

# HEXHAM TRAIN - SUPPORT FACILITY

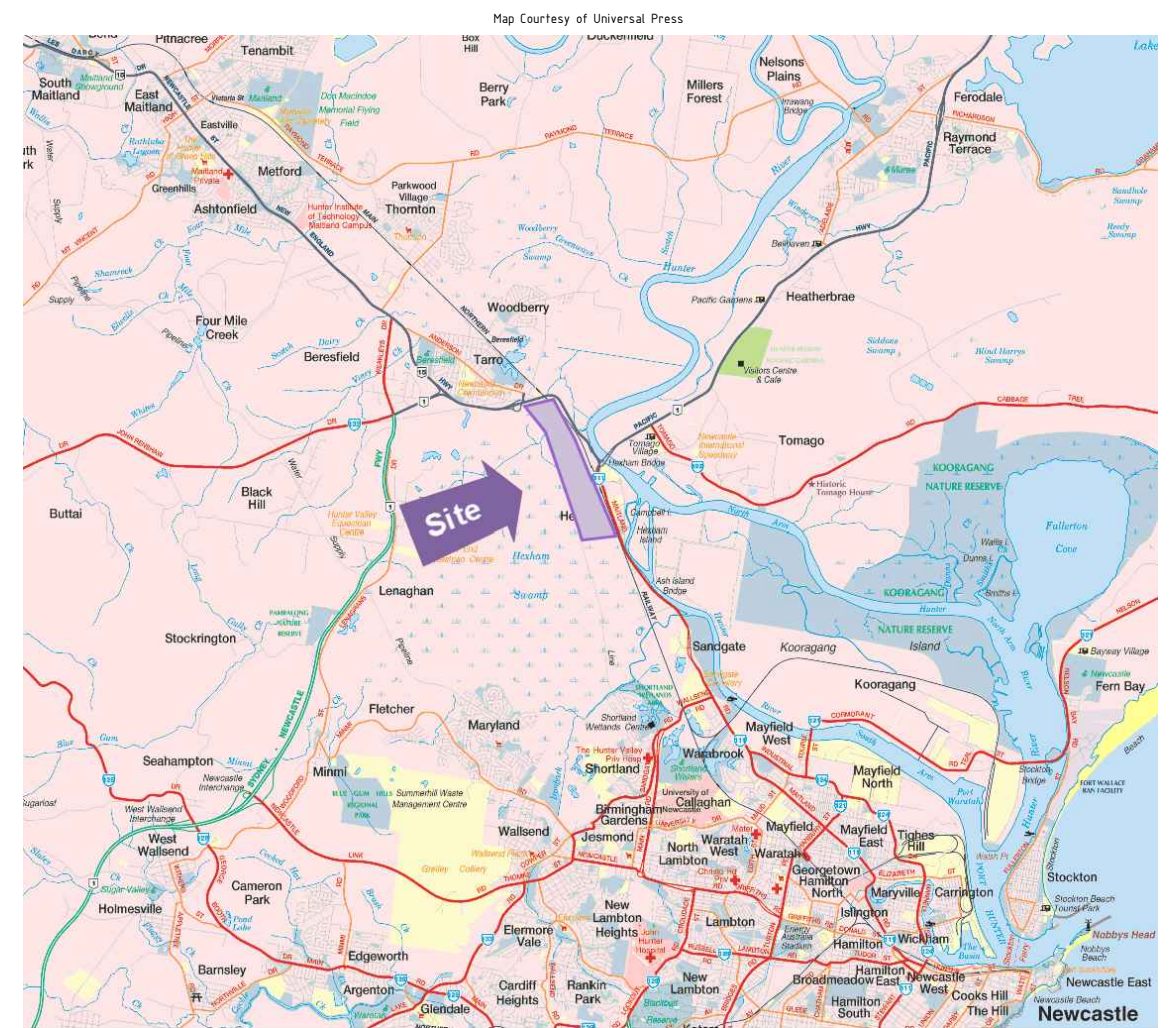
## HUNTER VALLEY - NEWCASTLE to MAITLAND

### 174 km to 177 km CIVIL WORKS

# QR NATIONAL

### DRAWING LIST

<b>GENERAL</b>	
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ENG-03891-007	General Arrangement & Profile - Sheet 5 of 5
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<b>SKETCHES</b>	
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SKETCH 4 - 13-06-12	SERVICES RELOCATION/PROTECTION



Locality Sketch

**DEVELOPMENT PLAN**  
NOT FOR CONSTRUCTION

DETAILS AND INFORMATION ON THIS DRAWING HAVE BEEN DERIVED FROM PREVIOUS DESIGN AND DRAWINGS PREPARED BY WORLEY PARSONS. ORIGINAL PLANS WERE SUPPLIED AND USED WITH THE PERMISSION OF QR NATIONAL - THE SAME DEVELOPER/CLIENT OF THE SUBJECT SITE

ISSUE	DATE	DESCRIPTION (Issue or Revision)
F	11.Sept.2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update
E	13.June.2012	ISSUED FOR PROJECT APPLICATION - Sketches Included
D	29.May.2012	ISSUED FOR PROJECT APPLICATION - Irrigation Beds Moved
C	21.May.2012	ISSUED FOR PROJECT APPLICATION - Sheet numbers revised
B	08.May.2012	ISSUED FOR PROJECT APPLICATION - General Update
A	26.Apr.2012	ISSUED FOR PROJECT APPLICATION

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CHECKED	EM + JH
APPROVED	----
CAD FILE	aMaster_G.dwg

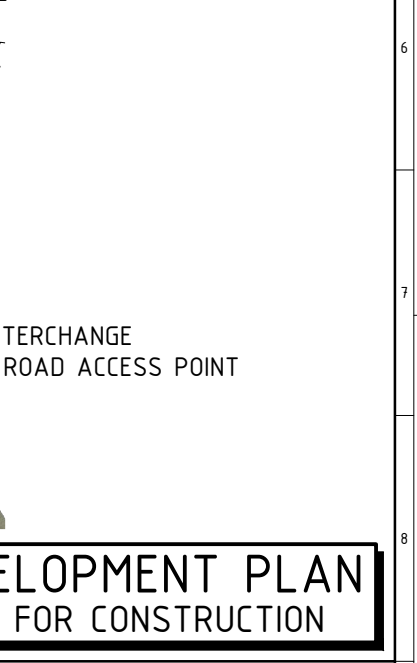
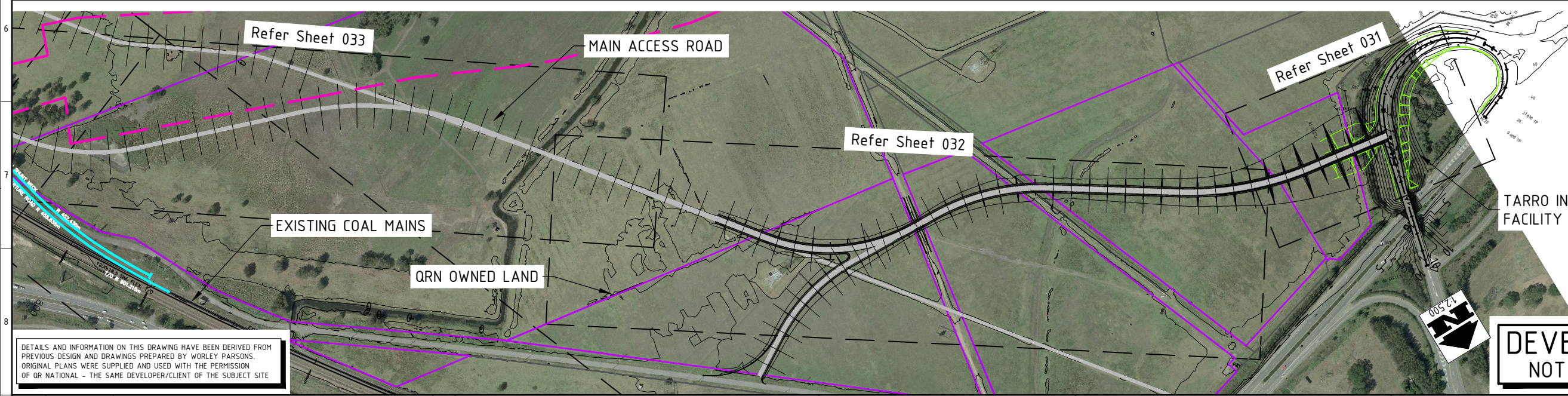
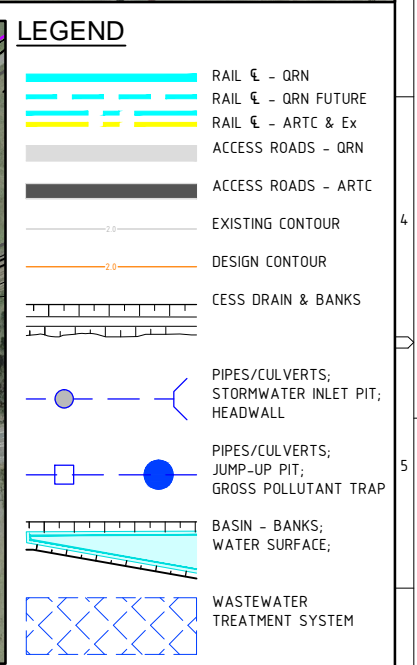
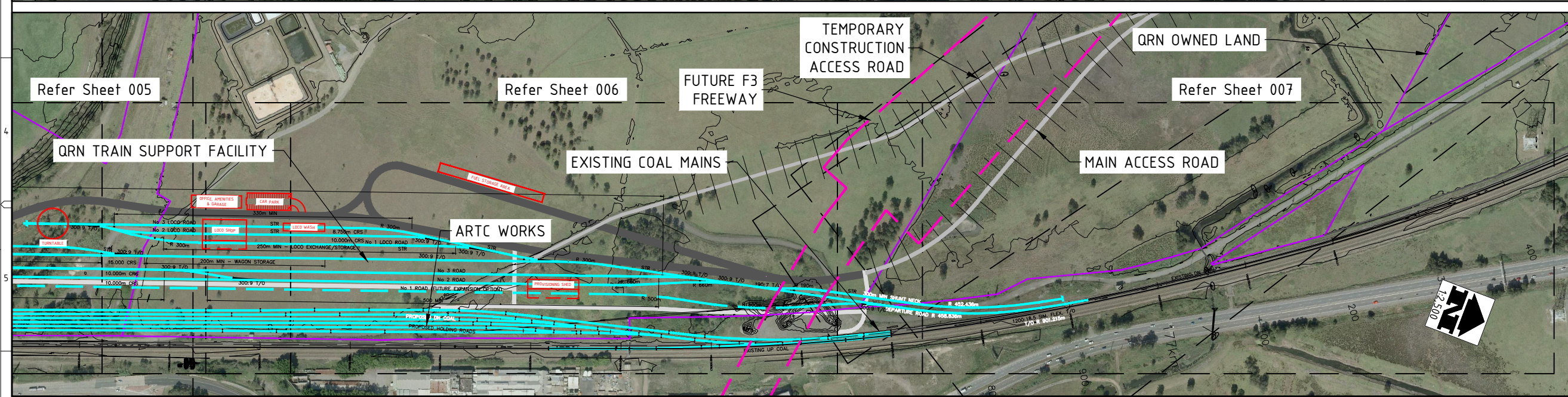
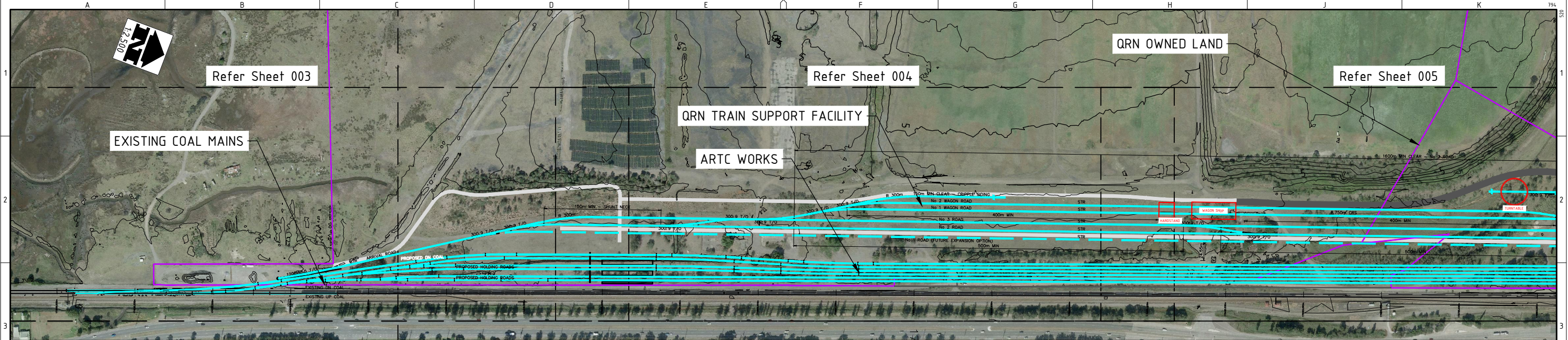
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QRN - HEXHAM TRAIN SUPPORT FACILITY HEXHAM, NSW COVER SHEET, DRAWING LIST and LOCALITY PLAN			
DRG No	ENG-03891-001	Issue	E
SHEET	1	Scale	Not to Scale
OF	20	Sheet Size	A1

PLOTTED: 11-SEP-2012 04:07 PM

DO NOT SCALE



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**DEVELOPMENT PLAN**  
NOT FOR CONSTRUCTION

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E	11.Sept.2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update
D	29.May.2012	ISSUED FOR PROJECT APPLICATION - Irrigation Beds Moved
C	21.May.2012	ISSUED FOR PROJECT APPLICATION - Sheet numbers revised
B	08.May.2012	ISSUED FOR PROJECT APPLICATION - General Update
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DESIGNED	EM + JH
APPROVED	----
CAD FILE	aMaster_G.dwg

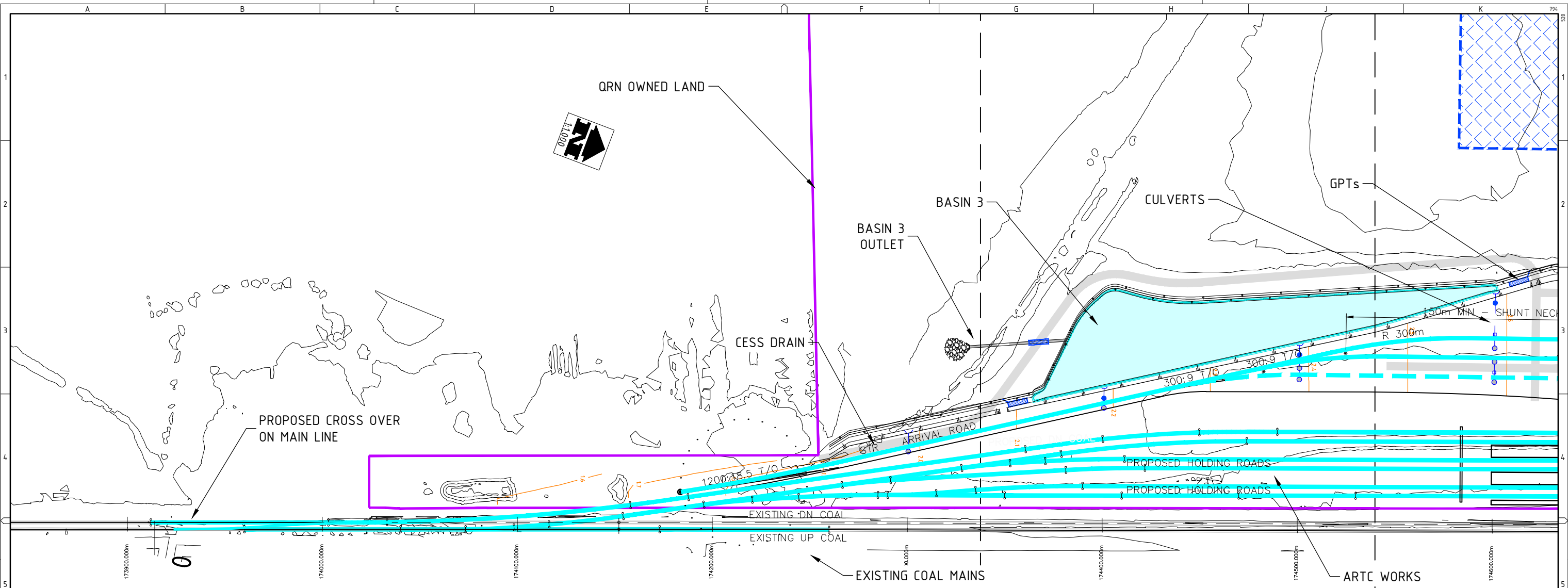
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QRN - HEXHAM TRAIN SUPPORT FACILITY HEXHAM, NSW OVERALL PLAN and PLAN KEY	
DRG No. <b>ENG-03891-002</b>	Issue <b>E</b>
SHEET 2 OF 20	Scale Plan: 1:2,500
Sheet Size <b>A1</b>	

