



**Carmichael Coal Mine and Rail Project
Supplementary Environmental Impact Statement**

Volume 4, Appendix C3b – Operational Works Excavation and Filling

Containing

- Part 1 - IDAS Form 1 and Form 6 and supporting drawings



19 July 2013

Chief Executive Officer
Isaac Regional Council
PO Box 97
Moranbah QLD 4744

Our ref: 41/26422/19
449987

Dear Sir/Madam

**Adani Mining Pty Ltd - Carmichael Coal Mine and Rail Project.
Rail Alignment
Application for Operational Works Development Permit**

We act on behalf of Adani Mining Pty Ltd and have been instructed to lodge an Operational Works Development Permit application with Isaac Regional Council. The proposal involves Operational Works associated with the construction of a rail alignment for the proposed Carmichael Coal Mine and Rail Project (the Project).

The rail alignment is part of the Project which involves the development of a 60 million tonne (product) per annum (Mtpa) thermal coal mine in the northern Galilee Basin, approximately 160 kilometres (km) north-west of Clermont, Central Queensland, Australia. Coal from the Project will be transported by rail to the existing Goonyella and Newlands rail systems, operated by Aurizon Operations Limited (Aurizon). The coal will be exported via the Port of Hay Point and the Port of Abbot Point over the 60 year mine life.

The overall Project components are as follows:

- The Project (Mine): a greenfield coal mine over EPC 1690 and the eastern portion of EPC 1080, which includes both open cut and underground mining, on mine infrastructure and associated mine processing facilities (the Mine) and the Mine (offsite) infrastructure including a workers accommodation village and associated facilities, a permanent airport site, an industrial area and water supply infrastructure
- The Project (Rail): a greenfield rail line connecting to mine to the existing Goonyella and Newlands rail systems to provide for the export of coal via the Port of Hay Point (Dudgeon Point expansion) and the Port of Abbot Point, respectively including:
 - Rail (west): a 120 kilometre (km) dual gauge portion running west from the Mine site east to Diamond Creek
 - Rail (east): a 69 km narrow gauge portion running east from Diamond Creek connecting to the Goonyella rail system south of Moranbah.
 - Quarries: The use of five (5) local quarries to extract quarry materials for construction and operational purposes.

The rail alignment traverses the allotments included in Table 1.

Table 1 Location of Premises

Lot on plan description		Local government area
Lot no.	Plan type and plan no.	
662	PH1491	Isaac Regional Council
3	BL26	Isaac Regional Council
637	PH1980	Isaac Regional Council
1	SP147546	Isaac Regional Council
323	PH752	Isaac Regional Council
4	SP116046	Isaac Regional Council
10	BL49	Isaac Regional Council
1	SP11814	Isaac Regional Council
6	SP125740	Isaac Regional Council
5	SP125740	Isaac Regional Council
8	DC98	Isaac Regional Council
5	DC138	Isaac Regional Council
9	RP891795	Isaac Regional Council
7	SP233102	Isaac Regional Council
2	DC99	Isaac Regional Council
5305	SP240414	Isaac Regional Council
2	GV248	Isaac Regional Council
125	SP151669	Isaac Regional Council
6	GV254	Isaac Regional Council

Table 2 sets out coordinates in GDA94 as an indication of the proposed rail alignment. For full alignment coordinates please refer to the drawings attached.

Table 2 Location of Premises

Easting	Northing	Description
7565000	440000	Start of Carmichael Rail (West)
7569000	44100	

7576500	452000	
7575500	465000	
7579000	475500	
7585000	484000	
758500	491500	
7581000	525000	
7572500	579000	
7563000	584000	
7562000	592500	
7558000	594000	
7555000	598000	
7555500	599500	End of Carmichael Rail (East)

The proposed Operational Works include bulk earthworks, roadworks, stormwater and drainage works for the construction of the rail alignment.

This Operational Works application and associated drawings have been prepared to accord with the provisions within the *Planning Scheme for Belyando Shire 2008*. The Operational Works compliance against the applicable codes of the *Planning Scheme for Belyando Shire 2008* is set out in the attached civil drawings summarised in Table 3 below.

Table 3 Operational Works Drawings

Drawing Title	Drawing No. – Job No.	Date
General Drawings	CARP12033-1000-DWG-G-001, 002 & 005	18/12/2012
Earthworks Drawings	CARP12033-1000-DWG-Y-021, 022 & 024 to 028	18/12/2012
Rail Drawings	CARP12033-1000-DWG-Y-010 012 & 101 to 153	18/12/2012
	CARP12033-1000-DWG-L-311, 321 to 325, 330, 331, 021 & 022	18/12/2012
Roads and Crossings Drawings	CARP12033-1000-DWG-C-021-021, 051 to 055, 057, 060, 065,	18/12/2012

Drawing Title	Drawing No. – Job No.	Date
	101 & 111	
Drainage Drawings	CARP12033-1000-DWG-C-041 & 091	18/12/2012
Structural Drawings	CARP12033-1000-DWG-G-010	18/12/2012
	CARP12033-1000-DWG-S-023 to 028, 030 to 034, 040,060, 101 to 117	18/12/2012
Hydrology Drawings	CARP12033-1000-DWG-C-301, 330 to 389	18/12/2012
Enabling Works Drawings	CARP12033-1000-DWG-C-010 & 011	18/12/2012
	CARP12033-1000-DWG-G-701 & 702	18/12/2012
Signalling and Communications Drawings	CARP12033-1000-DWG-N-010, 101 to 106, 201 to 205	18/12/2012

Please find the following enclosed to assist Council in its consideration of this application:

- Two (2) additional copies of the covering letter
- Three (3) copies of completed IDAS Form 1 and Form 6
- Three (3) copies of the civil design drawing packages

Application fees in accordance with Isaac Regional Council's applicable schedule of fees and charges are to be paid directly to Council by the applicant. Furthermore, a receipt from Q-leave regarding the payment of the Portable Long Service Leave Levy is to be provided to Council prior to the applications Decision Notice being issued.

Should you require further information with regard to this application, please address all enquires to the contact detailed on IDAS Form 1 (attached).

Sincerely
GHD Pty Ltd



Nick Patorniti
Senior Town Planner
07 5413 8136

IDAS form 1—Application details

(Sustainable Planning Act 2009 version 3.0 effective 1 July 2013)

This form must be used for **ALL** development applications.

You **MUST** complete **ALL** questions that are stated to be a mandatory requirement unless otherwise identified on this form.

For all development applications, you must:

- complete this form (*IDAS form 1—Application details*)
- complete any other forms relevant to your application
- provide any mandatory supporting information identified on the forms as being required to accompany your application.

Attach extra pages if there is insufficient space on this form.

All terms used on this form have the meaning given in the *Sustainable Planning Act 2009* (SPA) or the Sustainable Planning Regulation 2009.

This form and any other IDAS form relevant to your application must be used for development applications relating to strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994* and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*. Whenever a planning scheme is mentioned, take it to mean land use plan for the strategic port land, Brisbane core port land or airport land.

PLEASE NOTE: This form is not required to accompany requests for compliance assessment.

This form can also be completed online using MyDAS at www.dsdip.qld.gov.au/MyDAS

Mandatory requirements

Applicant details (Note: the applicant is the person responsible for making the application and need not be the owner of the land. The applicant is responsible for ensuring the information provided on all IDAS application forms is correct. Any development permit or preliminary approval that may be issued as a consequence of this application will be issued to the applicant.)

Name/s (individual or company name in full)	Adani Mining Pty Ltd		
For companies, contact name	Hamish Manzi		
Postal address	GPO Box 2569		
	Suburb	Brisbane	
	State	QLD	Postcode
Country	Australia		
Contact phone number	(07) 3223 4800		
Mobile number (non-mandatory requirement)			
Fax number (non-mandatory requirement)			

Email address (non-mandatory requirement)

hamish.manzi

@adani.com

Applicant's reference number (non-mandatory requirement)

1. What is the nature of the development proposed and what type of approval is being sought?

Table A—Aspect 1 of the application (If there are additional aspects to the application please list in Table B—Aspect 2.)

- a) What is the nature of the development? (Please only tick one box.)
- Material change of use Reconfiguring a lot Building work Operational work
- b) What is the approval type? (Please only tick one box.)
- Preliminary approval under s241 of SPA Preliminary approval under s241 and s242 of SPA Development permit
- c) Provide a brief description of the proposal, including use definition and number of buildings or structures where applicable (e.g. six unit apartment building defined as a *multi-unit dwelling*, 30 lot residential subdivision etc.)
- Construction of a rail alignment associated with the Carmichael Coal Mine and Rail Project.
- d) What is the level of assessment? (Please only tick one box.)
- Impact assessment Code assessment

Table B—Aspect 2 of the application (If there are additional aspects to the application please list in Table C—Additional aspects of the application.)

- a) What is the nature of development? (Please only tick one box.)
- Material change of use Reconfiguring a lot Building work Operational work
- b) What is the approval type? (Please only tick one box.)
- Preliminary approval under s241 of SPA Preliminary approval under s241 and s242 of SPA Development permit
- c) Provide a brief description of the proposal, including use definition and number of buildings or structures where applicable (e.g. six unit apartment building defined as a *multi-unit dwelling*, 30 lot residential subdivision etc.)
-
- d) What is the level of assessment?
- Impact assessment Code assessment

Table C—Additional aspects of the application (If there are additional aspects to the application please list in a separate table on an extra page and attach to this form.)

- Refer attached schedule Not required

2. Location of the premises (Complete Table D and/or Table E as applicable. Identify each lot in a separate row.)

Table D—Street address and lot on plan for the premises or street address and lot on plan for the land adjoining or adjacent to the premises (Note: this table is to be used for applications involving taking or interfering with water). (Attach a separate schedule if there is insufficient space in this table.)

- Street address **and** lot on plan (All lots must be listed.)
 Street address **and** lot on plan for the land adjoining or adjacent to the premises (Appropriate for development in water but adjoining or adjacent to land, e.g. jetty, pontoon. All lots must be listed.)

Street address					Lot on plan description		Local government area (e.g. Logan, Cairns)
Lot	Unit no.	Street no.	Street name and official suburb/ locality name	Post-code	Lot no.	Plan type and plan no.	
i)					Refer to	covering letter	Isaac Regional Council
ii)							
iii)							

Planning scheme details (If the premises involves multiple zones, clearly identify the relevant zone/s for each lot in a separate row in the below table. Non-mandatory)

Lot	Applicable zone / precinct	Applicable local plan / precinct	Applicable overlay/s
i)			
ii)			
iii)			

Table E—Premises coordinates (Appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay.) (Attach a separate schedule if there is insufficient space in this table.)

Coordinates (Note: place each set of coordinates in a separate row)				Zone reference	Datum	Local government area (if applicable)
Easting	Northing	Latitude	Longitude			
Refer to	covering	letter		55	<input checked="" type="checkbox"/> GDA94 <input type="checkbox"/> WGS84 <input type="checkbox"/> other	Isaac Regional Council

3. Total area of the premises on which the development is proposed (indicate square metres)

17,955,000m²

4. Current use/s of the premises (e.g. vacant land, house, apartment building, cane farm etc.)

Vacant agricultural/grazing land

5. Are there any current approvals (e.g. a preliminary approval) associated with this application? (Non-mandatory requirement)

No Yes—provide details below

List of approval reference/s	Date approved (dd/mm/yy)	Date approval lapses (dd/mm/yy)

6. Is owner's consent required for this application? (Refer to notes at the end of this form for more information.)

No
 Yes—complete either Table F, Table G or Table H as applicable

Table F	
Name of owner/s of the land	
I/We, the above-mentioned owner/s of the land, consent to the making of this application.	
Signature of owner/s of the land	
Date	

Table G	
Name of owner/s of the land	
<input type="checkbox"/> The owner's written consent is attached or will be provided separately to the assessment manager.	

Table H	
Name of owner/s of the land	
<input type="checkbox"/> By making this application, I, the applicant, declare that the owner has given written consent to the making of the application.	

7. Identify if any of the following apply to the premises (Tick applicable box/es.)

- Adjacent to a water body, watercourse or aquifer (e.g. creek, river, lake, canal)—complete Table I
- On strategic port land under the *Transport Infrastructure Act 1994*—complete Table J
- In a tidal water area—complete Table K
- On Brisbane core port land under the *Transport Infrastructure Act 1994* (No table requires completion.)
- On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008* (no table requires completion)

Table I	
Name of water body, watercourse or aquifer Grosvenor Creek, Diamond Creek, Logan Creek, Unnamed Creek, Gowrie Creek, Mistake Creek, Belyando River (East Branch), Belyando River (Anabranch), Ogenbeena Creek (lower crossing), Ogenbeena Creek, North Creek and Eight Mile Creek	

Table J	
Lot on plan description for strategic port land	Port authority for the lot

Table K	
Name of local government for the tidal area (if applicable)	Port authority for the tidal area (if applicable)

8. Are there any existing easements on the premises? (e.g. for vehicular access, electricity, overland flow, water etc)

- No Yes—ensure the type, location and dimension of each easement is included in the plans submitted

9. Does the proposal include new building work or operational work on the premises? (Including any services)

- No Yes—ensure the nature, location and dimension of proposed works are included in plans submitted

10. Is the payment of a portable long service leave levy applicable to this application? (Refer to notes at the end of this form for more information.)

- No—go to question 12 Yes

11. Has the portable long service leave levy been paid? (Refer to notes at the end of this form for more information.)

- No
 Yes—complete Table L and submit with this application the yellow local government/private certifier's copy of the receipted QLeave form

Table L		
Amount paid	Date paid (dd/mm/yy)	QLeave project number (6 digit number starting with A, B, E, L or P)

12. Has the local government agreed to apply a superseded planning scheme to this application under section 96 of the *Sustainable Planning Act 2009*?

- No
 Yes—please provide details below

Name of local government	Date of written notice given by local government (dd/mm/yy)	Reference number of written notice given by local government (if applicable)

13. List below all of the forms and supporting information that accompany this application (Include all IDAS forms, checklists, mandatory supporting information etc. that will be submitted as part of this application. Note: this question does not apply for applications made online using MyDAS)

Description of attachment or title of attachment	Method of lodgement to assessment manager
Covering Letter	
Completed IDAS Form 1 and IDAS Form 6	
Civil design drawing package	

14. Applicant's declaration

By making this application, I declare that all information in this application is true and correct (Note: it is unlawful to provide false or misleading information)

Notes for completing this form

- Section 261 of the *Sustainable Planning Act 2009* prescribes when an application is a properly-made application. Note, the assessment manager has discretion to accept an application as properly made despite any non-compliance with the requirement to provide mandatory supporting information under section 260(1)(c) of the *Sustainable Planning Act 2009*

Applicant details

- Where the applicant is not a natural person, ensure the applicant entity is a real legal entity.

Question 1

- Schedule 3 of the Sustainable Planning Regulation 2009 identifies assessable development and the type of assessment. Where schedule 3 identifies assessable development as "various aspects of development" the applicant must identify each aspect of the development on Tables A, B and C respectively and as required.

Question 6

- Section 263 of the *Sustainable Planning Act 2009* sets out when the consent of the owner of the land is required for an application. Section 260(1)(e) of the *Sustainable Planning Act 2009* provides that if the owner's consent is required under section 263, then an application must contain, or be accompanied by, the written consent of the owner, or include a declaration by the applicant that the owner has given written consent to the making of the application. If a development application relates to a state resource, the application is not required to be supported by evidence of an allocation or entitlement to a state resource. However, where the state is the owner of the subject land, the written consent of the state, as landowner, may be required. Allocation or entitlement to the state resource is a separate process and will need to be obtained before development commences.

Question 11

- The *Building and Construction Industry (Portable Long Service Leave) Act 1991* prescribes when the portable long service leave levy is payable.
- The portable long service leave levy amount and other prescribed percentages and rates for calculating the levy are prescribed in the *Building and Construction Industry (Portable Long Service Leave) Regulation 2002*.

Question 12

- The portable long service leave levy need not be paid when the application is made, but the *Building and Construction Industry (Portable Long Service Leave) Act 1991* requires the levy to be paid before a development permit is issued.
- Building and construction industry notification and payment forms are available from any Queensland post office or agency, on request from QLeave, or can be completed on the QLeave website at www.qleave.qld.gov.au. For further information contact QLeave on 1800 803 481 or visit www.qleave.qld.gov.au.

Privacy—The information collected in this form will be used by the Department of State Development, Infrastructure and Planning (DSDIP), assessment manager, referral agency and/or building certifier in accordance with the processing and assessment of your application. Your personal details should not be disclosed for a purpose outside of the IDAS process or the provisions about public access to planning and development information in the *Sustainable Planning Act 2009*, except where required by legislation (including the *Right to Information Act 2009*) or as required by Parliament. This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002*.

OFFICE USE ONLY

Date received

Reference numbers

NOTIFICATION OF ENGAGEMENT OF A PRIVATE CERTIFIER

To

Council. I have been engaged as the private certifier for the building work referred to in this application

Date of engagement	Name	BSA Certification license number	Building classification/s

QLEAVE NOTIFICATION AND PAYMENT (For completion by assessment manager or private certifier if applicable.)

Description of the work	QLeave project number	Amount paid (\$)	Date paid	Date receipted form sighted by assessment manager	Name of officer who sighted the form

The *Sustainable Planning Act 2009* is administered by the Department of State Development, Infrastructure and Planning. This form and all other required application materials should be sent to your assessment manager and any referral agency.

IDAS form 6—Building or operational work assessable against a planning scheme

(Sustainable Planning Act 2009 version 3.0 effective 1 July 2013)

This form must be used for development applications for building work or operational work assessable against a planning scheme.

You **MUST** complete **ALL** questions that are stated to be a mandatory requirement unless otherwise identified on this form.

For all development applications, you must:

- complete *IDAS form 1—Application details*
- complete any other forms relevant to your application
- provide any mandatory supporting information identified on the forms as being required to accompany your application.

Attach extra pages if there is insufficient space on this form.

All terms used on this form have the meaning given in the *Sustainable Planning Act 2009* (SPA) or the Sustainable Planning Regulation 2009.

This form must be used for building work or operational work relating on strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994* and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008* that requires assessment against the land use plan for that land. Whenever a planning scheme is mentioned, take it to mean land use plan for the strategic port land, Brisbane core port land or airport land.

This form can also be completed online using MyDAS at www.dsdip.qld.gov.au/MyDAS

Mandatory requirements

1. **What is the nature of the work that requires assessment against a planning scheme?** (Tick all applicable boxes.)

- Building work—complete Table A Operational work—complete Table B

Table A

a) What is the nature of the building work (e.g. building, repairing, altering, underpinning, moving or demolishing a building)?

N/A

b) Are there any current approvals associated with this application? (e.g. material change of use.)

- No Yes— provide details below

List of approval reference/s	Date approved (dd/mm/yy)	Date approval lapses (dd/mm/yy)

Table B

a) What is the nature of the operational work? (Tick all applicable boxes.)

- Road works Stormwater Water infrastructure
 Drainage works Earthworks Sewerage infrastructure
 Landscaping Signage Clearing vegetation under the planning scheme
 Other—provide details

b) Is the operational work necessary to facilitate the creation of new lots? (E.g. subdivision.)

- No Yes—specify the number of lots being created

c) Are there any current approvals associated with this application? (E.g. material change of use.)

- No Yes—provide details below

List of approval reference/s	Date approved (dd/mm/yy)	Date approval lapses (dd/mm/yy)

2. What is the dollar value of the proposed building work? (Inc GST, materials and labour.)	\$
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3. What is the dollar value of the proposed operational work? (Inc GST, materials and labour.)	\$ TBA
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Mandatory supporting information

4. Confirm that the following mandatory supporting information accompanies this application

Mandatory supporting information	Confirmation of lodgement	Method of lodgement
All applications involving building work or operational work		
A site plan drawn to an appropriate scale (1:100, 1:200 or 1:500 are recommended scales) which shows the following: <ul style="list-style-type: none"> • the location and site area of the land to which the application relates (<i>relevant land</i>) • the north point • the boundaries of the relevant land • the allotment layout showing existing lots, any proposed lots (including the dimensions of those lots), existing or proposed road reserves, building envelopes and existing or proposed open space (note: numbering is required for all lots) • any existing or proposed easements on the relevant land and their function • any access limitation strips • all existing and proposed roads and access points on the relevant land. 	<input checked="" type="checkbox"/> Confirmed	

A statement about how the proposed development addresses the local government's planning schemes and any other planning documents relevant to the application.	<input checked="" type="checkbox"/> Confirmed	
A statement addressing the relevant part(s) of the State Development Assessment Provisions (SDAP).	<input type="checkbox"/> Confirmed <input checked="" type="checkbox"/> Not applicable	
Applications for building work (including extensions and demolition that is assessable development)		
Floor plans drawn to an appropriate scale (1:50, 1:100 or 1:200 are recommended scales) which show the following: <ul style="list-style-type: none"> the north point the intended use of each area on the floor plan (for commercial, industrial or mixed use developments only) the room layout (for residential development only) with all rooms clearly labelled the existing and the proposed built form (for extensions only) the gross floor area of each proposed floor area. 	<input type="checkbox"/> Confirmed <input checked="" type="checkbox"/> Not applicable	
Elevations drawn to an appropriate scale (1:100, 1:200 or 1:500 are recommended scales) which show plans of all building elevations and facades, clearly labelled to identify orientation (e.g. north elevation).	<input type="checkbox"/> Confirmed <input checked="" type="checkbox"/> Not applicable	
Plans showing the size, location, proposed site cover, proposed maximum number of storeys, and proposed maximum height above natural ground level of the proposed new building work.	<input type="checkbox"/> Confirmed <input checked="" type="checkbox"/> Not applicable	
Plans showing the extent of any demolition that is assessable development.	<input type="checkbox"/> Confirmed <input checked="" type="checkbox"/> Not applicable	
Applications for operational work involving earthworks (filling and excavating)		
Drawings showing: <ul style="list-style-type: none"> existing and proposed contours areas to be cut and filled the location and level of any permanent survey marks or reference stations used as datum for the works the location of any proposed retaining walls on the relevant land and their height the defined flood level (if applicable) the fill level (if applicable). 	<input checked="" type="checkbox"/> Confirmed <input type="checkbox"/> Not applicable	
Applications for operational work involving roadworks		
Drawings showing: <ul style="list-style-type: none"> existing and proposed contours the centreline or construction line showing chainages, bearings, offsets if the construction line is not the centreline of the road and all intersection points information for each curve including tangent point chainages and offsets, curve radii, arc length, tangent length, superelevation (if applicable) and curve widening (if applicable) kerb lines including kerb radii (where not parallel to centreline) and tangent point changes (where not parallel to centreline) edge of pavement where kerb is not constructed position and extent of channelisation location and details of all traffic signs, guideposts, guardrail and other street furniture pavement markings including details on raised pavement markers 	<input checked="" type="checkbox"/> Confirmed <input type="checkbox"/> Not applicable	

<ul style="list-style-type: none"> • catchpit, manhole and pipeline locations • drainage details (if applicable) • cross road drainage culverts (if applicable) • concrete footpaths and cycle paths • location and details for access points, ramps and invert crossings • changes in surfacing material. 		
Applications for operational work involving stormwater drainage		
<p>Drawings showing:</p> <ul style="list-style-type: none"> • existing and proposed contours • drainage locations, diameters and class of pipe, open drains and easements • manhole location, chainage and offset or coordinates and inlet and outlet invert levels • inlet pit locations, chainage and offset or coordinates and invert and kerb levels. 	<input checked="" type="checkbox"/> Confirmed <input type="checkbox"/> Not applicable	
Applications for operational work involving water reticulation		
<p>Drawings showing:</p> <ul style="list-style-type: none"> • kerb lines or edge of pavement where kerb is not constructed • location and levels of other utility services where affected by water reticulation works • pipe diameter, type of pipe and pipe alignment • water main alignments • water supply pump station details (if applicable) • minor reservoir details (if applicable) • conduits • location of valves and fire hydrants • location of house connections (if applicable) • location of bench marks and reference pegs. 	<input type="checkbox"/> Confirmed <input checked="" type="checkbox"/> Not applicable	
Applications for operational work involving sewerage reticulation		
<p>Drawings showing:</p> <ul style="list-style-type: none"> • location of all existing and proposed services • location of all existing and proposed sewer lines and manhole locations • location of all house connection branches • kerb lines or edge of pavement where kerb is not constructed • chainages • design sewer invert levels • design top of manhole levels • type of manhole and manhole cover • pipe diameter, type of pipe and pipe alignment • location of house connections (if applicable) • sewer pump station details (if applicable). 	<input type="checkbox"/> Confirmed <input checked="" type="checkbox"/> Not applicable	
Applications for operational work involving street lighting		
<p>Drawings showing:</p> <ul style="list-style-type: none"> • location of all light poles and service conduits • location of all other cross road conduits • type of wattage and lighting • any traffic calming devices • additional plans for roundabouts and major roads (if applicable) • details of any variations to normal alignment 	<input type="checkbox"/> Confirmed <input checked="" type="checkbox"/> Not applicable	

<ul style="list-style-type: none"> • details of lighting levels. 		
Applications for operational work involving public utility services		
Drawings showing: <ul style="list-style-type: none"> • any existing light poles and power poles • any existing underground services • details of proposed services • alteration to existing services. 	<input type="checkbox"/> Confirmed <input checked="" type="checkbox"/> Not applicable	
Applications for operational work involving landscaping works		
Drawings showing: <ul style="list-style-type: none"> • the location of proposed plant species • a plant schedule indicating common and botanical names, pot sizes and numbers of plants • planting bed preparation details including topsoil depth, subgrade preparation, mulch type and depth, type of turf, pebble, paving and garden edge • the location and type of any existing trees to be retained • construction details of planter boxes, retaining walls and fences • the proposed maintenance period • irrigation system details. 	<input type="checkbox"/> Confirmed <input checked="" type="checkbox"/> Not applicable	

Privacy—Please refer to your assessment manager, referral agency and/or building certifier for further details on the use of information recorded in this form.

OFFICE USE ONLY

Date received Reference numbers

The *Sustainable Planning Act 2009* is administered by the Department of State Development, Infrastructure and Planning. This form and all other required application materials should be sent to your assessment manager and any referral agency.



Carmichael Coal Mine & Rail Project Front End Engineering Design Report - RAIL



Adani Mining Pty Ltd

CARP12033-REP-G-100 Rev 0
VOLUME 4 - DRAWINGS



General Drawings



Carmichael Coal Mine & Rail Project Front End Engineering Design Report - RAIL



Adani Mining Pty Ltd

CARP12033-REP-G-100 Rev 0
VOLUME 4 - DRAWINGS



CARMICHAEL COAL MINE AND RAIL PROJECT

ADANI CLIENT'S ENGINEER - RAIL

GENERAL DRAWINGS:

CARP12033-1000-DWG-G-001 GENERAL
 CARP12033-1000-DWG-G-002 GENERAL
 CARP12033-1000-DWG-G-005 GENERAL

DRAWING INDEX - SHEET 1
 DRAWING INDEX - SHEET 2
 NOTES

EARTHWORKS DRAWINGS:

CARP12033-1000-DWG-Y-021 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-028 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-022 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-027 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-024 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-025 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-026 CIVIL - EARTHWORKS

TYPICAL FILL FORMATION DETAILS - SHEET 1
 TYPICAL FILL FORMATION DETAILS - SHEET 2
 TYPICAL CUT FORMATION DETAILS
 CROSS SECTIONS AT DEEP CUTTINGS
 TYPICAL BENCHING AND DRAIN DETAILS
 TYPICAL TREATMENT FOR EMBANKMENT AND CUTTING
 TYPICAL INFRASTRUCTURE MAINTENANCE SIDING CROSS SECTION

RAIL DRAWINGS:

CARP12033-1000-DWG-Y-010 CIVIL - RAIL
 CARP12033-1000-DWG-Y-012 CIVIL - RAIL
 CARP12033-1000-DWG-L-311 CIVIL - RAIL
 CARP12033-1000-DWG-L-321 CIVIL - RAIL
 CARP12033-1000-DWG-L-322 CIVIL - RAIL
 CARP12033-1000-DWG-L-323 CIVIL - RAIL
 CARP12033-1000-DWG-L-324 CIVIL - RAIL
 CARP12033-1000-DWG-L-325 CIVIL - RAIL
 CARP12033-1000-DWG-L-330 CIVIL - RAIL
 CARP12033-1000-DWG-L-331 CIVIL - RAIL

GENERAL ARRANGEMENT - ALIGNMENT
 GENERAL ARRANGEMENT - LAYDOWN AREAS
 SCHEMATIC - BALLOON LOOP
 SCHEMATIC - PASSING LOOP No. 1 - CH: 35.75
 SCHEMATIC - PASSING LOOP No. 2 - CH: 72.35
 SCHEMATIC - PASSING LOOP No. 3 - CH: 94.630
 SCHEMATIC - PASSING LOOP No. 4 - CH: 116.08
 SCHEMATIC - PASSING LOOP No. 5 - CH: 143.250
 SCHEMATIC - REFUGE SIDING
 SCHEMATIC - QRN JUNCTION

CARP12033-1000-DWG-L-021 TRACK
 CARP12033-1000-DWG-L-022 TRACK
 CARP12033-1000-DWG-Y-101 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-102 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-103 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-104 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-105 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-106 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-107 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-108 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-109 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-110 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-111 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-112 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-113 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-114 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-115 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-116 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-117 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-118 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-119 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-120 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-121 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-122 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-123 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-124 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-125 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-126 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-127 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-128 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-129 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-130 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-131 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-132 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-133 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-134 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-135 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-136 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-137 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-138 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-139 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-140 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-141 CIVIL - EARTHWORKS

TYPICAL TRACK CROSSING SECTION - (NARROW GAUGE)
 TYPICAL TRACK CROSSING SECTION - (DUAL GAUGE)
 PLAN AND PROFILE - CH 0.0 - CH 3.5 - SHEET 1
 PLAN AND PROFILE - CH 3.5 - CH 7.0 - SHEET 2
 PLAN AND PROFILE - CH 7.0 - CH 10.5 - SHEET 3
 PLAN AND PROFILE - CH 10.5 - CH 14.0 - SHEET 4
 PLAN AND PROFILE - CH 14.0 - CH 17.5 - SHEET 5
 PLAN AND PROFILE - CH 17.5 - CH 21.0 - SHEET 6
 PLAN AND PROFILE - CH 21.0 - CH 24.5 - SHEET 7
 PLAN AND PROFILE - CH 24.5 - CH 28.0 - SHEET 8
 PLAN AND PROFILE - CH 28.0 - CH 31.5 - SHEET 9
 PLAN AND PROFILE - CH 31.5 - CH 35.0 - SHEET 10
 PLAN AND PROFILE - CH 35.0 - CH 38.5 - SHEET 11
 PLAN AND PROFILE - CH 38.5 - CH 42.0 - SHEET 12
 PLAN AND PROFILE - CH 42.0 - CH 45.5 - SHEET 13
 PLAN AND PROFILE - CH 45.5 - CH 49.0 - SHEET 14
 PLAN AND PROFILE - CH 49 - CH 52.5 - SHEET 15
 PLAN AND PROFILE - CH 52.5 - CH 56.0 - SHEET 16
 PLAN AND PROFILE - CH 56.0 - CH 59.5 - SHEET 17
 PLAN AND PROFILE - CH 59.5 - CH 63.0 - SHEET 18
 PLAN AND PROFILE - CH 63.0 - CH 66.5 - SHEET 19
 PLAN AND PROFILE - CH 66.5 - CH 70.0 - SHEET 20
 PLAN AND PROFILE - CH 70.0 - CH 73.5 - SHEET 21
 PLAN AND PROFILE - CH 73.5 - CH 77.0 - SHEET 22
 PLAN AND PROFILE - CH 77.0 - CH 80.5 - SHEET 23
 PLAN AND PROFILE - CH 80.5 - 84.0 - SHEET 24
 PLAN AND PROFILE - CH 84.0 - CH 87.500 - SHEET 25
 PLAN AND PROFILE - CH 87.5 - CH 91.0 - SHEET 26
 PLAN AND PROFILE - CH 91.0 - CH 94.5 - SHEET 27
 PLAN AND PROFILE - CH 94.5 - CH 98.0 - SHEET 28
 PLAN AND PROFILE - CH 98.0 - 101.5 - SHEET 29
 PLAN AND PROFILE - CH 101.5 - CH 105 - SHEET 30
 PLAN AND PROFILE - CH 105.0 - CH 108.5 - SHEET 31
 PLAN AND PROFILE - CH 108.5 - CH 112.0 - SHEET 32
 PLAN AND PROFILE - CH 112.0 - CH 115.50 - SHEET 33
 PLAN AND PROFILE - CH 115.5 - CH 119.0 - SHEET 34
 PLAN AND PROFILE - CH 119.0 - CH 122.5 - SHEET 35
 PLAN AND PROFILE - CH 122.5 - CH 126.0 - SHEET 36
 PLAN AND PROFILE - CH 126.0 - CH 129.50 - SHEET 37
 PLAN AND PROFILE - CH 129.5 - CH 133.0 - SHEET 38
 PLAN AND PROFILE - CH 133.0 - CH 136.50 - SHEET 39
 PLAN AND PROFILE - CH 136.5 - CH 140 - SHEET 40
 PLAN AND PROFILE - CH 140.0 - CH 143.5 - SHEET 41

