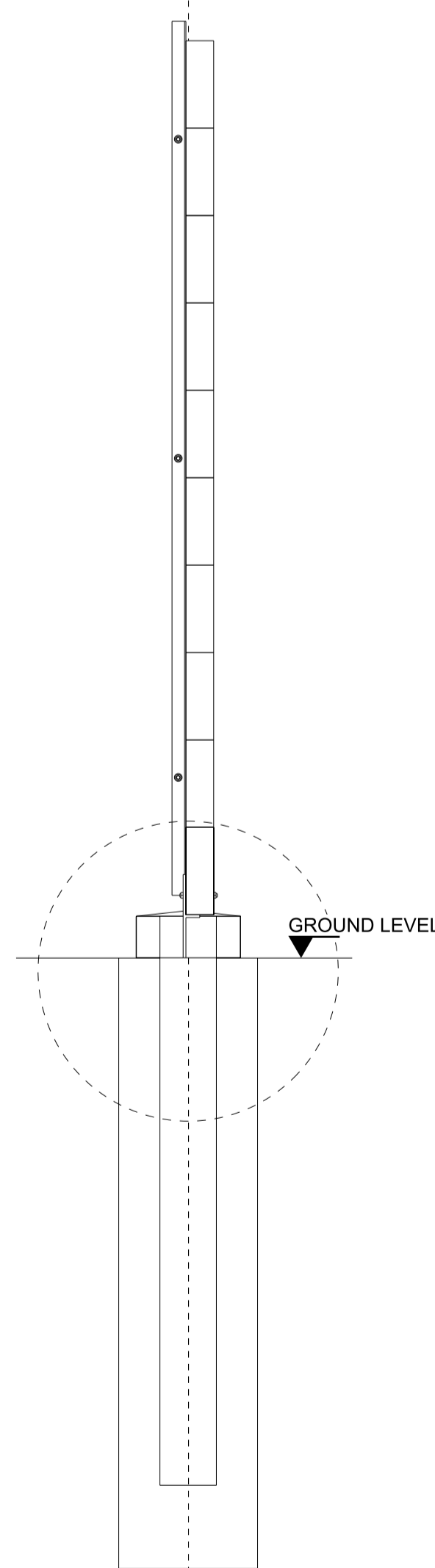
DETAIL 4 SCALE 1:10



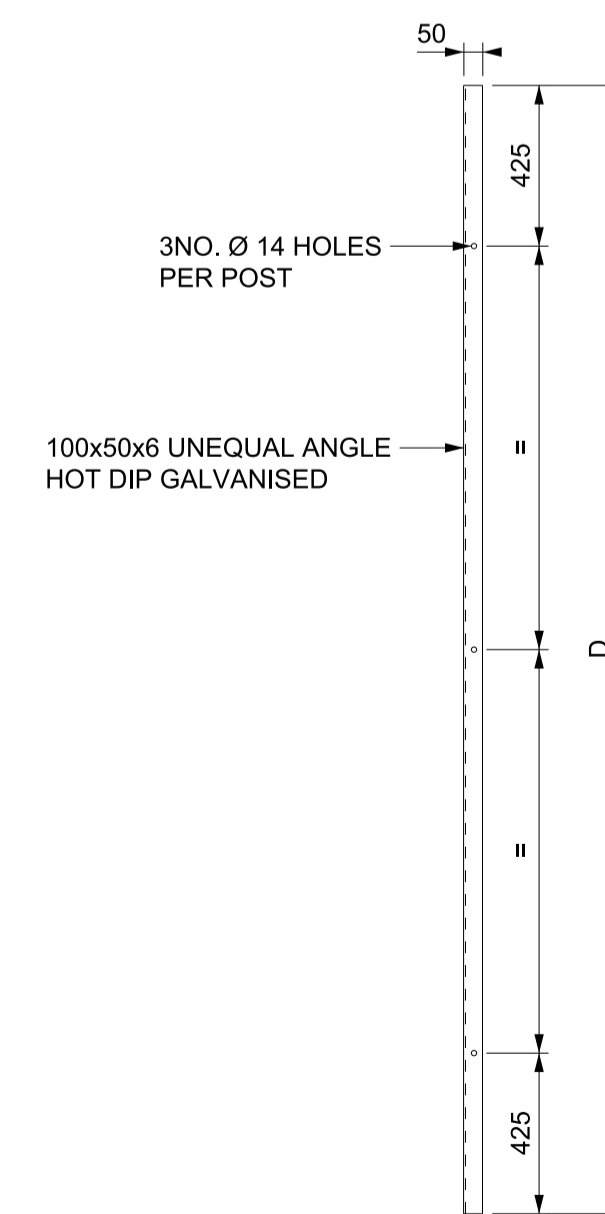
DETAIL 2 SCALE 1:10



ELEVATION SCALE 1:20



SECTION A-A SCALE 1:20



DETAIL 3 SCALE 1:20

LEGEND / NOTES

- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS STATED OTHERWISE.
- LENGTH OF CONCRETE PILES CAN BE FOUND IN THE LOCATION SPECIFIC ACOUSTIC BARRIER SUBMISSIONS.
- ALL STEEL SECTIONS TO BE HOT-DIP-GALVANISED FROM TOP OF POST TO 500mm BELOW GROUND AND IN ACCORDANCE WITH BS EN ISO 1461:2009 AND BS EN ISO 14713-1:2017 TO ACHIEVE A SURFACE COATING OF 140 MICRONS. ANY DAMAGE TO GALVANISED STEEL SHOULD BE REPAIRED USING A ZINC RICH PRIMER COMPLYING WITH BS 4652:1995 OR BS EN ISO 12944-5:2007.
- RESULTING TOTAL HEIGHT TO BE CONFIRMED IN SITE SPECIFIC SUBMISSIONS.
- ALL STEELWORK TO BE S275 STEEL GRADE J2 SUBGRADE.
- STRUCTURAL NUTS, BOLT AND WASHERS SHOULD BE GALVANISED IN ACCORDANCE WITH BS EN 898-1:2013. ALL BOLTS TO BE GRADE 8.8 IN ACCORDANCE WITH BS 4190. TAMPERPROOF BOLTS AND NUTS TO BE USED FOR FIXING THE UNEQUAL ANGLE TO THE POST
- CONCRETE PILES TO BE TYPE CA-H IN ACCORDANCE WITH THE PROJECT CONCRETE SPECIFICATION AND 55mm NOMINAL COVER TO BE ACHIEVED TO THE FACE OF THE CONCRETE PILE AND THE UC WITHIN THE PILE IN ACCORDANCE WITH THE PROJECT CONCRETE SPECIFICATION 133735-EWR-SPE-EMF-000002