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**LEGEND**

- RAIL € - QRN
- RAIL € - QRN FUTURE
- RAIL € - ARTC & Ex
- ACCESS ROADS - QRN
- ACCESS ROADS - ARTC
- EXISTING CONTOUR
- DESIGN CONTOUR
- CESS DRAIN & BANKS
- PIPES/CULVERTS; STORMWATER INLET PIT; HEADWALL
- PIPES/CULVERTS; JUMP-UP PIT; GROSS POLLUTANT TRAP
- BASIN - BANKS; WATER SURFACE;
- WASTEWATER TREATMENT SYSTEM

**DEVELOPMENT PLAN  
NOT FOR CONSTRUCTION**

CHAINAGE	173+900.0	173+925.0	173+950.0	173+975.0	174+000.0	174+025.0	174+050.0	174+075.0	174+100.0	174+125.0	174+150.0	174+175.0	174+200.0	174+225.0	174+250.0	174+275.0	174+300.0	174+325.0	174+350.0	174+375.0	174+400.0	174+425.0	174+450.0	174+475.0	174+500.0	174+525.0	174+550.0	174+575.0	174+600.0	174+625.0		
DESIGN PLATFORM (RAIL TOP+0.67m)					1.44	1.47	1.53	1.58	1.63	1.69	1.71	1.74	1.75	1.79	1.84	1.89	1.94	1.99	2.04	2.09	2.14	2.19	2.24	2.29	2.34	2.39	2.44	2.49	2.54	2.59	2.63	
CESS DRAIN INVERT					1.44	1.47	1.52	1.57	1.62	1.67	1.66	1.65	1.64	1.63	1.61	1.58	1.57	1.56	1.54	1.53	1.51	1.50	1.49	1.47	1.46	1.44	1.44	1.43	1.43	1.42	1.42	1.42
Ex DOWN MAIN (RAIL TOP+0.67m)	1.30	1.33	1.36	1.39	1.44	1.47	1.52	1.57	1.62	1.67	1.66	1.65	1.64	1.63	1.61	1.58	1.57	1.56	1.54	1.53	1.51	1.50	1.49	1.47	1.46	1.44	1.44	1.43	1.43	1.42	1.42	1.42
EXISTING SURFACE	1.97	2.02	2.03	2.05	2.08	2.12	2.20	2.29	2.31	2.33	2.33	2.32	2.31	2.30	2.27	2.25	2.23	2.22	2.20	2.19	2.17	2.16	2.14	2.14	2.13	2.11	2.10	2.10	2.10	2.09	2.09	2.09

LONG SECTION: Coal\_Down\_Exist (From 173900 to 174625)  
Scales: H 1 in 1000 V 1 in 50

ISSUE	DATE	DESCRIPTION (Issue or Revision)
E	11.Sept.2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update
D	29.05.2012	ISSUED FOR PROJECT APPLICATION - Irrigation Beds Moved
C	21.May.2012	ISSUED FOR PROJECT APPLICATION - Sheet numbers revised
B	08.May.2012	ISSUED FOR PROJECT APPLICATION - General Update
A	26.Apr.2012	ISSUED FOR PROJECT APPLICATION

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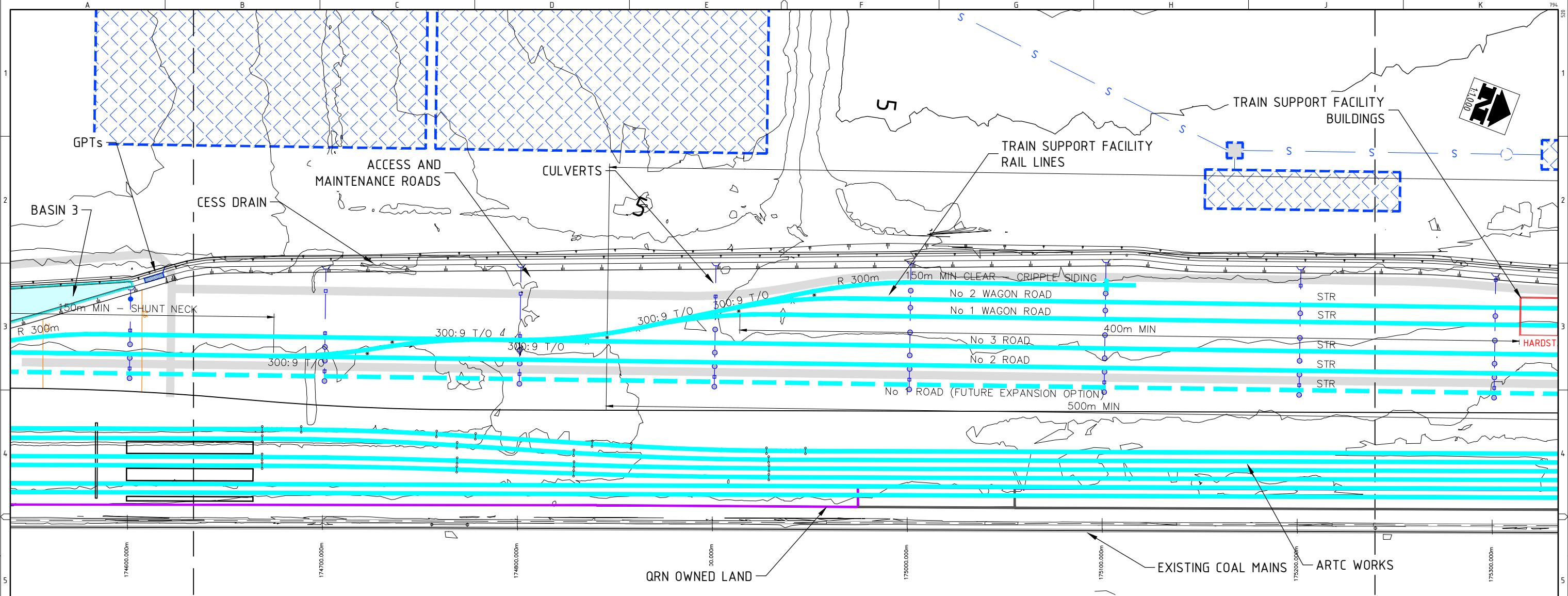
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**QRN - HEXHAM TRAIN SUPPORT FACILITY**  
 HEXHAM, NSW  
 GENERAL ARRANGEMENT & PROFILE  
 Sheet 1 of 5

DRG No: **ENG-03891-003**  
 Issue: **E**  
 SHEET 3 OF 20  
 Scale: Plan: 1:1,000  
 H: 1:1,000 + V: 1:50

Sheet Size: **A1**



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**LEGEND**

- RAIL € - QRN
- RAIL € - QRN FUTURE
- RAIL € - ARTC & Ex
- ACCESS ROADS - QRN
- ACCESS ROADS - ARTC
- EXISTING CONTOUR
- DESIGN CONTOUR
- CESS DRAIN & BANKS
- PIPES/CULVERTS; STORMWATER INLET PIT; HEADWALL
- PIPES/CULVERTS; JUMP-UP PIT; GROSS POLLUTANT TRAP
- BASIN - BANKS; WATER SURFACE;
- WASTEWATER TREATMENT SYSTEM

**DEVELOPMENT PLAN  
NOT FOR CONSTRUCTION**

CHAINAGE	174+600.0	174+625.0	174+650.0	174+675.0	174+700.0	174+725.0	174+750.0	174+756.3	174+775.0	174+776.1	174+800.0	174+825.0	174+850.0	174+875.0	174+900.0	174+925.0	174+950.0	174+975.0	175+000.0	175+025.0	175+050.0	175+075.0	175+100.0	175+125.0	175+150.0	175+175.0	175+200.0	175+225.0	175+250.0	175+275.0	175+300.0	175+325.0	
DESIGN PLATFORM (RAIL TOP+0.67m)	2.59	2.63	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	
CESS DRAIN INVERT	0.82	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ex DOWN MAIN (RAIL TOP+0.67m)	1.42	1.42	1.41	1.41	1.40	1.40	1.39	1.39	1.39	1.39	1.38	1.39	1.40	1.39	1.37	1.37	1.36	1.36	1.35	1.35	1.35	1.34	1.34	1.34	1.34	1.35	1.35	1.34	1.33	1.33	1.32	1.31	1.31
EXISTING SURFACE	2.10	2.09	2.09	2.09	2.08	2.08	2.07	2.07	2.06	2.06	2.05	2.06	2.07	2.06	2.04	2.05	2.03	2.04	2.02	2.02	2.02	2.01	2.01	2.01	2.02	2.02	2.02	2.02	2.02	2.02	1.99	1.99	1.98

LONG SECTION: Coal\_Down\_Exist (From 174600.000 to 175325.000)  
Scales: H 1 in 1000 V 1 in 50

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E	11.Sept.2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update
D	29.May.2012	ISSUED FOR PROJECT APPLICATION - Irrigation Beds Moved
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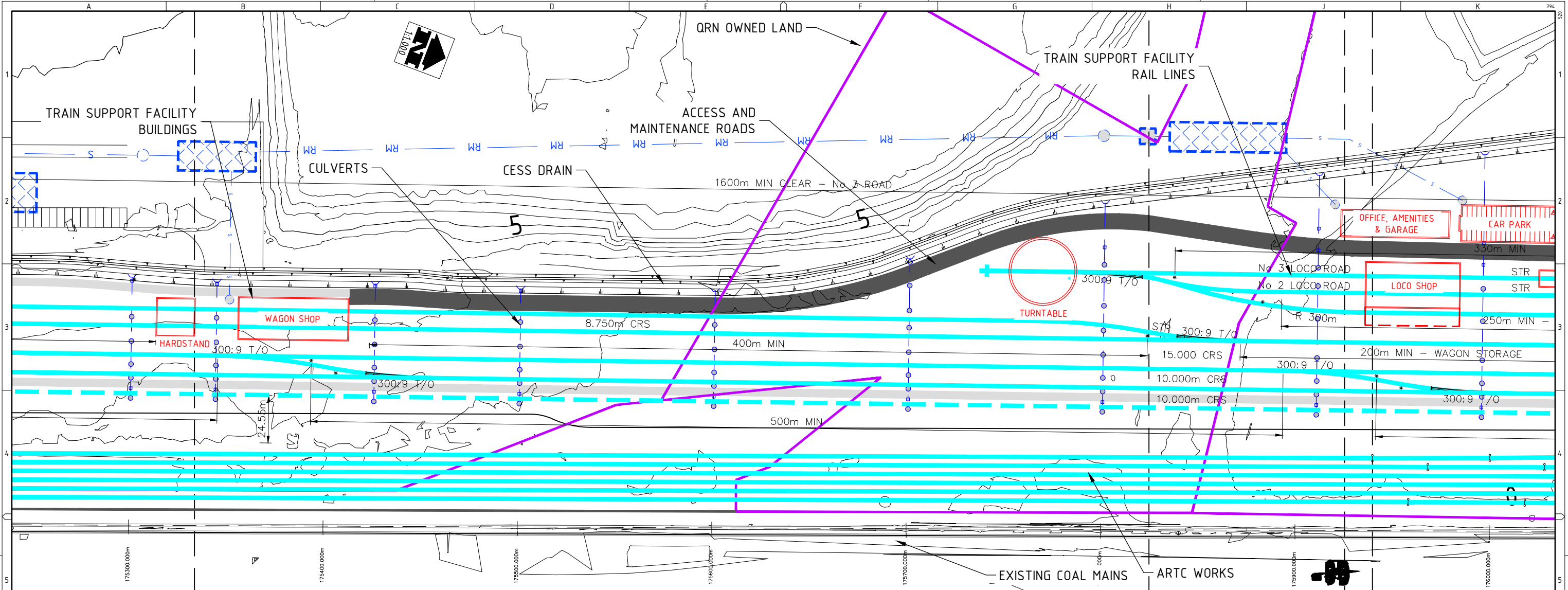
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**QRN - HEXHAM TRAIN SUPPORT FACILITY**  
 HEXHAM, NSW  
 GENERAL ARRANGEMENT & PROFILE  
 Sheet 2 of 5  
 DRG No: **ENG-03891-004**  
 Issue: **E**  
 SHEET 4 OF 20  
 Scale: Plan: 1:1,000  
 H: 1:1,000 + V: 1:50  
 Sheet Size: **A1**

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**LEGEND**

- RAIL € - QRN
- RAIL € - QRN FUTURE
- RAIL € - ARTC & Ex
- ACCESS ROADS - QRN
- ACCESS ROADS - ARTC
- EXISTING CONTOUR
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**DEVELOPMENT PLAN**  
NOT FOR CONSTRUCTION

CHAINAGE	175+300.0	175+325.0	175+350.0	175+375.0	175+400.0	175+425.0	175+450.0	175+475.0	175+500.0	175+525.0	175+550.0	175+575.0	175+600.0	175+625.0	175+650.0	175+675.0	175+700.0	175+725.0	175+750.0	175+775.0	175+800.0	175+825.0	175+850.0	175+875.0	175+900.0	175+925.0	175+950.0	175+975.0	176+000.0	176+025.0
DESIGN PLATFORM (RAIL TOP+0.67m)	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	
CESS DRAIN INVERT	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ex DOWN MAIN (RAIL TOP+0.67m)	1.32	1.31	1.30	1.28	1.26	1.24	1.22	1.20	1.18	1.16	1.14	1.12	1.10	1.08	1.06	1.04	1.02	1.00	0.98	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	
EXISTING SURFACE	1.99	1.98	1.97	1.97	1.93	1.92	1.94	1.99	2.03	2.03	2.04	2.05	2.08	2.08	2.07	2.10	2.16	2.18	2.20	2.24	2.27	2.27	2.26	2.26	2.27	2.27	2.27	2.28	2.30	2.30

LONG SECTION: Coal\_Down\_Exist (From 175300.000 to 176025.000)  
Scales: H 1 in 1000 V 1 in 50