RAIL DRAWINGS CONTINUED:

CARP12033-1000-DWG-Y-142 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-143 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-144 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-145 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-146 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-147 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-148 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-149 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-150 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-151 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-152 CIVIL - EARTHWORKS
 CARP12033-1000-DWG-Y-153 CIVIL - EARTHWORKS

PLAN AND PROFILE - CH 143.5 - CH 147.0 - SHEET 42
 PLAN AND PROFILE - CH 147.0 - CH 150.5 - SHEET 43
 PLAN AND PROFILE - CH 150.5 - CH 154.0 - SHEET 44
 PLAN AND PROFILE - CH 154.0 - CH 157.5 - SHEET 45
 PLAN AND PROFILE - CH 157.5 - CH 161.0 - SHEET 46
 PLAN AND PROFILE - CH 161.0 - CH 164.5 - SHEET 47
 PLAN AND PROFILE - CH 164.5 - CH 168 - SHEET 48
 PLAN AND PROFILE - CH 168 - CH 171.5 - SHEET 49
 PLAN AND PROFILE - CH 171.5 - CH 175 - SHEET 50
 PLAN AND PROFILE - CH 175 - CH 178.5 - SHEET 51
 PLAN AND PROFILE - CH 178.5 - CH 182.00 - SHEET 52
 PLAN AND PROFILE - CH 182 - CH 184.112 - SHEET 53

ROADS AND CROSSINGS DRAWINGS:

CARP12033-1000-DWG-C-021 CIVIL
 CARP12033-1000-DWG-C-051 CIVIL
 CARP12033-1000-DWG-C-052 CIVIL
 CARP12033-1000-DWG-C-053 CIVIL
 CARP12033-1000-DWG-C-054 CIVIL
 CARP12033-1000-DWG-C-055 CIVIL
 CARP12033-1000-DWG-C-057 CIVIL
 CARP12033-1000-DWG-C-060 CIVIL
 CARP12033-1000-DWG-C-065 CIVIL
 CARP12033-1000-DWG-C-101 CIVIL
 CARP12033-1000-DWG-C-111 CIVIL

TYPICAL ROAD CROSS SECTIONS
 TYPICAL FENCE ARRANGEMENT - BRIDGE ABUTMENT
 GRADE SEPARATED - OCCUPATIONAL CROSSING
 AT GRADE - PUBLIC ROAD CROSSING
 AT GRADE - OCCUPATIONAL CROSSING
 AT GRADE - PUBLIC AND STOCK CROSSING
 TYPICAL CROSSING PANEL DETAIL
 TYPICAL CATTLE GRID DETAILS
 TYPICAL RAIL CROSSING SIGNAGE
 PLAN AND PROFILE - GREGORY DEVELOPMENTAL ROAD
 PLAN AND PROFILE - AVON ROAD

DRAINAGE DRAWINGS:

CARP12033-1000-DWG-C-041 CIVIL - DRAINAGE
 CARP12033-1000-DWG-C-091 CIVIL - DRAINAGE

TYPICAL PIPE CULVERT
 CULVERT SCHEDULE

STRUCTURAL DRAWINGS:

CARP12033-1000-DWG-G-010 CIVIL - RAIL
 CARP12033-1000-DWG-S-023 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-024 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-025 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-026 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-027 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-028 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-030 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-031 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-032 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-033 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-034 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-040 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-060 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-101 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-102 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-103 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-104 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-105 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-106 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-107 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-108 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-109 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-110 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-111 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-112 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-113 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-114 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-115 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-116 STRUCTURAL - BRIDGE
 CARP12033-1000-DWG-S-117 STRUCTURAL - BRIDGE

SCHEMATIC - SP1 AND SP2 LINE
 TYPICAL ABUTMENT - 4 PILE GROUP - WITHOUT PILE CAP
 TYPICAL ABUTMENT - 2 PILE GROUP - WITHOUT PILE CAP
 TYPICAL DETAILS OF RAIL UNDER ROAD BRIDGE ABUTMENT
 TYPICAL PIER - 2 PILE GROUP - WITHOUT PILE CAP
 TYPICAL PIER - 4 PILE GROUP - WITH PILE CAP
 TYPICAL DETAILS OF CAST IN PLACE BORED PILES
 TYPICAL DETAILS OF DRAIN PIPE AND EXPANSION JOINT
 TYPICAL 19.6m RAIL BRIDGE GIRDER - SHEET 1
 TYPICAL 19.6m RAIL BRIDGE GIRDER - SHEET 2
 TYPICAL 26.0m ROAD BRIDGE GIRDER - SHEET 1
 TYPICAL 26.0m ROAD BRIDGE GIRDER - SHEET 2
 TYPICAL SCOUR PROTECTION DETAILS
 TYPICAL BOX CULVERT DETAILS
 PLAN AND ELEVATION - LOGAN CREEK - CH 82.712
 PLAN AND ELEVATION - UNNAMED CREEK - CH 86.122
 PLAN AND ELEVATION - UNNAMED CREEK - CH 90.771
 PLAN AND ELEVATION - GOWRIE CREEK - CH 113.447
 PLAN AND ELEVATION - MISTAKE CREEK - CH 120.732
 PLAN AND ELEVATION - MISTAKE CREEK - CH 121.415
 PLAN AND ELEVATION - BELYANDO RIVER - CH 139.334
 PLAN AND ELEVATION - BELYANDO RIVER - CH 145.962
 PLAN AND ELEVATION - BELYANDO RIVER - CH 149.063
 PLAN AND ELEVATION - BELYANDO RIVER - CH 149.558
 PLAN AND ELEVATION - OGENBEENA - CH 150.648
 PLAN AND ELEVATION - OGENBEENA - CH 153.020
 PLAN AND ELEVATION - NORTH CREEK - CH 170.458
 PLAN AND ELEVATION - EIGHT MILE CREEK - CH 176.201
 PLAN AND ELEVATION - DIAMOND CREEK - CH 63.207
 PLAN AND ELEVATION - GREGORY DEVELOPMENTAL ROAD - CH: 108.100 km
 PLAN AND ELEVATION - FUTURE STANDARD GAUGE - CH: 67.652

ISSUED FOR USE
 NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	PRM	18.12.12	ISSUED FOR USE	DES	SBL

DRAWN	P. McMASTER	18.12.12
DRAFTING CHECK	D. SMITH	18.12.12
ENG. APPROVED	G. BOYTAR	18.12.12
PROJECT MANAGER	S. LOWDEN	18.12.12
RPEQ APPROVAL		
SIGNED:		
NAME:		
RPEQ No:		

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ORIGINAL SIZE A1

CARMICHAEL COAL MINE AND RAIL PROJECT
 ADANI CLIENT'S ENGINEER - RAIL
 GENERAL
 DRAWING INDEX - SHEET 1

PROJECT No. **CARP12033**
 DRG No. **CARP12033-1000-DWG-G-001**

REV **0**

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GENERAL NOTES:

1. ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE LATEST EDITIONS OF CURRENT AUSTRALIAN STANDARDS, SPECIFICATIONS AND DRAWINGS AS SPECIFIED.
2. DRAWINGS SHALL NOT BE SCALED. ANY DISCREPANCIES BETWEEN DRAWINGS SHALL BE REFERRED TO THE SUPERINTENDENT FOR CLARIFICATION.
3. THESE NOTES APPLY IN GENERAL TO THE WORK DESCRIBED ON THE DESIGN DRAWINGS AND ARE ONLY OVERRIDDEN BY A SPECIFIC DIMENSION OR NOTE ON THE DESIGN DRAWINGS AND CONTRACT SPECIFICATION.
4. DRAWINGS TO BE READ IN CONJUNCTION WITH DRAWING INDEX: CARP12033-1000-DWG-G-001 and CARP12033-1000-DWG-G-002.

GENERAL ARRANGEMENT DRAWINGS:

1. FOR BRIDGE LOCATIONS REFER STRUCTURAL GENERAL ARRANGEMENT DRAWING: CARP12033-1000-DWG-G-010.
2. FOR OCCUPATIONAL AND PUBLIC ROAD CROSSING LOCATIONS REFER ROADS AND CROSSINGS GENERAL ARRANGEMENT DRAWING: CARP12033-1000-DWG-C-010.
3. FOR ALIGNMENT GENERAL ARRANGEMENT REFER DRAWING: CARP12033-1000-DWG-Y-010.

CIVIL NOTES:

1. FOR STANDARD ROAD SPECIFICATIONS REFER TO DEPARTMENT OF TRANSPORT AND MAIN ROAD (DTMR) ROAD PLANNING AND DESIGN MANUAL.
2. CIVIL DRAWINGS TO BE READ IN CONJUNCTION WITH THE FENCE AND GATE SPECIFICATION AND RAIL CROSSING SPECIFICATION.
3. UNDERGROUND UTILITIES / SERVICES TO BE LOCATED PRIOR TO WORKS BEING UNDERTAKEN.
4. CATTLE GRIDS AND GATES TO BE INSTALLED AS PER THE RAILWAY SAFETY MANAGEMENT SYSTEM.
5. FOR CATTLE GRID DETAILS REFER DRAWING: CARP12033-1000-DWG-C-060.
6. FOR STANDARD FENCE DETAILS REFER QUEENSLAND RAIL STANDARD RURAL FENCES DRAWING: 2614.
7. CLEARING FOR BOUNDARY FENCES SHALL BE IN ACCORDANCE WITH EIS REQUIREMENTS.
8. FOR CROSSING APPROACH ROAD SIGNAGE REFER DRAWING: CARP12033-1000-DWG-C-065.
9. FOR TYPICAL CROSSING PANEL DETAILS REFER DRAWING: CARP12033-1000-DWG-C-057.
10. ROADWAY TO BE FREE DRAINING

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REV	BY	DATE	DESCRIPTION	CKD	APP
0		18.12.12	ISSUED FOR USE		

DRAWN	
DRAFTING CHECK	
ENG. APPROVED	
PROJECT MANAGER	
RPEQ APPROVAL	
SIGNED:	
NAME:	
RPEQ No:	

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ORIGINAL SIZE A1

CARMICHAEL COAL MINE AND RAIL PROJECT	
ADANI CLIENT'S ENGINEER - RAIL	
MASTER COPY	
PROJECT No.	CARP12033
DRG No.	CARP12033-1000-DWG-G-005
REV	0

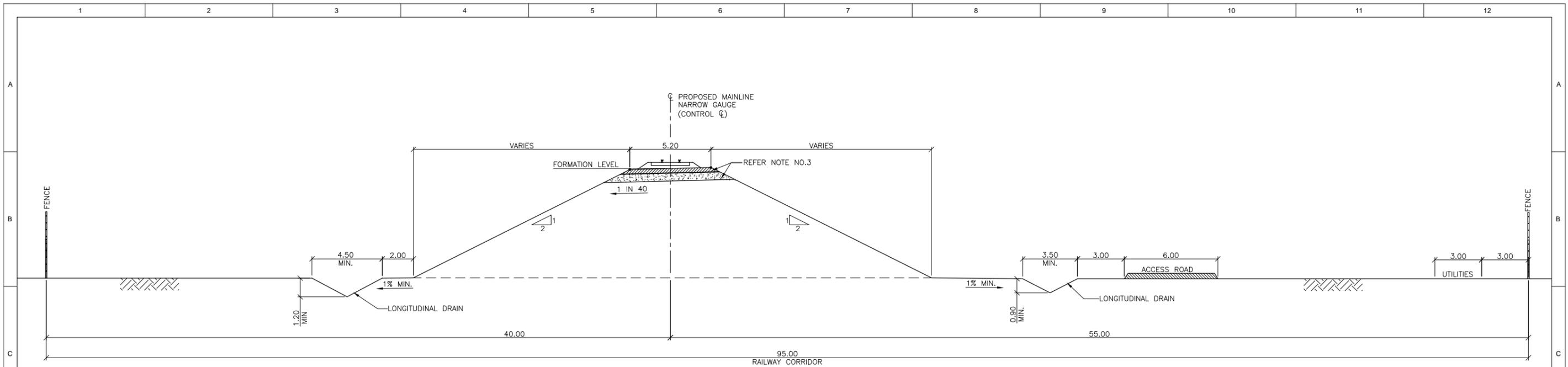
Earthworks Drawings

Carmichael Coal Mine & Rail Project
Front End Engineering Design Report - RAIL

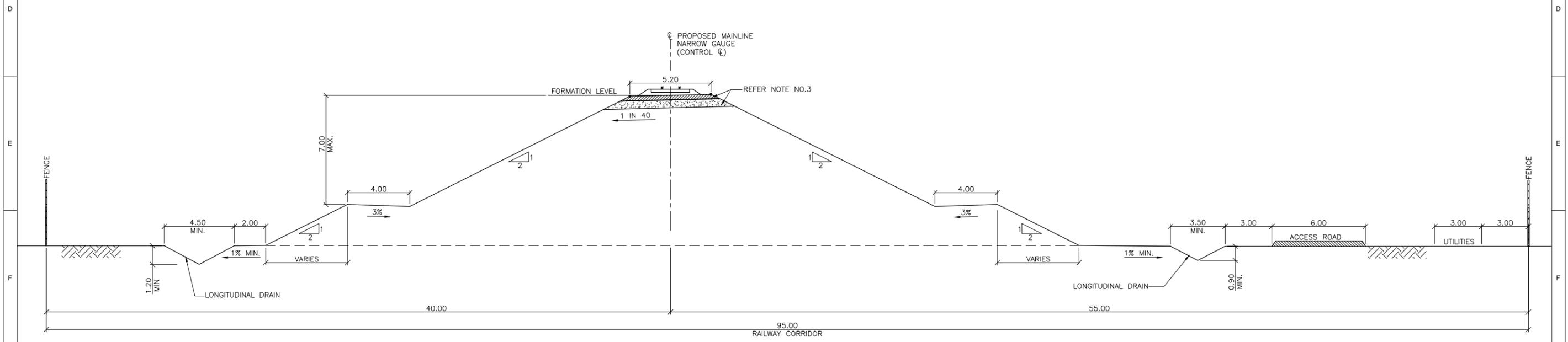
Adani Mining Pty Ltd

CARP12033-REP-G-100 Rev 0
VOLUME 4 - DRAWINGS





CROSS SECTION FOR EMBANKMENT HEIGHT ≤ 7m FOR NARROW GAUGE
SCALE 1:125



CROSS SECTION FOR EMBANKMENT HEIGHT > 7m FOR NARROW GAUGE
SCALE 1:125

NOTE:

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. CROSS SECTION IS DEVELOPED BASED ON CENTERLINE OF MAINLINE NARROW GAUGE.
3. FOR CAPPING LAYER DETAILS REFER DRAWING NO. CARP12033-1000-DWG-Y-025.

REV	BY	DATE	DESCRIPTION	CKD	APP
0	SK	18/12/12	ISSUED FOR USE	DT	RB

DRAWN	SYAM	18/12/12
DRAFTING CHECK	KAUSHIK	18/12/12
ENG. APPROVED	AJAY KUMAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: DANIEL TING	18/12/12
	NAME: DANIEL TING	
	RPEQ No: 05784	

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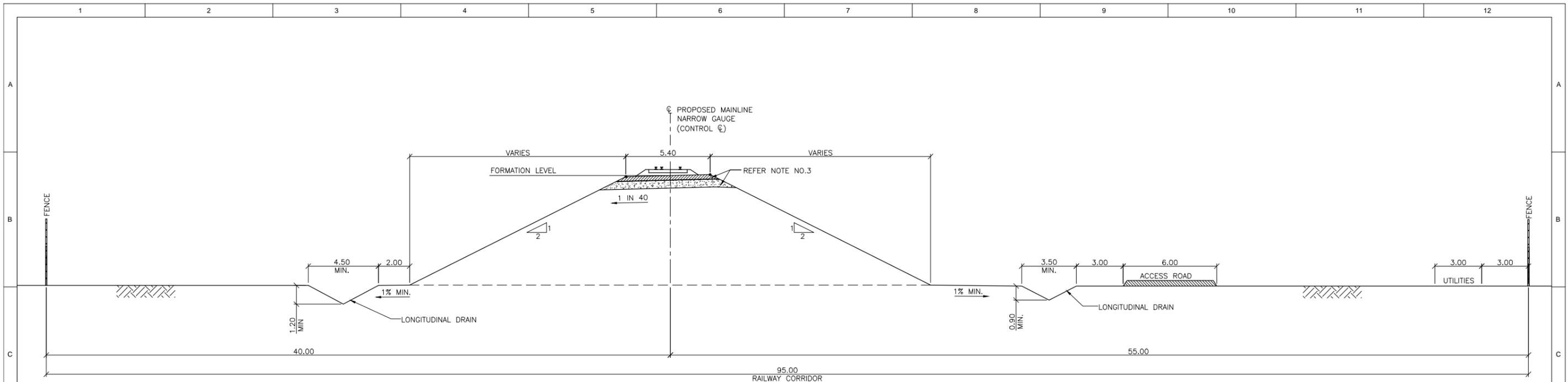
1:125 0 1 2 3 4 5m

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NOT FOR CONSTRUCTION

CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
TYPICAL FILL FORMATION DETAILS - SHEET 1

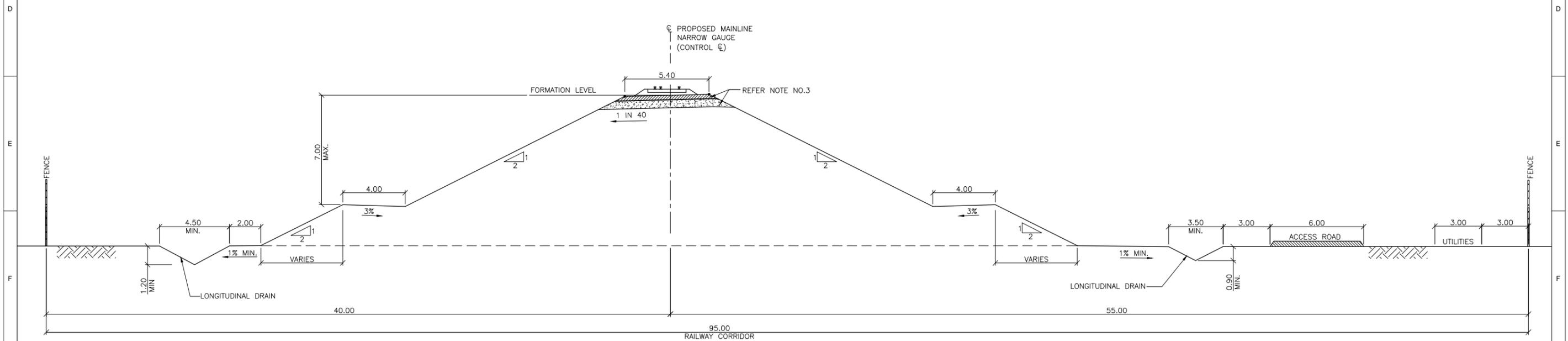
PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-021** REV **0**

MASTER COPY



CROSS SECTION FOR EMBANKMENT HEIGHT $\leq 7m$ FOR DUAL GAUGE

SCALE 1:125



CROSS SECTION FOR EMBANKMENT HEIGHT $> 7m$ FOR DUAL GAUGE

SCALE 1:125

NOTE:

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. CROSS SECTION IS DEVELOPED BASED ON CENTERLINE OF MAINLINE NARROW GAUGE.
3. FOR CAPPING LAYER DETAILS REFER DRAWING NO. CARP12033-1000-DWG-Y-025.

REV	BY	DATE	DESCRIPTION	CKD	APP
0	SK	18/12/12	ISSUED FOR USE	DT	RB

DRAWN	SYAM	18/12/12
DRAFTING CHECK	KAUSHIK	18/12/12
ENG. APPROVED	AJAY KUMAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: DANIEL TING	18/12/12
	NAME: DANIEL TING	
	RPEQ No: 05784	

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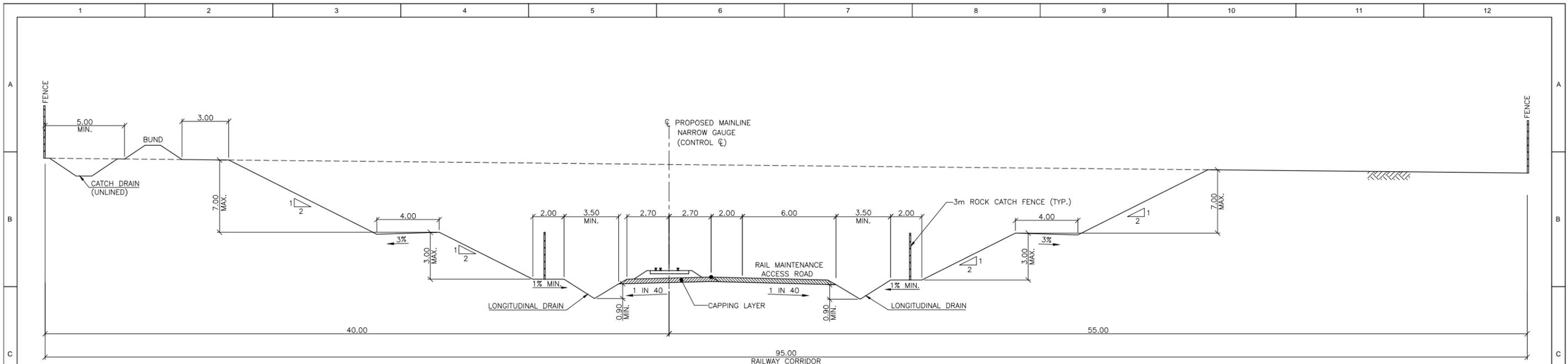
CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
TYPICAL FILL FORMATION DETAILS - SHEET 2
PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-028** REV **0**

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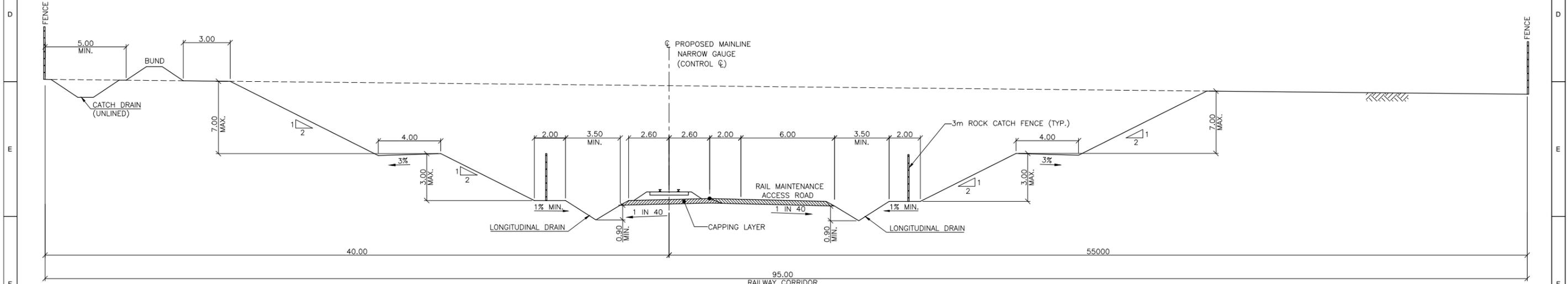


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ORIGINAL SIZE A1



TYPICAL CROSS SECTION FOR CUT (DUAL GAUGE)
SCALE 1:125



TYPICAL CROSS SECTION FOR CUT (NARROW GAUGE)
SCALE 1:125

- NOTE:**
- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
 - CROSS SECTION IS DEVELOPED BASED ON CENTERLINE PROFILE OF MAINLINE NARROW GAUGE.
 - FOR TYPICAL DETAILS OF BERM IN CUTTING AND DRAIN REFER DRAWING NO.CARP12033-1000-DWG-Y-024
 - FOR TYPICAL DETAILS OF TREATMENT FOR CUTTING REFER DRAWING NO.CARP12033-1000-DWG-Y-025
 - ROCK CATCH FENCE REQUIRED WITHIN CUTTINGS \geq 7m. ROCK CATCH FENCE TO BE A PROVEN PRODUCT SUITABLE FOR THE APPLICATION.



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REV	BY	DATE	DESCRIPTION	CKD	APP
0	SK	18/12/12	ISSUED FOR USE	DT	RB

NO.	DESCRIPTION	DATE

DRAWN	SYAM	18/12/12
DRAFTING CHECK	KAUSHIK	18/12/12
ENG. APPROVED	AJAY KUMAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: DANIEL TING	18/12/12
	NAME: DANIEL TING	
	RPEQ No: 05784	

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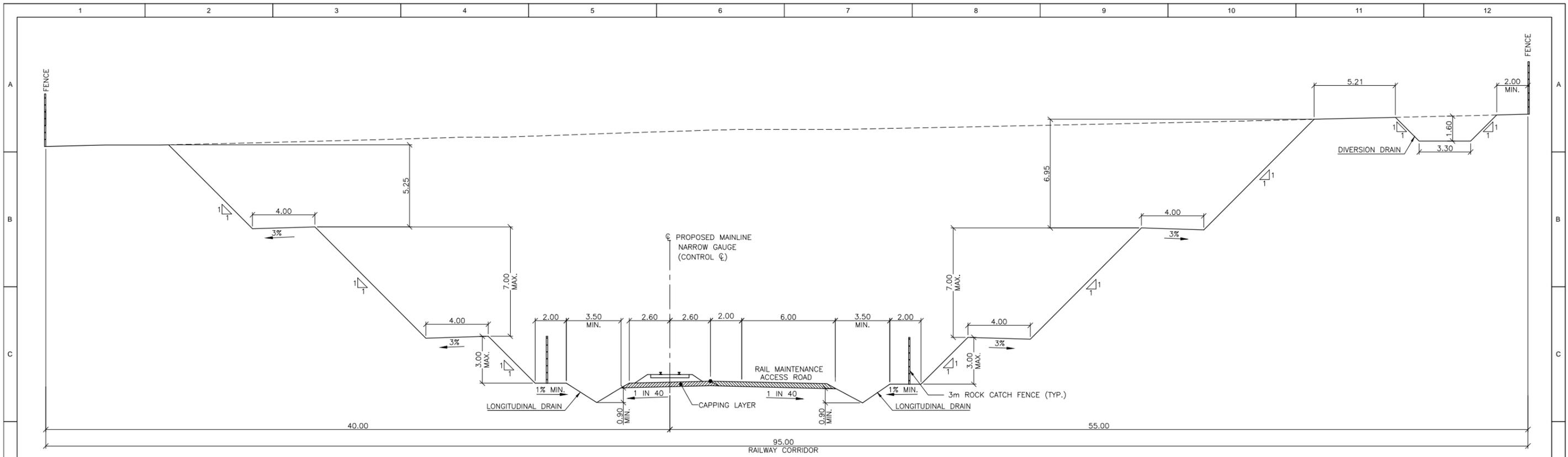
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
TYPICAL CUT FORMATION DETAILS

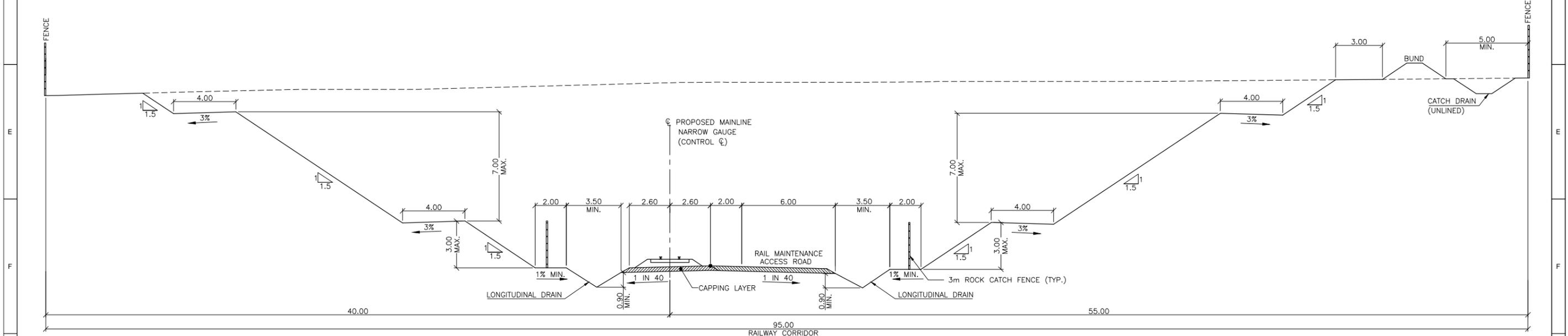
PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-022** REV **0**

ORIGINAL SIZE A1

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CROSS SECTION FOR CUT (CHAINAGE: 4.100 km TO 6.500 km ONLY)
SCALE 1:125



CROSS SECTION FOR CUT (CHAINAGE: 10.300 km TO 12.600 km ONLY)
SCALE 1:125

- NOTE:**
1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE SPECIFIED.
 2. ADDITIONAL WIDTH PROPOSED BEYOND BUND IS SUBJECT TO GEOTECH REPORT & FIELD VARIATIONS.
 3. CROSS SECTION IS DEVELOPED BASED ON CENTERLINE PROFILE OF MAINLINE NARROW GAUGE.
 4. FOR TYPICAL DETAILS OF BERM IN CUTTING AND DRAIN REFER DRAWING NO. CARP12033-1000-DWG-Y-024.
 5. FOR TYPICAL DETAILS OF TREATMENT FOR CUTTING REFER DRAWING NO. CARP12033-1000-DWG-Y-025.
 6. NOMINATED CUTTING BATTER SLOPES ARE BASED ON THE LEVEL OF EXISTING GEO-TECHNICAL INFORMATION. ACTUAL SLOPES ARE TO BE DETERMINED DURING DETAIL DESIGN AND CONSTRUCTION BASED ON TEST RESULTS FOR ACTUAL MATERIAL ENCOUNTERED.
 7. FROM CH:4.100 km TO CH:5.676 km, TYPICAL BUND AND CATCH DRAIN DETAILS ARE APPLICABLE ON NORTH SIDE AS PER DRAWING NO. CARP12033-1000-DWG-Y-022.
 8. ROCK CATCH FENCE REQUIRED WITHIN CUTTINGS \geq 7m. ROCK CATCH FENCE TO BE A PROVEN PRODUCT SUITABLE FOR THE APPLICATION.