- ACOUSTIC PANELS TO MEET MINIMUM ACOUSTIC PERFORMANCE SPECIFICATION OF $DL_r = 25db$ AND $DL_a = 13db$. PANEL SUPPLIER AND DETAILS TO BE CONFIRMED WITH THE DESIGNER PRIOR TO AFC SUBMISSION. MAXIMUM 100mm THICK PANEL ASSUMED WITHIN DESIGN.
- THE PLAN DEVIATION AT THE TOP OF THE PILE IS 100mm MAXIMUM IN ACCORDANCE WITH BS EN 1536:2010+A1:2015. A 2mm/mm OUT OF VERTICALLY TOLERANCE AND A 10MM PLAN TOLERANCE IS APPLIED TO THE INSTALLATION OF THE POSTS.
- THE EWR ALLIANCE DELIVERY TEAM IS RESPONSIBLE FOR LOCATING AND PROTECTING SERVICES AND UTILITIES. THEY ARE ALSO RESPONSIBLE FOR ALL TEMPORARY WORKS.
- BOTTOM GRP PANEL CONNECTION DETAIL SUBJECT TO REVIEW OF THE SELECTED ACOUSTIC PANEL.
- THE BOTTOM GRP TEE SECTION CAN BE REMOVED TO ALLOW THE MOVEMENT OF ANIMALS. IN PARTICULAR GREAT CRESTED NEWTS. THE REQUIREMENT AND SPACING WILL BE OUTLINED IN THE LOCATION SPECIFIC ACOUSTIC BARRIER SUBMISSIONS.
- ENVISAGED CONSTRUCTION SEQUENCE:
 - AUGER HOLE TO BE THE REQUIRED DEPTH.
 - CORRECTLY POSITION STEEL POST.
 - CONCRETE POURED INTO THE AUGERED HOLE AND ALLOWED TO CURE TO FORM THE CONCRETE PILE.
 - INSERT THE ACOUSTIC PANELS. AFTER INSERTING THE FIRST PANEL, THE GRP TEE SECTION IS TO BE SECURED TO THE BOTTOM ACOUSTIC PANEL.
 - ACOUSTIC PANELS ARE TO BE CLAMPED TO THE POST FLANGE WITH THE UNEQUAL ANGLE, WHICH IS BOLTED THROUGH THE WEB OF THE POST.

Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	06/12/19	For Approval				

SHARED - for Assurance Review S3



Project
East West Rail (Western Section) Phase 2

Drawing Title
ROUTEWIDE ACOUSTIC BARRIERS GENERIC DETAILS PILE FOUNDATION

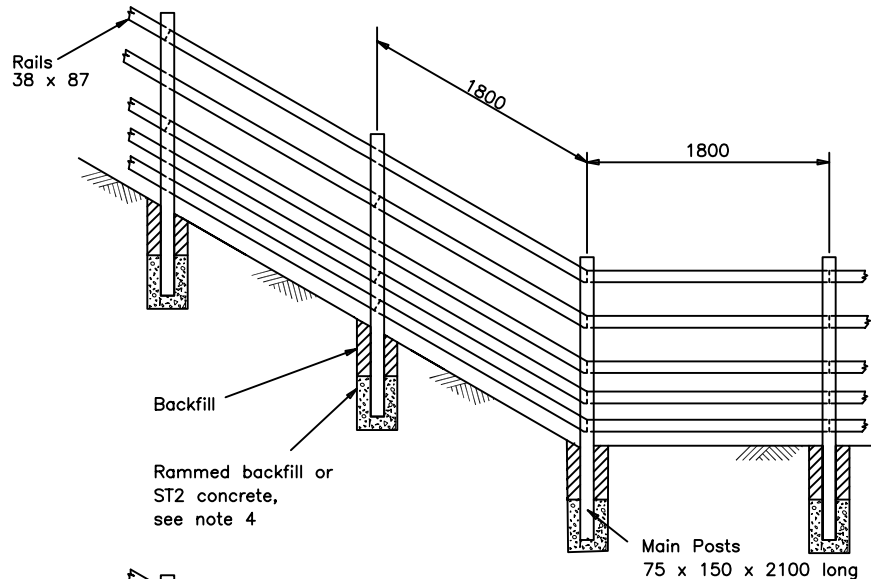
Designed	Liam Dempsey	Signed	L. Dempsey	Date	27/11/19
Drawn	Nathan Smart	Signed	N. Smart	Date	24/06/19
Checked	Fraser Drew	Signed	F. Drew	Date	27/11/19
Approved	Fraser Drew	Signed	F. Drew	Date	02/12/19

Scale(s)
As Shown ELR - Project Chainage (Miles/Yards)
XX - XXXXXXXX

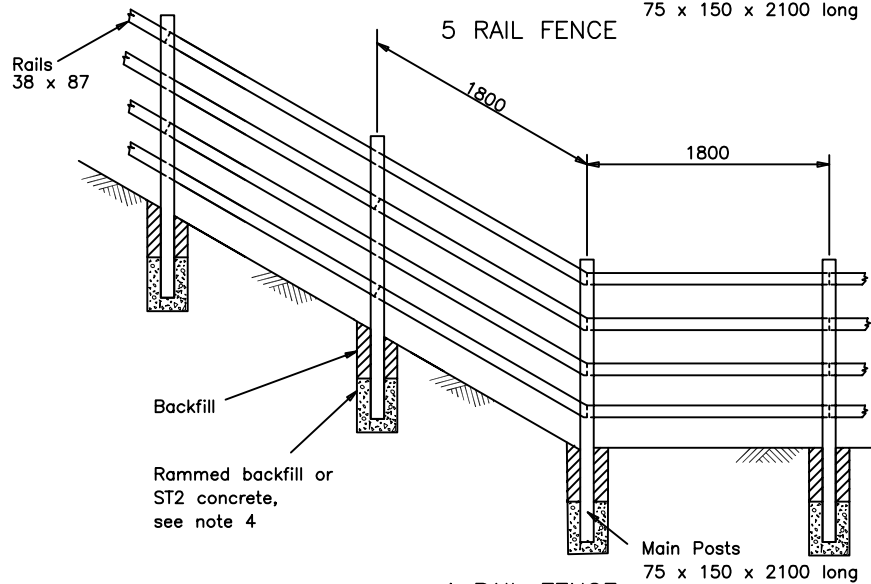
Design Package Risk Classification
High Sheet 1 of 1