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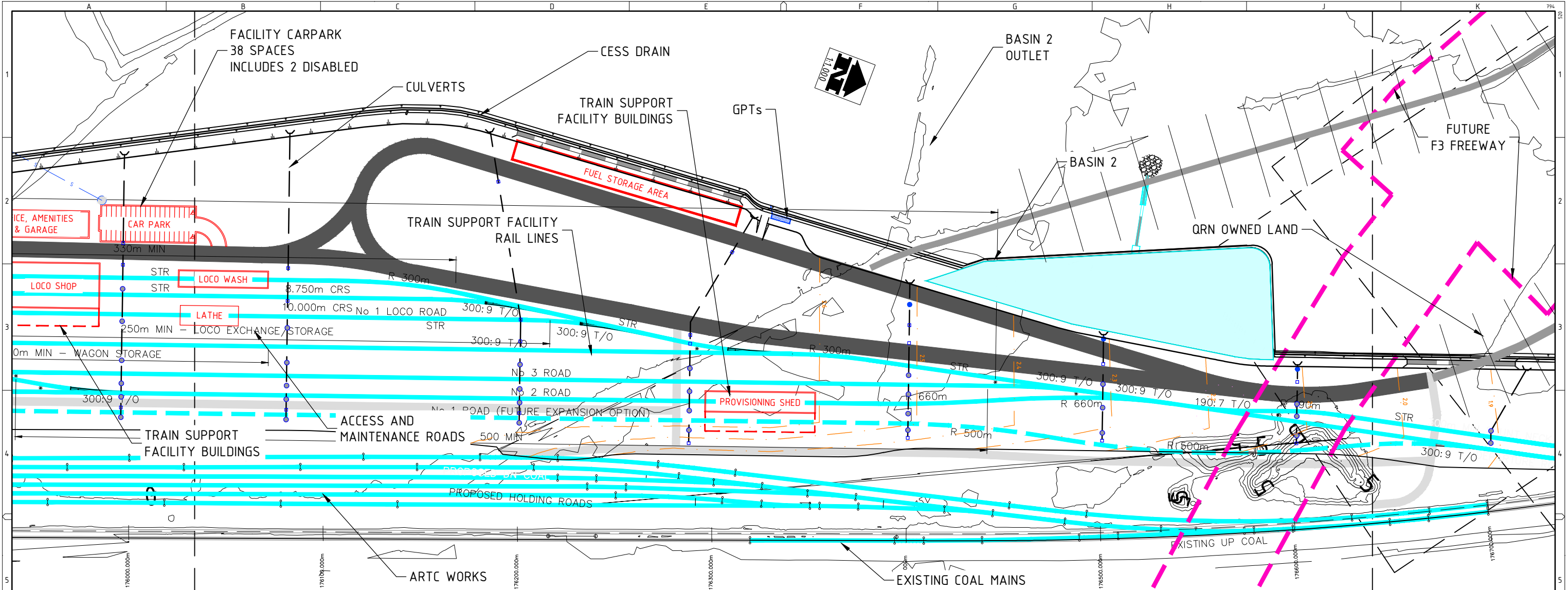
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**QRN - HEXHAM TRAIN SUPPORT FACILITY**  
 HEXHAM, NSW  
 GENERAL ARRANGEMENT & PROFILE  
 Sheet 3 of 5

DRG No. **ENG-03891-005** Issue **E** SHEET 5 OF 20 Scale Plan: 1:1,000 H: 1:1,000 + V: 1:50

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**LEGEND**

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- RAIL € - ARTC & Ex
- ACCESS ROADS - QRN
- ACCESS ROADS - ARTC
- EXISTING CONTOUR
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- PIPES/CULVERTS; STORMWATER INLET PIT; HEADWALL
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DEVELOPMENT PLAN  
NOT FOR CONSTRUCTION

	CHAINAGE	176+000.0	176+025.0	176+050.0	176+075.0	176+100.0	176+125.0	176+150.0	176+175.0	176+200.0	176+225.0	176+250.0	176+275.0	176+300.0	176+325.0	176+350.0	176+375.0	176+400.0	176+425.0	176+450.0	176+475.0	176+500.0	176+525.0	176+550.0	176+575.0	176+600.0	176+625.0	176+650.0	176+675.0	176+700.0	176+725.0
DATUM R.L. -0.40		2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.61	2.56	2.51	2.49	2.46	2.41	2.40	2.36	2.31	2.27	2.22	2.17	2.12	2.07	1.97	1.87
DESIGN PLATFORM (RAIL TOP+0.67m)		2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.61	2.56	2.51	2.49	2.46	2.41	2.40	2.36	2.31	2.27	2.22	2.17	2.12	2.07	1.97	1.87
CESS DRAIN INVERT		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Ex DOWN MAIN (RAIL TOP+0.67m)		1.65	1.62	1.59	1.56	1.58	1.59	1.61	1.62	1.64	1.64	1.65	1.66	1.72	1.75	1.78	1.81	1.83	1.83	1.83	1.85	1.86	1.88	1.90	1.89	1.90	1.89	1.89	1.88	1.88	1.83
EXISTING SURFACE		2.32	2.30	2.26	2.24	2.25	2.26	2.27	2.28	2.31	2.31	2.32	2.33	2.39	2.42	2.46	2.49	2.50	2.50	2.50	2.51	2.52	2.55	2.57	2.56	2.55	2.57	2.56	2.55	2.50	

LONG SECTION: Coal\_Down\_Exist (From 176000.000 to 176725.000)  
Scales: H 1 in 1000 V 1 in 50

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C	21.May.2012	ISSUED FOR PROJECT APPLICATION - Sheet numbers revised
B	08.May.2012	ISSUED FOR PROJECT APPLICATION - General Update
A	26.Apr.2012	ISSUED FOR PROJECT APPLICATION

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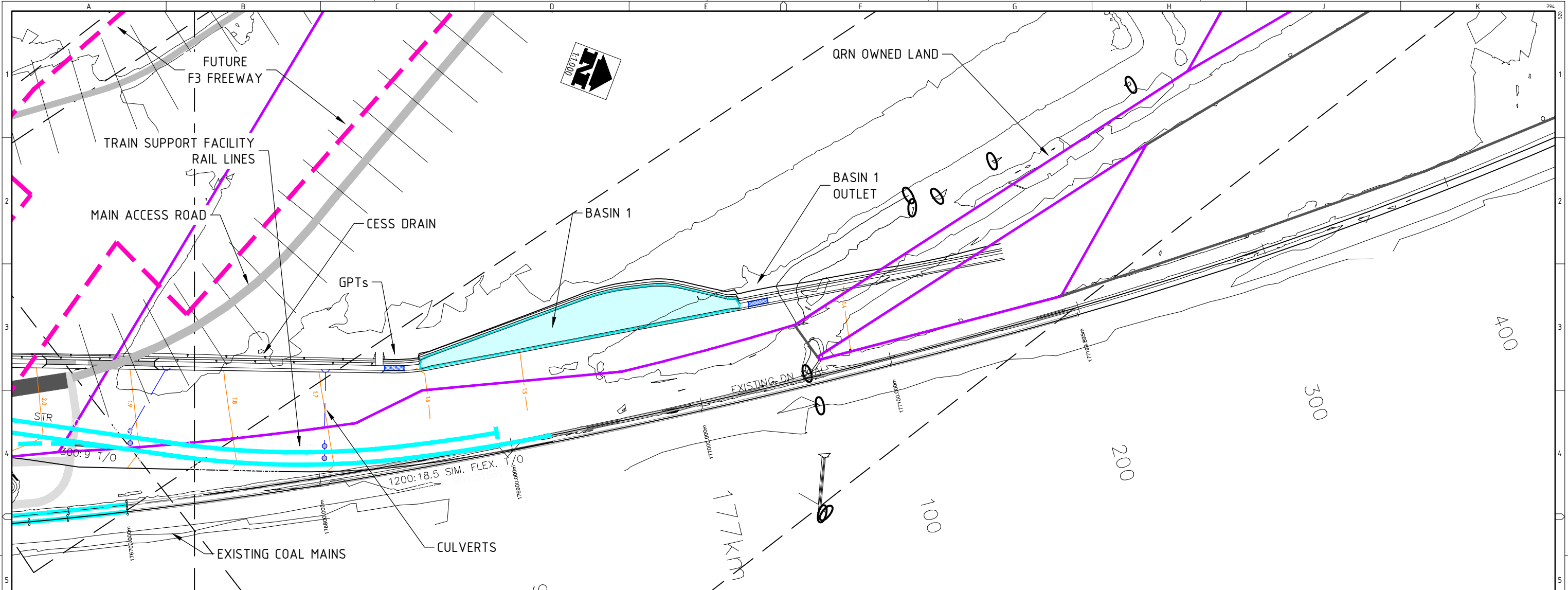


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DESIGNED	GC
CHECKED	EM + JH
APPROVED	---
CAD FILE	aMaster_H_JJB_121011.dwg

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**QRN - HEXHAM TRAIN SUPPORT FACILITY**  
 HEXHAM, NSW  
 GENERAL ARRANGEMENT & PROFILE  
 Sheet 4 of 5  
 DRG No: **ENG-03891-006**  
 Issue: **E** SHEET 6 OF 26 Scale: Plan: 1:1,000 H: 1:1,000 + V: 1:50  
 Sheet Size: **A1**

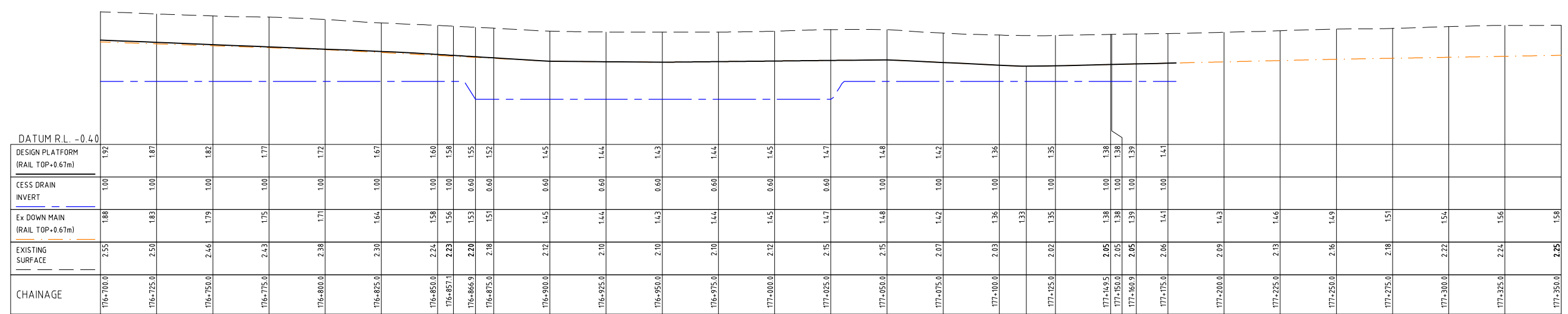


**LEGEND**

- RAIL € - QRN
- RAIL € - QRN FUTURE
- RAIL € - ARTC & Ex
- ACCESS ROADS - QRN
- ACCESS ROADS - ARTC
- EXISTING CONTOUR
- DESIGN CONTOUR
- CESS DRAIN & BANKS
- PIPES/CULVERTS; STORMWATER INLET PIT; HEADWALL
- PIPES/CULVERTS; JUMP-UP PIT; GROSS POLLUTANT TRAP
- BASIN - BANKS; WATER SURFACE;
- WASTEWATER TREATMENT SYSTEM

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**DEVELOPMENT PLAN  
NOT FOR CONSTRUCTION**



LONG SECTION: Coal\_Down\_Exist (From 176700.000 to 177350.000)  
Scales: H 1 in 1000 V 1 in 50

ISSUE	DATE	DESCRIPTION (Issue or Revision)
E	11.Sept.2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update
D	29.May.2012	ISSUED FOR PROJECT APPLICATION - Irrigation Beds Moved
C	21.May.2012	ISSUED FOR PROJECT APPLICATION - Sheet numbers revised
B	08.May.2012	ISSUED FOR PROJECT APPLICATION - General Update
A	26.Apr.2012	ISSUED FOR PROJECT APPLICATION

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**QRN - HEXHAM TRAIN SUPPORT FACILITY**  
 HEXHAM, NSW  
 GENERAL ARRANGEMENT & PROFILE  
 Sheet 5 of 5

DRG No. **ENG-03891-007** Issue **E** SHEET 7 OF 20 Scale Plan: 1:1,000 H: 1:1,000 + V: 1:50

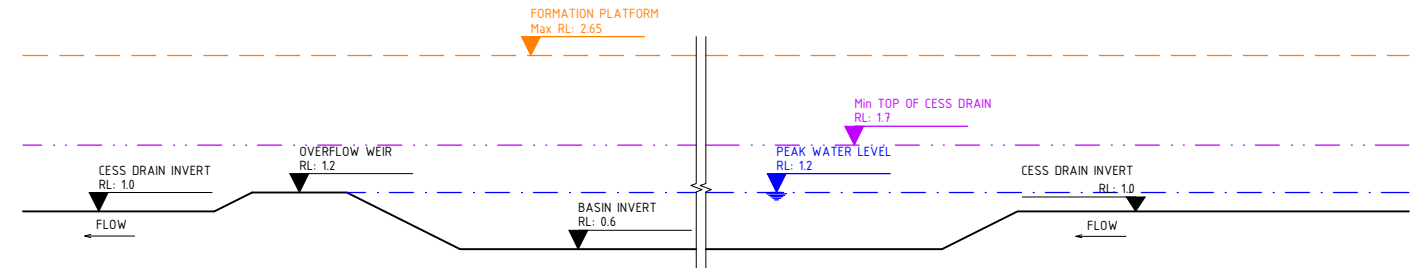
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**BASIN STORAGE CAPACITIES**

BASIN 1 - Northern						
Height	Area		Volume		Delta	
	RL	Delta	Plan	Average	At RL	Delta
1.2		2350			1286	
1.1	0.1	2282	2316	2316	1054	231.6
1.0	0.1	2212	2247	2247	830	224.7
0.9	0.1	2142	2177	2177	612	217.7
0.8	0.1	2074	2108	2108	401	210.8
0.7	0.1	2006	2040	2040	197	204
0.6	0.1	1936	1971	1971	0	197.1
0.6					0	
<b>Peak Level (m)</b>	<b>1.2</b>	<b>Area (m<sup>2</sup>)</b>	<b>2350</b>	<b>Volume (m<sup>3</sup>)</b>	<b>1286</b>	

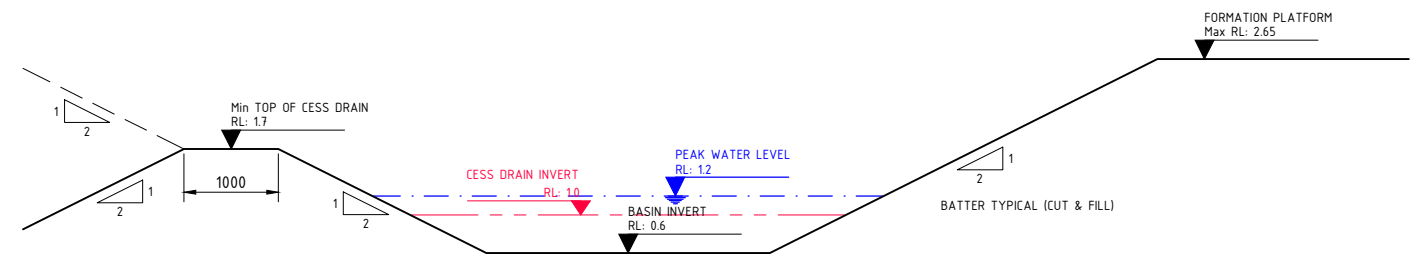
BASIN 2 - Middle						
Height	Area		Volume		Delta	
	RL	Delta	Plan	Average	At RL	Delta
1.2		6910			3955	
1.1	0.1	6804	6857	6857	3269	685.7
1.0	0.1	6698	6751	6751	2594	675.1
0.9	0.1	6590	6644	6644	1929	664.4
0.8	0.1	6484	6537	6537	1276	653.7
0.7	0.1	6378	6431	6431	633	643.1
0.6	0.1	6272	6325	6325	0	632.5
0.6					0	
<b>Peak Level (m)</b>	<b>1.2</b>	<b>Area (m<sup>2</sup>)</b>	<b>6910</b>	<b>Volume (m<sup>3</sup>)</b>	<b>3955</b>	

BASIN 3 - Southern						
Height	Area		Volume		Delta	
	RL	Delta	Plan	Average	At RL	Delta
1.2		6146			3501	
1.1	0.1	6042	6094	6094	2891	609.4
1.0	0.1	5938	5990	5990	2292	599
0.9	0.1	5834	5886	5886	1704	588.6
0.8	0.1	5730	5782	5782	1126	578.2
0.7	0.1	5628	5679	5679	558	567.9
0.6	0.1	5524	5576	5576	0	557.6
0.6					0	
<b>Peak Level (m)</b>	<b>1.2</b>	<b>Area (m<sup>2</sup>)</b>	<b>6146</b>	<b>Volume (m<sup>3</sup>)</b>	<b>3501</b>	



**BASIN TYPICAL LONG SECTION**

SCALE 1:40



**BASIN TYPICAL CROSS SECTION**

SCALE 1:40

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**DEVELOPMENT PLAN**  
**NOT FOR CONSTRUCTION**

ISSUE	DATE	DESCRIPTION (Issue or Revision)
D	11.Sept.2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update
C	21.May.2012	ISSUED FOR PROJECT APPLICATION - Sheet numbers revised
B	-	- not issued -
A	-	- not issued -

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DESIGNED	EM + JH
APPROVED	JH
CAD FILE	aSections_D.dwg