1:125 **ISSUED FOR USE**
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REVISIONS	NO.	DATE	DESCRIPTION	BY	APP

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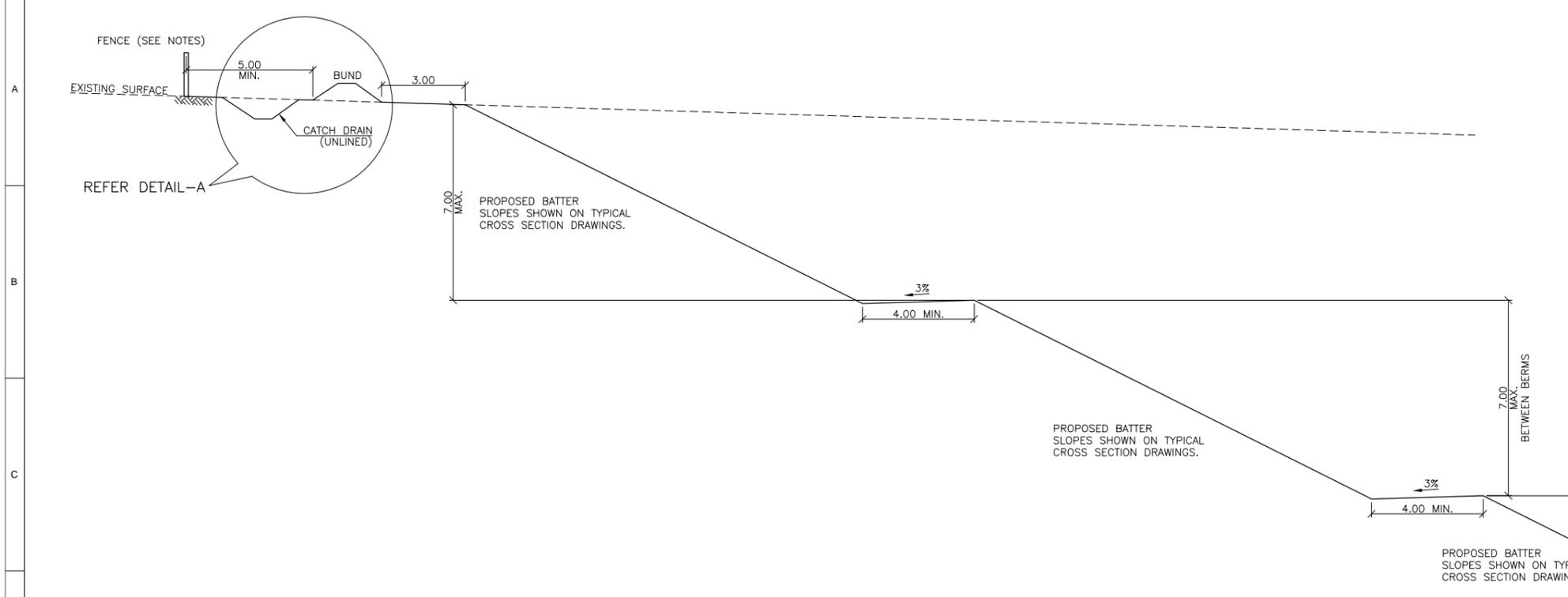
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
CROSS SECTIONS AT DEEP CUTTINGS

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-027** REV **0**

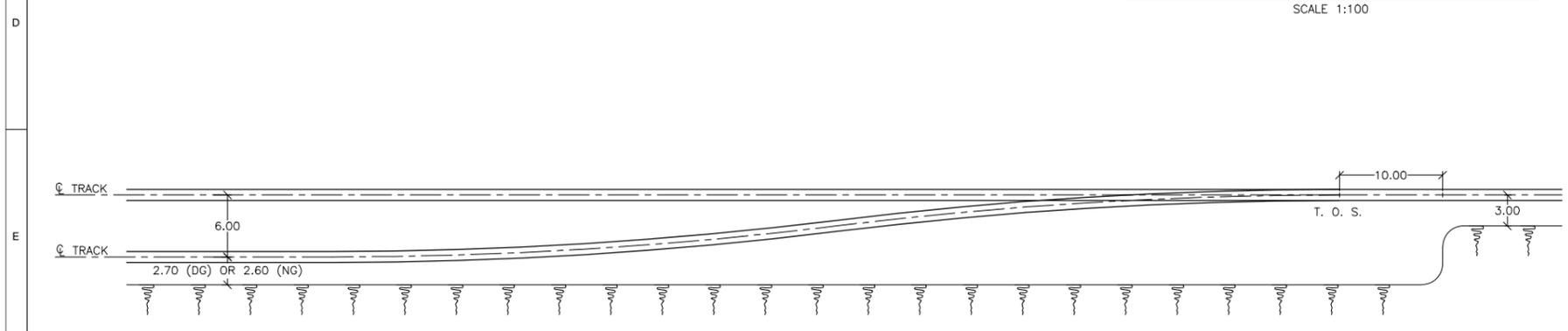
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ORIGINAL SIZE A1

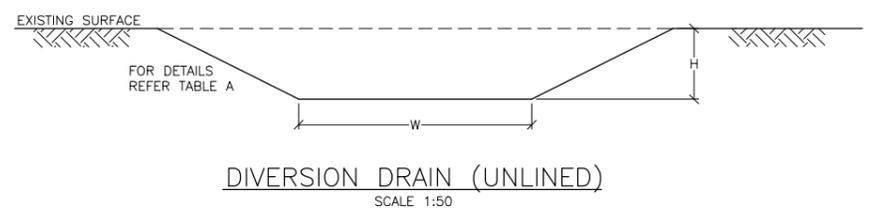


SEPARABLE PORTION-2						
SL NO.	DIVERSION CHAINAGE (km)	WIDTH (W) (m)	HEIGHT (H) (m)	BATTER SLOPE	HYD. SLOPE	BED MATERIAL
1	2.670 to 2.000	2.00	0.80	1H:1V	1 in 30	ROCK
2	3.300 to 2.670	2.00	0.80	1H:1V	1 in 130	ROCK
3	3.300 to 3.533	2.60	1.40	1H:1V	1 in 100	ROCK
4	3.533 to 3.866	2.60	1.40	1H:1V	1 in 170	ROCK
5	4.082 to 3.866	2.20	1.40	1H:1V	1 in 65	ROCK
6	5.676 to 7.049	3.30	1.60	1H:1V	1 in 70	ROCK
7	8.132 & 8.159 to 8.688	4.80	1.20	2H:1V	1 in 1000	SOIL
8	8.942 to 8.688	5.50	1.50	2H:1V	1 in 1000	SOIL
9	42.088 to 42.466	3.80	0.95	2H:1V	1 in 1000	SOIL
10	42.466 to 42.709	4.30	1.20	2H:1V	1 in 1000	SOIL
11	42.709 to 43.932	5.30	1.40	2H:1V	1 in 1000	SOIL
SEPARABLE PORTION-1						
12	180.450 to 181.551	5.00	1.40	2H:1V	1 in 800	SOIL

TYPICAL BERM DETAIL IN CUTTINGS
SCALE 1:100

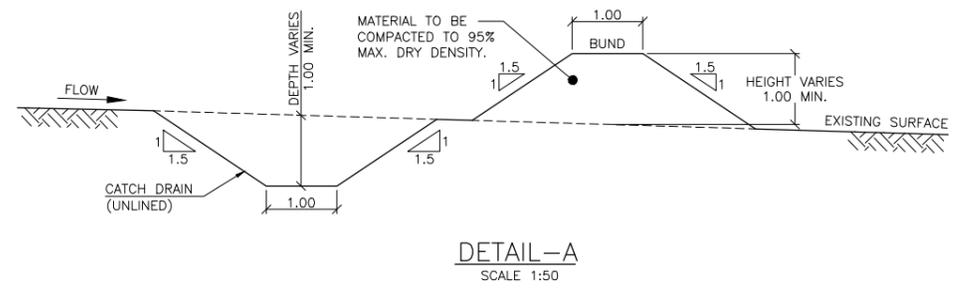


DETAIL OF EARTHWORKS AT SWITCH
SCALE 1:300

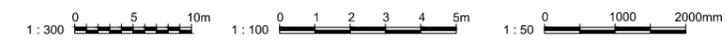


DIVERSION DRAIN (UNLINED)
SCALE 1:50

- NOTES:-
- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
 - IN CUTTINGS, IF THE LONGITUDINAL GRADE IS LESS THAN 1 IN 250. MINIMUM LONGITUDINAL GRADE ON BERMS TO BE 1 IN 240. BERM DRAINS AND CESS DRAINS MAY BE GRADED DIFFERENTLY.
 - IN CUTTINGS WITH GRADES STEEPER THAN 1 IN 100 AND WHERE CESS DRAINS ARE LIKELY TO SCOUR, VELOCITY STOPS ARE TO BE CONSTRUCTED AT INTERVALS NOT EXCEEDING 20m WITH DRAINS CONSTRUCTED ON REDUCED GRADE TO TOP OF VELOCITY STOPS.
 - FENCES SHALL BE PLACED ON PROPERTY BOUNDARIES AND ARE PERVIOUS TO DRAINAGE REQUIREMENTS.
 - FOR LAYOUT PLAN OF DIVERSION DRAINS REFER TO ALIGNMENT DRAWINGS CARP12033-1000-DWG-Y-101 TO CARP12033-1000-DWG-Y-103 AND CARP12033-1000-DWG-Y-113.
 - FREE BOARD OF 100mm IS PROVIDED FOR LONGITUDINAL AND DIVERSION DRAINS.
 - ALL BERMS SHALL BE CONTINUED AT THEIR FULL WIDTH FOR THEIR FULL LENGTH AND DRAINED AT ENDS ALONG CONTOURS AWAY FORM FORMATION. ACCESS TO BE AVAILABLE AT BOTH ENDS OF ALL BERMS.
 - FOR BATTER SLOPE DETAILS REFER DRAWING NO. CARP12033-1000-DWG-Y-022.
 - NG DENOTES TO NARROW GAUGE, DG DENOTES TO DUAL GAUGE.



DETAIL-A
SCALE 1:50



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PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: DANIEL TING NAME: DANIEL TING RPEQ No: 05784	18/12/12

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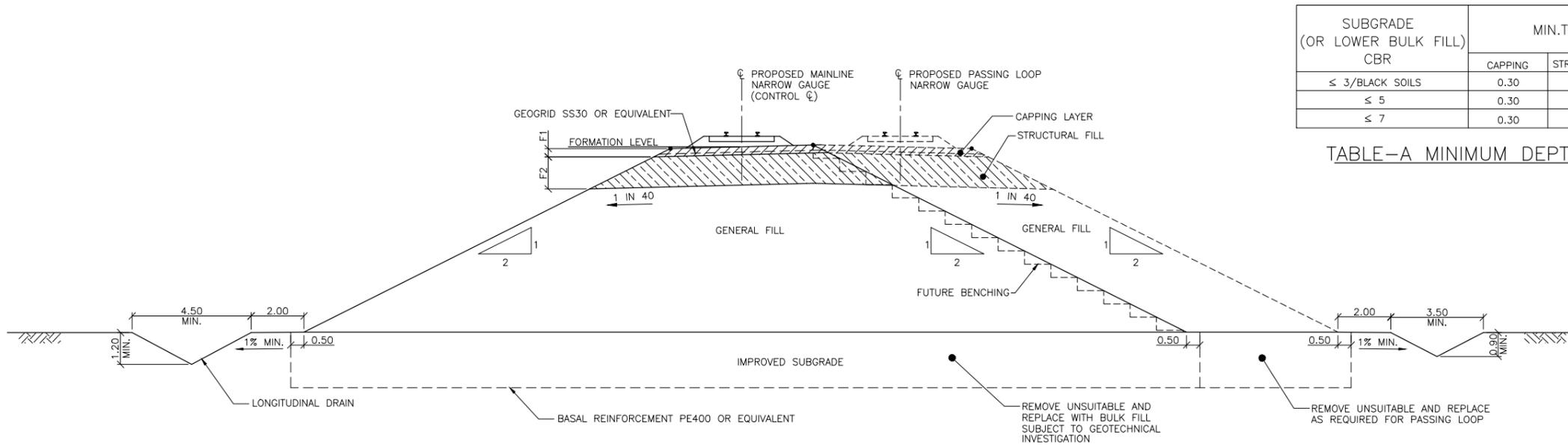
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
TYPICAL BENCHING AND DRAIN DETAILS

PROJECT NO. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-024** REV **0**

ORIGINAL SIZE A1

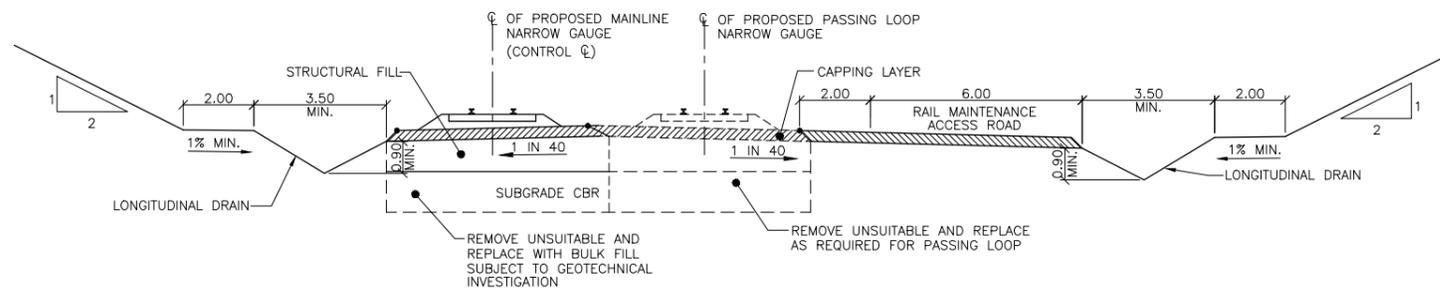
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FOUNDATION TREATMENT FOR EMBANKMENT
SCALE 1:100 (REFER TABLE-A)

SUBGRADE (OR LOWER BULK FILL) CBR	MIN.THICKNESS (m)			NO. OF GEOGRIDS		
	CAPPING	STRUCTURAL FILL	GENERAL FILL	CAPPING	STR. FILL	GENERAL FILL
≤ 3/BLACK SOILS	0.30	1.22	DEPTH VARIES DEPENDING ON RAIL GEOMETRY	1	-	-
≤ 5	0.30	0.75		1	-	-
≤ 7	0.30	0.50		1	-	-

TABLE-A MINIMUM DEPTH REQUIREMENTS FOR EMBANKMENT



FOUNDATION TREATMENT FOR CUT
SCALE 1:100 (REFER TABLE-B)

SUBGRADE (OR LOWER BULK FILL) CBR	CAPPING (m)	STRUCTURAL FILL (m)
≤ 3/BLACK SOILS	0.45	0.92
≤ 5	0.45	0.45
≤ 7	0.45	0.20

TABLE-B MINIMUM DEPTH REQUIREMENTS FOR CUT

TYPE	FORMATION WIDTH (m)	FILL THICKNESS (m)	
		F1	F2
DUAL GAUGE	5.40	0.30	1.15
NARROW GAUGE	5.20	0.30	1.25

TABLE-C TYPE OF GAUGE AND MAXIMUM FILL THICKNESS FOR EMBANKMENT

NOTES:-

- ALL DIMENSIONS ARE SHOWN IN METRES UNLESS NOTED OTHERWISE
- CROSS SECTIONS TO TRANSITION SMOOTHLY OVER 20m FROM THE NOMINATED METERAGE UNLESS NOTED OTHERWISE.
- CUT GEOMETRY MAY BE MODIFIED WHERE UNSUITABLE GROUND CONDITIONS ARE ENCOUNTERED.
- GEOGRID TO BE SS30 OR APPROVED EQUIVALENT.
- BASAL REINFORCEMENT (PE400 OR EQUIVALENT) IS TO BE USED FOR EMBANKMENT UP TO 7.0m HEIGHT
- CBR REQUIREMENTS ARE 4 DAY SOAKED CBR.
- CUT CROSS SECTION REFER DRAWING No.CARP12033-1000-DWG-Y-022
- EMBANKMENT CROSS SECTION REFER DRAWING No.CARP12033-1000-DWG-Y-024
- LONGITUDINAL DRAIN REFER DRAWING No.CARP12033-1000-DWG-Y-024
- MATERIAL PROPERTIES AS GIVEN IN TABLE D ARE INDICATIVE.

LAYER ZONE	CBR (MIN)	LIQUID LIMIT (MAX) (%)	PLASTICITY INDEX (%)	WEIGHTED PLASTICITY INDEX (MAX)	EMERSON (%)	FIELD DENSITY (STANDARD MDD)
CAPPING	40	35	6 - 12	360	>3	≥ 100% @ (DRY OF OMC)
STRUCTURAL FILL	20	45	8 - 20	1200	>3	≥ 100% @ OMC -6% MIN
GENERAL FILL TYPE 1	5	50	6-30	1200	>3	≥ 95% @ OMC TO -6% MIN

NOTE: STRUCTURAL FILL AND GENERAL BULK FILL SHOULD BE GENERALLY CLAYEY SANDY GRAVEL COMPRISING 40-70% GRAVEL, 20-50% SAND AND 10-15% FINES. REFER TO SPECIFICATION FOR DETAILS.

TABLE-D MATERIAL PROPERTIES

1:100 0 1 2 3 4 5m

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RPEQ APPROVAL	SIGNED: DANIEL TING	18/12/12
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	RPEQ No: 05784	

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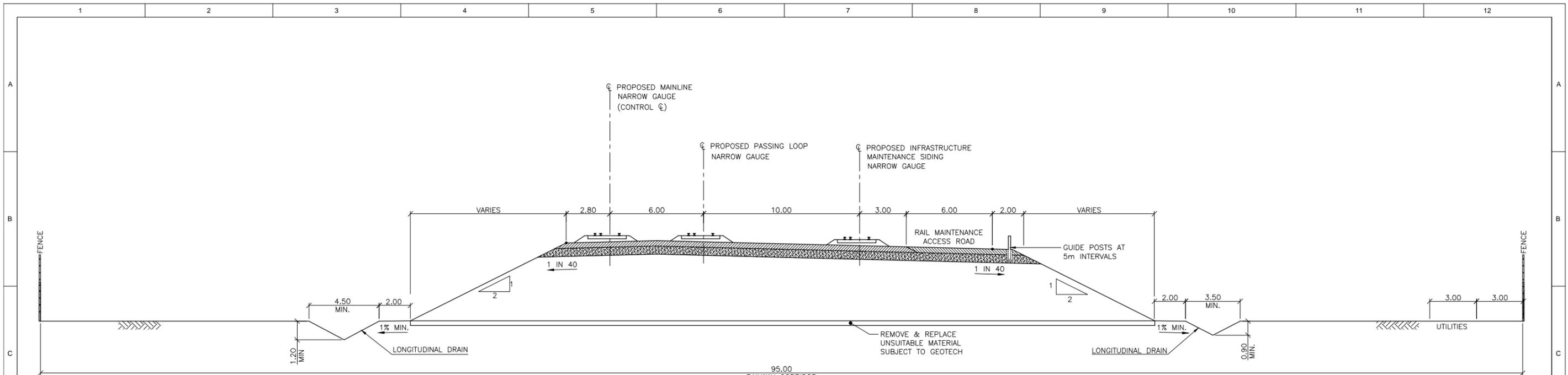
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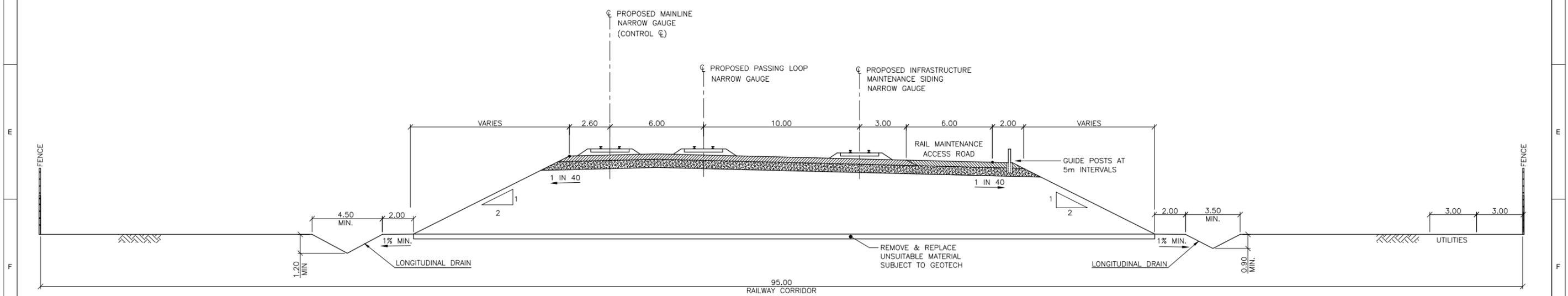
CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
TYPICAL TREATMENT FOR EMBANKMENT AND CUTTING

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-025** REV **0**

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INFRASTRUCTURE MAINTENANCE SIDING FOR DUAL GAUGE
SCALE 1:125



INFRASTRUCTURE MAINTENANCE SIDING FOR NARROW GAUGE
SCALE 1:125

NOTE:

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. CROSS SECTION IS DEVELOPED BASED ON CENTERLINE PROFILE OF MAINLINE NARROW GAUGE.
3. FOR TYPICAL DETAILS OF TREATMENT FOR EMBANKMENT REFER DRAWING NO. CARP12033-1000-DWG-Y-025
4. FOR LONGITUDINAL DRAIN DETAILS REFER DRAWING NO. CARP12033-1000-DWG-Y-024



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	RPEQ No: 05784	

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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
TYPICAL INFRASTRUCTURE MAINTENANCE SIDING CROSS SECTION

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-026** REV **0**

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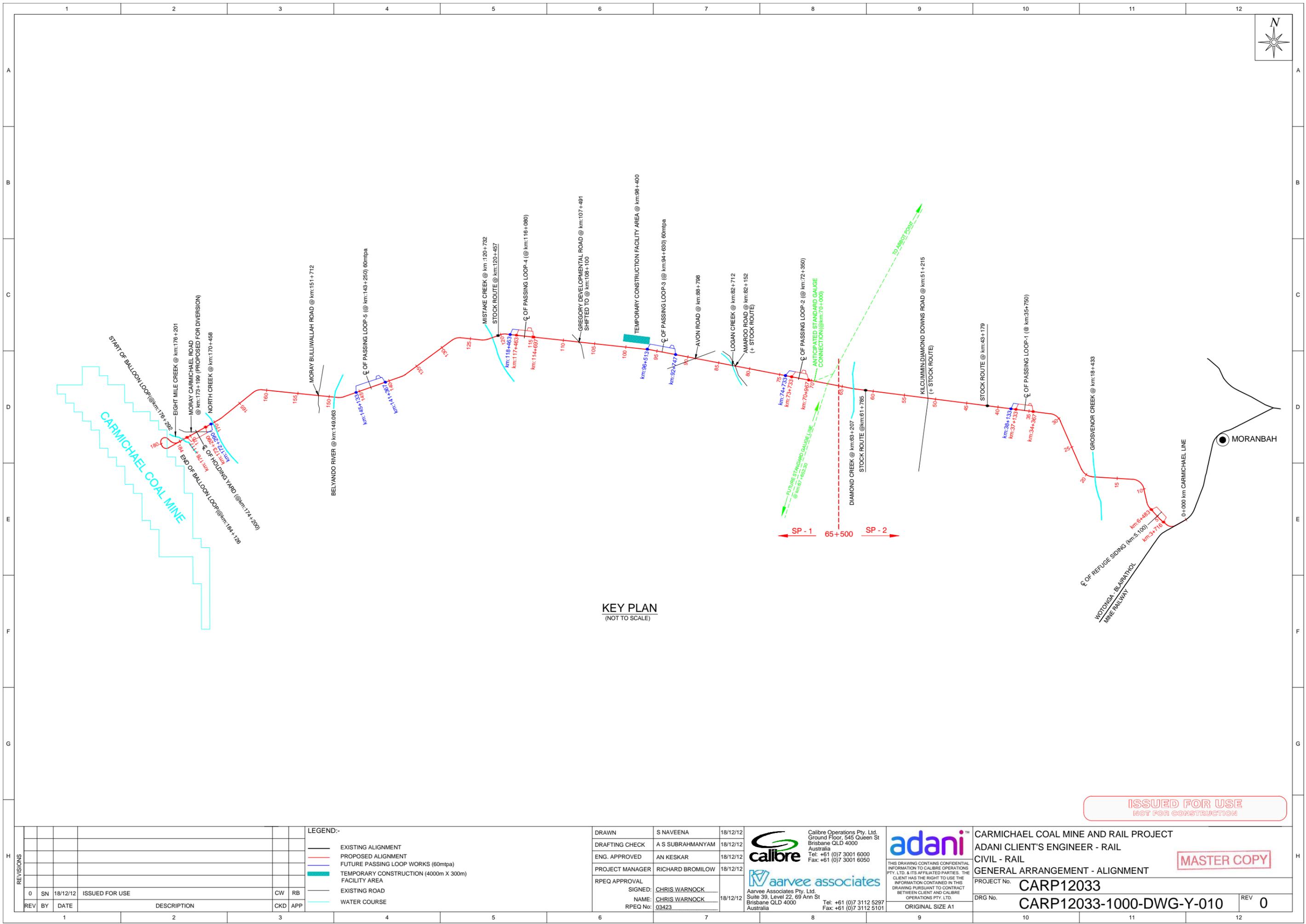
Rail Drawings

Carmichael Coal Mine & Rail Project Front End Engineering Design Report - RAIL

Adani Mining Pty Ltd

CARP12033-REP-G-100 Rev 0
VOLUME 4 - DRAWINGS





KEY PLAN
(NOT TO SCALE)

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LEGEND:-

- EXISTING ALIGNMENT
- PROPOSED ALIGNMENT
- FUTURE PASSING LOOP WORKS (60mtpa)
- TEMPORARY CONSTRUCTION (4000m X 300m) FACILITY AREA
- EXISTING ROAD
- WATER COURSE

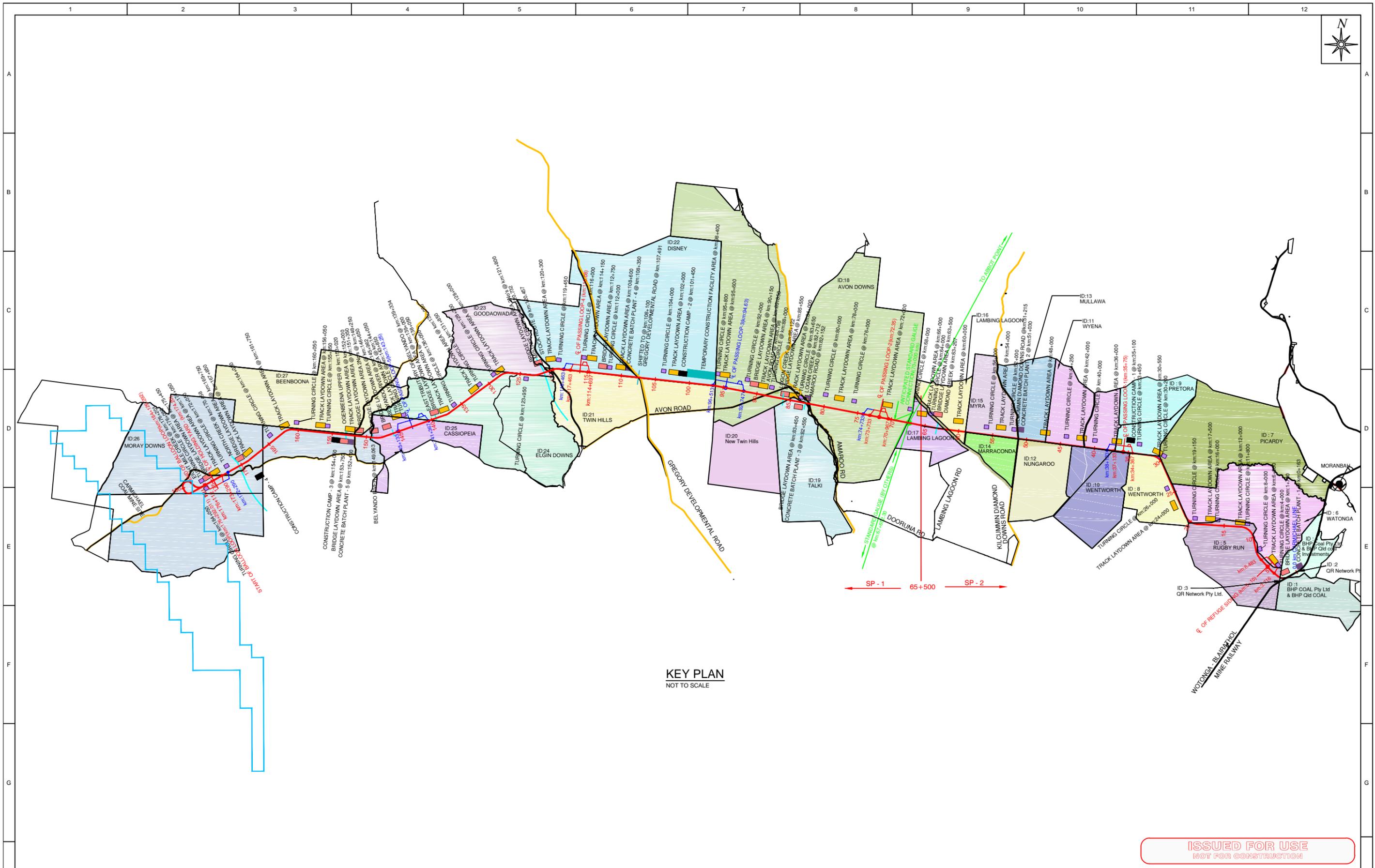
DRAWN	S NAVEENA	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	
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	RPEQ No: 03423	
		18/12/12

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ADANI CLIENT'S ENGINEER - RAIL		
GENERAL ARRANGEMENT - ALIGNMENT		
PROJECT No.	CARP12033	
DRG No.	CARP12033-1000-DWG-Y-010	REV 0



KEY PLAN
NOT TO SCALE

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REV	BY	DATE	DESCRIPTION	CKD	APP
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LEGEND:-

	Proposed Alignment		Temporary Laydown Area (300m X 150m) (Track)
	FUTURE PASSING LOOP WORKS (60MTPA)		Temporary Laydown Area (300m X 200m) (Bridge)
	ROADS		Temporary Construction (100m X 100m) Turning Circle
	Construction Camp (430m X 220m)		Temporary Construction (4000m X 300m) Facility Area
	Concrete Batch plant (230m X 200m)		

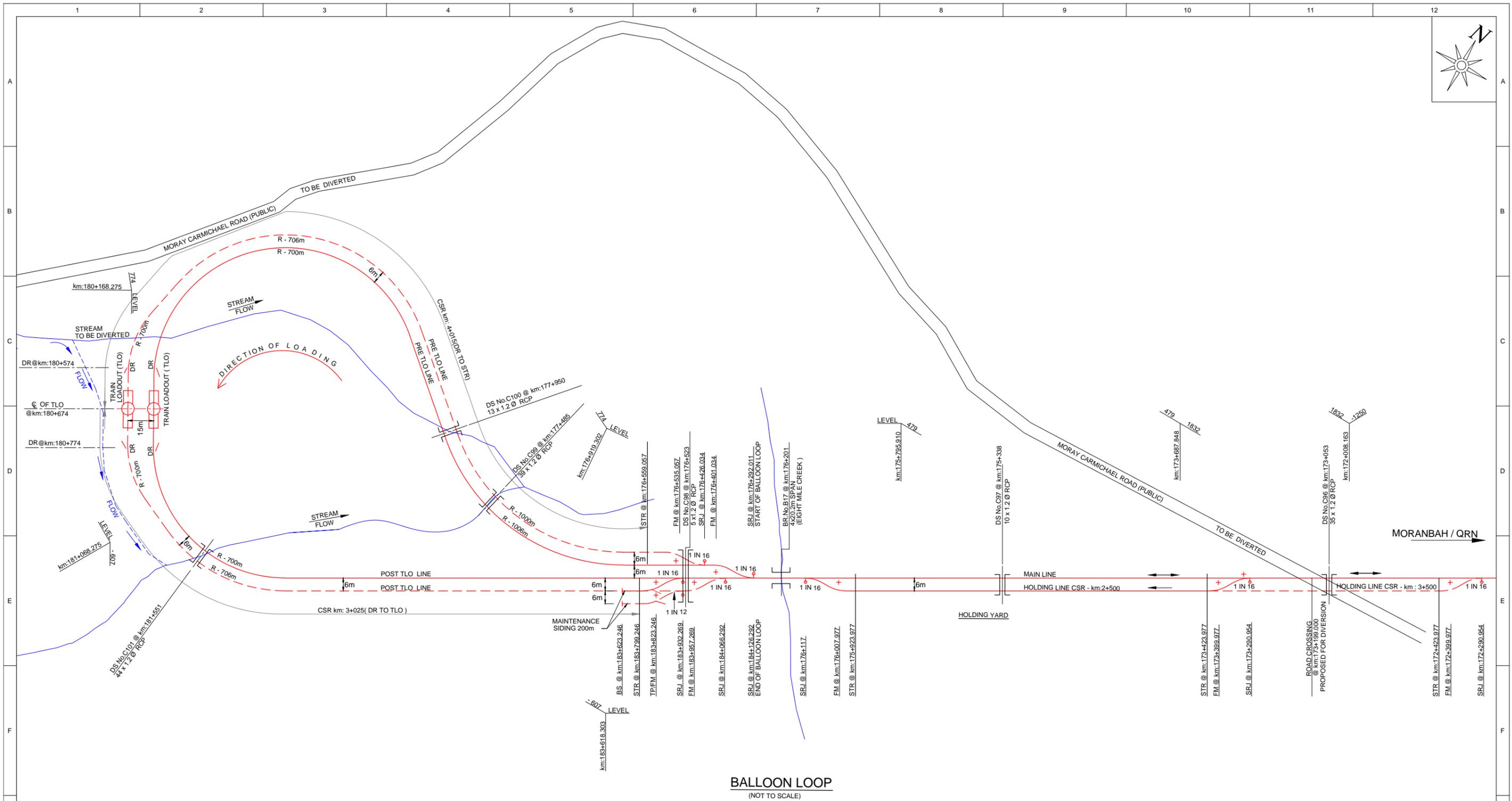
DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL		
SIGNED:	CHRIS WARNOCK	18/12/12
NAME:	CHRIS WARNOCK	
RPEQ No:	03423	

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CIVIL - RAIL		
GENERAL ARRANGEMENT - LAYDOWN AREAS		
PROJECT No.	CARP12033	
DRG No.	CARP12033-1000-DWG-Y-012	
REV	0	