Alternative Reference
Revision
B01

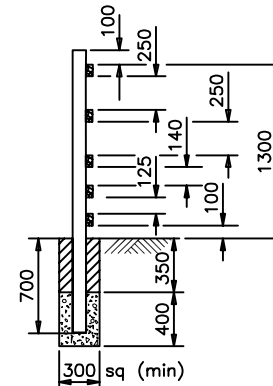
Drawing Number
133735_RW-EWR-XX-XX-DR-CA-000402



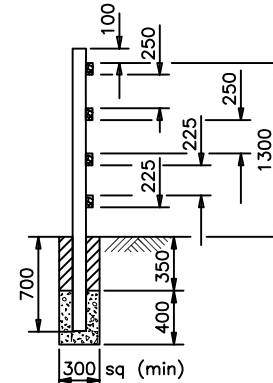
5 RAIL FENCE



4 RAIL FENCE



SECTION THROUGH
Q OF MAIN POSTS



SECTION THROUGH
Q OF MAIN POSTS

NOTES

1. Specification Clause 306 applies unless otherwise stated in Appendix 3/1 or Appendix 1/15.
- 2a). Where plain or barbed wire is required in Appendix 3/1 or Appendix 1/15 it shall be zinc coated and comply with BS 4102.
- 2b). 4 rail fence – BS 1722 Part 7 Type SPR 13/4 applies unless otherwise stated.
- 2c). 5 rail fence – BS 1722 Part 7 Type SPR 13/4 applies (except for the addition of a fifth rail, rails spaced as shown) unless otherwise stated.
3. Where the fence forms a boundary between the highway and private property, the rails shall be fixed to the private property side unless otherwise stated in Appendix 3/1 or 1/15.
4. Posts can be supported by rammed backfill or ST2 concrete unless Appendix 1/15 or Appendix 3/1 require ST2 concrete to be used.
5. ALL DIMENSIONS ARE IN MILLIMETRES.

HIGHWAY CONSTRUCTION DETAILS

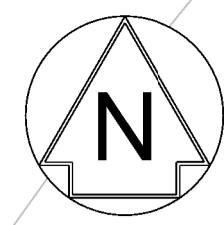
FENCES, STILES &
GATES

D	MAY 04
C	MAR 98
B	AUG 93
A	DEC 91
Issue	Date

MOTORWAY AND ACCOMMODATION WORKS
TIMBER POST AND 4 (OR 5)
RAIL FENCES

Drawing No.

H3



- NOTES**
- DRAWING SHOWS LOCATION OF NEW PERMANENT BOUNDARY FENCING WHICH ABUTS A HIGHWAY, RESIDENTIAL OR COMMERCIAL LAND OR PREMISES.
 - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
 - DO NOT SCALE FROM THIS DRAWING.
 - OS GRID REFERENCE: SP 606 231
 - FENCING SHOWN ON THIS DRAWING WILL TIE INTO THE LINESIDE FENCING AT THE RAILWAY CORRIDOR.
 - IT IS ASSUMED THAT THE HIGHWAY EMBANKMENT WILL BE A NETWORK RAIL ASSET AND AS SUCH MAINTAINED WITH ACCESS FROM THE TRACK.
 - THE FOLLOWING NETWORK RAIL STANDARD DETAIL SHALL BE INSTALLED
 - WELDMESH NR/L2/TRK/5100/1/MM 2015 REV A
i. 1800MM TO BE USED
 - PALISADE NR/L2/TRL/5100/MP 2015 REV A
i. 1800MM TO BE USED OTHER THAN VEHICULAR ACCESS POINTS, WHERE 2400MM WILL BE USED.
 - STOCK PROOF NR/L2/TRK/5100/2/PSN 2015 REV A
i. METAL POSTS SHALL NOT BE USED
ii. STRAINER POSTS AT MAXIMUM 500M INTERVALS

LEGEND

- 1.4m STOCK PROOF FENCING
- 1.4m POST AND RAIL



Rev	Date	Description of Revisions	Desd	Chkd	Appr
B01	27/02/20	FOR PLANNING	J.A.	R.G.	J.G.
Status	Accepted for Detailed Design				A5