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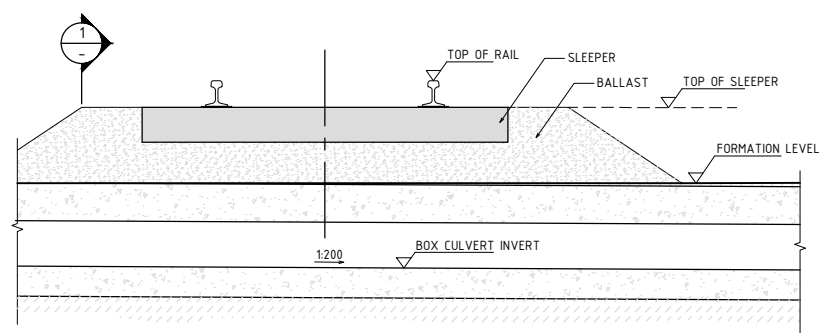


<b>QRN - HEXHAM TRAIN SUPPORT FACILITY</b>			
HEXHAM, NSW			
BASIN - STORAGE CAPACITIES			
BASIN - TYPICAL SECTIONS			
DRG No	Issue	SHEET 8 OF 20	Scale Section: 1:40
<b>ENG-03891-011</b>	<b>D</b>		
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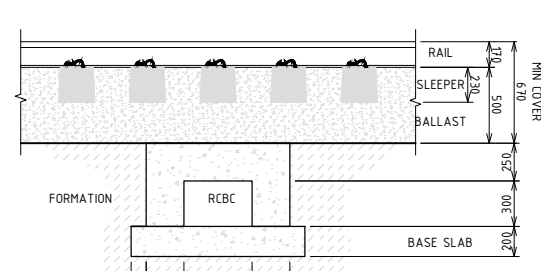
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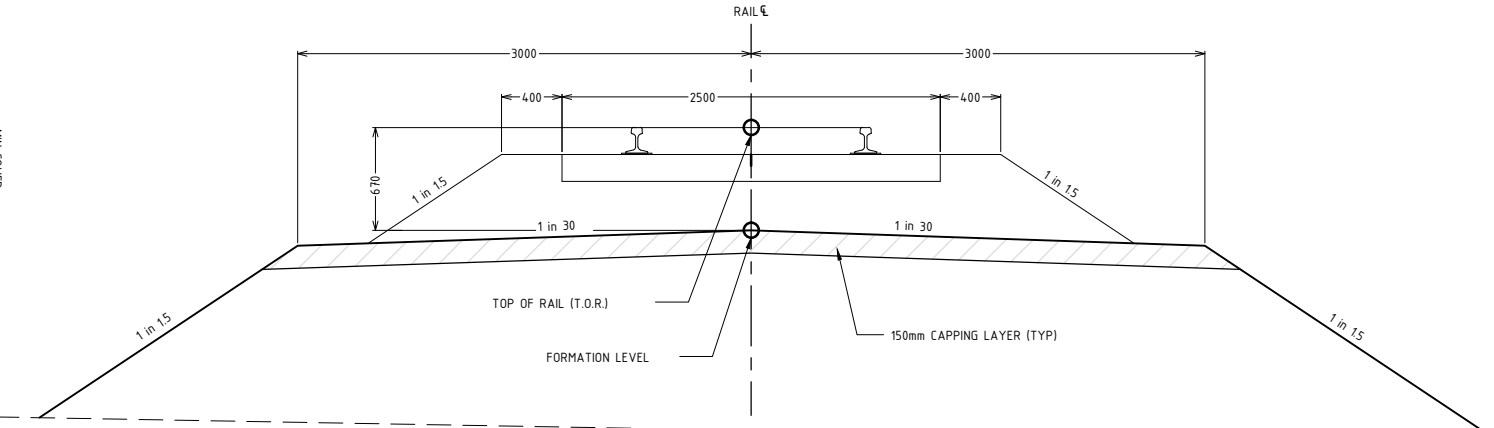




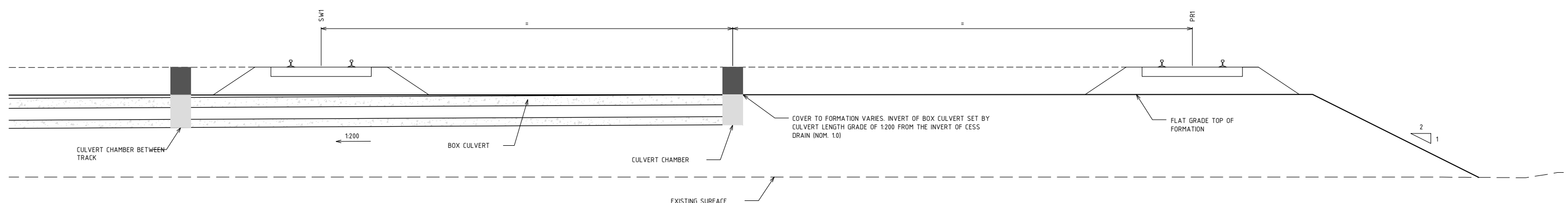
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N.T.S.



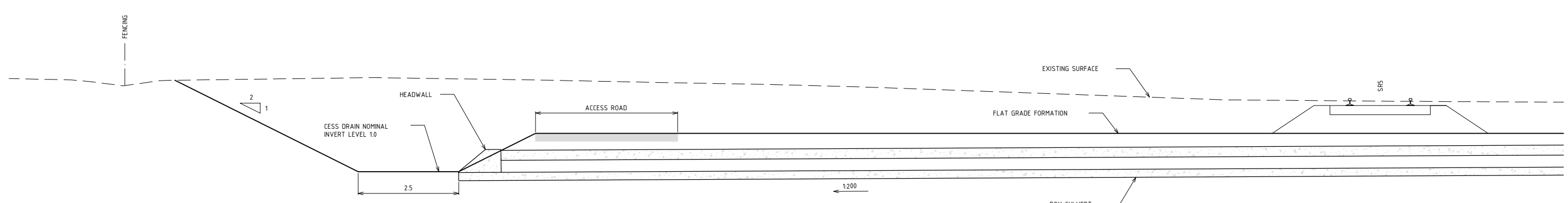
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N.T.S.



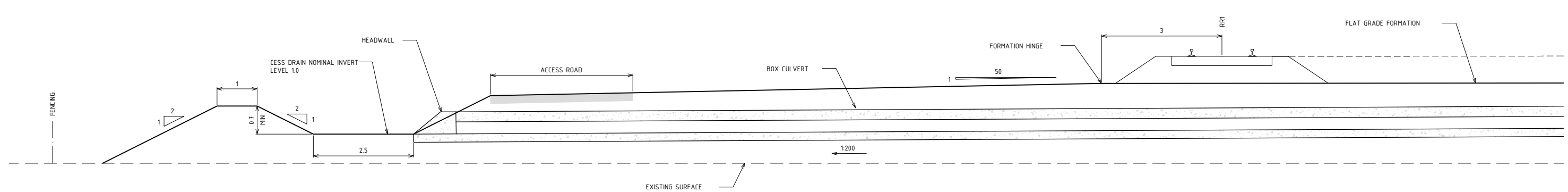
**TYPICAL RAIL SECTION - SINGLE TRACK**  
SCALE 1:25



**TYPICAL RAIL PIT LOCATION**  
SCALE 1:50



**TYPICAL FORMATION CUT DETAIL**  
SCALE 1:50



**TYPICAL FORMATION FILL DETAIL**  
SCALE 1:50

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**DEVELOPMENT PLAN**  
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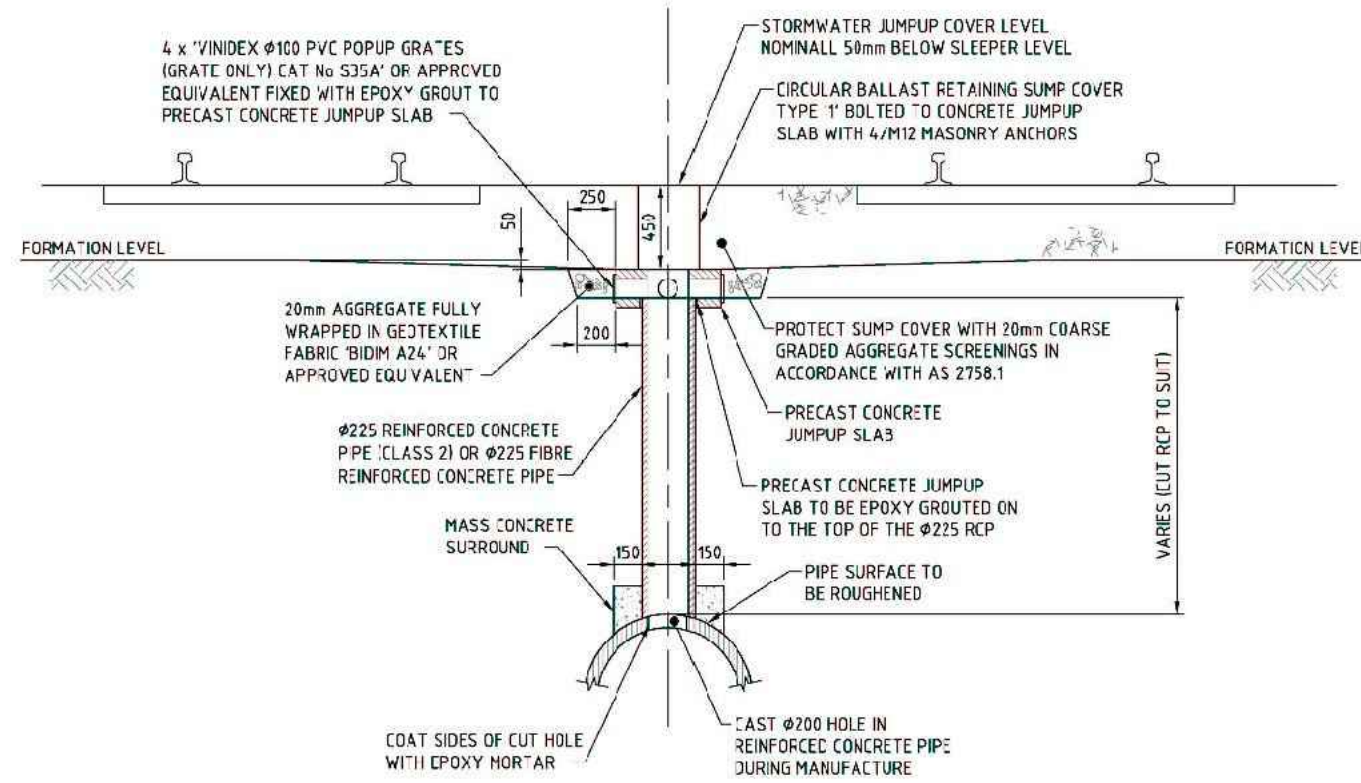
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DESIGNED	GC
CHECKED	EM + JH
APPROVED	JH
CAD FILE	aSections_D.dwg

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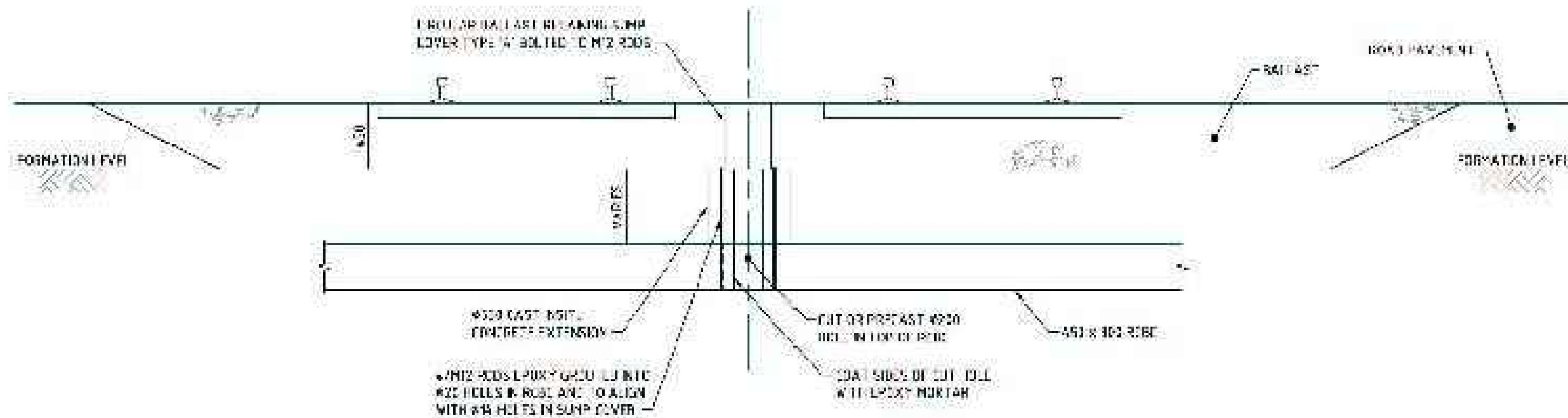


**QRN - HEXHAM TRAIN SUPPORT FACILITY**  
 HEXHAM, NSW  
 DRAINAGE TYPICAL DETAILS - Sheet 1 of 3  
 FORMATION SECTIONS

DRG No: **ENG-03891-012** Issue: **D** SHEET 9 OF 20 Scale: Section: 1:50 Section: 1:25 & N.T.S. Sheet Size: **A1**



**STORMWATER JUMPUP TYPE 'A1'**  
FOR USE ON WAGON MAINTENANCE LINES IN FILL  
SCALE 1:20



**STORMWATER JUMPUP TYPE 'B1'**  
FOR USE ON WAGON MAINTENANCE LINES IN FILL  
SCALE 1:20

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**DEVELOPMENT PLAN**  
NOT FOR CONSTRUCTION

ISSUE	DATE	DESCRIPTION (Issue or Revision)
D	11.Sept.2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update
C	21.May.2012	ISSUED FOR PROJECT APPLICATION - Sheet numbers revised
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A	26.Apr.2012	ISSUED FOR PROJECT APPLICATION