BALLOON LOOP
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REV	BY	DATE	DESCRIPTION	CKD	APP
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LEGEND:-

	PROPOSED ALIGNMENT (30mtpa)	SRJ - STOCK RAIL JOINT
	PROPOSED ALIGNMENT (60mtpa)	FM - FOULING MARK
	DS	TP - TRAP POINT
	DR	STR - STARTER SIGNAL
	STR	CSR - CLEAR STANDING ROOM
	OC	BS - BUFFER STOP
	FM	DS - DRAINAGE STRUCTURE
	TP	OC - OCCUPATIONAL CROSSING
	RCP	RCP - REINFORCED CONCRETE PIPE

DRAWN	S NAVEENA	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
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		18/12/12

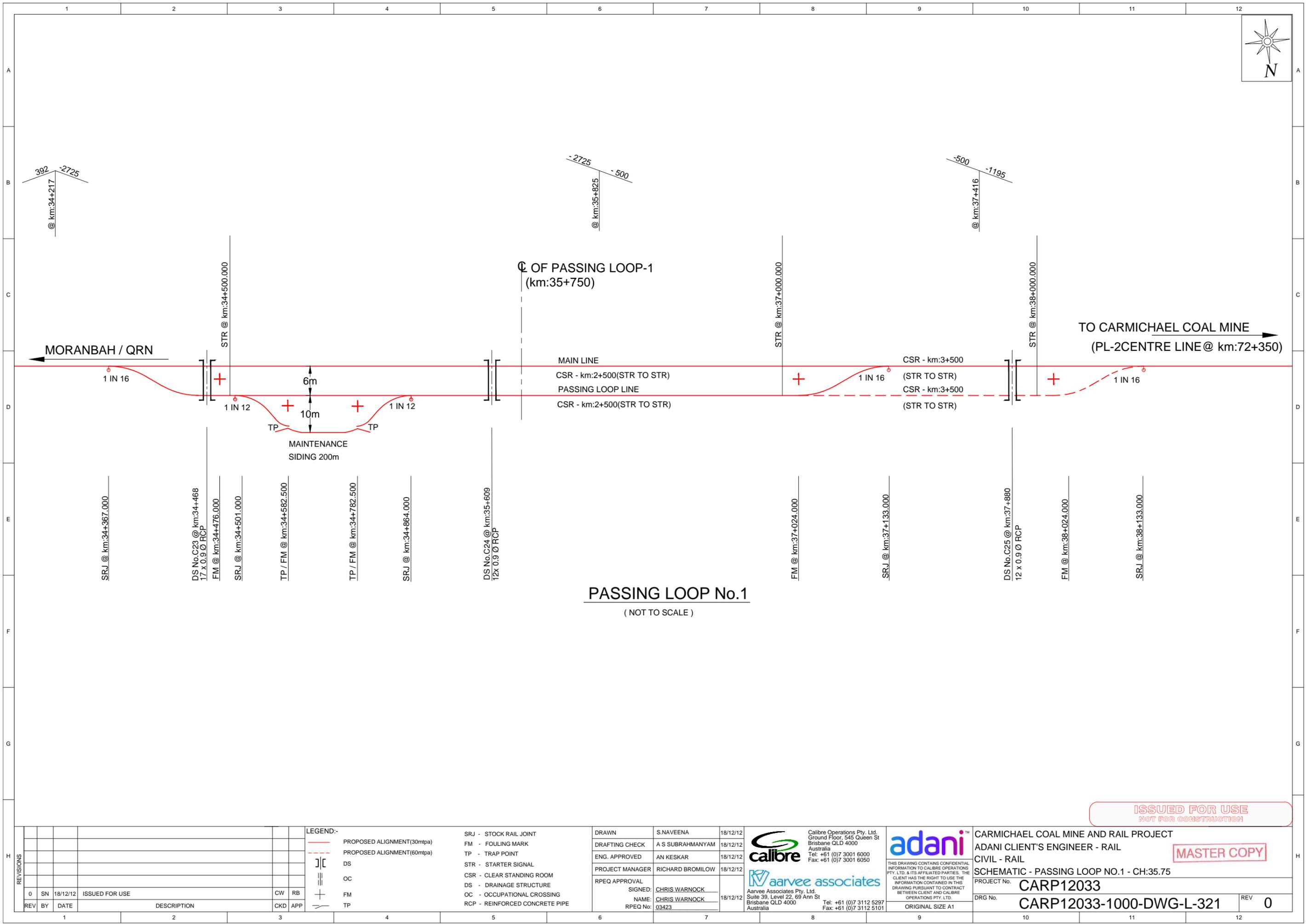
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - RAIL
SCHEMATIC - BALLOON LOOP
PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-L-311** REV **0**

MASTER COPY



REV	BY	DATE	DESCRIPTION	CKD	APP
0	SN	18/12/12	ISSUED FOR USE	CW	RB

LEGEND:-

	PROPOSED ALIGNMENT (30mtpa)	SRJ - STOCK RAIL JOINT
	PROPOSED ALIGNMENT (60mtpa)	FM - FOULING MARK
	DS	TP - TRAP POINT
	OC	STR - STARTER SIGNAL
	FM	CSR - CLEAR STANDING ROOM
	TP	DS - DRAINAGE STRUCTURE
		OC - OCCUPATIONAL CROSSING
		RCP - REINFORCED CONCRETE PIPE

DRAWN	S.NAVEENA	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	18/12/12
	NAME: CHRIS WARNOCK	
	RPEQ No: 03423	

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Brisbane QLD 4000
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Australia
Tel: +61 (0)7 3112 5297
Fax: +61 (0)7 3112 5101

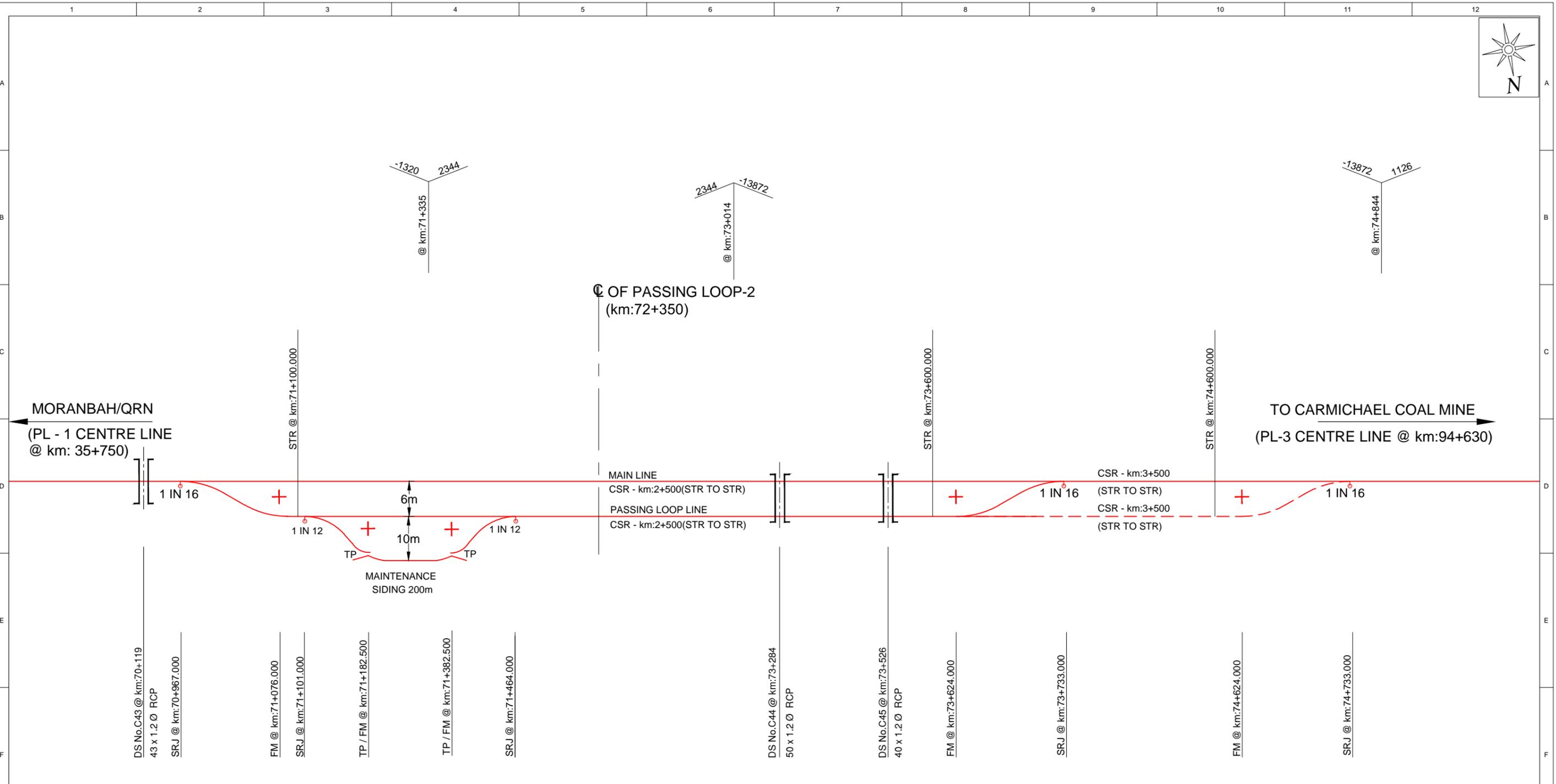
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ISSUED FOR USE
NOT FOR CONSTRUCTION

MASTER COPY

CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - RAIL
SCHEMATIC - PASSING LOOP NO.1 - CH:35.75
PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-L-321** REV **0**

ORIGINAL SIZE A1



PASSING LOOP No.2
(NOT TO SCALE)

ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	SN	18/12/12	ISSUED FOR USE	CW	RB

LEGEND:-

	PROPOSED ALIGNMENT (30mtpa)	SRJ - STOCK RAIL JOINT
	PROPOSED ALIGNMENT (60mtpa)	FM - FOULING MARK
	DS	TP - TRAP POINT
	OC	STR - STARTER SIGNAL
	FM	CSR - CLEAR STANDING ROOM
	TP	DS - DRAINAGE STRUCTURE
		OC - OCCUPATIONAL CROSSING
		RCP - REINFORCED CONCRETE PIPE

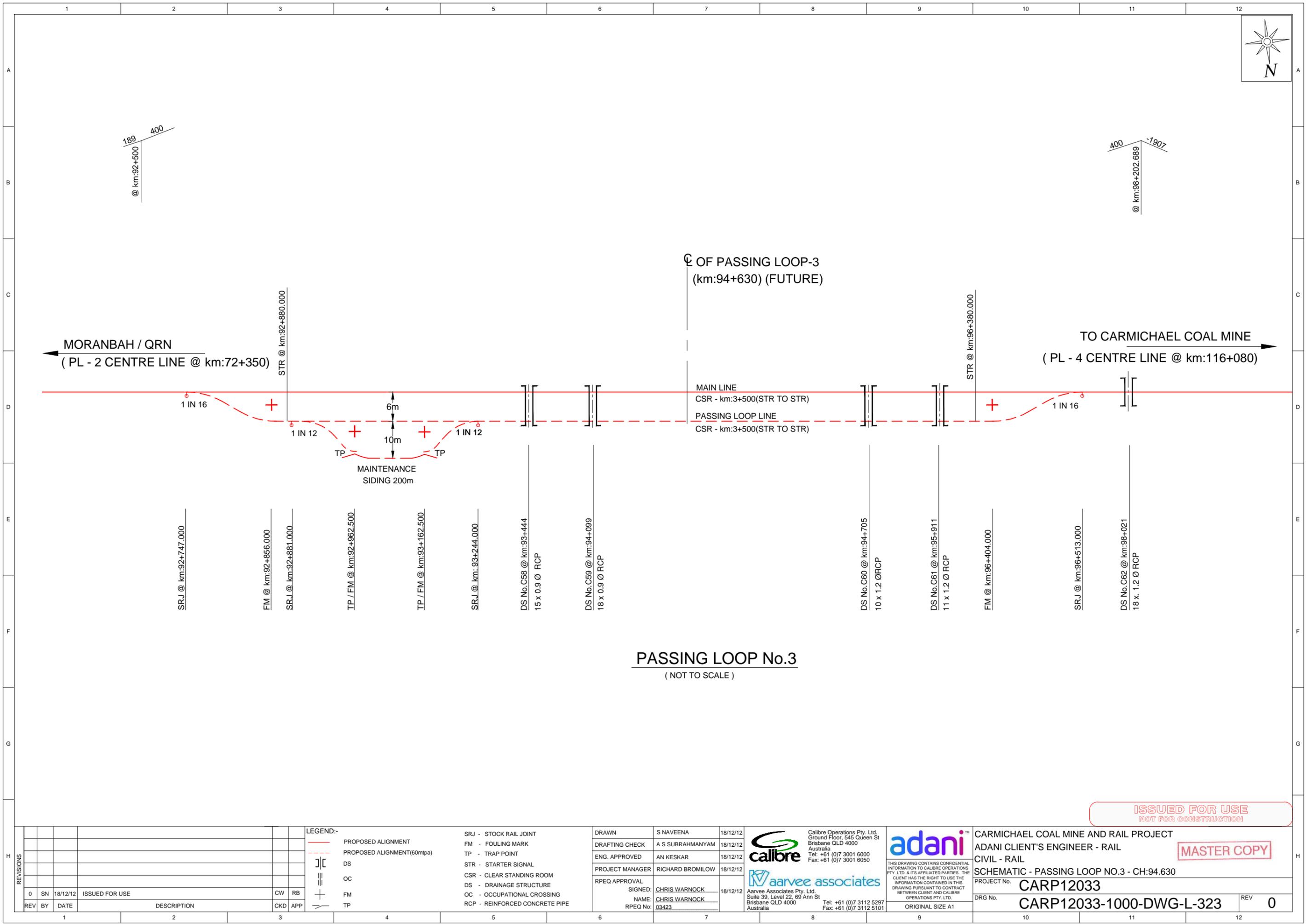
DRAWN	S NAVEENA	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	
	NAME: CHRIS WARNOCK	
	RPEQ No: 03423	
	18/12/12	

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CARMICHAEL COAL MINE AND RAIL PROJECT		MASTER COPY
ADANI CLIENT'S ENGINEER - RAIL		
CIVIL - RAIL		
SCHEMATIC - PASSING LOOP NO.2 - CH:72.35		
PROJECT No.	CARP12033	
DRG No.	CARP12033-1000-DWG-L-322	REV 0



PASSING LOOP No.3
(NOT TO SCALE)

ISSUED FOR USE
NOT FOR CONSTRUCTION

LEGEND:-

	PROPOSED ALIGNMENT	SRJ - STOCK RAIL JOINT
	PROPOSED ALIGNMENT (60mtpa)	FM - FOULING MARK
	DS	TP - TRAP POINT
	OC	STR - STARTER SIGNAL
	FM	CSR - CLEAR STANDING ROOM
	TP	DS - DRAINAGE STRUCTURE
		OC - OCCUPATIONAL CROSSING
		RCP - REINFORCED CONCRETE PIPE

DRAWN	S NAVEENA	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	18/12/12
	NAME: CHRIS WARNOCK	
	RPEQ No: 03423	

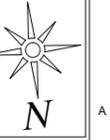
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Fax: +61 (0)7 3001 6050

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CARMICHAEL COAL MINE AND RAIL PROJECT		MASTER COPY
ADANI CLIENT'S ENGINEER - RAIL		
CIVIL - RAIL		
SCHEMATIC - PASSING LOOP NO.3 - CH:94.630		
PROJECT No.	CARP12033	
DRG No.	CARP12033-1000-DWG-L-323	REV 0

REV	BY	DATE	DESCRIPTION	CKD	APP
0	SN	18/12/12	ISSUED FOR USE	CW	RB



LEVEL -739
@ km:113+600

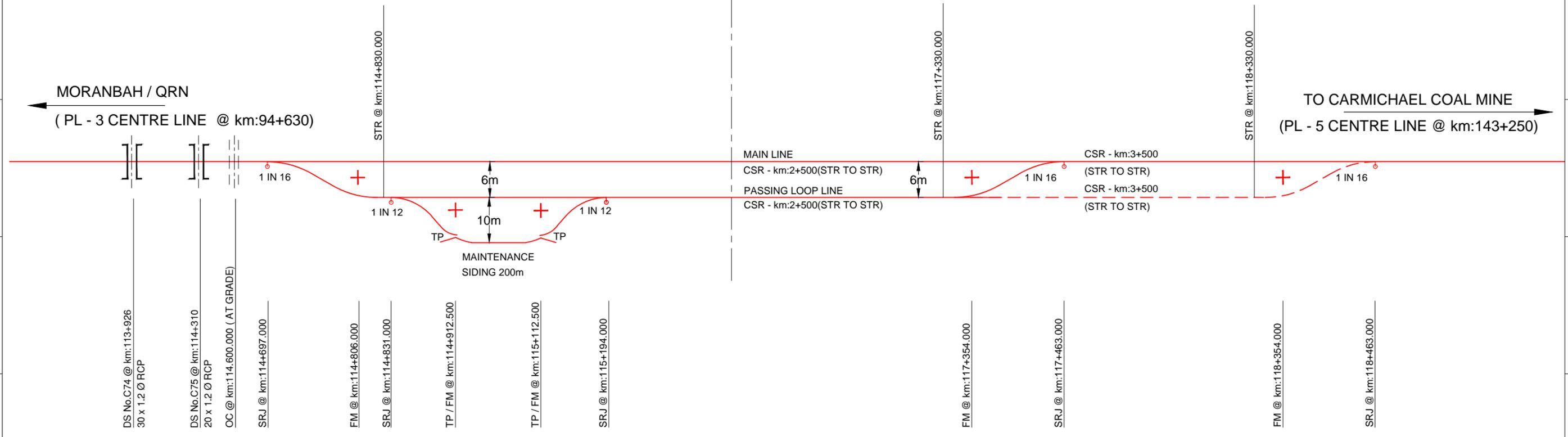
-739 -3115
@ km:116+272.202

-3115 880
@ km:118+709

CL OF PASSING LOOP-4
(km:116+080)

MORANBAH / QRN
(PL - 3 CENTRE LINE @ km:94+630)

TO CARMICHAEL COAL MINE
(PL - 5 CENTRE LINE @ km:143+250)



PASSING LOOP No.4
(NOT TO SCALE)

ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	SN	18/12/12	ISSUED FOR USE	CW	RB

LEGEND:-

	PROPOSED ALIGNMENT (30mtpa)	SRJ - STOCK RAIL JOINT
	PROPOSED ALIGNMENT (60mtpa)	FM - FOULING MARK
	DS	TP - TRAP POINT
	OC	STR - STARTER SIGNAL
	FM	CSR - CLEAR STANDING ROOM
	TP	DS - DRAINAGE STRUCTURE
		OC - OCCUPATIONAL CROSSING
		RCP - REINFORCED CONCRETE PIPE

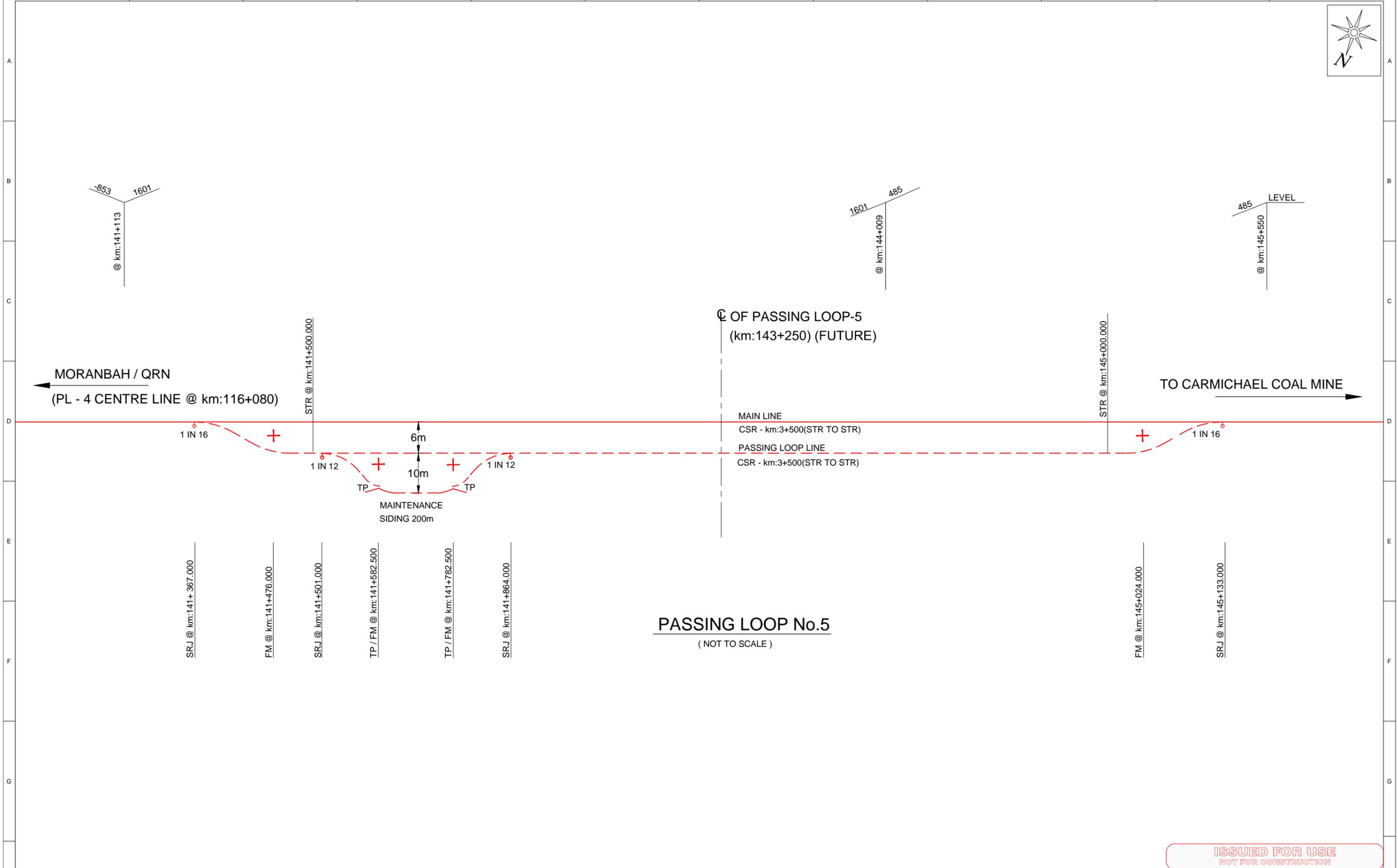
DRAWN	S NAVEENA	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	
	NAME: CHRIS WARNOCK	18/12/12
	RPEQ No: 03423	

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CARMICHAEL COAL MINE AND RAIL PROJECT		MASTER COPY
ADANI CLIENT'S ENGINEER - RAIL CIVIL - RAIL		
SCHEMATIC - PASSING LOOP NO.4 - CH:116.08		
PROJECT No.	CARP12033	
DRG No.	CARP12033-1000-DWG-L-324	REV 0



PASSING LOOP No.5
(NOT TO SCALE)

ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	SN	18/12/12	ISSUED FOR USE	CW	RB

LEGEND:-

	PROPOSED ALIGNMENT		SRJ - STOCK RAIL JOINT
	PROPOSED ALIGNMENT (60mtpa)		FM - FOULING MARK
	DS		TP - TRAP POINT
	OC		STR - STARTER SIGNAL
	FM		CSR - CLEAR STANDING ROOM
	TP		DS - DRAINAGE STRUCTURE
			OC - OCCUPATIONAL CROSSING
			RCP - REINFORCED CONCRETE PIPE

DRAWN	S NAVEENA	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	
	NAME: CHRIS WARNOCK	
	RPEQ No: 03423	

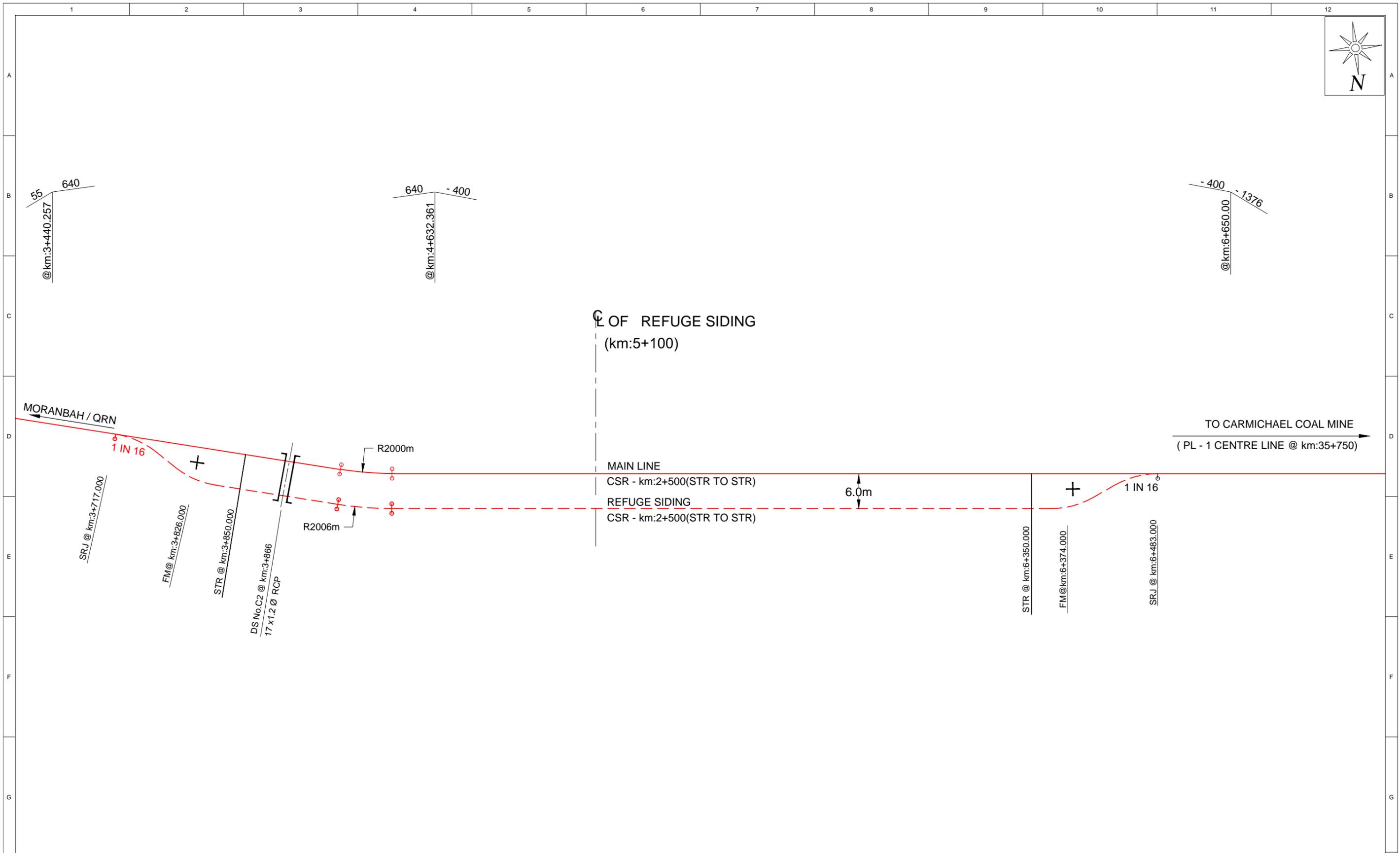
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CARMICHAEL COAL MINE AND RAIL PROJECT		
ADANI CLIENT'S ENGINEER - RAIL		
CIVIL - RAIL		
SCHEMATIC - PASSING LOOP NO.5 - CH: 143.250		
PROJECT No.	CARP12033	
DRG No.	CARP12033-1000-DWG-L-325	REV 0

MASTER COPY



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REVISIONS											
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REV	BY	DATE	DESCRIPTION	CKD	APP						

DRAWN	S NAVEENA	18/12/12	 <small>Calibre Operations Pty. Ltd. Ground Floor, 545 Queen St Brisbane QLD 4000 Australia Tel: +61 (0)7 3001 6000 Fax: +61 (0)7 3001 6050</small>	 <small>CARMICHAEL COAL MINE AND RAIL PROJECT ADANI CLIENT'S ENGINEER - RAIL CIVIL - RAIL SCHEMATIC - REFUGE SIDING</small>
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12		
ENG. APPROVED	AN KESKAR	18/12/12		
PROJECT MANAGER	RICHARD BROMILOW	18/12/12		
RPEQ APPROVAL				
SIGNED: CHRIS WARNOCK NAME: CHRIS WARNOCK RPEQ No: 03423			 <small>Aarvee Associates Pty. Ltd. Suite 39, Level 22, 69 Ann St Brisbane QLD 4000 Australia Tel: +61 (0)7 3112 5297 Fax: +61 (0)7 3112 5101</small>	<small>THIS DRAWING CONTAINS CONFIDENTIAL INFORMATION TO CALIBRE OPERATIONS PTY. LTD. & ITS AFFILIATED PARTIES. THE CLIENT HAS THE RIGHT TO USE THE INFORMATION CONTAINED IN THIS DRAWING PURSUANT TO CONTRACT BETWEEN CLIENT AND CALIBRE OPERATIONS PTY. LTD.</small> ORIGINAL SIZE A1

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

SRJ - STOCK RAIL JOINT	FM - FOULING MARK	STR - STARTER SIGNAL	CSR - CLEAR STANDING ROOM	DS - DRAINAGE STRUCTURE	RCP - REINFORCED CONCRETE PIPE] [DS	+ FM				

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
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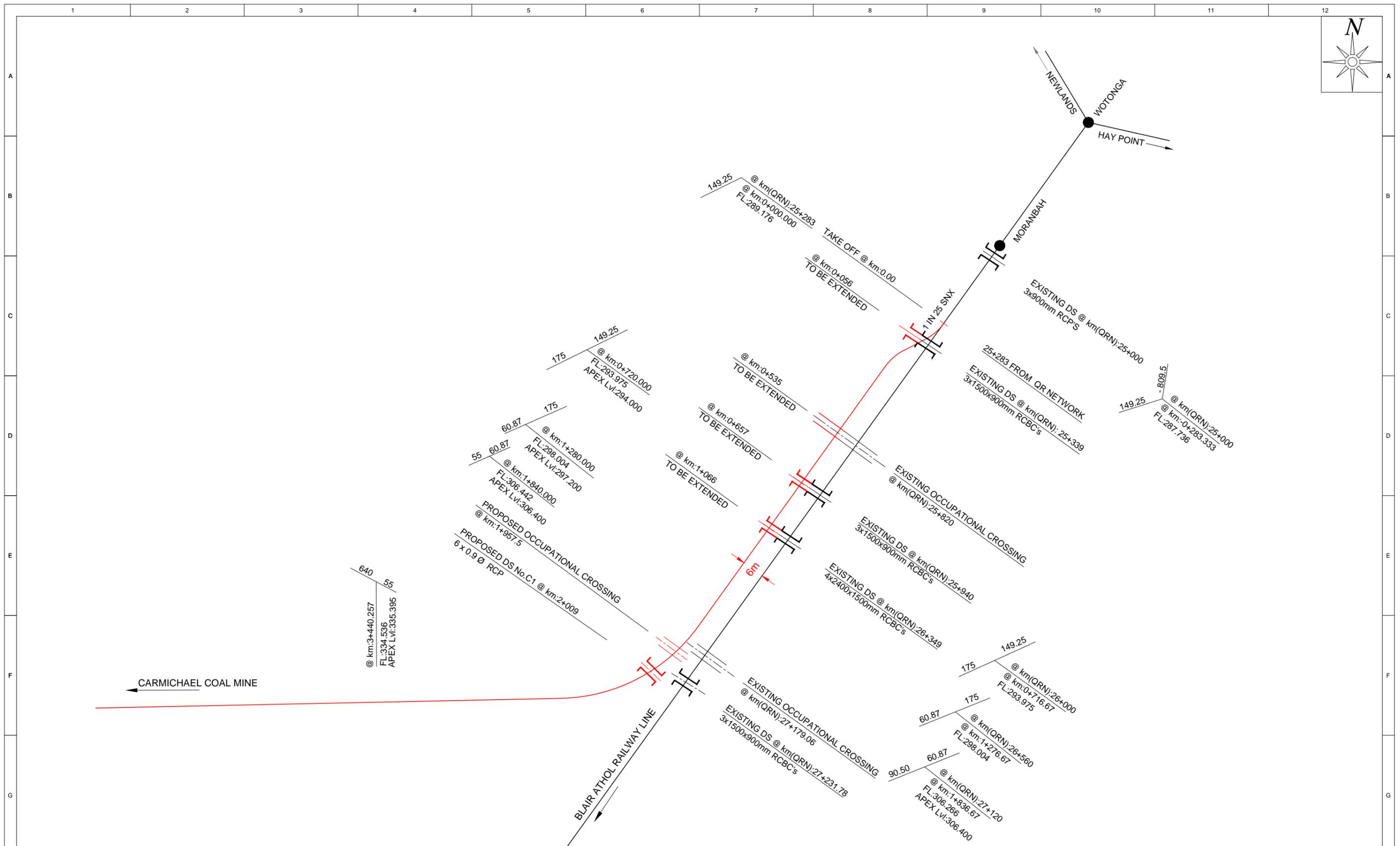
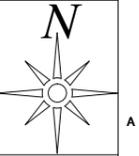
DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK		RPEQ No:	03423	