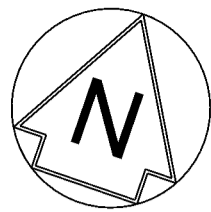


Project
**East West Rail
(Western Section)
Phase 2**

Drawing Title
**FENCING PLAN DRAWING
OXD/36AA
CHARBRIDGE LANE**

Designed	Jessica Arnison	Signed	J. Arnison	Date	26/02/20
Drawn	Richard Gallagher	Signed	R. Gallagher	Date	26/02/20
Checked	Richard Gallagher	Signed	R. Gallagher	Date	26/02/20
Approved	Julien Green	Signed	J. Green	Date	27/02/20

Scale(s)	ELR - Project Chainage (Miles Yards)	Sheet	0 of 0
Design Package Risk Classification	Normal	Revision	B01
Alternative Reference		Drawing Number	133735_RW-EWR-XX-XX-DR-CA-011206

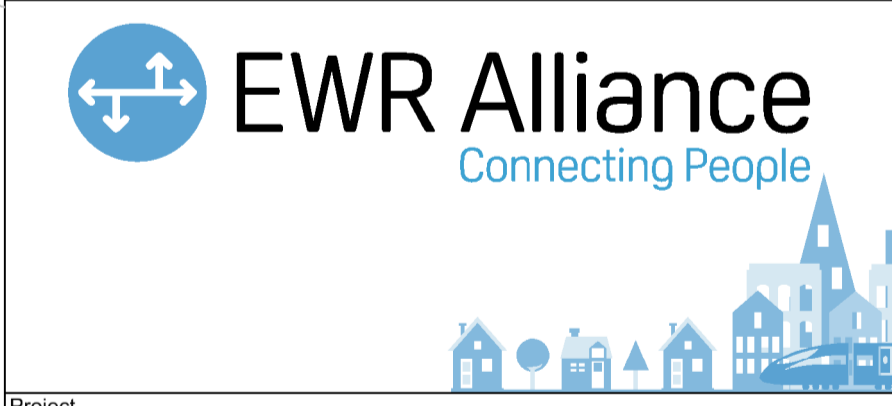


- NOTES**
- DRAWING SHOWS LOCATION OF NEW PERMANENT BOUNDARY FENCING WHICH ABUTS A HIGHWAY, RESIDENTIAL OR COMMERCIAL LAND OR PREMISES.
 - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
 - DO NOT SCALE FROM THIS DRAWING.
 - OS GRID REFERENCE: SP 619235
 - FENCING SHOWN ON THIS DRAWING WILL TIE INTO THE LINE SIDE FENCING AT THE RAILWAY CORRIDOR.
 - IT IS ASSUMED THAT THE HIGHWAY EMBANKMENT WILL BE A NETWORK RAIL ASSET AND AS SUCH MAINTAINED WITH ACCESS FROM THE TRACK.
 - THE FOLLOWING NETWORK RAIL STANDARD DETAIL SHALL BE INSTALLED
 - WELDMESH NR/L2/TRK/5100/1/WM 2015 REV A
 - 1800MM TO BE USED
 - PALISADE NR/L2/TRL/5100/WP 2015 REV A
 - 1800MM TO BE USED OTHER THAN VEHICULAR ACCESS POINTS, WHERE 2400MM WILL BE USED.
 - STOCK PROOF NR/L2/TRK/5100/2/PSN 2015 REV A
 - METAL POSTS SHALL NOT BE USED
 - STRAINER POSTS AT MAXIMUM 500M INTERVALS

LEGEND

	1.4m STOCK PROOF FENCING
	1.4m POST AND RAIL
	2.4m PALISADE FENCE

Rev	Date	Description of Revisions	Desd	Chkd	Appr	Suitability
B01	27/02/20	FOR PLANNING	J.A.	R.G.	J.G.	
Accepted for Detailed Design						A5



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

Drawing Title
**FENCING PLAN DRAWING
OXD34
STATION ROAD LAUNTON**

Designed	Jessica Arnison	Signed	J. Arnison	Date	26/02/20
Drawn	Richard Gallagher	Signed	R. Gallagher	Date	26/02/20
Checked	Richard Gallagher	Signed	R. Gallagher	Date	26/02/20
Approved	Julien Green	Signed	J. Green	Date	27/02/20
Scale(s)	ELR - Project Chainage (Miles Yards) XX - \$EDIT#PW_PROJECT_CHAINAGE				
Design Package Risk Classification	Normal			Sheet	0 of 0
Alternative Reference				Revision	B01
Drawing Number	133735_RW-EWR-XX-XX-DR-CA-011207				