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ROLE	NAME
DRAWN	DQ
DESIGNED	GC
CHECKED	EM + JH
APPROVED	JH
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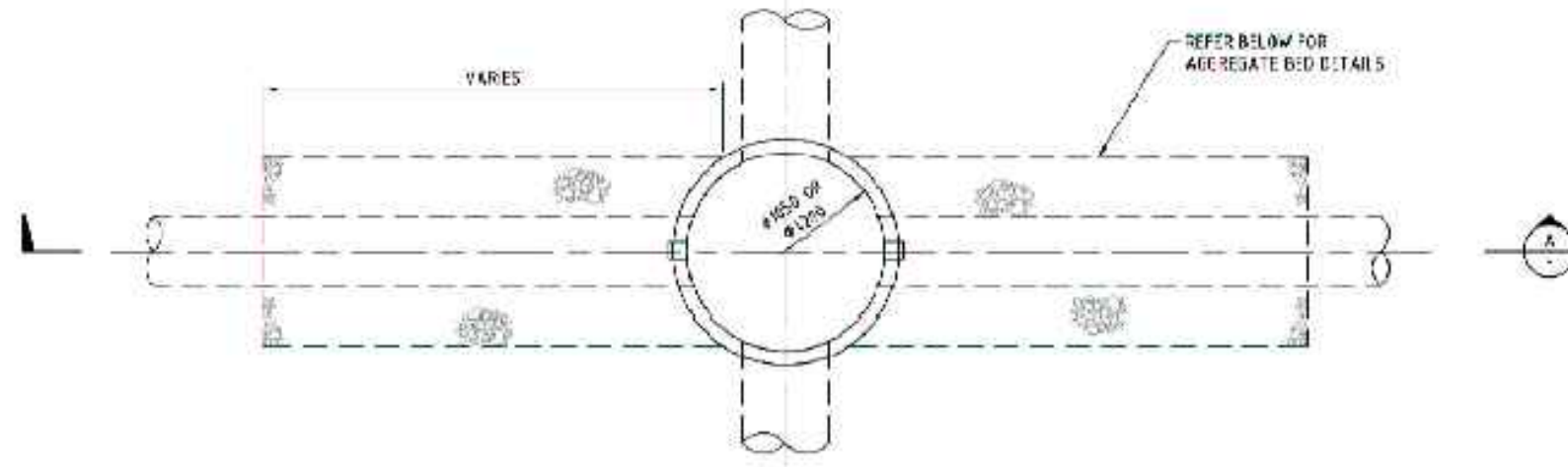
QR National Limited  
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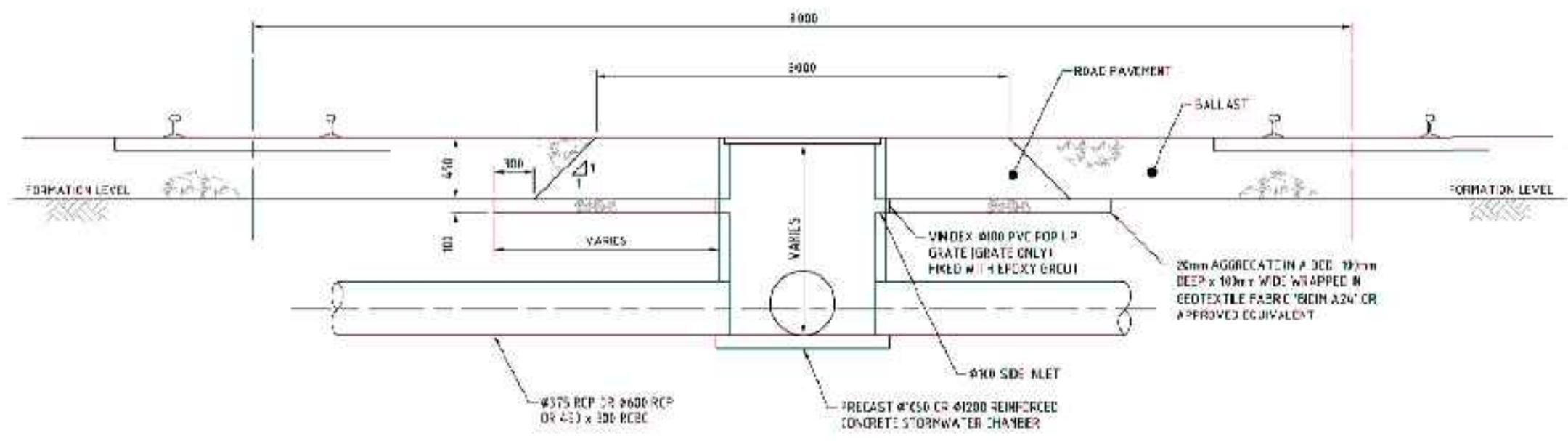
QRN - HEXHAM TRAIN SUPPORT FACILITY  
HEXHAM, NSW  
DRAINAGE TYPICAL DETAILS - Sheet 2 of 3  
STORMWATER JUMP PIT DETAILS (Provided by Queensland Rail)  
DRG No: ENG-03891-013  
Issue: D  
SHEET 10 OF 20  
Scale: Detail: 1:20  
Sheet Size: A1

PLOTTED: 11-Sep-2012 04:02 PM

DO NOT SCALE



**PLAN**  
**STORMWATER CHAMBER (Ø1050 AND Ø1200)**  
 FOR USE ON WAGON MAINTENANCE LINES  
 SCALE 1:20



**SECTION A**  
 SCALE 1:20

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**DEVELOPMENT PLAN**  
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APPROVED	JH
CAD FILE	aSections_D.dwg

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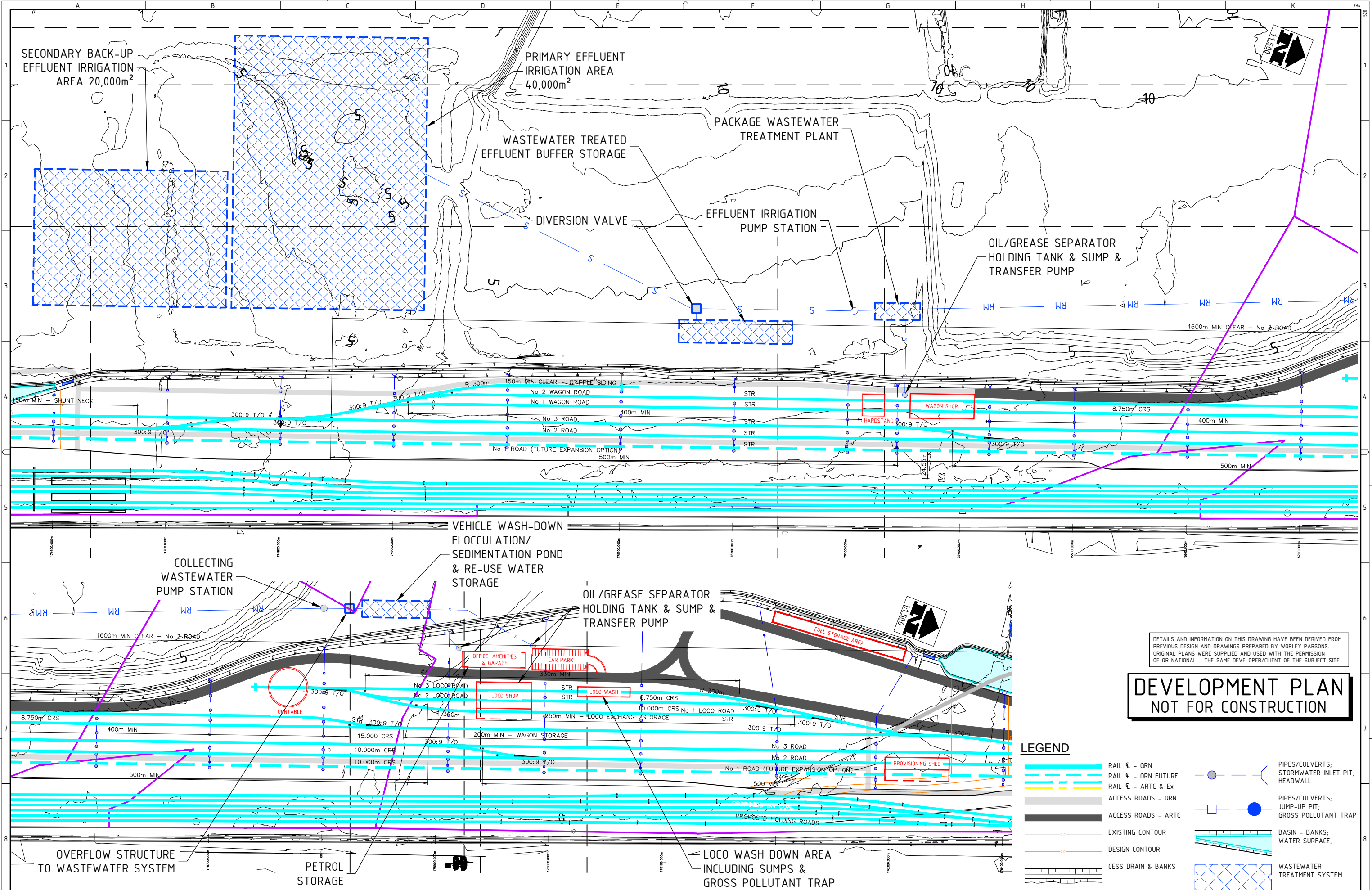
**QRN - HEXHAM TRAIN SUPPORT FACILITY**  
 HEXHAM, NSW  
 DRAINAGE TYPICAL DETAILS - Sheet 3 of 3  
 STORMWATER INLET PIT DETAILS (Provided by Queensland Rail)

DRG No	ENG-03891-014	Issue	D	SHEET 11	OF 20	Scale	Detail: 1:20
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Sheet Size  
**A1**

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**DEVELOPMENT PLAN  
NOT FOR CONSTRUCTION**

**LEGEND**

	RAIL € - QRN		PIPES/CULVERTS, STORMWATER INLET PIT, HEADWALL
	RAIL € - QRN FUTURE		PIPES/CULVERTS, JUMP-UP PIT, GROSS POLLUTANT TRAP
	RAIL € - ARTC & Ex		BASIN - BANKS, WATER SURFACE,
	ACCESS ROADS - QRN		WASTEWATER TREATMENT SYSTEM
	ACCESS ROADS - ARTC		
	EXISTING CONTOUR		
	DESIGN CONTOUR		
	CESS DRAIN & BANKS		

ISSUE	DATE	DESCRIPTION (Issue or Revision)
E	11.Sept.2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update
D	29.May.2012	ISSUED FOR PROJECT APPLICATION - Irrigation Beds Moved
C	21.May.2012	ISSUED FOR PROJECT APPLICATION - Sheet numbers revised
B	-	- not issued -
A	26.Apr.2012	ISSUED FOR PROJECT APPLICATION

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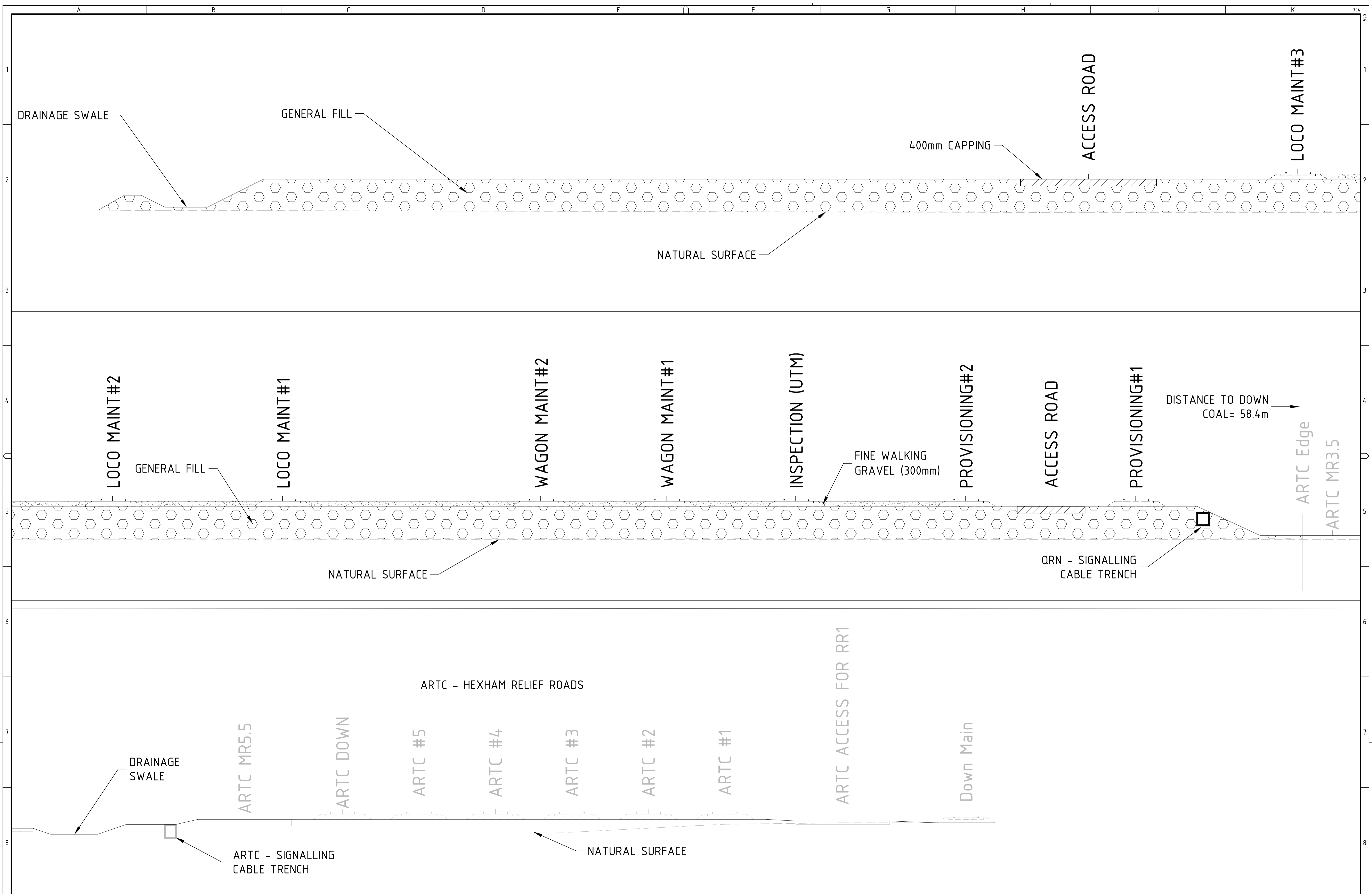
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**QRN - HEXHAM TRAIN SUPPORT FACILITY  
 HEXHAM, NSW  
 WATER RECYCLING and WASTEWATER TREATMENT SYSTEM  
 General Arrangement**

DRG No. **ENG-03891-015** Issue **E** SHEET 12 OF 20 Scale Plan: 1:1,500

Sheet Size **A1**



ISSUE	DATE	DESCRIPTION (Issue or Revision)
B	11.Sept.2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update
A	5.SEPT.2012	ISSUED FOR ENVIRONMENTAL ASSESSMENT