DRAWN	S NAVEENA	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12



ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	SN	18/12/12	ISSUED FOR USE	CW	RB

LEGEND:-

	EXISTING ALIGNMENT		SRJ - STOCK RAIL JOINT
	PROPOSED ALIGNMENT (30mtpa)		FM - FOULING MARK
	DS		STR - STARTER SIGNAL
	OC		CSR - CLEAR STANDING ROOM
	FM		DS - DRAINAGE STRUCTURE
			OC - OCCUPATIONAL CROSSING
			RCP - REINFORCED CONCRETE PIPE

DRAWN	S NAVEENA	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	A N KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	18/12/12
	NAME: CHRIS WARNOCK	
	RPEQ No: 03423	

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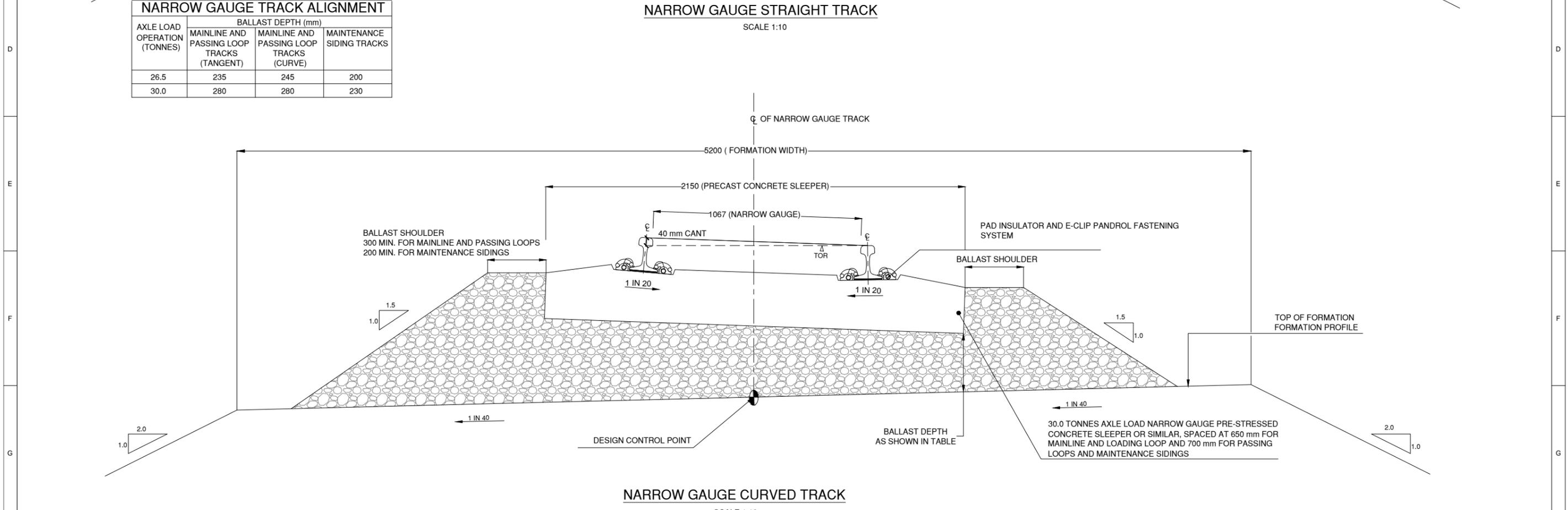
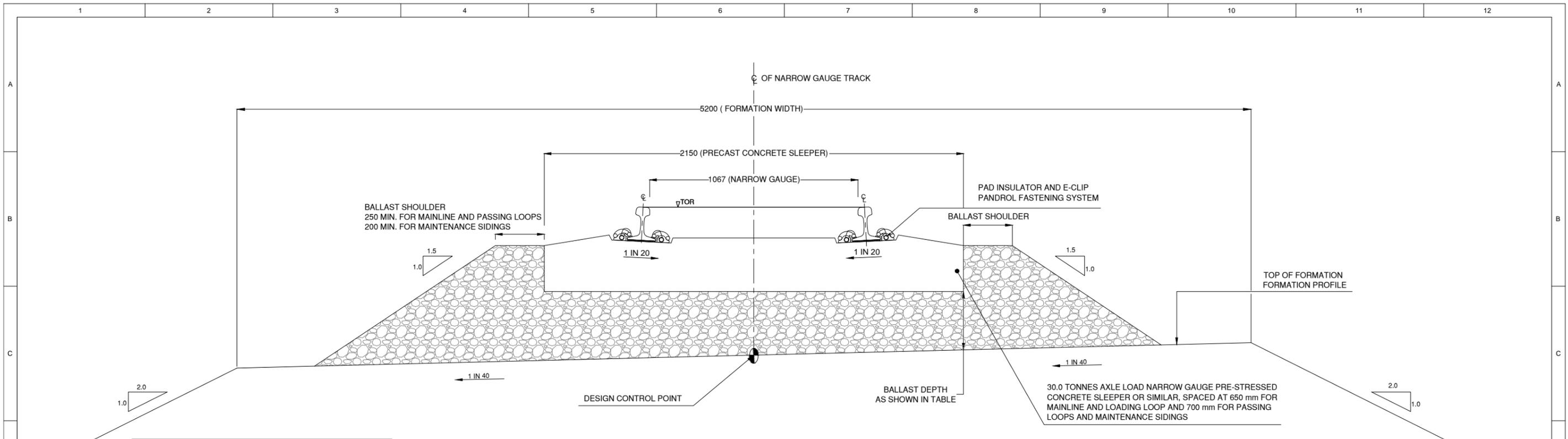
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - RAIL
SCHEMATIC - QRN JUNCTION

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-L-331**

MASTER COPY

REV **0**



NOTES :
1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT NOTED OTHERWISE

REV	BY	DATE	DESCRIPTION	CKD	APP
0	SN	18/12/12	ISSUED FOR USE	HH	RB

DESIGN PARAMETER :-	
AXLE LOAD OPERATION	: AS NOTED IN TABLE
RAIL SIZE (KG/M)	: 60.0
CAPPING LAYER STRENGTH (CBR)	: 40
CANT FOR CURVED TRACK	: NO CANT IN LOADING LOOP AND MAINTENANCE SIDINGS

DRAWN	SNAVEENA	18/12/12
DRAFTING CHECK	CH SANTOSHI	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: HAITHAM HAWARI	18/12/12
	NAME: HAITHAM HAWARI	
	RPEQ No: 7266	

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Aarvee Associates Pty. Ltd.
Suite 39, Level 22, 69 Ann St
Brisbane QLD 4000
Australia
Tel: +61 (0)7 3112 5297
Fax: +61 (0)7 3112 5101

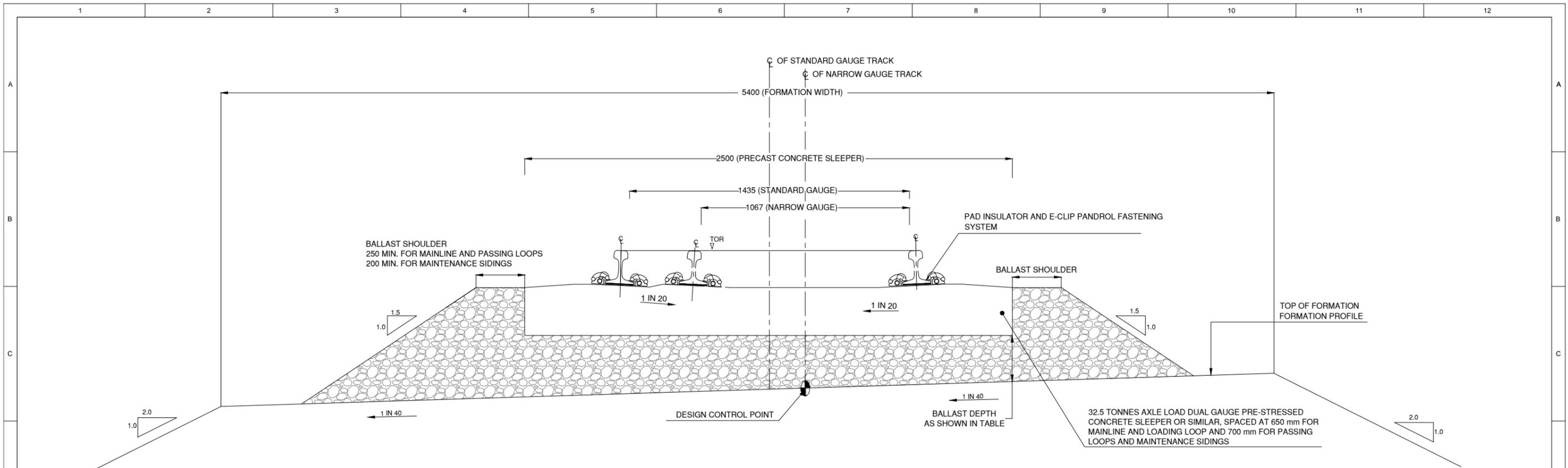
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THIS DRAWING CONTAINS CONFIDENTIAL INFORMATION TO CALIBRE OPERATIONS PTY. LTD. & ITS AFFILIATED PARTIES. THE CLIENT HAS THE RIGHT TO USE THE INFORMATION CONTAINED IN THIS DRAWING PURSUANT TO CONTRACT BETWEEN CLIENT AND CALIBRE OPERATIONS PTY. LTD.

CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
TRACK
TYPICAL TRACK CROSS SECTION - (NARROW GAUGE)
PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-L-021** REV **0**

ISSUED FOR USE
NOT FOR CONSTRUCTION

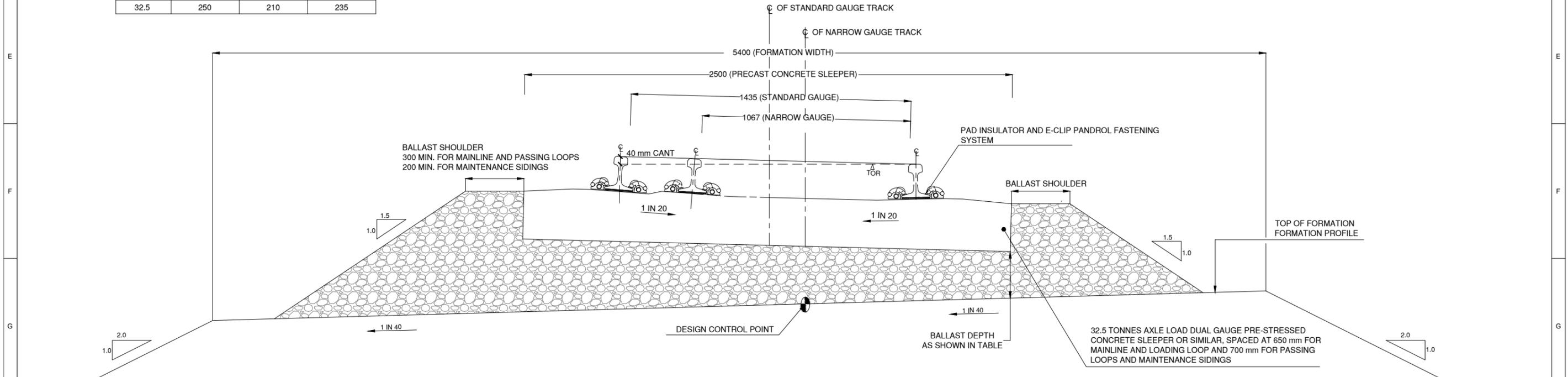
MASTER COPY





DUAL GAUGE STRAIGHT TRACK
SCALE 1:10

AXLE LOAD OPERATION (TONNES)	BALLAST DEPTH (mm)		
	MAINLINE AND PASSING LOOP TRACKS	MAINTENANCE SIDING TRACKS	LOADING LOOP TRACK
26.5	200	200	200
30.0	210	200	200
32.5	250	210	235



DUAL GAUGE CURVED TRACK
SCALE 1:10

NOTES :
1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT NOTED OTHERWISE

REV	BY	DATE	DESCRIPTION	CKD	APP
0	SN	18/12/12	ISSUED FOR USE	HH	RB

DESIGN PARAMETER :-	
AXLE LOAD OPERATION	: AS NOTED IN TABLE
RAIL SIZE (KG/M)	: 60.0
CAPPING LAYER STRENGTH (CBR)	: 40
CANT FOR CURVED TRACK	: NO CANT IN LOADING LOOP AND MAINTENANCE SIDINGS

DRAWN	S NAVEENA	18/12/12
DRAFTING CHECK	CH SANTOSHI	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: HAITHAM HAWARI	18/12/12
	NAME: HAITHAM HAWARI	
	RPEQ No: 7266	

calibre
Calibre Operations Pty. Ltd.
Ground Floor, 545 Queen St
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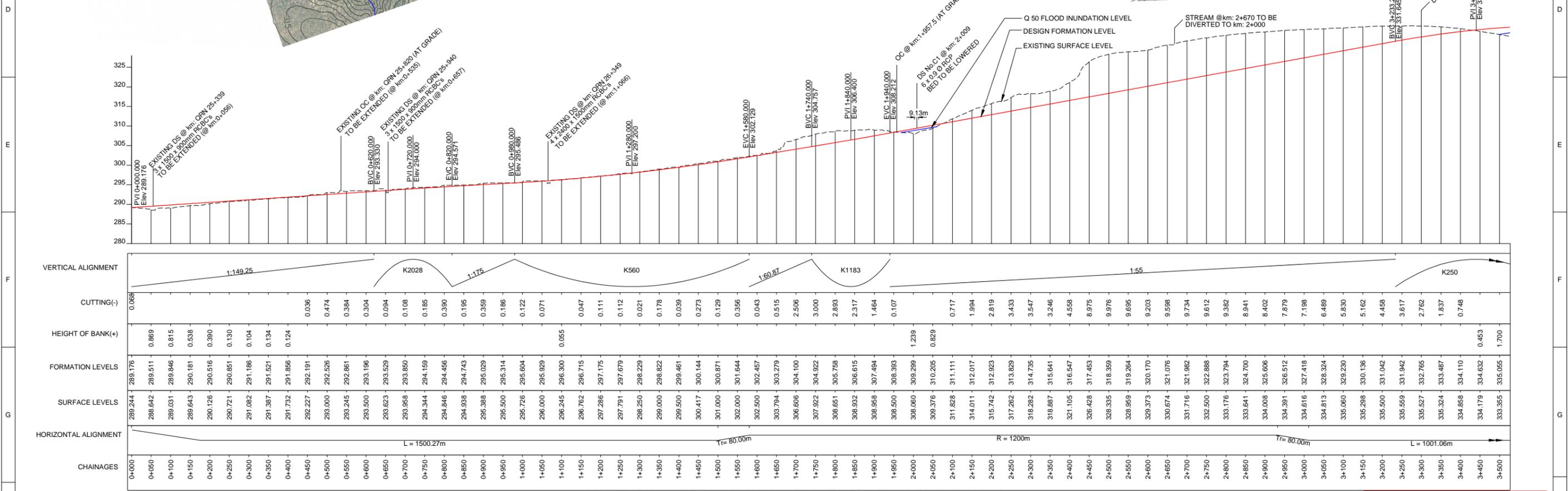
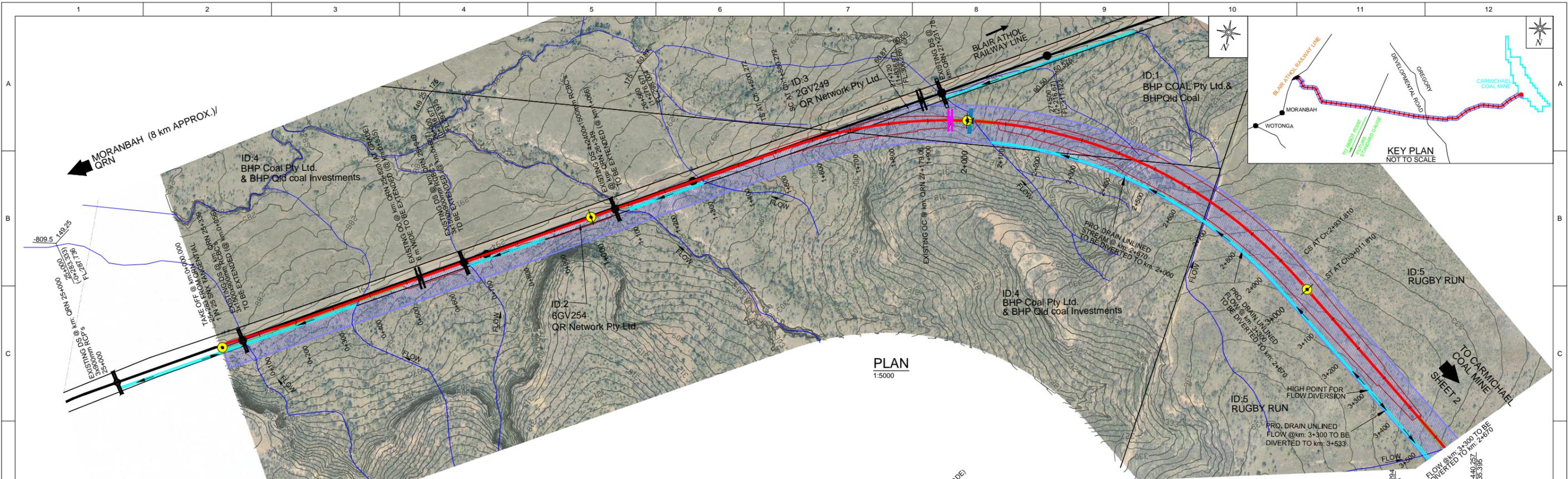
CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL TRACK
PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-L-022** REV **0**

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ORIGINAL SIZE A1





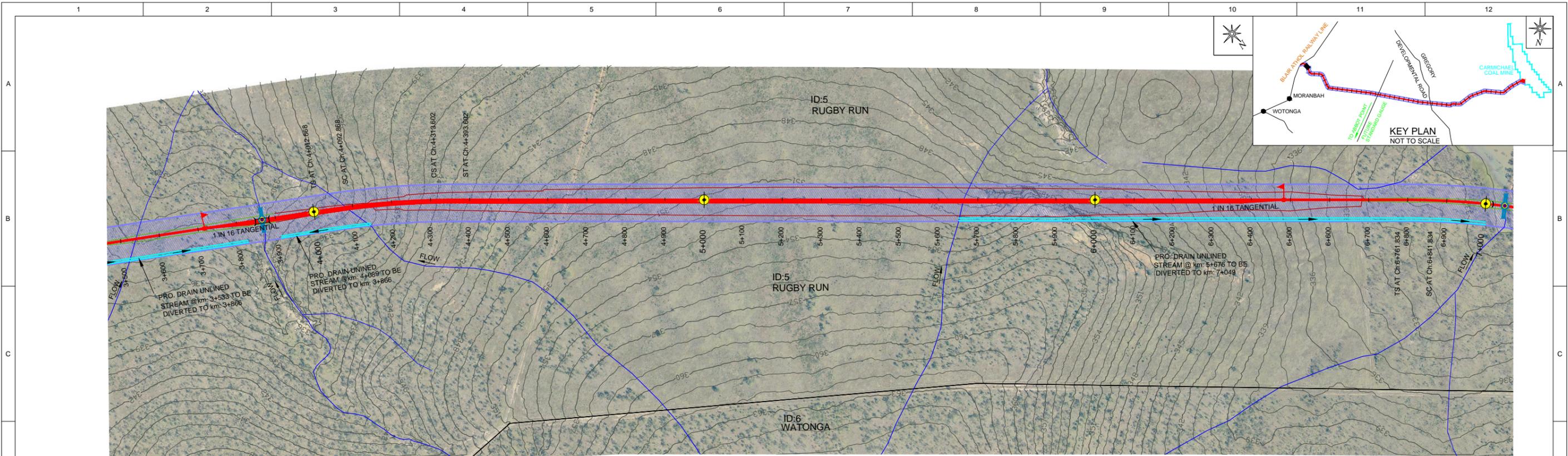
LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL: 1:5000, VERTICAL: 1:500

LEGEND:- 		DRAWN V SURESH 18/12/12 DRAFTING CHECK A S SUBRAHMANYAM 18/12/12 ENG. APPROVED AN KESKAR 18/12/12 PROJECT MANAGER RICHARD BROMILOW 18/12/12 RPEQ APPROVAL SIGNED: CHRIS WARNOCK 18/12/12 NAME: CHRIS WARNOCK RPEQ No: 03423	Calibre Operations Pty. Ltd. Ground Floor, 545 Queen St Brisbane QLD 4000 Australia Tel: +61 (0)7 3001 6000 Fax: +61 (0)7 3001 6050	adani THIS DRAWING CONTAINS CONFIDENTIAL INFORMATION TO CALIBRE OPERATIONS PTY. LTD. & ITS AFFILIATED PARTIES. THE CLIENT HAS THE RIGHT TO USE THE INFORMATION CONTAINED IN THIS DRAWING PURSUANT TO CONTRACT BETWEEN CLIENT AND CALIBRE OPERATIONS PTY. LTD. ORIGINAL SIZE A1	CARMICHAEL COAL MINE AND RAIL PROJECT ADANI CLIENT'S ENGINEER - RAIL CIVIL - EARTHWORKS PLAN AND PROFILE - CH 0.0 - CH 3.5 - SHEET 1 PROJECT No. CARP12033 DRG No. CARP12033-1000-DWG-Y-101 REV 0
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REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE	CW	RB

ISSUED FOR USE
NOT FOR CONSTRUCTION

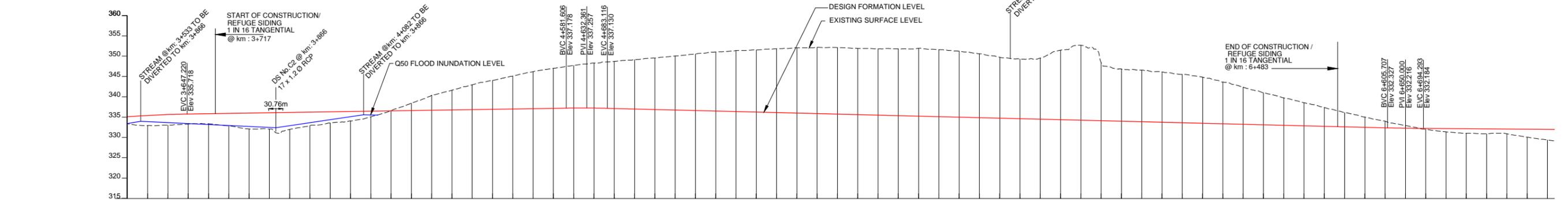
MASTER COPY



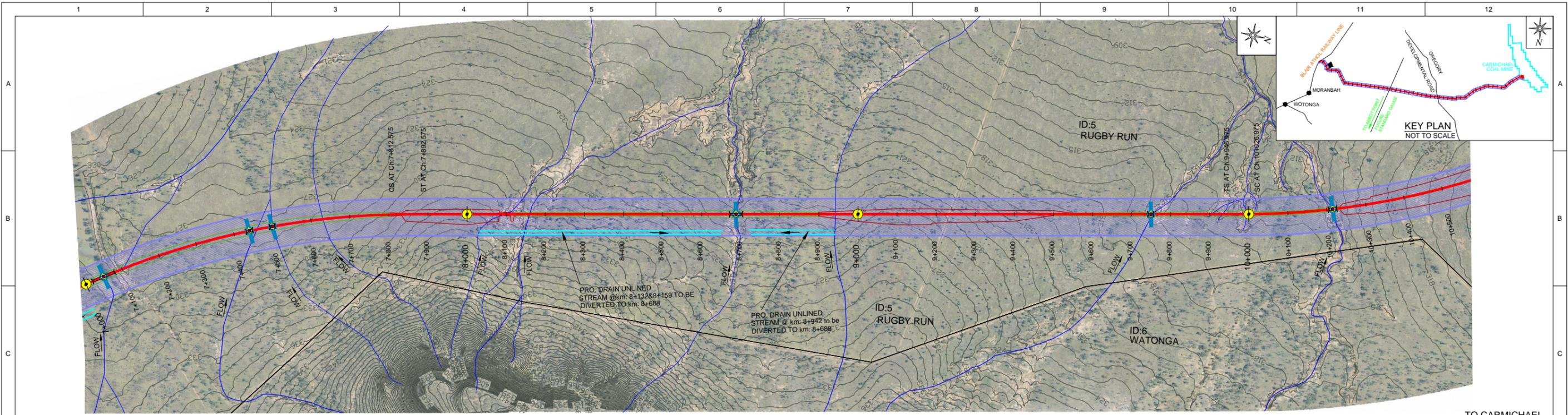
PLAN
1:5000

MORANBAH / QRN
SHEET 1

TO CARMICHAEL
COAL MINE
SHEET 3



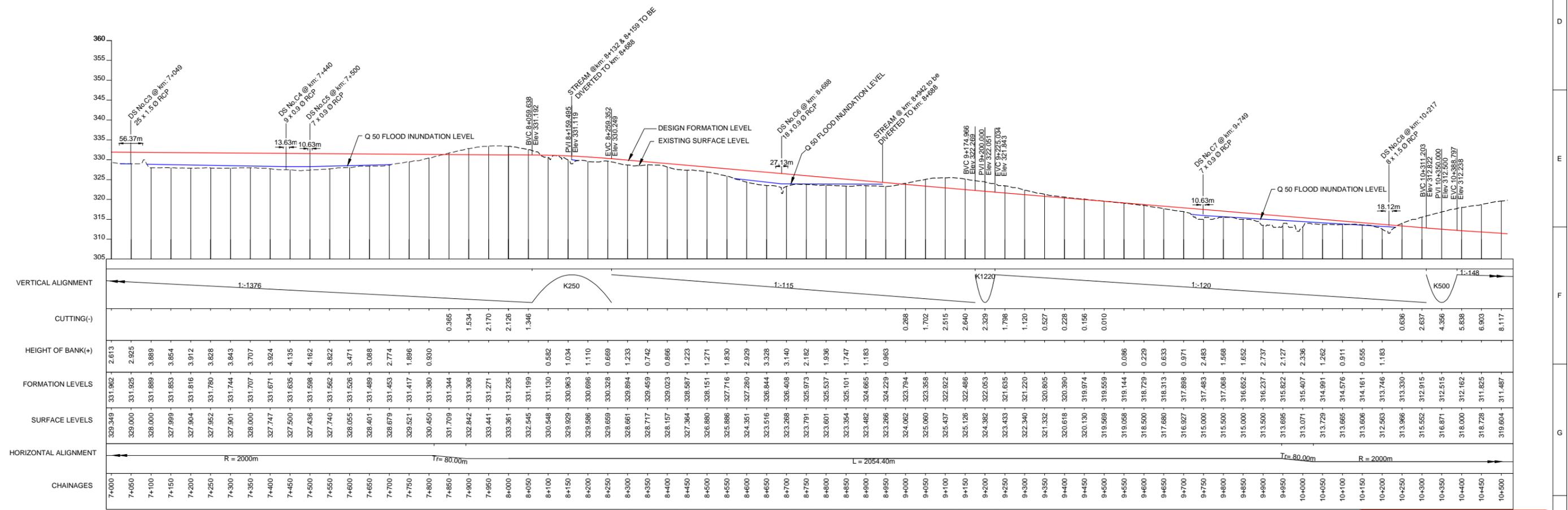
VERTICAL ALIGNMENT	K250		1:640		K250		1:400		K500		1:1376																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
CUTTING(-)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
HEIGHT OF BANK(+)	1.700	2.478	2.600	2.464	2.462	3.031	3.925	4.035	4.180	3.303	2.757	2.347	1.370	0.061	1.806	3.699	4.845	6.084	7.106	8.080	9.087	9.825	10.467	11.062	11.588	12.115	12.662	13.287	13.901	14.537	14.987	15.286	15.681	16.036	16.287	16.349	16.277	16.297	16.395	16.659	16.434	16.216	15.715	14.955	14.651	15.030	17.083	18.414	14.299	12.829	12.680	12.385	11.891	11.317	10.248	9.118	7.910	6.751	5.659	4.616	3.484	2.524	1.608	0.675	0.190	0.813	1.107	1.187	1.150	1.977	2.613																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
FORMATION LEVELS	335.055	335.377	335.600	335.723	335.801	335.879	335.957	336.035	336.113	336.191	336.269	336.347	336.425	336.504	336.582	336.660	336.738	336.816	336.894	336.972	337.050	337.128	337.200	337.271	337.341	337.411	337.481	337.551	337.621	337.691	337.761	337.831	337.901	337.971	338.041	338.111	338.181	338.251	338.321	338.391	338.461	338.531	338.601	338.671	338.741	338.811	338.881	338.951	339.021	339.091	339.161	339.231	339.301	339.371	339.441	339.511	339.581	339.651	339.721	339.791	339.861	339.931	340.001	340.071	340.141	340.211	340.281	340.351	340.421	340.491	340.561	340.631	340.701	340.771	340.841	340.911	340.981	341.051	341.121	341.191	341.261	341.331	341.401	341.471	341.541	341.611	341.681	341.751	341.821	341.891	341.961	342.031	342.101	342.171	342.241	342.311	342.381	342.451	342.521	342.591	342.661	342.731	342.801	342.871	342.941	343.011	343.081	343.151	343.221	343.291	343.361	343.431	343.501	343.571	343.641	343.711	343.781	343.851	343.921	343.991	344.061	344.131	344.201	344.271	344.341	344.411	344.481	344.551	344.621	344.691	344.761	344.831	344.901	344.971	345.041	345.111	345.181	345.251	345.321	345.391	345.461	345.531	345.601	345.671	345.741	345.811	345.881	345.951	346.021	346.091	346.161	346.231	346.301	346.371	346.441	346.511	346.581	346.651	346.721	346.791	346.861	346.931	347.001	347.071	347.141	347.211	347.281	347.351	347.421	347.491	347.561	347.631	347.701	347.771	347.841	347.911	347.981	348.051	348.121	348.191	348.261	348.331	348.401	348.471	348.541	348.611	348.681	348.751	348.821	348.891	348.961	349.031	349.101	349.171	349.241	349.311	349.381	349.451	349.521	349.591	349.661	349.731	349.801	349.871	349.941	350.011	350.081	350.151	350.221	350.291	350.361	350.431	350.501	350.571	350.641	350.711	350.781	350.851	350.921	350.991	351.061	351.131	351.201	351.271	351.341	351.411	351.481	351.551	351.621	351.691	351.761	351.831	351.901	351.971	352.041	352.111	352.181	352.251	352.321	352.391	352.461	352.531	352.601	352.671	352.741	352.811	352.881	352.951	353.021	353.091	353.161	353.231	353.301	353.371	353.441	353.511	353.581	353.651	353.721	353.791	353.861	353.931	354.001	354.071	354.141	354.211	354.281	354.351	354.421	354.491	354.561	354.631	354.701	354.771	354.841	354.911	354.981	355.051	355.121	355.191	355.261	355.331	355.401	355.471	355.541	355.611	355.681	355.751	355.821	355.891	355.961	356.031	356.101	356.171	356.241	356.311	356.381	356.451	356.521	356.591	356.661	356.731	356.801	356.871	356.941	357.011	357.081	357.151	357.221	357.291	357.361	357.431	357.501	357.571	357.641	357.711	357.781	357.851	357.921	357.991	358.061	358.131	358.201	358.271	358.341	358.411	358.481	358.551	358.621	358.691	358.761	358.831	358.901	358.971	359.041	359.111	359.181	359.251	359.321	359.391	359.461	359.531	359.601	359.671	359.741	359.811	359.881	359.951	360.021	360.091	360.161	360.231	360.301	360.371	360.441	360.511	360.581	360.651	360.721	360.791	360.861	360.931	361.001	361.071	361.141	361.211	361.281	361.351	361.421	361.491	361.561	361.631	361.701	361.771	361.841	361.911	361.981	362.051	362.121	362.191	362.261	362.331	362.401	362.471	362.541	362.611	362.681	362.751	362.821	362.891	362.961	363.031	363.101	363.171	363.241	363.311	363.381	363.451	363.521	363.591	363.661	363.731	363.801	363.871	363.941	364.011	364.081	364.151	364.221	364.291	364.361	364.431	364.501	364.571	364.641	364.711	364.781	364.851	364.921	364.991	365.061	365.131	365.201	365.271	365.341	365.411	365.481	365.551	365.621	365.691	365.761	365.831	365.901	365.971	366.041	366.111	366.181	366.251	366.321	366.391	366.461	366.531	366.601	366.671	366.741	366.811	366.881	366.951	367.021	367.091	367.161	367.231	367.301	367.371	367.441	367.511	367.581	367.651	367.721	367.791	367.861	367.931	368.001	368.071	368.141	368.211	368.281	368.351	368.421	368.491	368.561	368.631	368.701	368.771	368.841	368.911	368.981	369.051	369.121	369.191	369.261	369.331	369.401	369.471	369.541	369.611	369.681	369.751	369.821	369.891	369.961	370.031	370.101	370.171	370.241	370.311	370.381	370.451	370.521	370.591	370.661	370.731	370.801	370.871	370.941	371.011	371.081	371.151	371.221	371.291	371.361	371.431	371.501	371.571	371.641	371.711	371.781	371.851	371.921	371.991	372.061	372.131	372.201	372.271	372.341	372.411	372.481	372.551	372.621	372.691	372.761	372.831	372.901	372.971	373.041	373.111	373.181	373.251	373.321	373.391	373.461	373.531	373.601	373.671	373.741	373.811	373.881	373.951	374.021	374.091	374.161	374.231	374.301	374.371	374.441	374.511	374.581	374.651	374.721	374.791	374.861	374.931	375.001	375.071	375.141	375.211	375.281	375.351	375.421	375.491	375.561	375.631	375.701	375.771	375.841	375.911	375.981	376.051	376.121	376.191	376.261	376.331	376.401	376.471	376.541	376.611	376.681	376.751	376.821	376.891	376.961	377.031	377.101	377.171	377.241	377.311	377.381	377.451	377.521	377.591	377.661	377.731	377.801	377.871	377.941	378.011	378.081	378.151	378.221	378.291	378.361	378.431	378.501	378.571	378.641	378.711	378.781	378.851	378.921	378.991	379.061	379.131	379.201	379.271	379.341	379.411	379.481	379.551	379.621	379.691	379.761	379.831	379.901	379.971	380.041	380.111	380.181	380.251	380.321	380.391	380.461	380.531	380.601	380.671	380.741	380.811	380.881	380.951	381.021	381.091	381.161	381.231	381.301	381.371	381.441	381.511	381.581	381.651	381.721	381.791	381.861	381.931	382.001	382.071	382.141	382.211	382.281	382.351	382.421	382.491	382.561	382.631	382.701	382.771	382.841	382.911	382.981	383.051	383.121	383.191	383.261	383.331	383.401	383.471	383.541	383.611	383.681	383.751	383.821	383.891	383.961	384.031	384.101	384.171	384.241	384.311	384.381	384.451	384.521	384.591	384.661	384.731	384.801	384.871	384.941	385.011	385.081	385.151	385.221	385.291	385.361	385.431	385.501	385.571	385.641	385.711	385.781	385.851	385.921	385.991	386.061	386.131	386.201	386.271	386.341	386.411	386.481	386.551	386.621	386.691	386.761	386.831	386.901	386.971	387.041	387.111	387.181	387.251	387.321	387.391	387.461	387.531	387.601	387.671	387.741	387.811	387.881	387.951	388.021	388.091	388.161	388.231	388.301	388.371	388.441	388.511	388.581	388.651	388.721	388.791	388.861	388.931	389.001	389.071	389.141	389.211	389.281	389.351	389.421	389.491	389.561	389.631	389.701	389.771	389.841	389.911	389.981	390.051	390.121	390.191	390.261	390.331	390.401	390.471	390.541	390.611	390.681	390.751	390.821	390.891	390.961	391.031	391.101	391.171	391.241	391.311	391.381	391.451	391.521	391.591	391.661	391.731	391.801	391.871	391.941	392.011	392.081	392.151	392.221	392.291	392.361	392.431	392.501	392.571	392.641	392.711	392.781	392.851	392.921	392.991	393.061	393.131	393.201	393.271	393.341	393.411	393.481	393.551	393.621	393.691	393.761	393.831	393.901	393.971	394.041	394.111	394.181	394.251	394.321	394.391	394.461	394.531	394.601	394.671	394.741	394.811	394.881	394.951	395.021	395.091	395.161	395.231	395.301	395.371	395.441	395.511	395.581	395.651	395.721	395.791	395.861	395.931	396.001	396.071	396.141	396.211	396.281	396.351	396.421	396.491	396.561	396.631	396.701	396.771	396.841	396.911	396.981	397.051	397.121	397.191	397.261	397.331	397.401	397.471	397.541	397.611	397.681	397.751	397.821	397.891	397.961	398.031	398.101	398.171	398.241	398.311	398.381	398.451	398.521	398.591	398.661	398.731	398.801	398.871	398.941	399.011	399.081	399.151	399.221	399.291	399.361	399.431	399.501	399.571</