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CHECKED		EM
APPROVED		-
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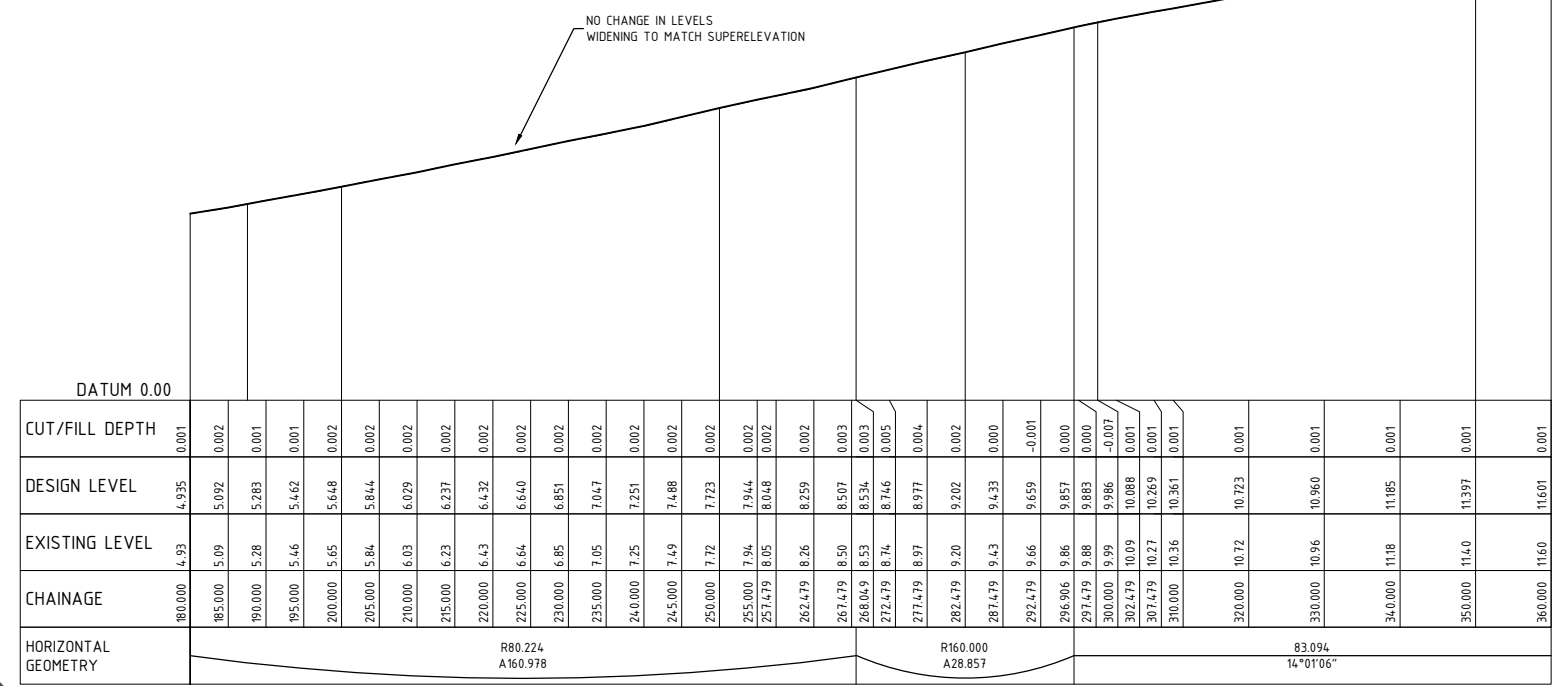
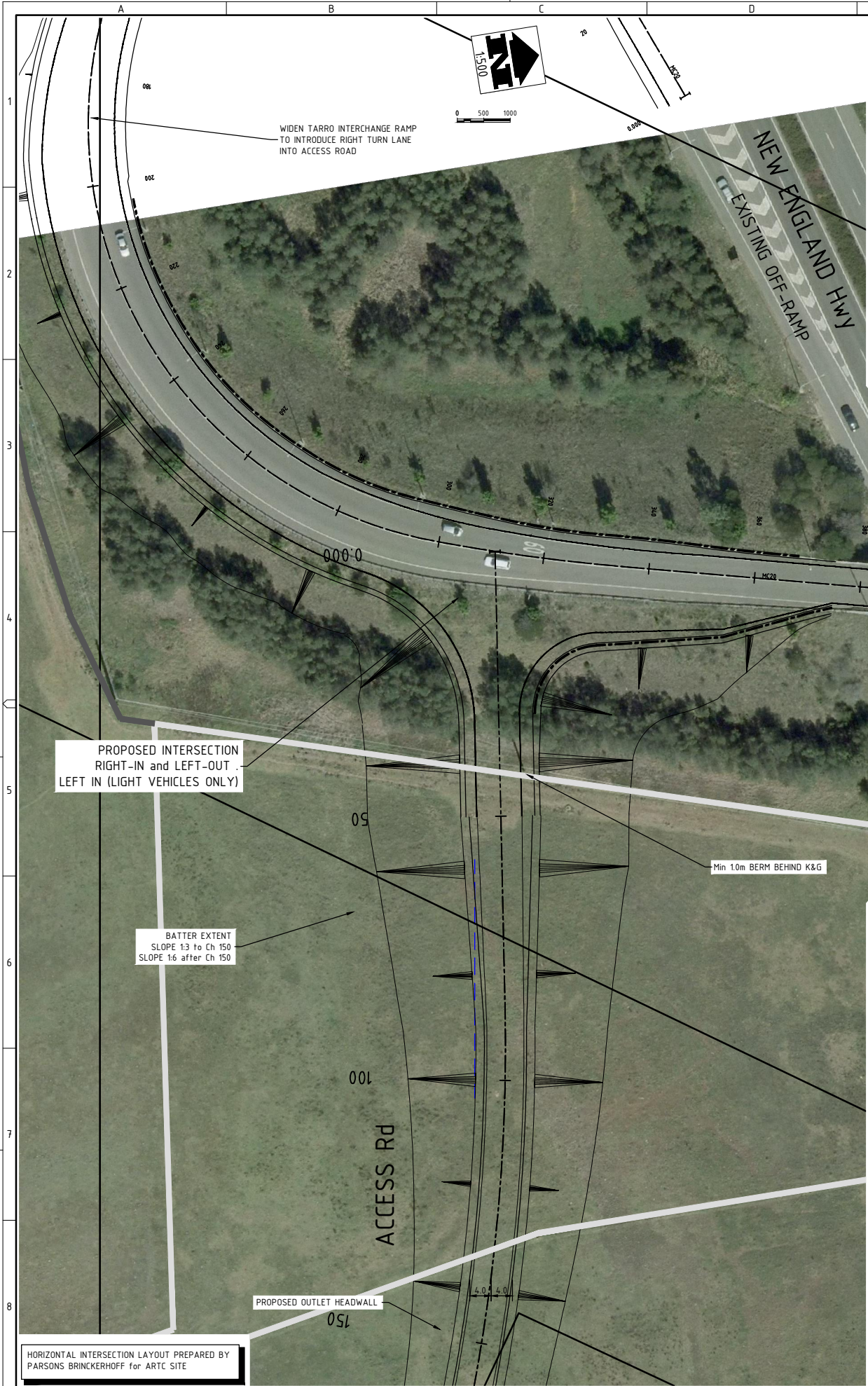
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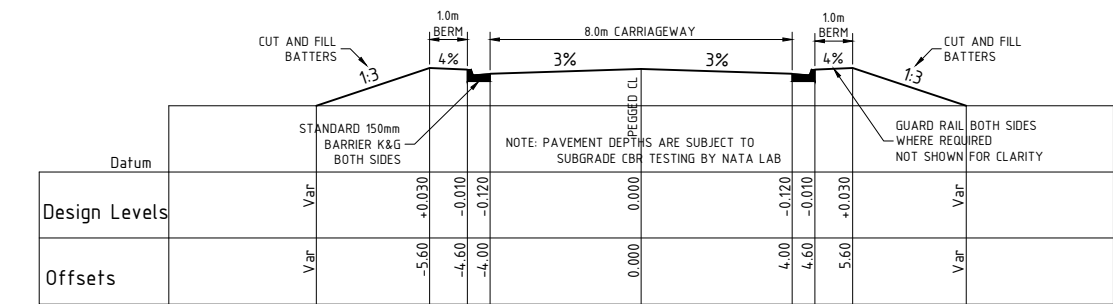
QRN - HEXHAM TRAIN SUPPORT FACILITY HEXHAM, NSW TYPICAL CROSS SECTION			
DRG No.	Issue	SHEET 13 OF 20	Scale Not to Scale
ENG-03891-021	B		
			Sheet Size A1

PLOT: 11-SEP-2012 04:05 PM

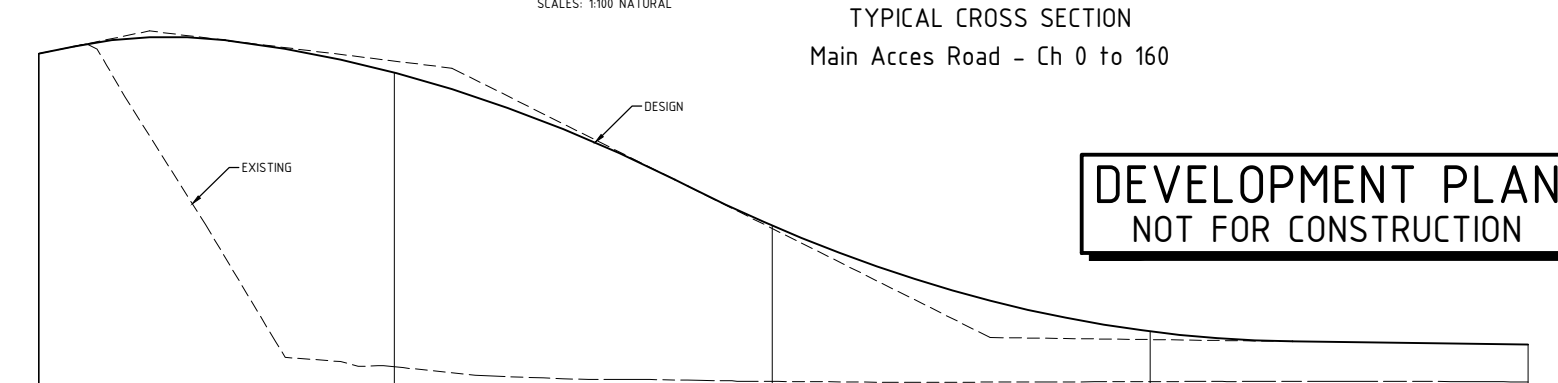
DO NOT SCALE



Profile: Tarro Interchange



TYPICAL CROSS SECTION  
Main Access Road - Ch 0 to 160



DATUM 0.00	
VERTICAL GEOMETRY	VC 20.000, A.D. -6.56% IP CH 17.624, RL 9.982
CUT/FILL DEPTH	0.001
DESIGN LEVEL	8.880
EXISTING LEVEL	8.880
CHAINAGE	50.000
HORIZONTAL GEOMETRY	VC 59.000, A.D. -7.54% IP CH 57.632, RL 8.997
CUT/FILL DEPTH	0.001
DESIGN LEVEL	8.880
EXISTING LEVEL	8.880
CHAINAGE	100.000
HORIZONTAL GEOMETRY	VC 80.000, A.D. 9.74% IP CH 128.844, RL 1.876
CUT/FILL DEPTH	0.001
DESIGN LEVEL	1.694
EXISTING LEVEL	1.694
CHAINAGE	200.000
HORIZONTAL GEOMETRY	VC 131.156, A.D. -0.26%

Profile: Access Rd

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D	11.Sep.2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update
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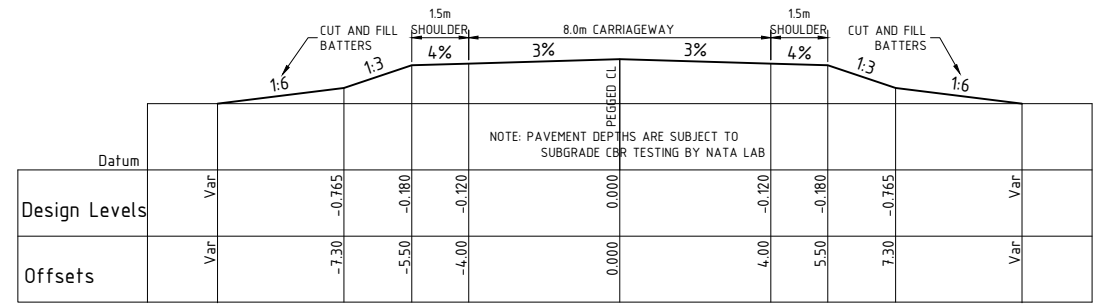
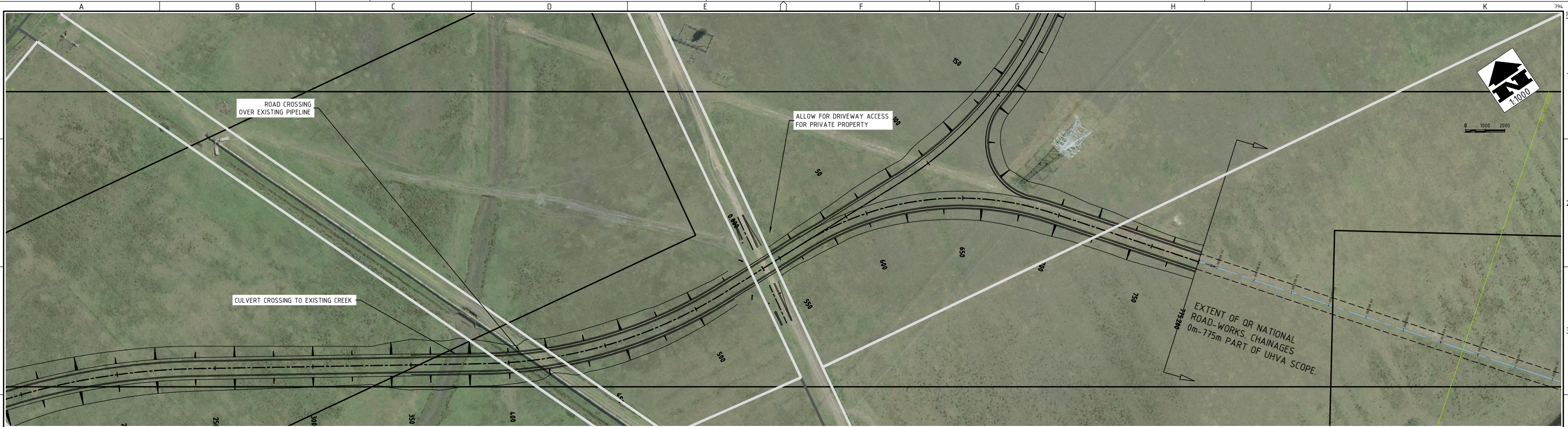


DRAWN	DQ
DESIGNED	GC
CHECKED	EM + JH
APPROVED	JH
CAD FILE	Design_F - Access Road Drawings.dwg

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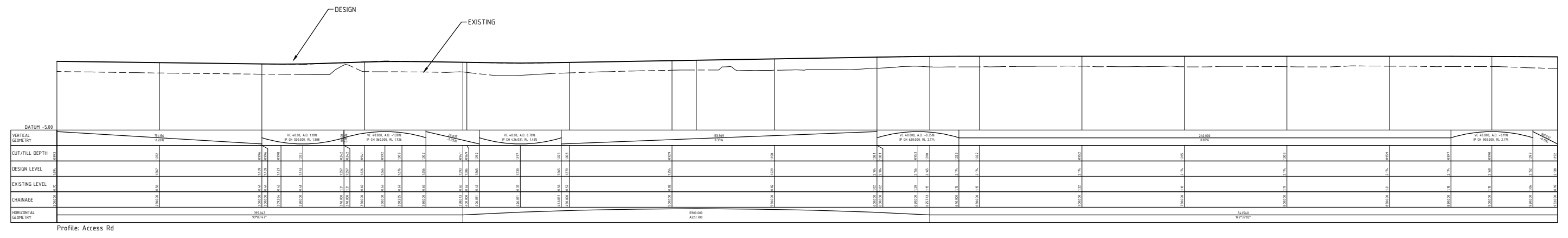


QRN - HEXHAM TRAIN SUPPORT FACILITY  
 HEXHAM, NSW  
 TARRO INTERCHANGE  
 Plan & Profile - Sheet 1 of 3  
 DRG No. ENG-03891-031  
 Issue D  
 SHEET 14 OF 20  
 Scale Plan: 1:500  
 H: 1:500; V: 1:100  
 Sheet Size A1



**DEVELOPMENT PLAN  
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TYPICAL CROSS SECTION  
Main Access Road - Ch 160 to 1600



ISSUE	DATE	DESCRIPTION (Issue or Revision)
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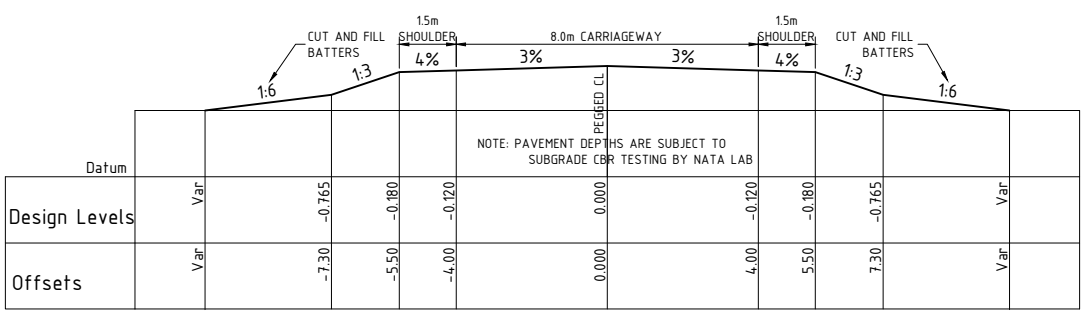
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QRN - HEXHAM TRAIN SUPPORT FACILITY  
HEXHAM, NSW  
MAIN ACCESS ROAD  
Plan & Profile - Sheet 2 of 3

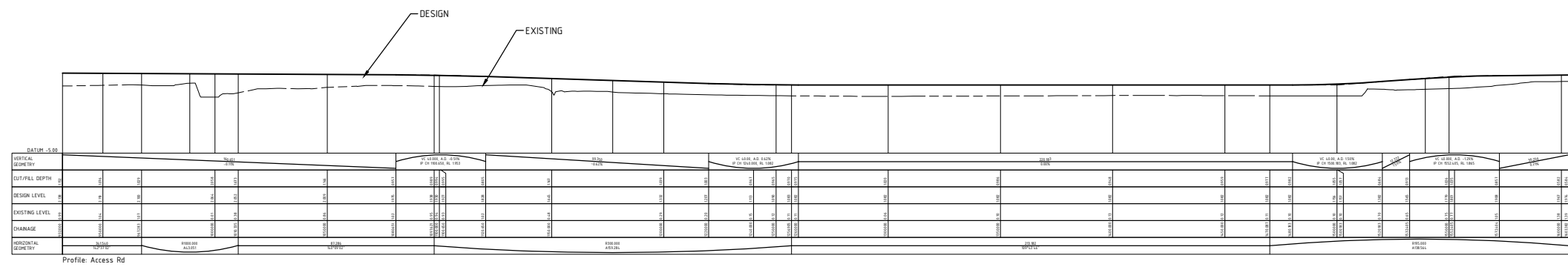
DRG No: **ENG-03891-032** Issue: **D** SHEET 15 OF 20 Scale: Plan: 1:1,000 H: 1:1,000; V: 1:200

Sheet Size: **A1**



**DEVELOPMENT PLAN  
NOT FOR CONSTRUCTION**

TYPICAL CROSS SECTION  
Main Access Road - Ch 160 to 1600



ISSUE	DATE	DESCRIPTION (Issue or Revision)
D	11.Sept.2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update
C	21.May.2012	ISSUED FOR PROJECT APPLICATION - Sheet numbers revised
B	-	- not issued -
A	26-Apr-2012	ISSUED FOR PROJECT APPLICATION

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DRAWN	DQ
DESIGNED	GC
CHECKED	EM + JH
APPROVED	JH
CAD FILE	Design_F - Access Road Drawings.dwg

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**QRN - HEXHAM TRAIN SUPPORT FACILITY**  
 HEXHAM, NSW  
 MAIN ACCESS ROAD  
 Plan & Profile - Sheet 3 of 3

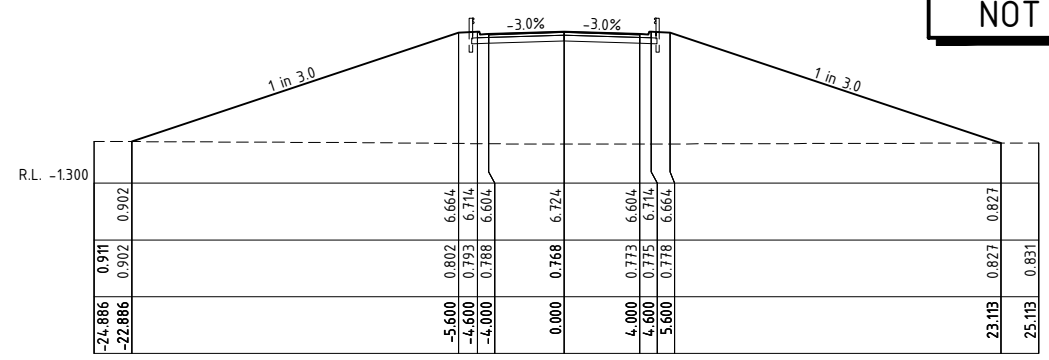
DRG No	ENG-03891-033
Issue	D
SHEET	16
OF	20
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Sheet Size	A1

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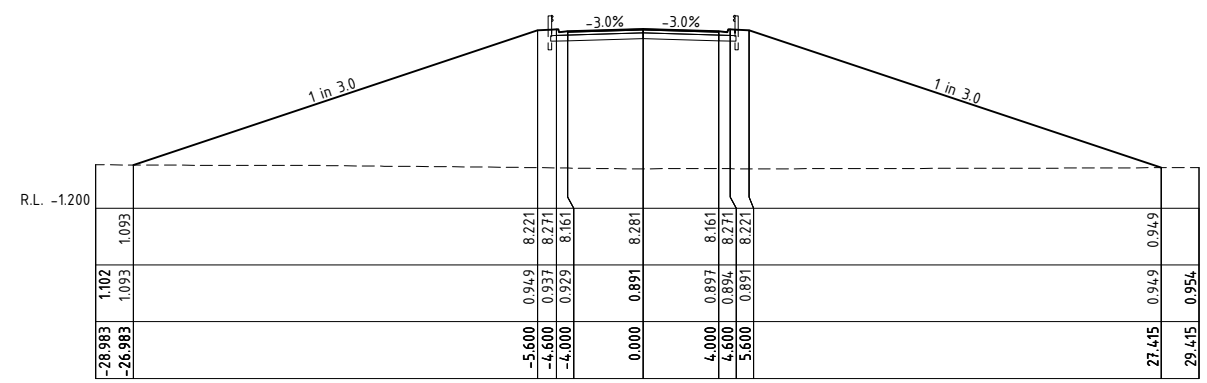
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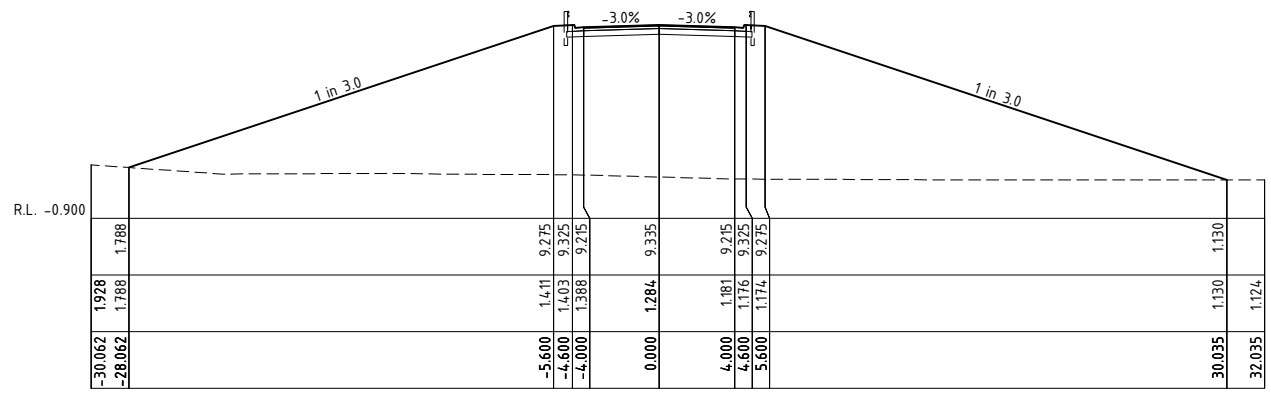
# DEVELOPMENT PLAN NOT FOR CONSTRUCTION



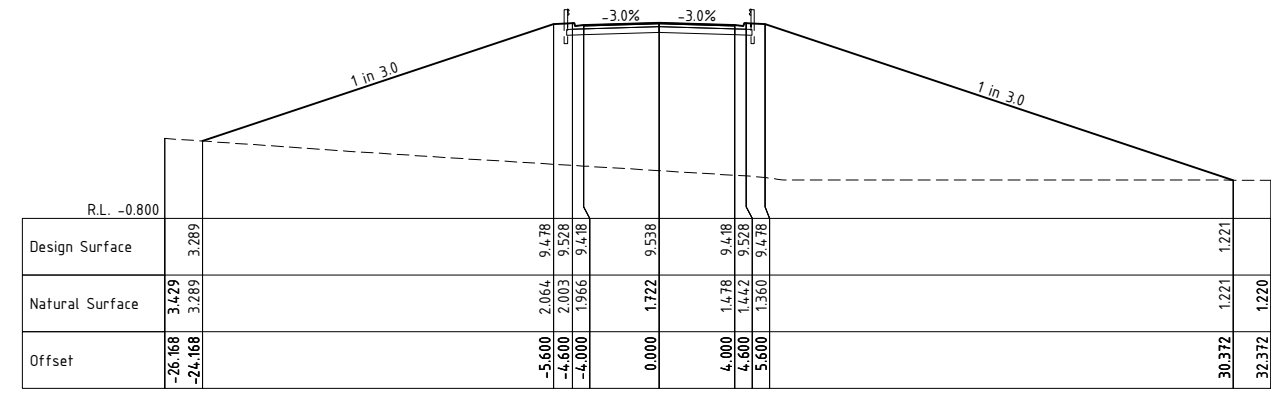
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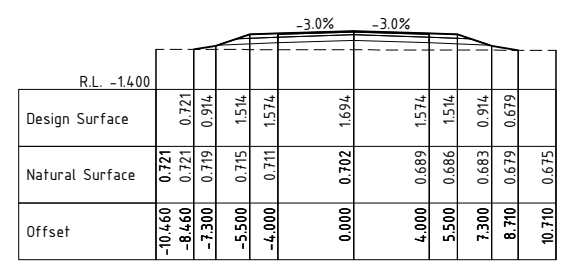
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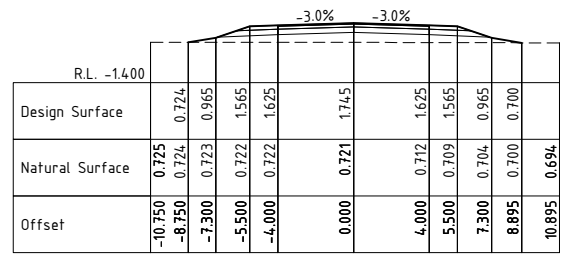
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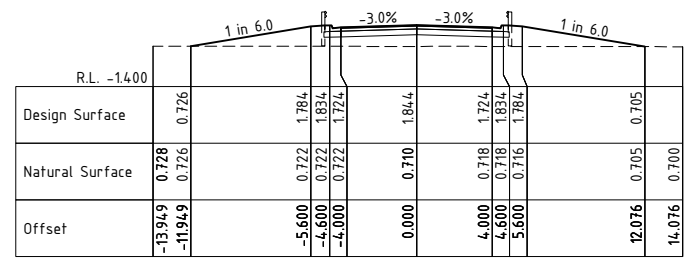
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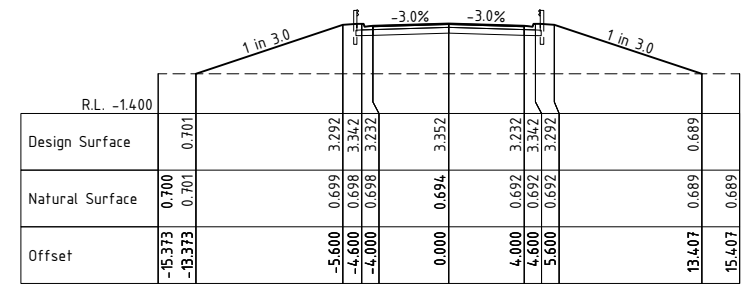
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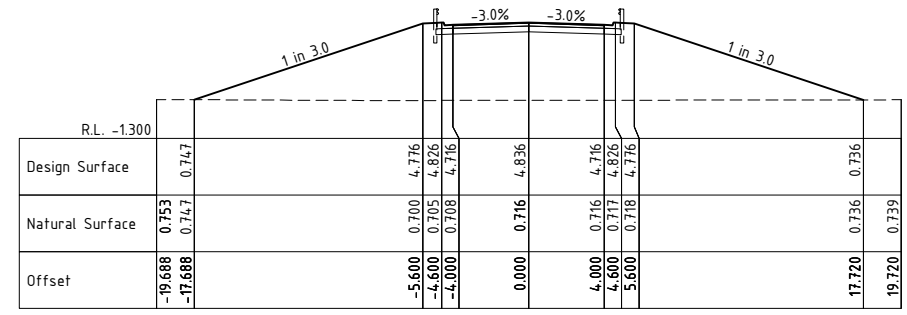
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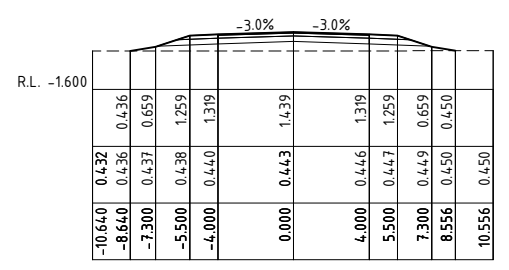
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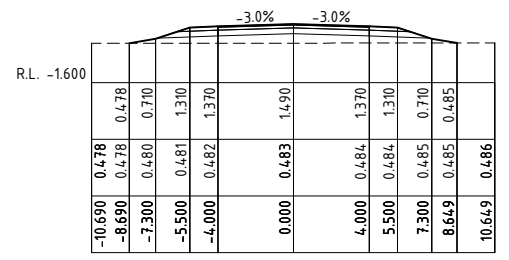
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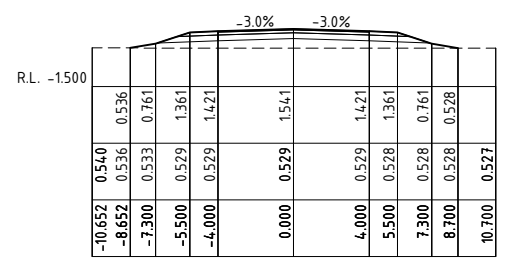
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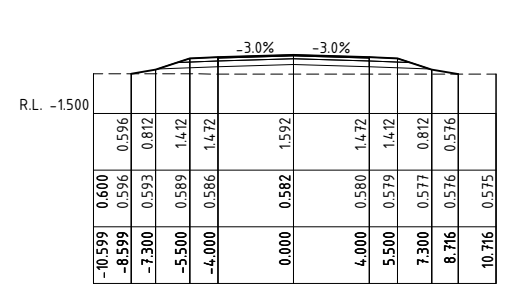
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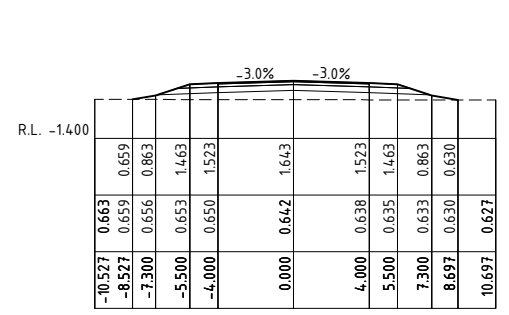
Ch 280.00



Ch 260.00



Ch 240.00



Ch 220.00

ISSUE	DATE	DESCRIPTION (Issue or Revision)
D	11.Sept.2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update
C	21.May.2012	ISSUED FOR PROJECT APPLICATION - Sheet numbers revised
B	-	- not issued -
A	26-Apr-2012	ISSUED FOR PROJECT APPLICATION

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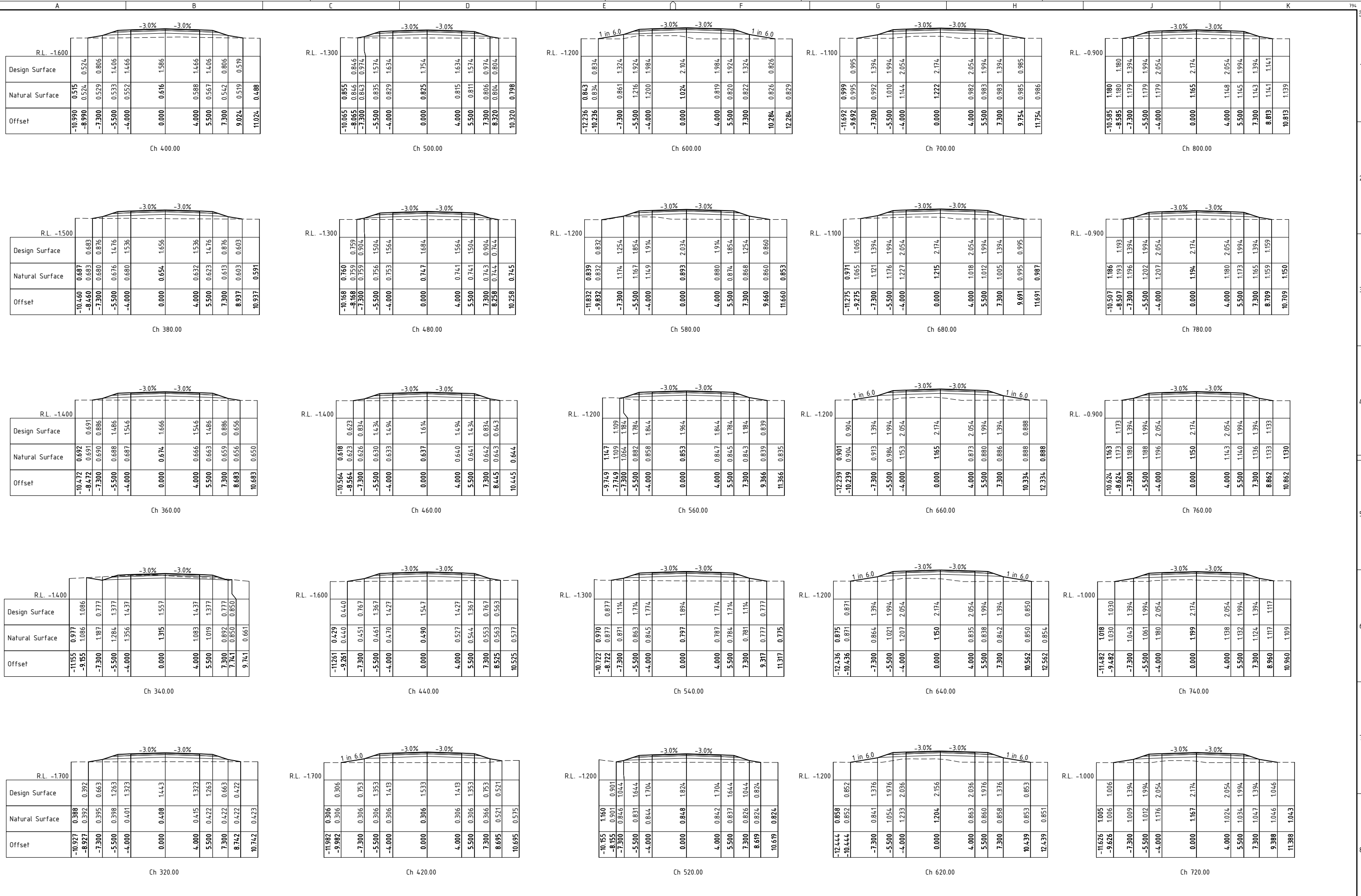
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DESIGNED	GC
CHECKED	EM + JH
APPROVED	JH
CAD FILE	Design_F - Access Road Drawings.dwg