PLAN
1:5000

MORANBAH/QRN
← SHEET 2

TO CARMICHAEL COAL MINE
→ SHEET 4



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL: 1:5000, VERTICAL: 1:500



ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE		

LEGEND:-

	KILOMETRE POST		OCCUPATIONAL CROSSING (OC) AT GRADE		OCCUPATIONAL CROSSING (OC) UNDER PASS		RAILWAY BRIDGE
	START OF PASSING LOOP		ROAD CROSSING (AT GRADE)		ROAD CROSSING (RAIL OVER ROAD)		RAILWAY CORRIDOR
	END OF PASSING LOOP		ROAD CROSSING (RAIL OVER ROAD)		ROAD CROSSING (ROAD OVER RAIL)		EMBANKMENT TOE
	PROPERTY BOUNDARY		ROAD CROSSING (ROAD OVER RAIL)		DRAINAGE STRUCTURE (DS)		CUTTING TOE
	PROPOSED ALIGNMENT (OPTION-11 REV-2)		DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY)		STREAM DIVERSION		EXISTING RAILWAY LINE
	EXISTING RAILWAY LINE		STREAM DIVERSION		FUTURE PIPE LINE		EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	
	NAME: CHRIS WARNOCK	18/12/12
	RPEQ No: 03423	

calibre
Calibre Operations Pty. Ltd.
Ground Floor, 545 Queen St
Brisbane QLD 4000
Australia
Tel: +61 (0)7 3001 6000
Fax: +61 (0)7 3001 6050

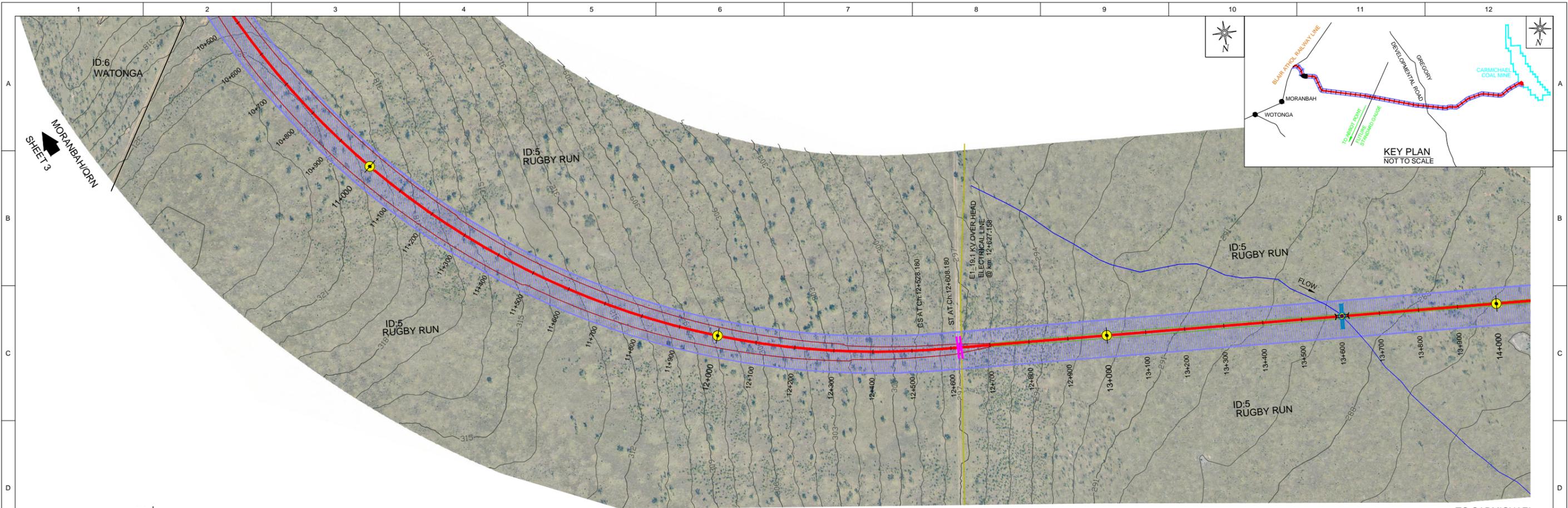
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Aarvee Associates Pty. Ltd.
Suite 39, Level 22, 69 Ann St
Brisbane QLD 4000
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adani
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
PLAN AND PROFILE - CH 7.0 - CH 10.5 - SHEET 3

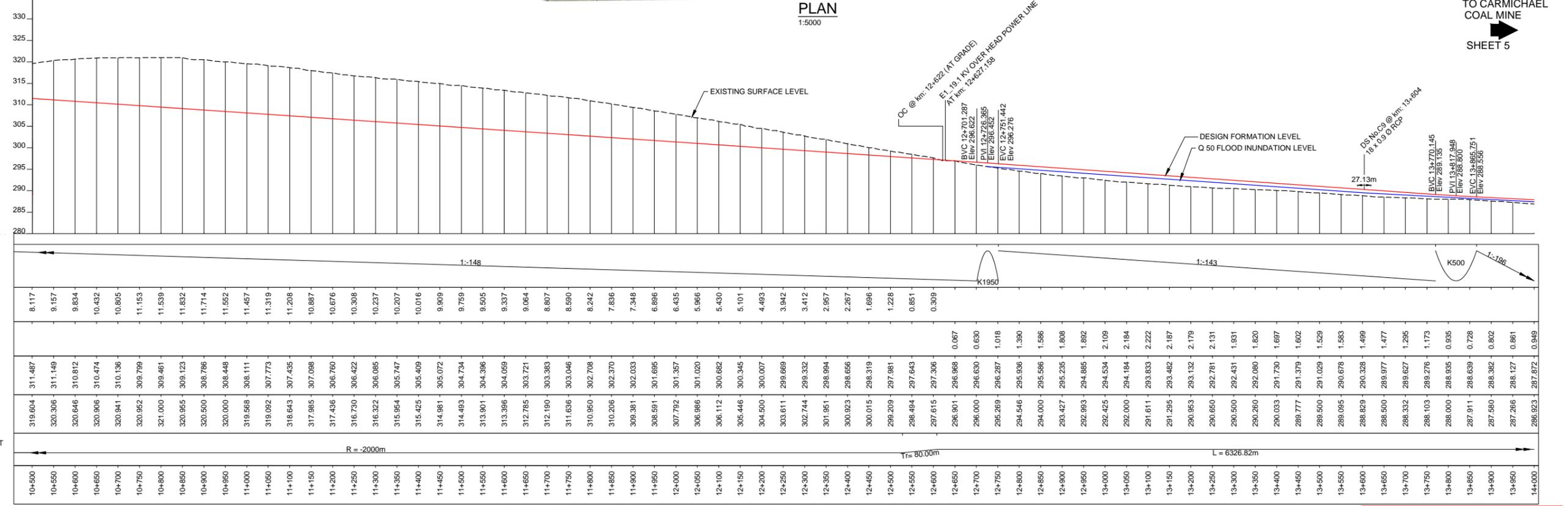
PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-103** REV **0**

MASTER COPY



PLAN
1:5000

TO CARMICHAEL COAL MINE
SHEET 5



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL: 1:5000, VERTICAL: 1:500



ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE		

LEGEND:-

- KILOMETRE POST
- START OF PASSING LOOP
- END OF PASSING LOOP
- PROPERTY BOUNDARY
- PROPOSED ALIGNMENT (OPTION-11 REV-2)
- EXISTING RAILWAY LINE
- OCCUPATIONAL CROSSING (OC) AT GRADE
- OCCUPATIONAL CROSSING (OC) UNDER PASS
- ROAD CROSSING (AT GRADE)
- ROAD CROSSING (RAIL OVER ROAD)
- ROAD CROSSING (ROAD OVER RAIL)
- DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY)
- RAILWAY BRIDGE
- WATER COURSE
- RAILWAY CORRIDOR
- EMBANKMENT TOE
- CUTTING TOE
- STREAM DIVERSION
- FUTURE PIPE LINE
- EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL		
SIGNED:	CHRIS WARNOCK	
NAME:	CHRIS WARNOCK	18/12/12
RPEQ No.:	03423	

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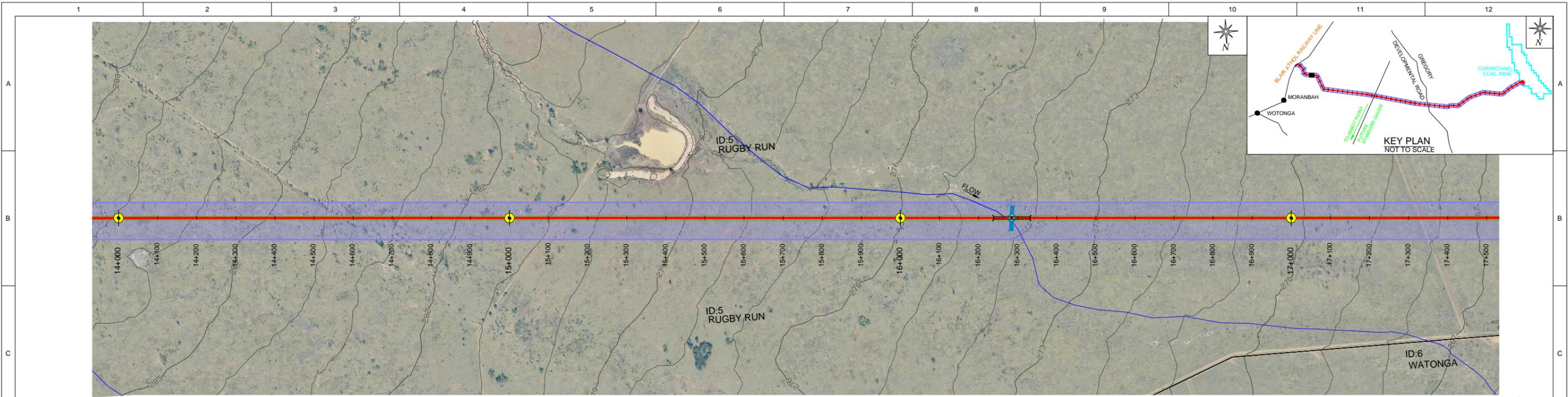
aarvee associates
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
PLAN AND PROFILE - CH 10.5 - CH 14.0 - SHEET 4

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-104** REV **0**

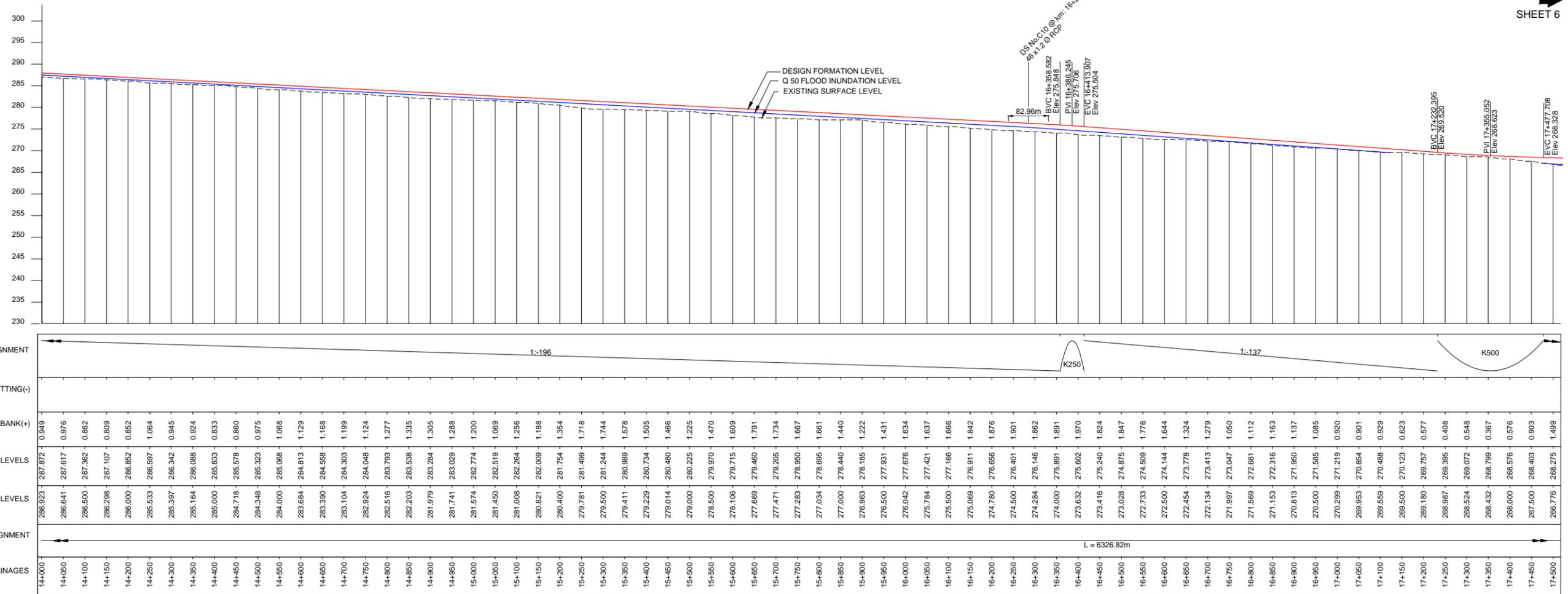
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PLAN
1:5000

MORANBAH/QRN
SHEET 4

TO CARMICHAEL COAL MINE
SHEET 6



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL: 1:5000, VERTICAL: 1:500



ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE	CW	RB

LEGEND:-

- KILOMETRE POST
- START OF PASSING LOOP
- END OF PASSING LOOP
- PROPERTY BOUNDARY
- PROPOSED ALIGNMENT (OPTION-11 REV-2)
- EXISTING RAILWAY LINE
- OCCUPATIONAL CROSSING (OC) AT GRADE
- OCCUPATIONAL CROSSING (OC) UNDER PASS
- ROAD CROSSING (AT GRADE)
- ROAD CROSSING (RAIL OVER ROAD)
- ROAD CROSSING (ROAD OVER RAIL)
- DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY)
- RAILWAY BRIDGE
- WATER COURSE
- RAILWAY CORRIDOR
- EMBANKMENT TOE
- CUTTING TOE
- STREAM DIVERSION
- FUTURE PIPE LINE
- EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	
	NAME: CHRIS WARNOCK	18/12/12
	RPEQ No: 03423	

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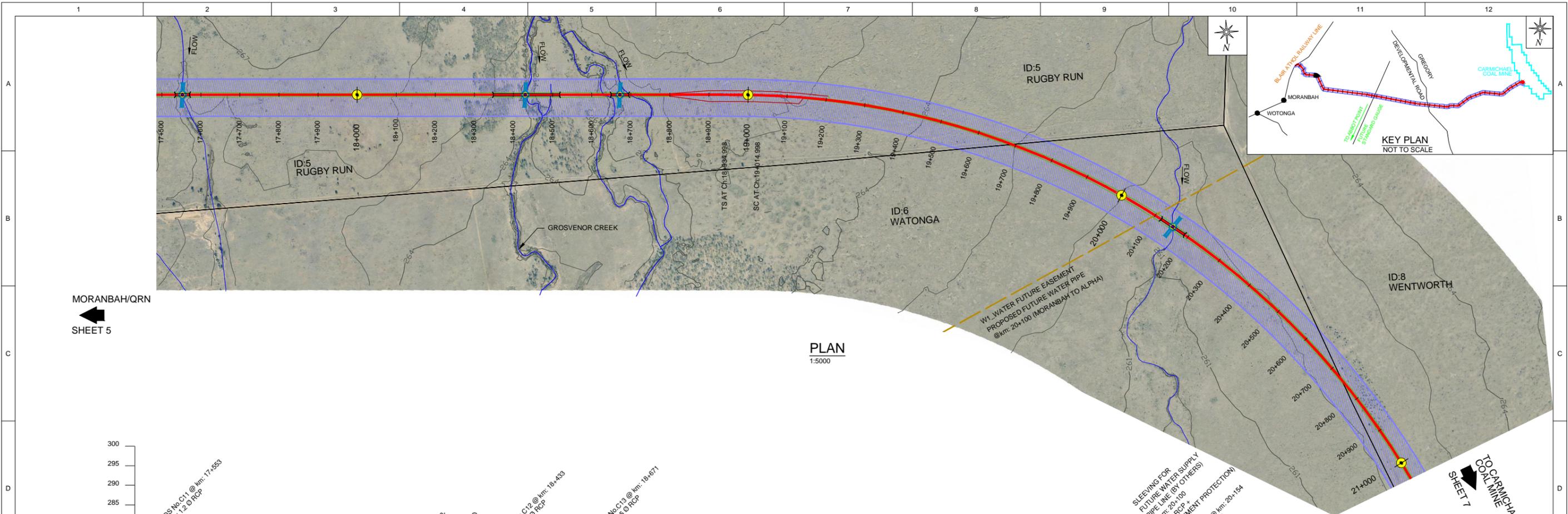
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
PLAN AND PROFILE - CH 14.0 - CH 17.5 - SHEET 5

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-105** REV **0**

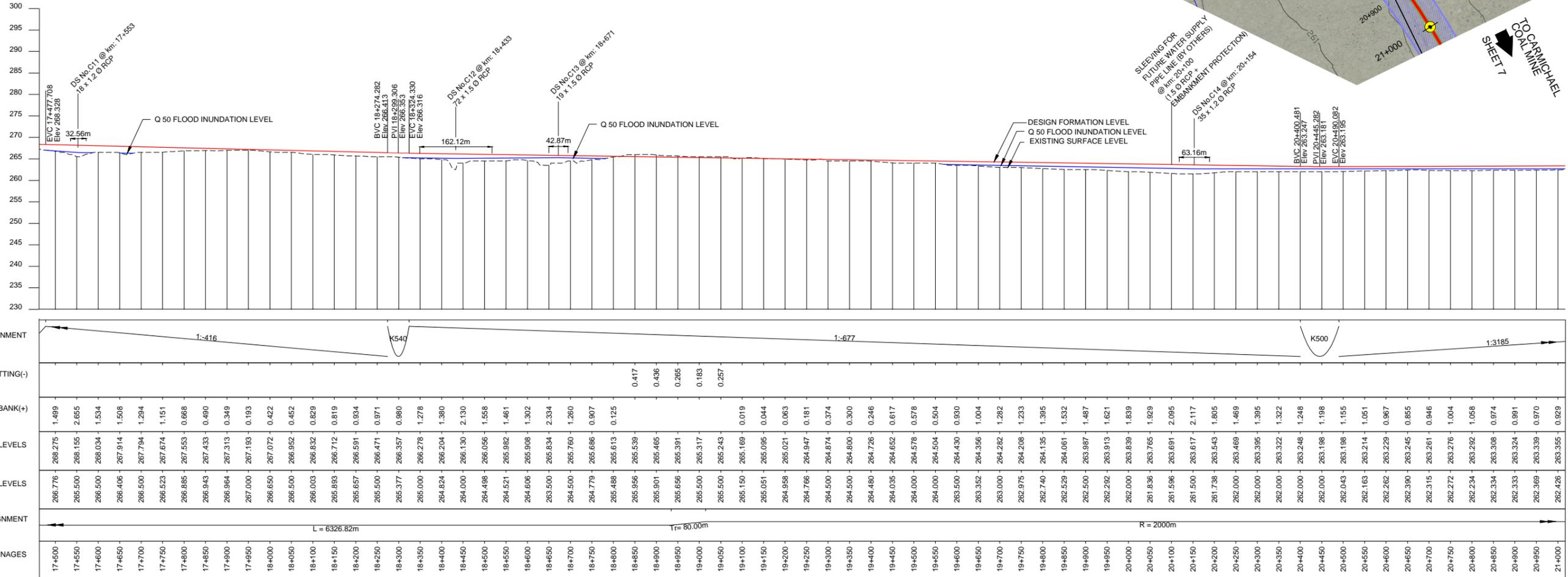
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MORANBAH/QRN
 SHEET 5

TO CARMICHAEL
 COAL MINE
 SHEET 7

PLAN
 1:5000



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
 HORIZONTAL: 1:5000, VERTICAL: 1:500



ISSUED FOR USE
 NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE		

LEGEND:-

KILOMETRE POST	OCCUPATIONAL CROSSING (OC) AT GRADE	RAILWAY BRIDGE
START OF PASSING LOOP	OCCUPATIONAL CROSSING (OC) UNDER PASS	WATER COURSE
END OF PASSING LOOP	ROAD CROSSING (AT GRADE)	RAILWAY CORRIDOR
PROPERTY BOUNDARY	ROAD CROSSING (RAIL OVER ROAD)	EMBANKMENT TOE
PROPOSED ALIGNMENT (OPTION-11 REV-2)	ROAD CROSSING (ROAD OVER RAIL)	CUTTING TOE
EXISTING RAILWAY LINE	DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY)	STREAM DIVERSION
	FUTURE PIPE LINE	EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL		
SIGNED:	CHRIS WARNOCK	
NAME:	CHRIS WARNOCK	18/12/12
RPEQ No.:	03423	

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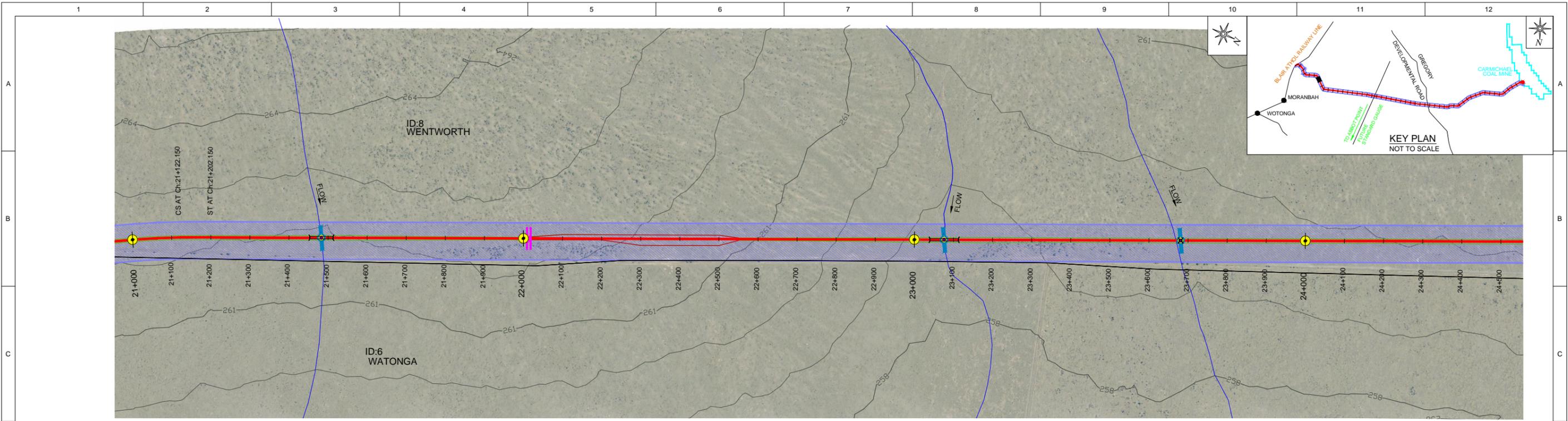
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 ORIGINAL SIZE A1

CARMICHAEL COAL MINE AND RAIL PROJECT
 ADANI CLIENT'S ENGINEER - RAIL
 CIVIL - EARTHWORKS
 PLAN AND PROFILE - CH 17.5 - CH 21.0 - SHEET 6

PROJECT No. **CARP12033**
 DRG No. **CARP12033-1000-DWG-Y-106** REV **0**

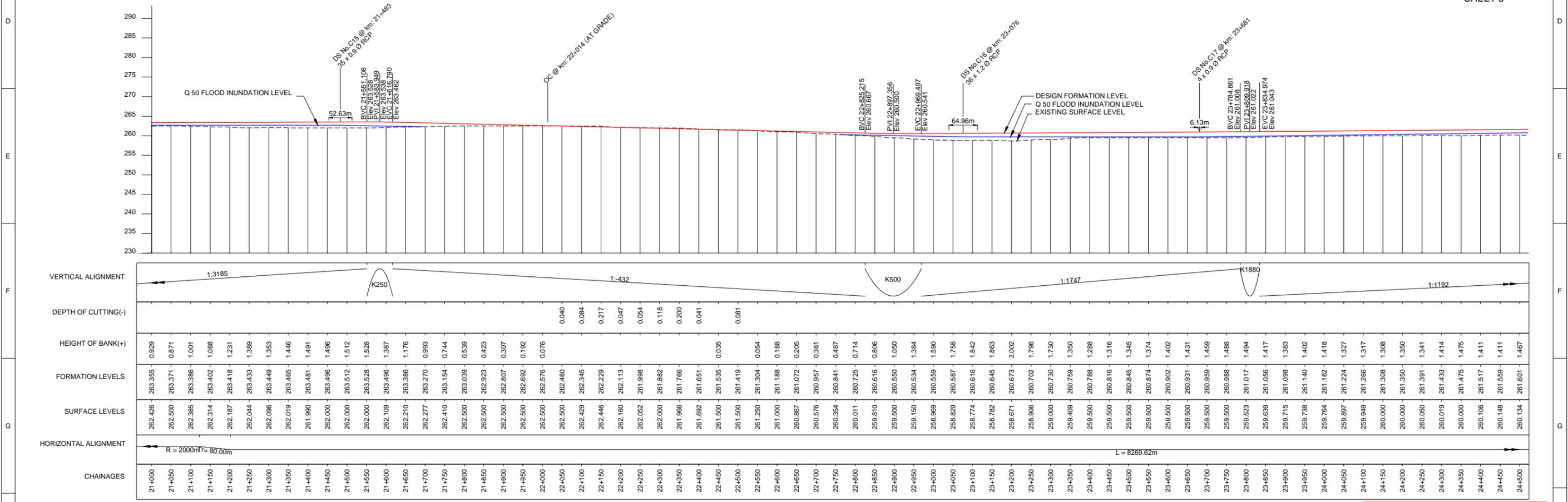
MASTER COPY



PLAN
1:5000

MORANBAH/QRN
← SHEET 6

→ TO CARMICHAEL COAL MINE
SHEET 8



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL-1:5000, VERTICAL-1:500



ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE		

LEGEND:-	
	KILOMETRE POST
	START OF PASSING LOOP
	END OF PASSING LOOP
	PROPERTY BOUNDARY
	PROPOSED ALIGNMENT (OPTION-11 REV-2)
	EXISTING RAILWAY LINE
	OCCUPATIONAL CROSSING (OC) AT GRADE
	OCCUPATIONAL CROSSING (OC) UNDER PASS
	ROAD CROSSING (AT GRADE)
	ROAD CROSSING (RAIL OVER ROAD)
	ROAD CROSSING (ROAD OVER RAIL)
	DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY)
	RAILWAY BRIDGE
	WATER COURSE
	RAILWAY CORRIDOR
	EMBANKMENT TOE
	CUTTING TOE
	STREAM DIVERSION
	FUTURE PIPE LINE
	EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	18/12/12
	NAME: CHRIS WARNOCK	
	RPEQ No: 03423	