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**QRN - HEXHAM TRAIN SUPPORT FACILITY**  
 HEXHAM, NSW  
 TARRO INTERCHANGE  
 CROSS SECTIONS - Sheet 1 of 4

DRG No. **ENG-03891-034** Issue **D** SHEET 17 OF 20 Scale 1:200 Natural

Sheet Size **A1**



ISSUE	DATE	DESCRIPTION (Issue or Revision)
A	26-Apr-2012	ISSUED FOR PROJECT APPLICATION
B	-	- not issued -
C	21-May-2012	ISSUED FOR PROJECT APPLICATION - Sheet numbers revised
D	11-Sept-2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update

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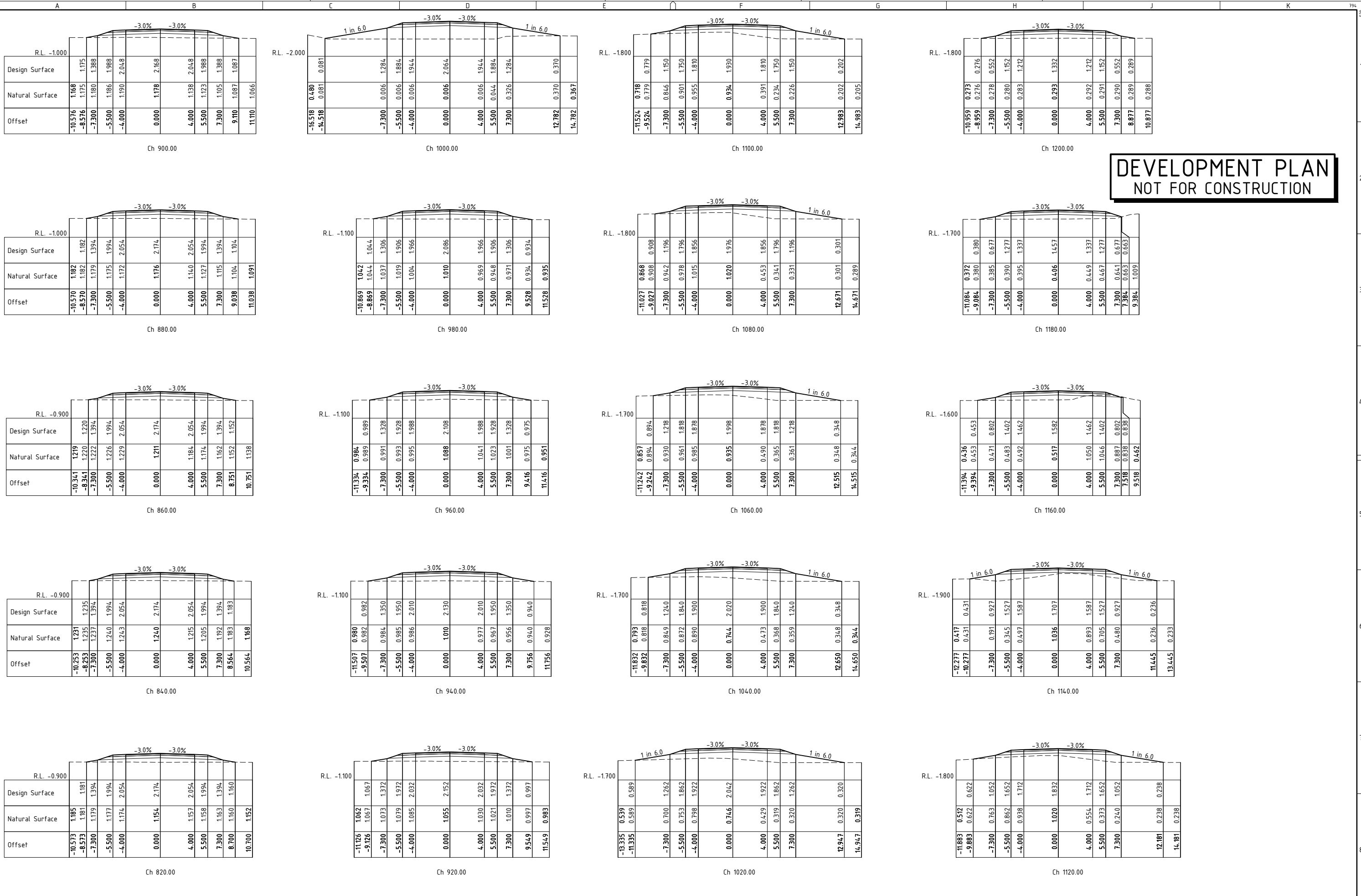
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DRAWN	DQ
DESIGNED	GC
CHECKED	EM + JH
APPROVED	JH
CAD FILE	Design_F - Access Road Drawings.dwg

**QRN - HEXHAM TRAIN SUPPORT FACILITY**  
 HEXHAM, NSW  
 MAIN ACCESS ROAD  
 CROSS SECTIONS - Sheet 2 of 4

DRG No: **ENG-03891-035** Issue: **D** SHEET 18 OF 20 Scale: 1:200 Natural

Sheet Size: **A1**



**DEVELOPMENT PLAN  
NOT FOR CONSTRUCTION**

FLOTTED: 11-SEP-2012 04:31 PM			
D	11.Sept.2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update	
C	21.May.2012	ISSUED FOR PROJECT APPLICATION - Sheet numbers revised	
B	-	- not issued -	
A	26-Apr-2012	ISSUED FOR PROJECT APPLICATION	
ISSUE	DATE	DESCRIPTION (Issue or Revision)	

**A.03891**

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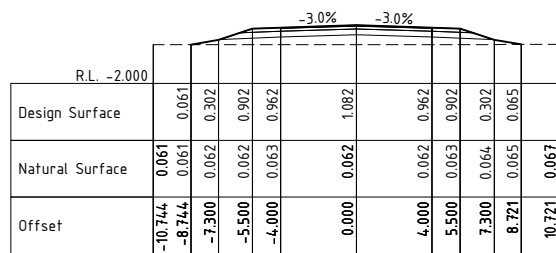
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CHECKED	EM + JH
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CAD FILE	Design_F - Access Road Drawings.dwg

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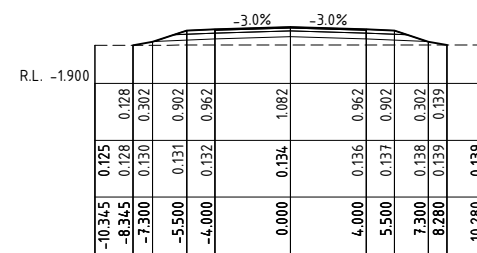


**QRN - HEXHAM TRAIN SUPPORT FACILITY**  
 HEXHAM, NSW  
 MAIN ACCESS ROAD  
 CROSS SECTIONS - Sheet 3 of 4

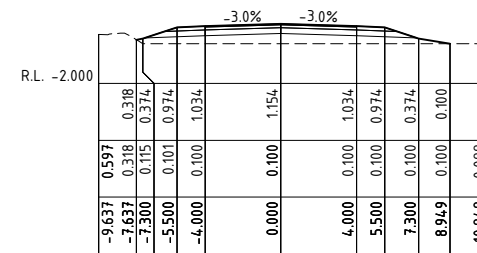
DRG No **ENG-03891-036** Issue **D** SHEET 19 OF 20 Scale 1:200 Natural Sheet Size **A1**



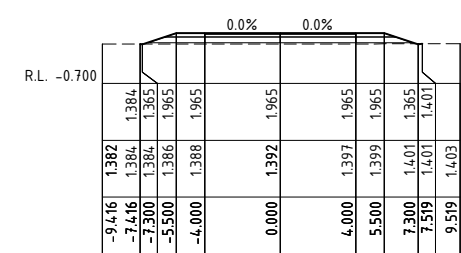
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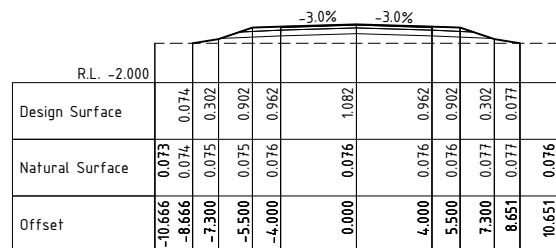


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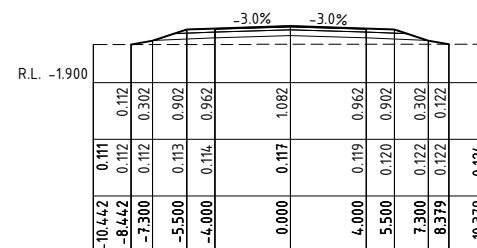


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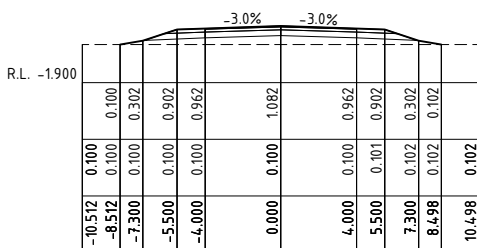
**DEVELOPMENT PLAN  
NOT FOR CONSTRUCTION**



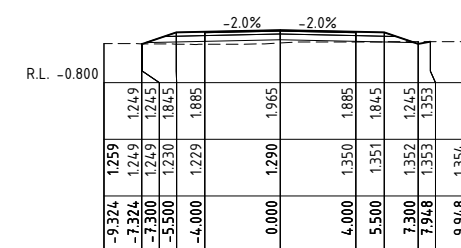
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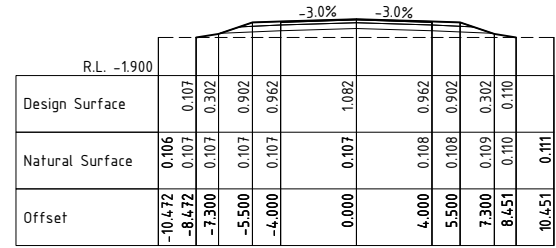
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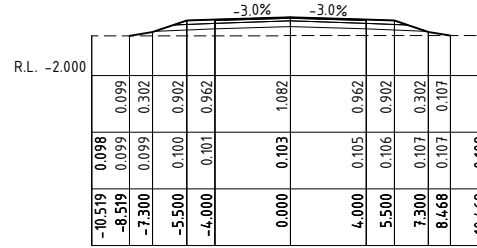
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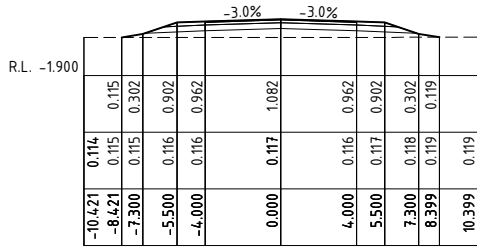
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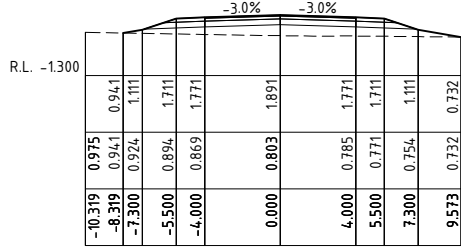
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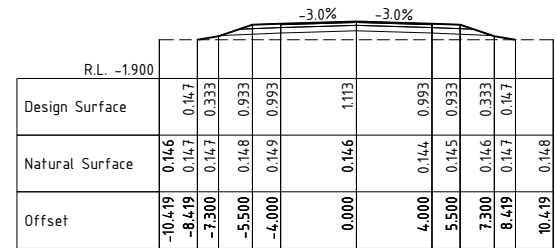
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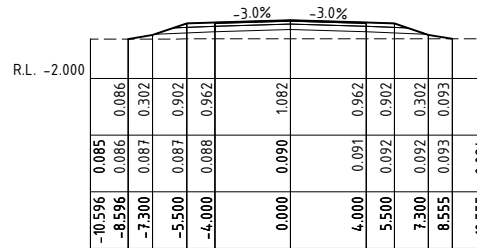
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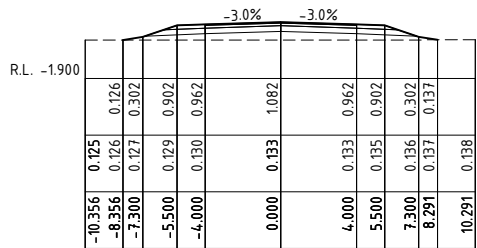
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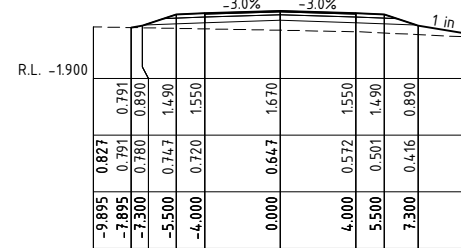
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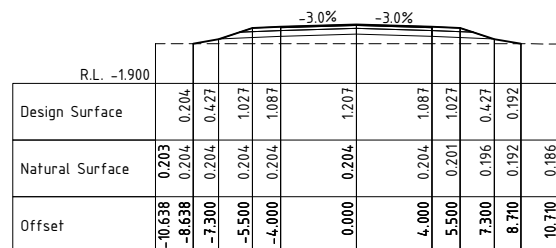
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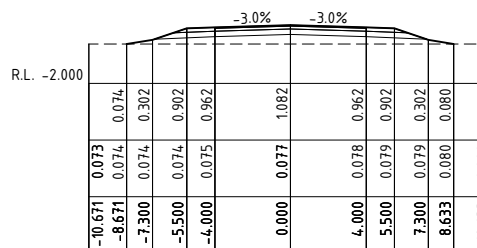
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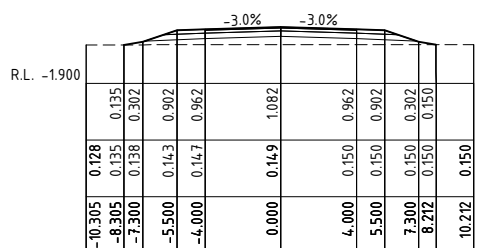
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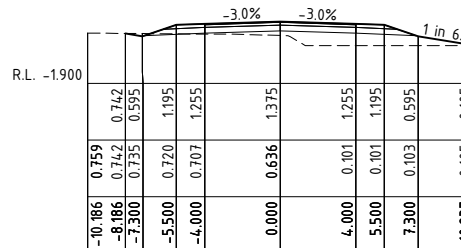
Ch 1220.00



Ch 1320.00



Ch 1420.00



Ch 1520.00

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D	11.Sept.2012	ISSUED FOR PROJECT APPLICATION - Adequacy Review Update
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DRAWN	DQ
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<b>QRN - HEXHAM TRAIN SUPPORT FACILITY</b>	
HEXHAM, NSW	
MAIN ACCESS ROAD	
CROSS SECTIONS - Sheet 4 of 4	
DRG No	ENG-03891-037
Issue	D
SHEET 20	OF 20
Scale	1:200 Natural
Sheet Size	A1