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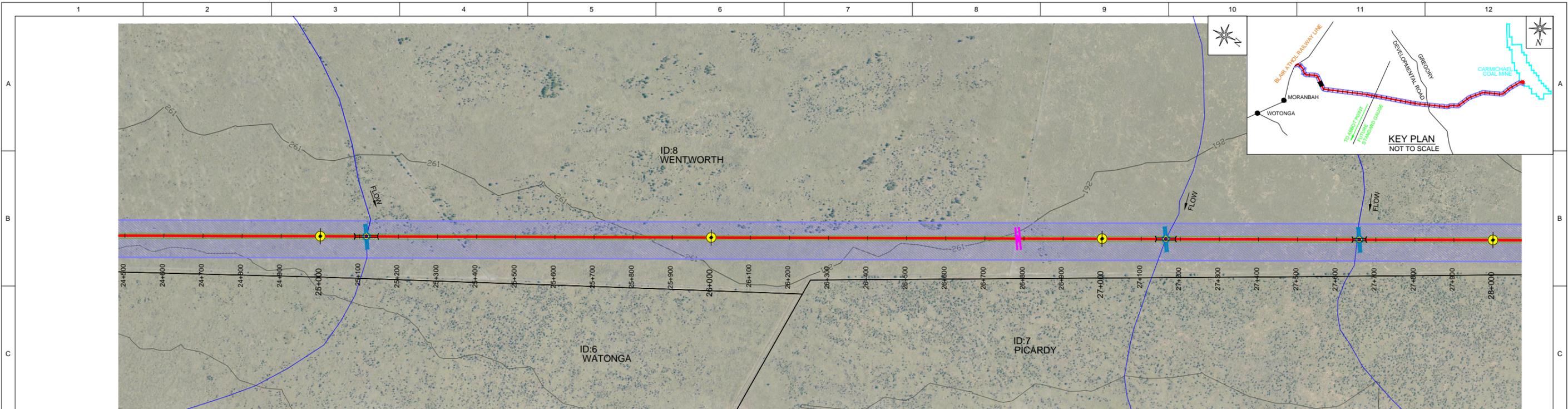
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ORIGINAL SIZE A1

CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
PLAN AND PROFILE - CH 21.0 - CH 24.5 - SHEET 7

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-107** REV **0**

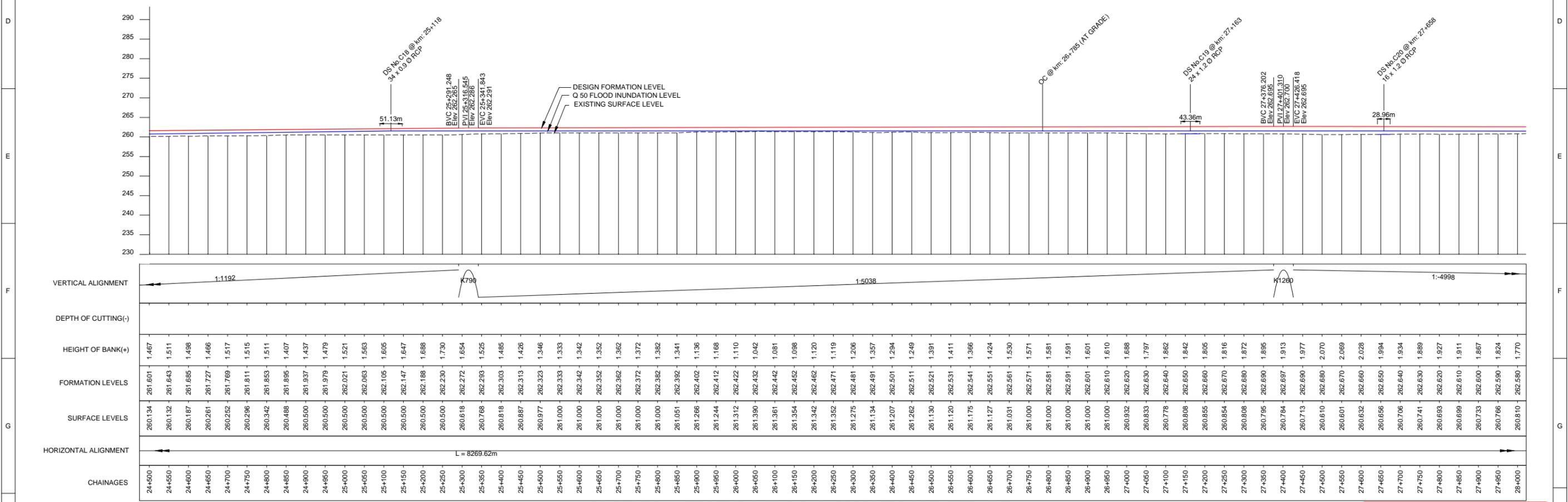
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PLAN
1:5000

MORANBAH/QRN
← SHEET 7

TO CARMICHAEL
COAL MINE
→ SHEET 9



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL: 1:5000, VERTICAL: 1:500



ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE	CW	RB

LEGEND:-	
	KILOMETRE POST
	START OF PASSING LOOP
	END OF PASSING LOOP
	PROPERTY BOUNDARY
	PROPOSED ALIGNMENT (OPTION-11 REV-2)
	EXISTING RAILWAY LINE
	OCCUPATIONAL CROSSING (OC) AT GRADE
	OCCUPATIONAL CROSSING (OC) UNDER PASS
	ROAD CROSSING (AT GRADE)
	ROAD CROSSING (RAIL OVER ROAD)
	ROAD CROSSING (ROAD OVER RAIL)
	DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY)
	RAILWAY BRIDGE
	WATER COURSE
	RAILWAY CORRIDOR
	EMBANKMENT TOE
	CUTTING TOE
	STREAM DIVERSION
	FUTURE PIPE LINE
	EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	18/12/12
	NAME: CHRIS WARNOCK	
	RPEQ No: 03423	

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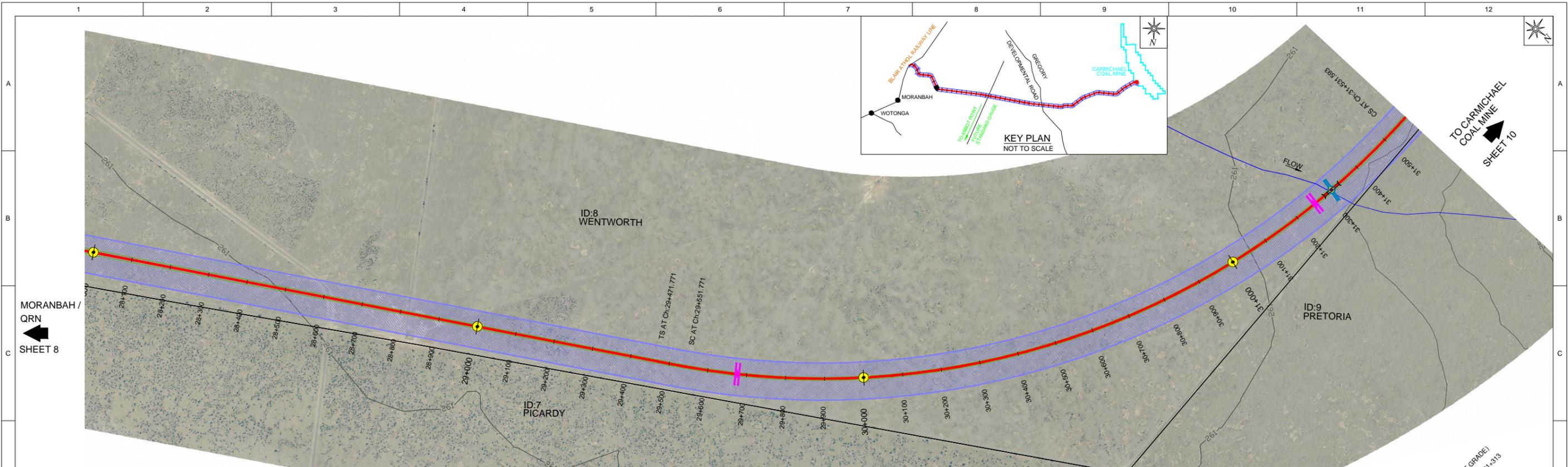
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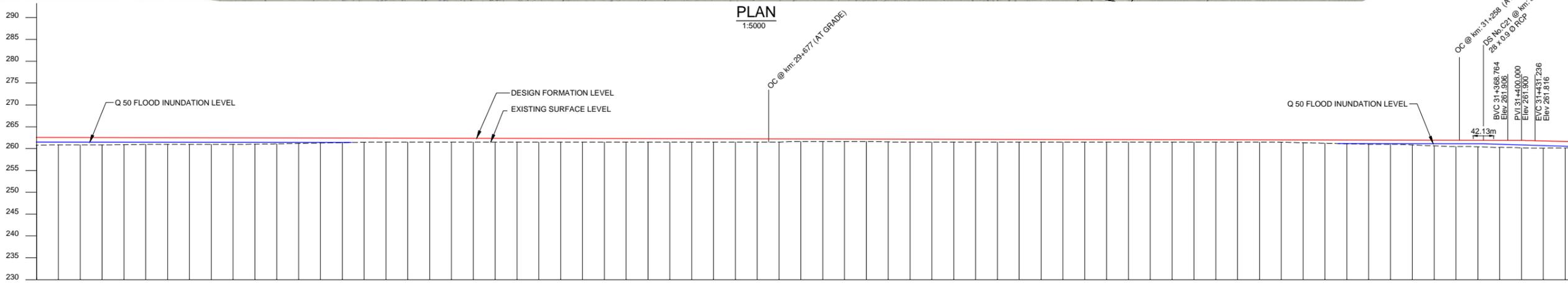
CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
PLAN AND PROFILE - CH 24.5 - CH 28.0 - SHEET 8

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-108** REV **0**

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PLAN
1:5000



DEPTH OF CUTTING (-)	HEIGHT OF BANK (+)	FORMATION LEVELS	SURFACE LEVELS	HORIZONTAL ALIGNMENT	CHAINAGES
				$L = 8269.62m$	28+000
				$Tr = 80.00m$	28+050
					28+100
					28+150
					28+200
					28+250
					28+300
					28+350
					28+400
					28+450
					28+500
					28+550
					28+600
					28+650
					28+700
					28+750
					28+800
					28+850
					28+900
					28+950
					29+000
					29+050
					29+100
					29+150
					29+200
					29+250
					29+300
					29+350
					29+400
					29+450
					29+500
					29+550
					29+600
					29+650
					29+700
					29+750
					29+800
					29+850
					29+900
					29+950
					30+000
					30+050
					30+100
					30+150
					30+200
					30+250
					30+300
					30+350
					30+400
					30+450
					30+500
					30+550
					30+600
					30+650
					30+700
					30+750
					30+800
					30+850
					30+900
					30+950
					31+000
					31+050
					31+100
					31+150
					31+200
					31+250
					31+300
					31+350
					31+400
					31+450
					31+500

LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL: 1:5000, VERTICAL: 1:500



ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE	CW	RB

LEGEND:-	
	KILOMETRE POST
	START OF PASSING LOOP
	END OF PASSING LOOP
	PROPERTY BOUNDARY
	PROPOSED ALIGNMENT (OPTION-11 REV-2)
	EXISTING RAILWAY LINE
	OCCUPATIONAL CROSSING (OC) AT GRADE
	OCCUPATIONAL CROSSING (OC) UNDER PASS
	ROAD CROSSING (AT GRADE)
	ROAD CROSSING (RAIL OVER ROAD)
	ROAD CROSSING (ROAD OVER RAIL)
	DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY)
	RAILWAY BRIDGE
	WATER COURSE
	RAILWAY CORRIDOR
	EMBANKMENT TOE
	CUTTING TOE
	STREAM DIVERSION
	FUTURE PIPE LINE
	EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	
	NAME: CHRIS WARNOCK	18/12/12
	RPEQ No: 03423	

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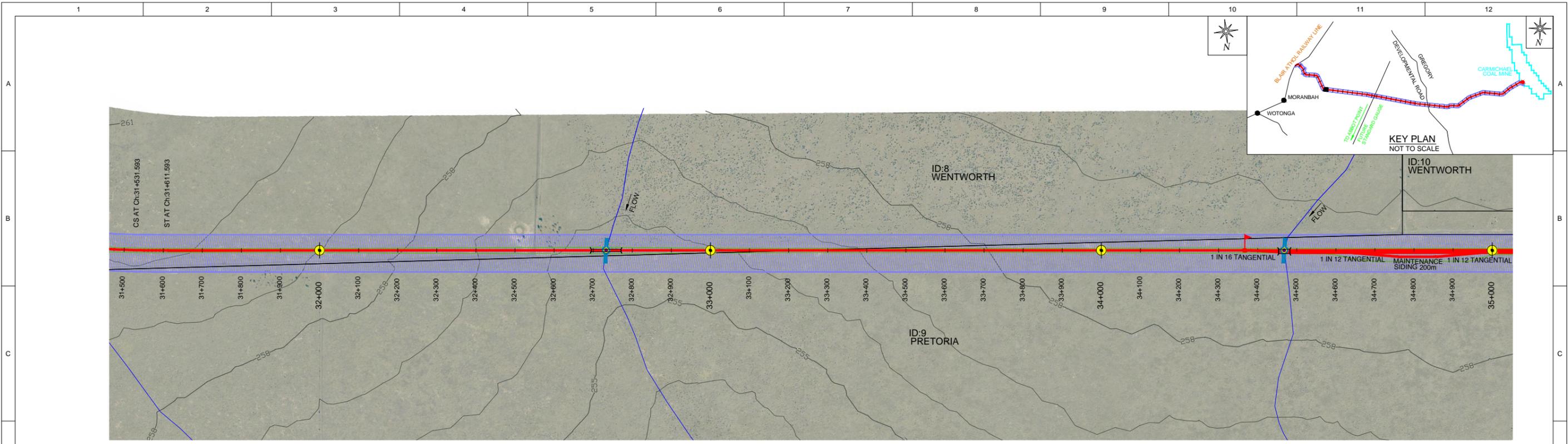
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ORIGINAL SIZE A1

CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
PLAN AND PROFILE - CH 28.0 - CH 31.5 - SHEET 9

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-109** REV **0**

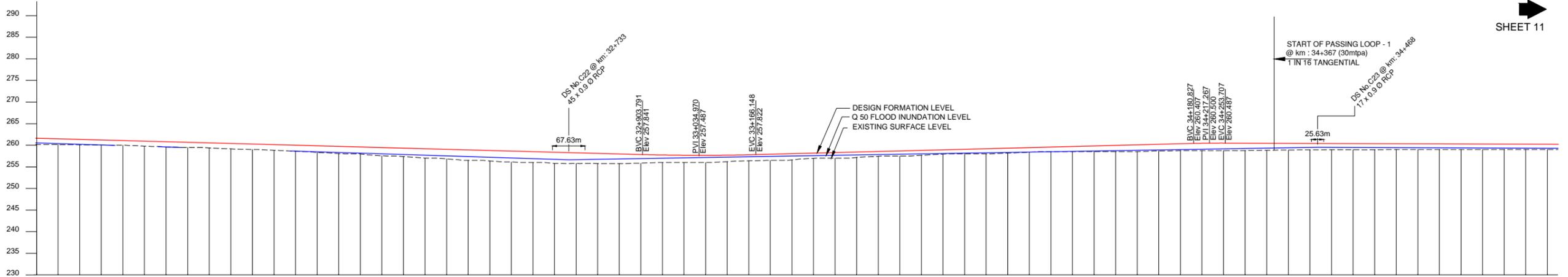
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PLAN
1:5000

MORANBAH / QRN
← SHEET 9

TO CARMICHAEL COAL MINE
→ SHEET 11



VERTICAL ALIGNMENT	DEPTH OF CUTTING(-)	HEIGHT OF BANK(+)	FORMATION LEVELS	SURFACE LEVELS	HORIZONTAL ALIGNMENT	CHAINAGES
1:371		1.469	261.630	260.161	R = -200m L = 80.00m	31+500
		1.345	261.485	260.150		31+550
		1.260	261.360	260.100		31+600
		1.174	261.225	260.051		31+650
		1.091	261.090	259.999		31+700
		1.163	260.955	259.792		31+750
		1.198	260.820	259.622		31+800
		1.185	260.685	259.500		31+850
		1.162	260.551	259.389		31+900
		1.255	260.416	259.161		31+950
		1.276	260.281	259.005		32+000
		1.321	260.146	258.825		32+050
		1.406	260.011	258.605		32+100
		1.544	259.876	258.332		32+150
		1.659	259.741	258.082		32+200
		1.618	259.606	257.988		32+250
		1.899	259.471	257.572		32+300
		1.959	259.336	257.377		32+350
		2.182	259.201	257.019		32+400
		2.217	259.066	256.849		32+450
		2.431	258.931	256.500		32+500
		2.426	258.796	256.370		32+550
		2.547	258.661	256.114		32+600
		2.526	258.526	256.000		32+650
		2.590	258.391	255.801		32+700
		2.487	258.256	255.769		32+750
		2.363	258.121	255.768		32+800
		2.262	257.987	255.725		32+850
		2.004	257.852	255.848		32+900
		1.749	257.738	255.989		32+950
		1.674	257.674	256.000		33+000
		1.660	257.660	256.000		33+050
		1.480	257.687	256.207		33+100
		1.375	257.783	256.408		33+150
		1.408	257.908	256.500		33+200
		1.432	258.035	256.603		33+250
		1.189	258.163	256.974		33+300
		1.290	258.290	257.000		33+350
		1.239	258.417	257.178		33+400
		1.116	258.545	257.429		33+450
		1.172	258.672	257.500		33+500
		1.129	258.800	257.671		33+550
		0.988	258.927	257.839		33+600
		1.054	259.054	258.000		33+650
		1.182	259.182	258.000		33+700
		1.138	259.309	258.171		33+750
		1.036	259.437	258.401		33+800
		1.064	259.564	258.600		33+850
		1.192	259.692	258.500		33+900
		1.319	259.819	258.500		33+950
		1.446	259.946	258.500		34+000
		1.565	260.074	258.509		34+050
		1.530	260.201	258.671		34+100
		1.580	260.329	258.749		34+150
		1.675	260.449	258.774		34+200
		1.708	260.488	258.780		34+250
		1.688	260.470	258.782		34+300
		1.606	260.451	258.845		34+350
		1.529	260.433	258.904		34+400
		1.488	260.415	258.927		34+450
		1.418	260.396	258.978		34+500
		1.407	260.378	258.971		34+550
		1.385	260.360	258.975		34+600
		1.341	260.341	259.000		34+650
		1.323	260.323	259.000		34+700
		1.304	260.304	259.000		34+750
		1.286	260.286	259.000		34+800
		1.268	260.268	259.000		34+850
		1.249	260.249	259.000		34+900
		1.231	260.231	259.000		34+950
		1.213	260.213	259.000		35+000

LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL: 1:5000, VERTICAL: 1:500



ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE	CW	RB

LEGEND:-	
	KILOMETRE POST
	START OF PASSING LOOP
	END OF PASSING LOOP
	PROPERTY BOUNDARY
	PROPOSED ALIGNMENT (OPTION-11 REV-2)
	EXISTING RAILWAY LINE
	OCCUPATIONAL CROSSING (OC) AT GRADE
	OCCUPATIONAL CROSSING (OC) UNDER PASS
	ROAD CROSSING (AT GRADE)
	ROAD CROSSING (RAIL OVER ROAD)
	ROAD CROSSING (ROAD OVER RAIL)
	DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY)
	RAILWAY BRIDGE
	WATER COURSE
	RAILWAY CORRIDOR
	EMBANKMENT TOE
	CUTTING TOE
	STREAM DIVERSION
	FUTURE PIPE LINE
	EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL		
SIGNED:	CHRIS WARNOCK	
NAME:	CHRIS WARNOCK	18/12/12
RPEQ No.:	03423	

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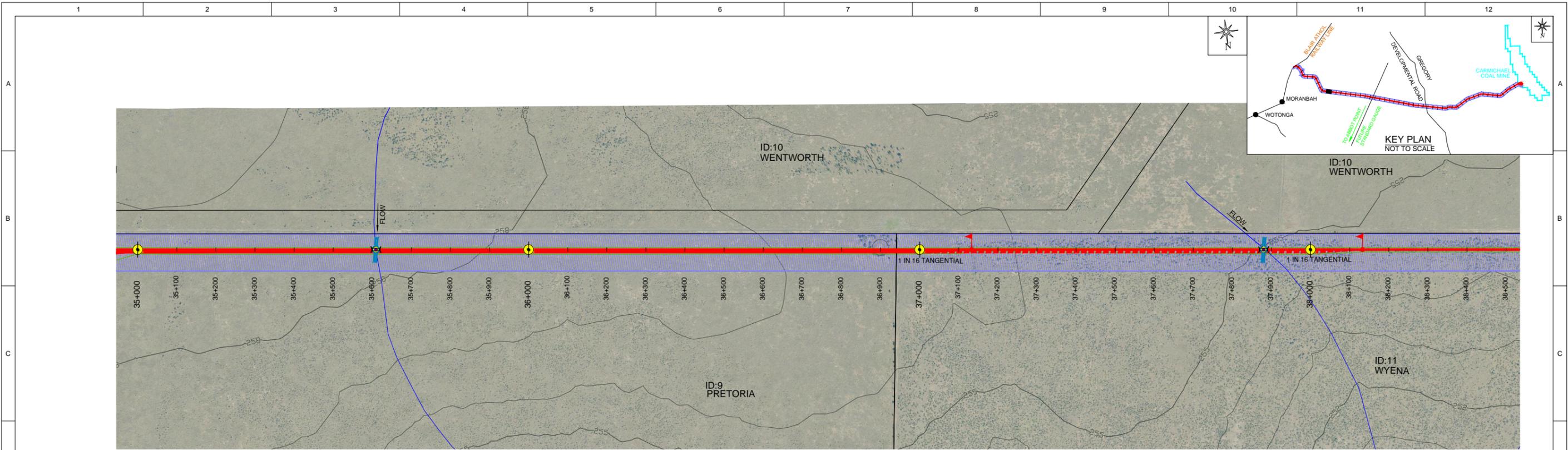
aarvee associates
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Fax: +61 (0)7 3112 5101

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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
PLAN AND PROFILE - CH 31.5 - CH 35.0 - SHEET 10

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-110** REV **0**

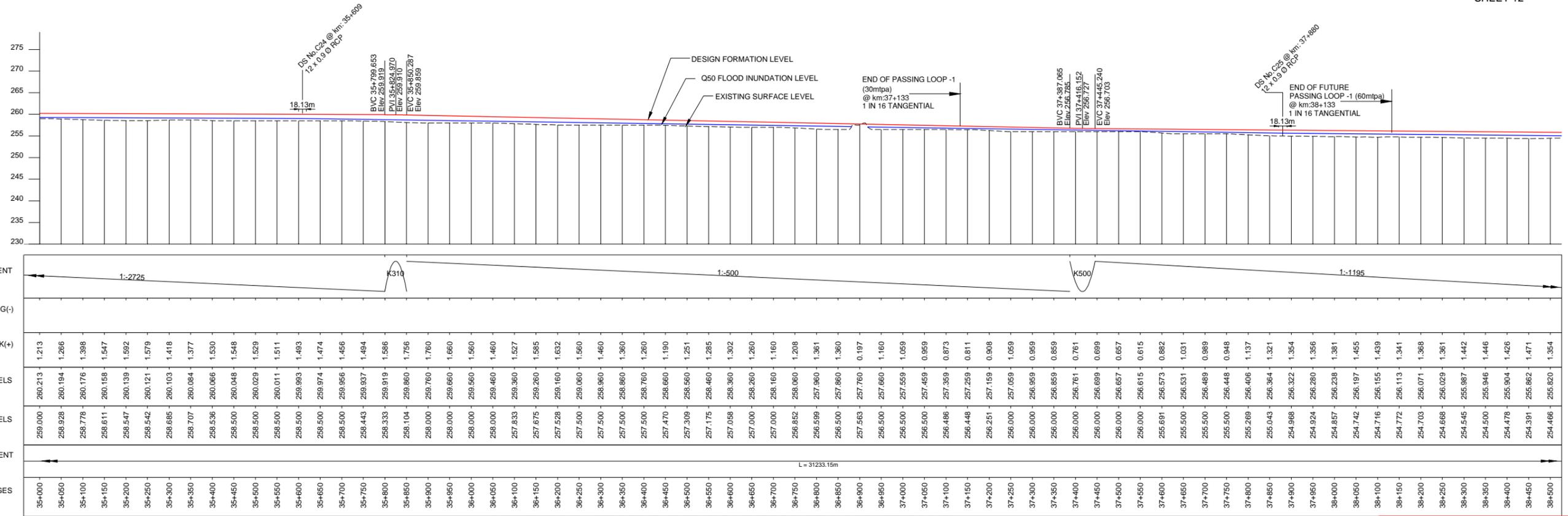
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PLAN
1:5000

MORANBAH / QRN
← SHEET 10

TO CARMICHAEL
COAL MINE
→ SHEET 12



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL: 1:5000, VERTICAL: 1:500

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE		

LEGEND:-

- KILOMETRE POST
- START OF PASSING LOOP
- END OF PASSING LOOP
- PROPERTY BOUNDARY
- PROPOSED ALIGNMENT (OPTION-11 REV-2)
- EXISTING RAILWAY LINE
- OCCUPATIONAL CROSSING (OC) AT GRADE
- OCCUPATIONAL CROSSING (OC) UNDER PASS
- ROAD CROSSING (AT GRADE)
- ROAD CROSSING (RAIL OVER ROAD)
- ROAD CROSSING (ROAD OVER RAIL)
- DRAINAGE STRUCTURE (DS)
- RAILWAY BRIDGE
- WATER COURSE
- RAILWAY CORRIDOR
- EMBANKMENT TOE
- CUTTING TOE
- STREAM DIVERSION
- FUTURE PIPE LINE
- EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL		
SIGNED:	CHRIS WARNOCK	18/12/12
NAME:	CHRIS WARNOCK	
RPEQ No:	03423	

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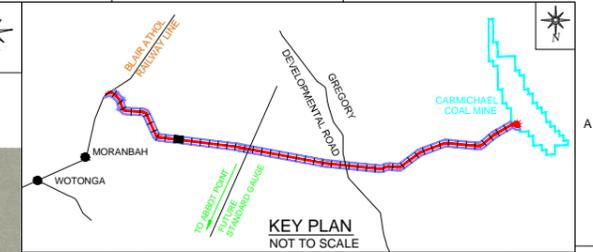
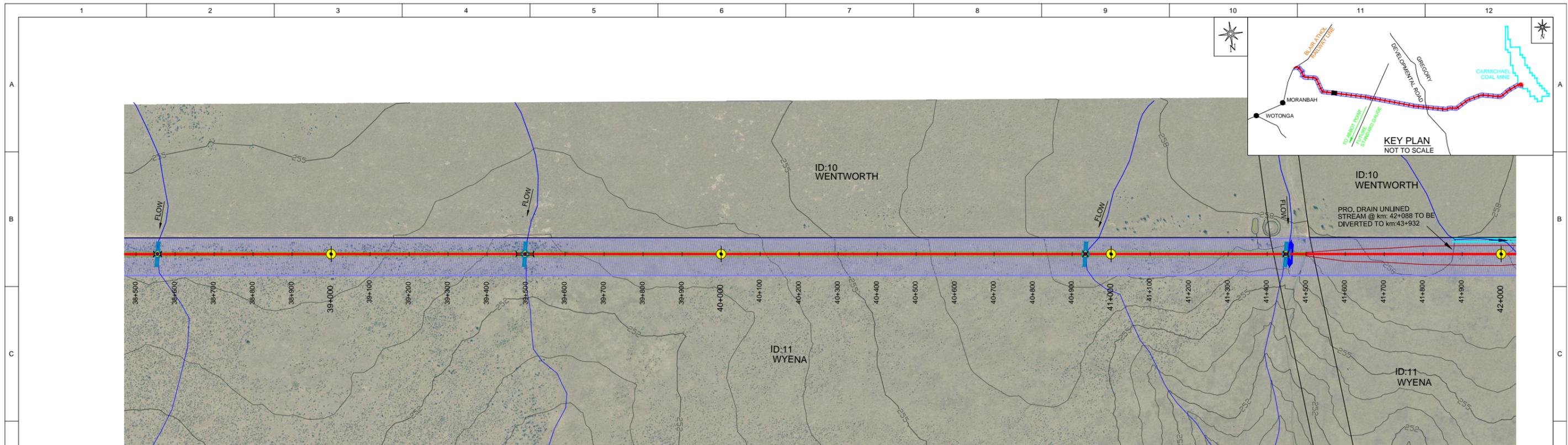
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ORIGINAL SIZE A1

CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
PLAN AND PROFILE - CH 35.0 - CH 38.5 - SHEET 11

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-111** REV **0**

ISSUED FOR USE
NOT FOR CONSTRUCTION

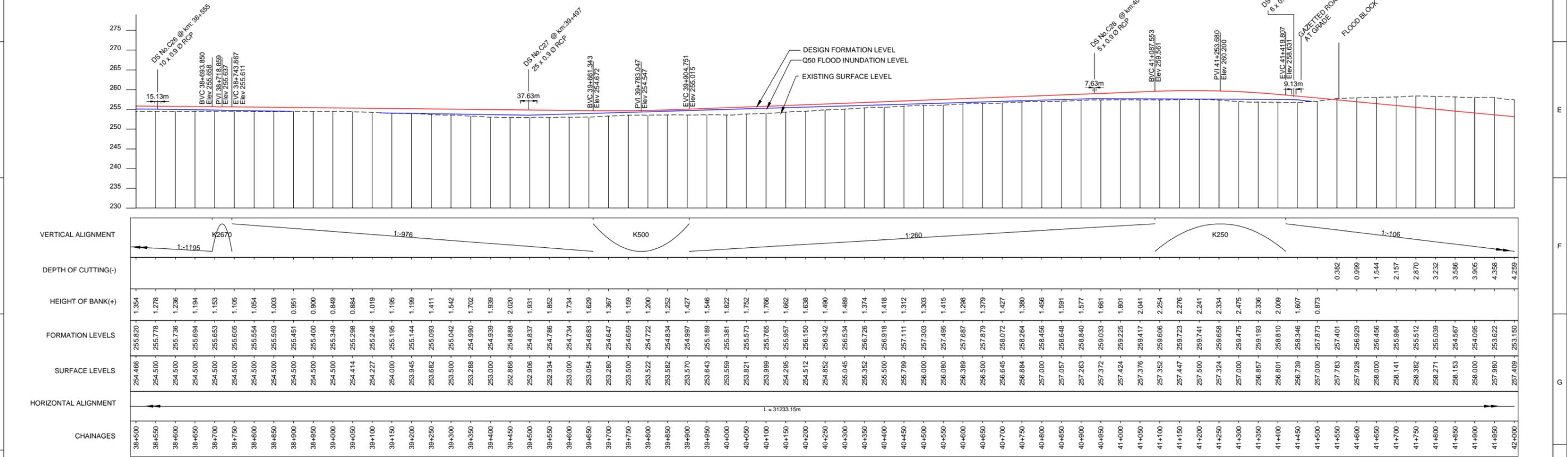
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MORANBAH / QRN
SHEET 11

TO CARMICHAEL COAL MINE
SHEET 13

PLAN
1:5000



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL-1:5000, VERTICAL-1:500



ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE		

LEGEND:-

- KILOMETRE POST
- START OF PASSING LOOP
- END OF PASSING LOOP
- PROPERTY BOUNDARY
- PROPOSED ALIGNMENT (OPTION-11 REV-2)
- EXISTING RAILWAY LINE
- OCCUPATIONAL CROSSING (OC) AT GRADE
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- ROAD CROSSING (ROAD OVER RAIL)
- DRAINAGE STRUCTURE (DS)
- INDICATIVE ONLY
- RAILWAY BRIDGE
- WATER COURSE
- RAILWAY CORRIDOR
- EMBANKMENT TOE
- CUTTING TOE
- STREAM DIVERSION
- FUTURE PIPE LINE
- EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	18/12/12
	NAME: CHRIS WARNOCK	
	RPEQ No: 03423	

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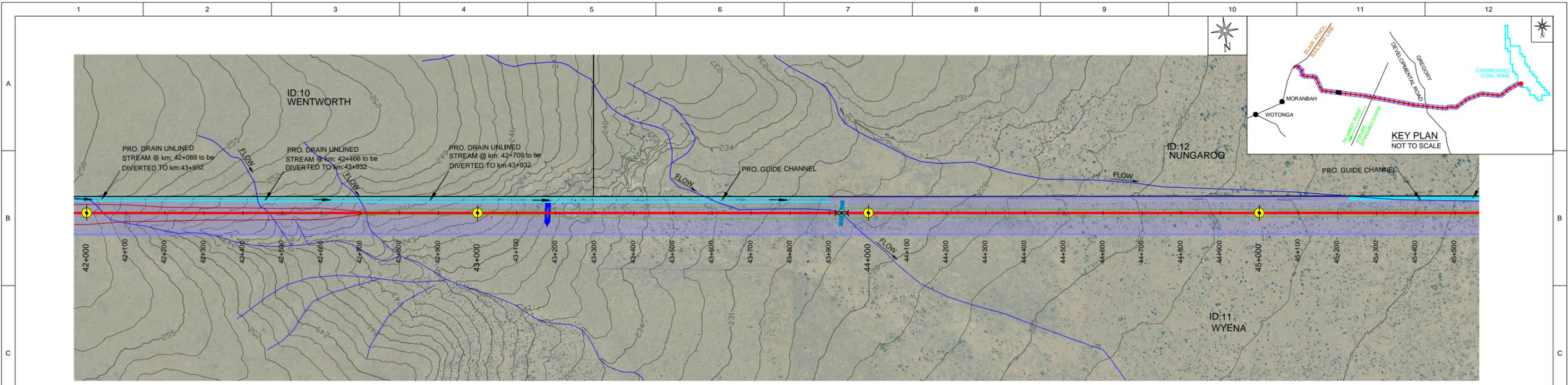
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
PLAN AND PROFILE - CH 38.5 - CH 42.0 - SHEET 12

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-112** REV **0**

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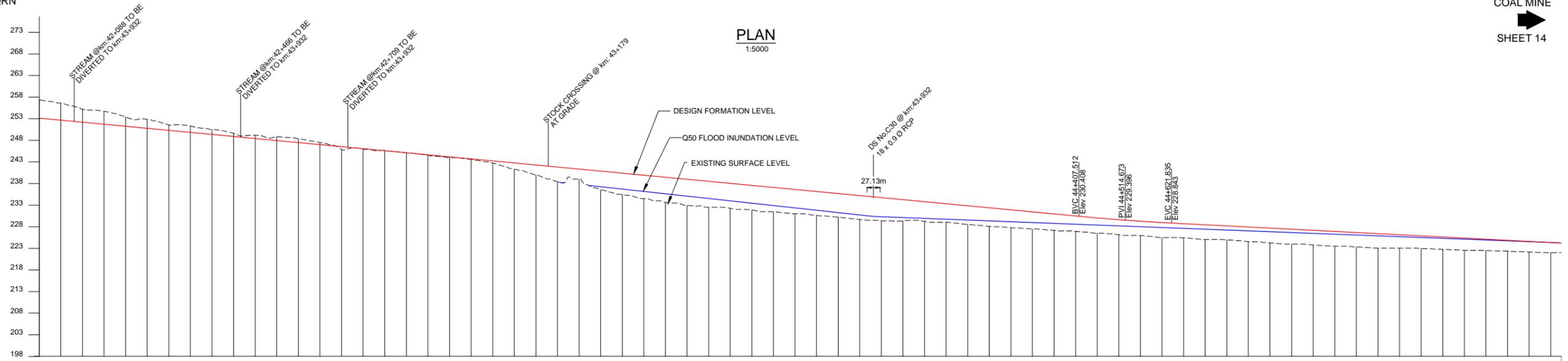
MORANBAH / QRN

SHEET 12

TO CARMICHAEL COAL MINE

SHEET 14

PLAN
1:5000



VERTICAL ALIGNMENT	DEPTH OF CUTTING(-)	HEIGHT OF BANK(+)	FORMATION LEVELS	SURFACE LEVELS	HORIZONTAL ALIGNMENT
1:106	4.259	257.409	253.150	257.409	L = 31233.15m
	3.903	256.581	252.676	256.581	
	2.999	255.205	252.206	255.205	
	2.871	254.704	251.733	254.704	
	2.174	253.435	251.261	253.435	
	2.062	252.851	250.788	252.851	
	1.201	251.517	250.316	251.517	
	1.474	251.318	249.844	251.318	
	1.128	250.500	249.372	250.500	
	0.717	249.616	248.899	249.616	
	0.730	249.157	248.427	249.157	
	0.837	248.792	247.955	248.792	
	0.868	248.350	247.482	248.350	
	0.489	247.498	247.010	247.498	
	0.639	245.899	246.538	245.899	
	0.125	245.940	246.065	245.940	
	0.090	245.683	245.593	245.683	
	0.004	245.125	245.121	245.125	
		244.519	244.649	244.519	
		243.980	244.176	243.980	
		243.568	243.704	243.568	
		242.729	243.232	242.729	
		241.309	242.759	241.309	
		240.000	242.287	240.000	
		238.390	241.815	238.390	
		239.000	241.342	239.000	
		236.510	240.870	236.510	
		235.500	240.398	235.500	
		234.500	239.925	234.500	
		233.671	239.453	233.671	
		232.938	238.981	232.938	
		232.500	238.509	232.500	
		232.253	238.036	232.253	
		231.887	237.564	231.887	
		231.458	237.092	231.458	
		231.000	236.619	231.000	
		230.610	236.147	230.610	
		230.201	235.675	230.201	
		229.685	235.202	229.685	
		229.387	234.730	229.387	
		229.337	234.258	229.337	
		229.227	233.785	229.227	
		229.000	233.313	229.000	
		228.525	232.841	228.525	
		228.097	232.369	228.097	
		227.748	231.896	227.748	
		227.500	231.424	227.500	
		227.168	230.952	227.168	
		226.907	230.479	226.907	
		226.500	230.025	226.500	
		226.138	229.520	226.138	
		225.950	229.265	225.950	
		225.500	228.961	225.500	
		225.422	228.696	225.422	
		225.000	228.440	225.000	
		224.832	228.182	224.832	
		224.530	227.924	224.530	
		224.259	227.666	224.259	
		224.000	227.408	224.000	
		223.761	227.150	223.761	
		223.500	226.892	223.500	
		223.316	226.634	223.316	
		223.000	226.376	223.000	
		223.000	226.118	223.000	
		222.955	225.860	222.955	
		222.742	225.602	222.742	
		222.525	225.344	222.525	
		222.471	225.086	222.471	
		222.328	224.828	222.328	
		222.148	224.570	222.148	
		222.000	224.312	222.000	

LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL:1:5000, VERTICAL:1:500



ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE	CW	RB

LEGEND:-

- KILOMETRE POST
- START OF PASSING LOOP
- END OF PASSING LOOP
- PROPERTY BOUNDARY
- PROPOSED ALIGNMENT (OPTION-11 REV-2)
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- OCCUPATIONAL CROSSING (OC) UNDER PASS
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- ROAD CROSSING (RAIL OVER ROAD)
- ROAD CROSSING (ROAD OVER RAIL)
- DRAINAGE STRUCTURE (DS)
- INDICATIVE ONLY
- RAILWAY BRIDGE
- WATER COURSE
- RAILWAY CORRIDOR
- EMBANKMENT TOE
- CUTTING TOE
- STREAM DIVERSION
- FUTURE PIPE LINE
- EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	
	NAME: CHRIS WARNOCK	18/12/12
	RPEQ No: 03423	

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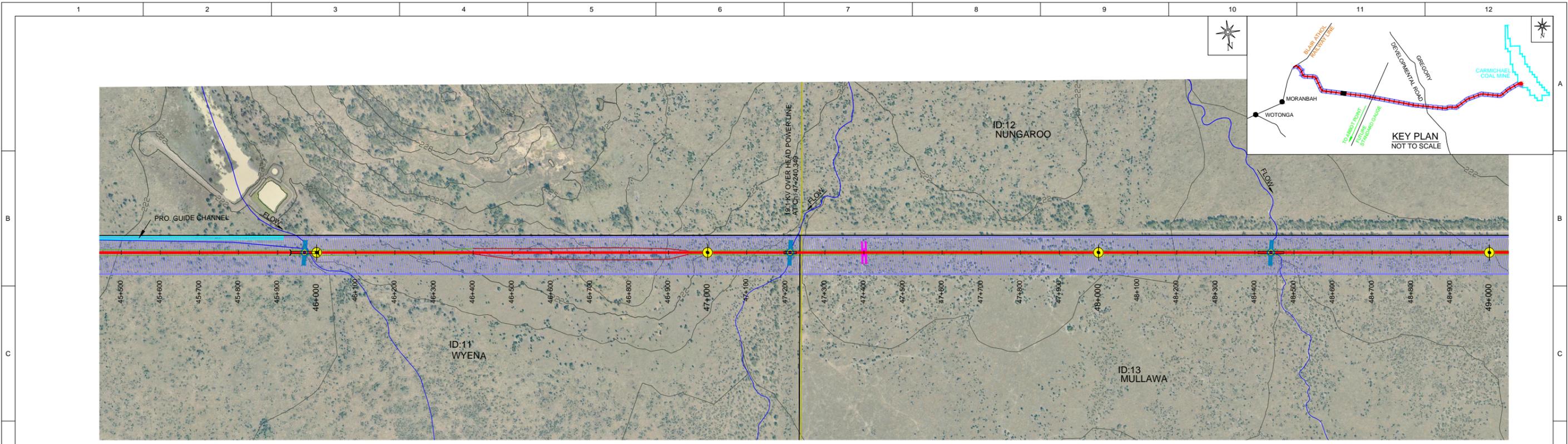
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL-EARTHWORKS
PLAN AND PROFILE - CH 42.0 - CH 45.5 - SHEET 13

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-113**

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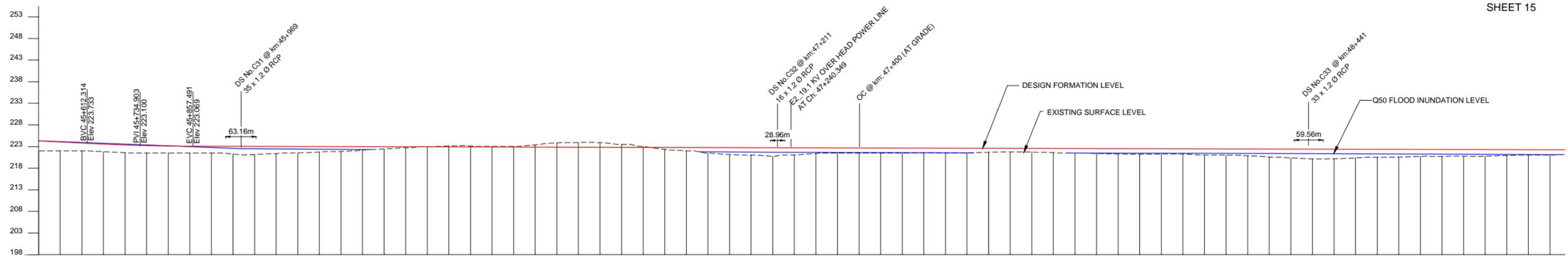
REV **0**



MORANBAH / QRN TO CARMICHAEL COAL MINE

SHEET 13 SHEET 15

PLAN
1:5000



VERTICAL ALIGNMENT	K500		1:3903	
DEPTH OF CUTTING(-)				
HEIGHT OF BANK(+)				
FORMATION LEVELS	224.312	224.054	223.796	223.552
SURFACE LEVELS	222.000	222.000	221.799	221.580
HORIZONTAL ALIGNMENT				
CHAINAGES	45+600	45+650	45+700	45+750
	45+800	45+850	45+900	45+950
	46+000	46+050	46+100	46+150
	46+200	46+250	46+300	46+350
	46+400	46+450	46+500	46+550
	46+600	46+650	46+700	46+750
	46+800	46+850	46+900	46+950
	47+000	47+050	47+100	47+150
	47+200	47+250	47+300	47+350
	47+400	47+450	47+500	47+550
	47+600	47+650	47+700	47+750
	47+800	47+850	47+900	47+950
	48+000	48+050	48+100	48+150
	48+200	48+250	48+300	48+350
	48+400	48+450	48+500	48+550
	48+600	48+650	48+700	48+750
	48+800	48+850	48+900	48+950
	49+000			

LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL:1:5000, VERTICAL:1:500



ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE	CW	RB

LEGEND:-

- KILOMETRE POST
- START OF PASSING LOOP
- END OF PASSING LOOP
- PROPERTY BOUNDARY
- PROPOSED ALIGNMENT (OPTION-11 REV-2)
- EXISTING RAILWAY LINE
- OCCUPATIONAL CROSSING (OC) AT GRADE
- OCCUPATIONAL CROSSING (OC) UNDER PASS
- ROAD CROSSING (AT GRADE)
- ROAD CROSSING (RAIL OVER ROAD)
- ROAD CROSSING (ROAD OVER RAIL)
- DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY)
- RAILWAY BRIDGE
- WATER COURSE
- RAILWAY CORRIDOR
- EMBANKMENT TOE
- CUTTING TOE
- STREAM DIVERSION
- FUTURE PIPE LINE
- EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL		
SIGNED:	CHRIS WARNOCK	18/12/12
NAME:	CHRIS WARNOCK	
RPEQ No:	03423	

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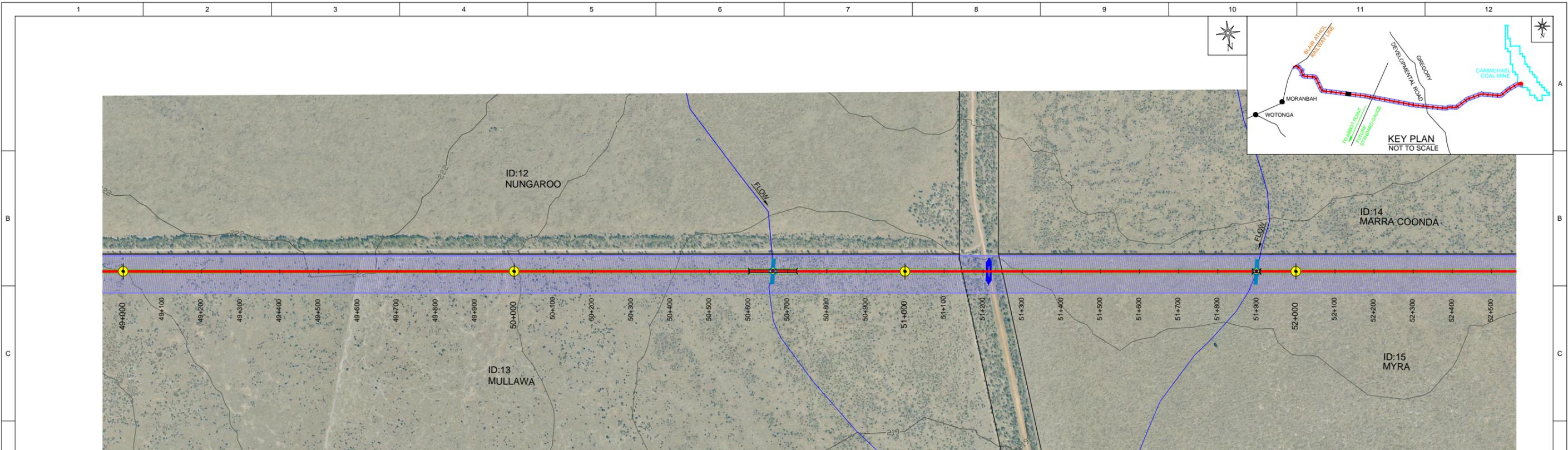
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL-EARTHWORKS
PLAN AND PROFILE - CH 45.5 - CH 49.0 - SHEET 14

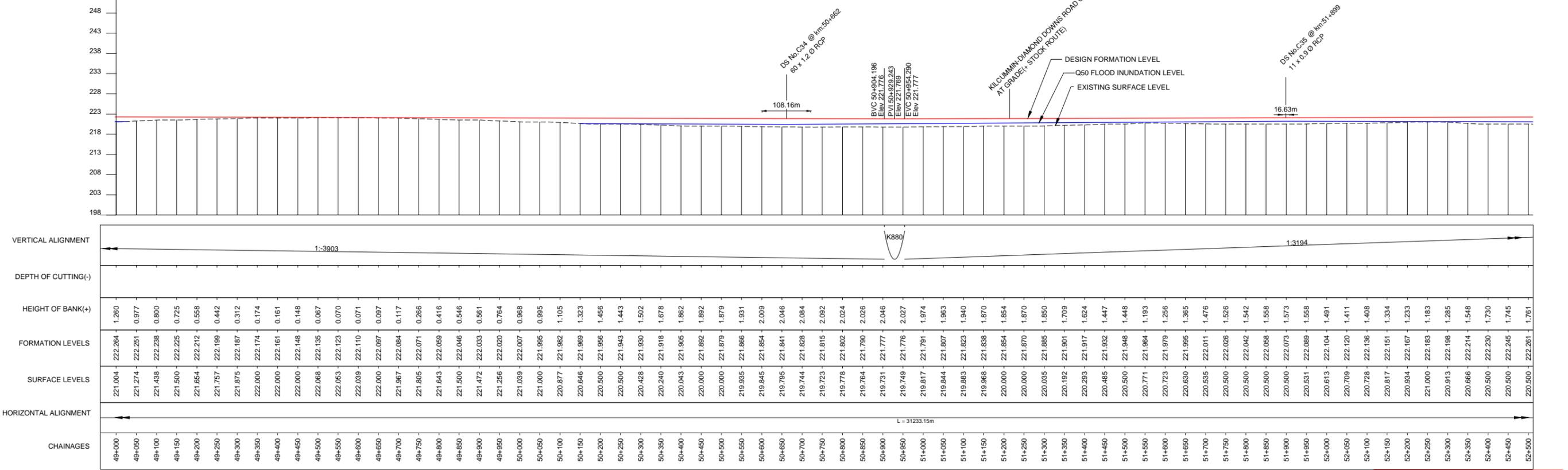
PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-114** REV **0**

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MORANBAH / QRN TO CARMICHAEL COAL MINE

SHEET 14 SHEET 16



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE		

LEGEND:-

KILOMETRE POST	OCCUPATIONAL CROSSING (OC) AT GRADE	RAILWAY BRIDGE
START OF PASSING LOOP	OCCUPATIONAL CROSSING (OC) UNDER PASS	WATER COURSE
END OF PASSING LOOP	ROAD CROSSING (AT GRADE)	RAILWAY CORRIDOR
PROPERTY BOUNDARY	ROAD CROSSING (RAIL OVER ROAD)	EMBANKMENT TOE
PROPOSED ALIGNMENT (OPTION-11 REV-2)	ROAD CROSSING (ROAD OVER RAIL)	CUTTING TOE
EXISTING RAILWAY LINE	DRAINAGE STRUCTURE (DS)	STREAM DIVERSION
	FUTURE PIPE LINE (INDICATIVE ONLY)	FUTURE PIPE LINE
	EXISTING SERVICES	EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	18/12/12
	NAME: CHRIS WARNOCK	
	RPEQ No: 03423	

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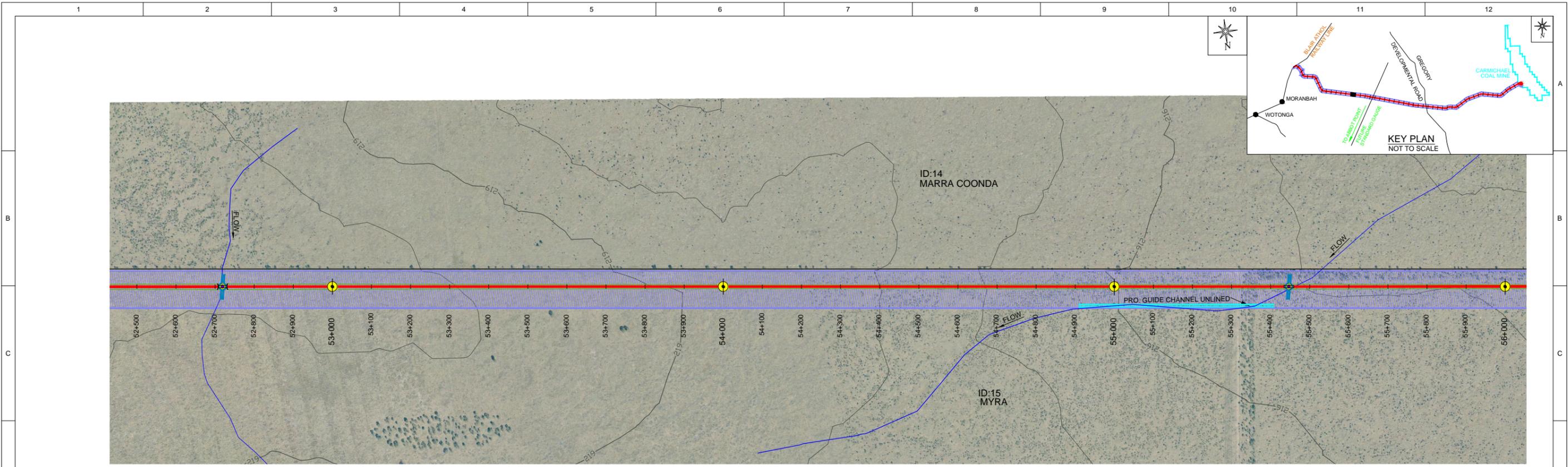
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL-EARTHWORKS
PLAN AND PROFILE - CH 49 - CH 52.5 - SHEET 15

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-115** REV **0**

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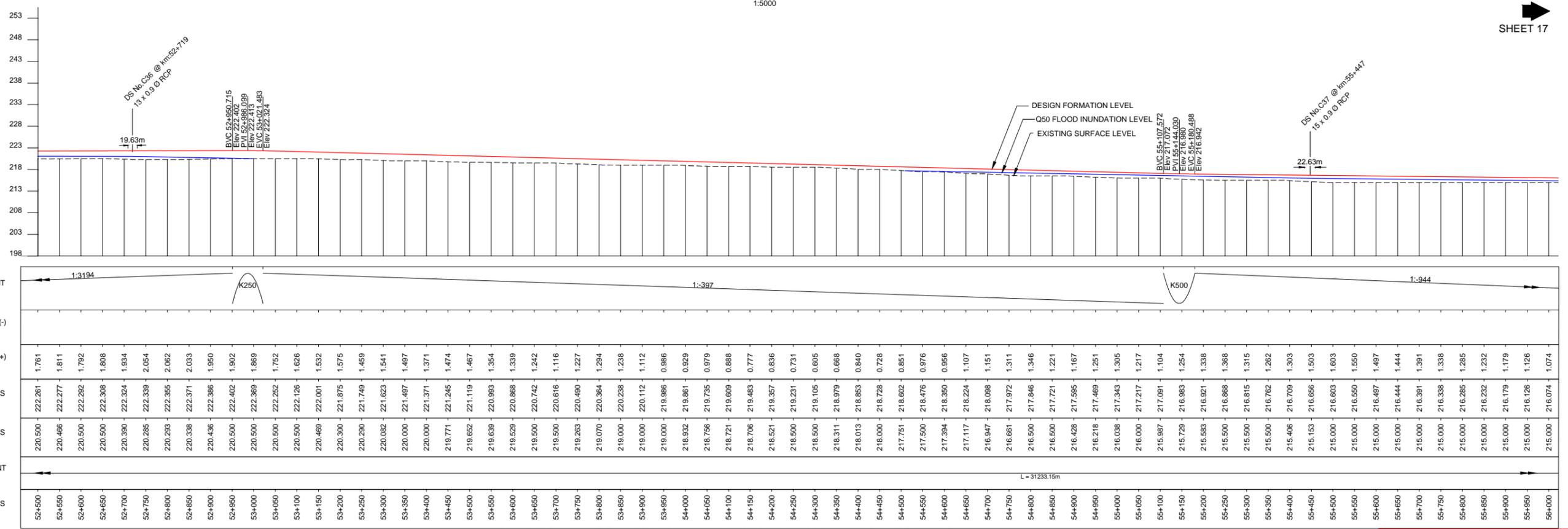
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PLAN
1:5000

MORANBAH / QRN
SHEET 15

TO CARMICHAEL
COAL MINE
SHEET 17



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL-1:5000, VERTICAL-1:500



ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE	CW	RB

LEGEND:-

KILOMETRE POST	OCCUPATIONAL CROSSING (OC) AT GRADE	RAILWAY BRIDGE
START OF PASSING LOOP	OCCUPATIONAL CROSSING (OC) UNDER PASS	WATER COURSE
END OF PASSING LOOP	ROAD CROSSING (AT GRADE)	RAILWAY CORRIDOR
PROPERTY BOUNDARY	ROAD CROSSING (RAIL OVER ROAD)	EMBANKMENT TOE
PROPOSED ALIGNMENT (OPTION-11 REV-2)	ROAD CROSSING (ROAD OVER RAIL)	CUTTING TOE
EXISTING RAILWAY LINE	DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY)	STREAM DIVERSION
		FUTURE PIPE LINE
		EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL		
SIGNED:	CHRIS WARNOCK	
NAME:	CHRIS WARNOCK	18/12/12
RPEQ No:	03423	

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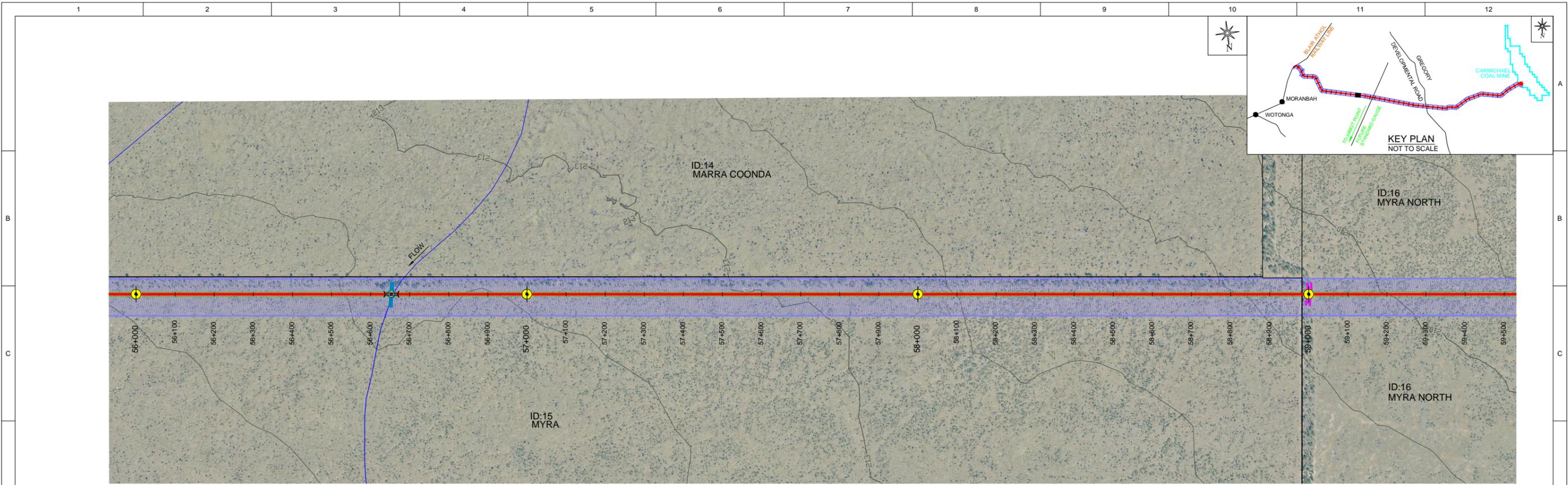
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL-EARTHWORKS
PLAN AND PROFILE - CH 52.5 - CH 56.0 - SHEET 16

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-116** REV **0**

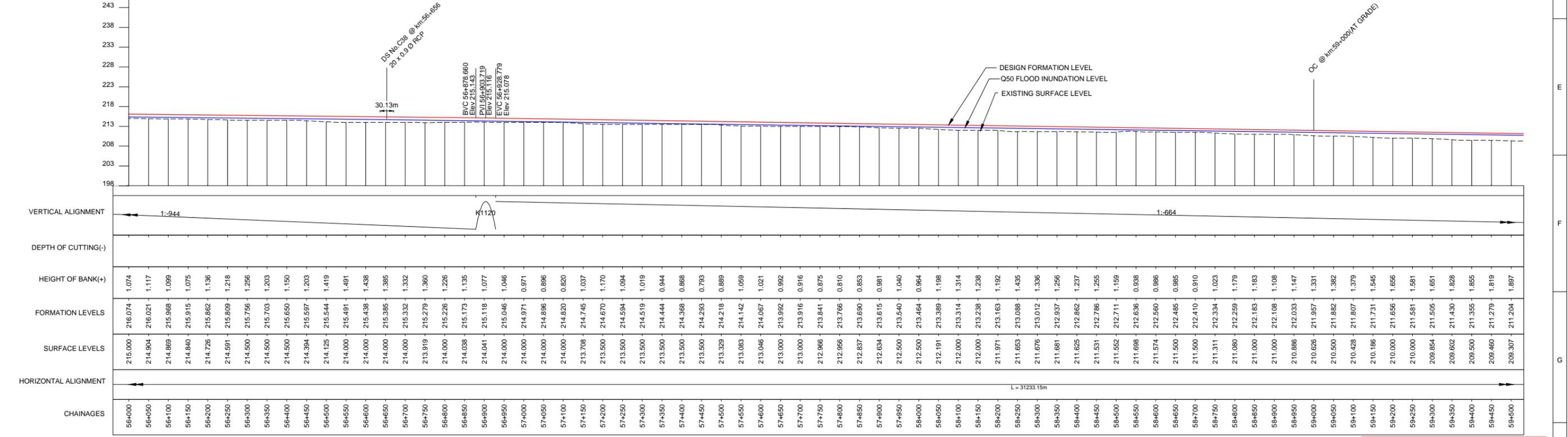
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PLAN
1:5000

MORANBAH / QRN
SHEET 16

TO CARMICHAEL
COAL MINE
SHEET 18



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL-1:5000, VERTICAL-1:500

REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE		

LEGEND:-

- KILOMETRE POST
- START OF PASSING LOOP
- END OF PASSING LOOP
- PROPERTY BOUNDARY
- PROPOSED ALIGNMENT (OPTION-11 REV-2)
- EXISTING RAILWAY LINE
- OCCUPATIONAL CROSSING (OC) AT GRADE
- OCCUPATIONAL CROSSING (OC) UNDER PASS
- ROAD CROSSING (AT GRADE)
- ROAD CROSSING (RAIL OVER ROAD)
- ROAD CROSSING (ROAD OVER RAIL)
- DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY)
- RAILWAY BRIDGE
- WATER COURSE
- RAILWAY CORRIDOR
- EMBANKMENT TOE
- CUTTING TOE
- STREAM DIVERSION
- FUTURE PIPE LINE
- EXISTING SERVICES

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL	SIGNED: CHRIS WARNOCK	
	NAME: CHRIS WARNOCK	18/12/12
	RPEQ No: 03423	

calibre
Calibre Operations Pty. Ltd.
Ground Floor, 545 Queen St
Brisbane QLD 4000
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Aarvee Associates Pty. Ltd.
Suite 39, Level 22, 69 Ann St
Brisbane QLD 4000
Australia
Tel: +61 (0)7 3112 5297
Fax: +61 (0)7 3112 5101

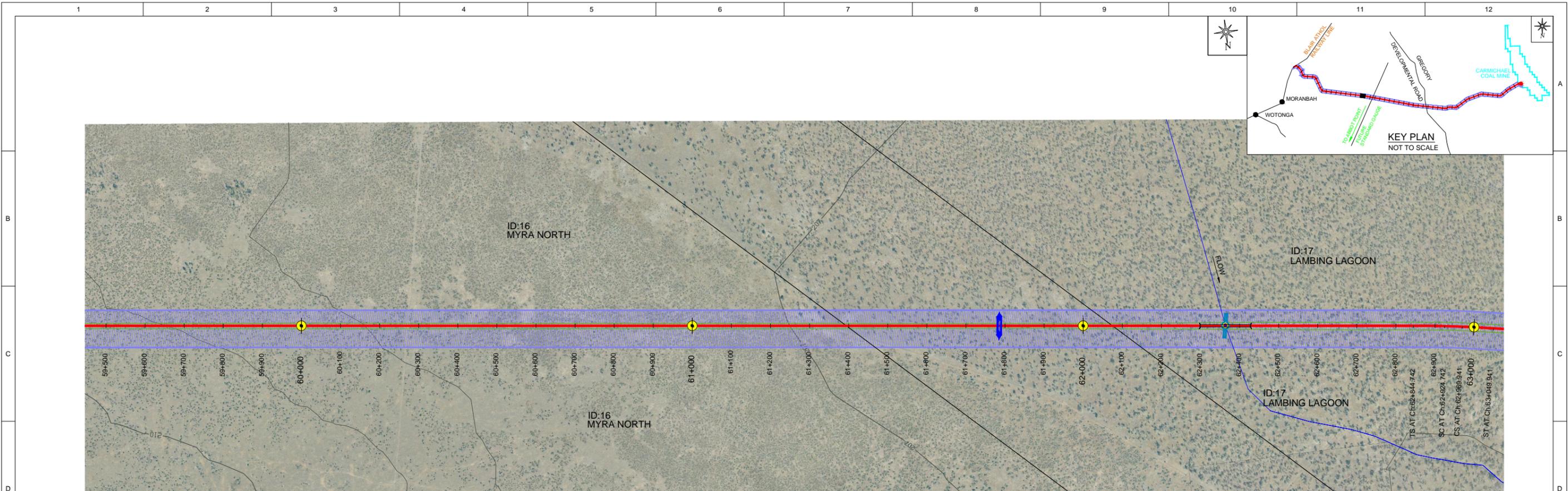
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL-EARTHWORKS
PLAN AND PROFILE - CH 56.0 - CH 59.5 - SHEET 17

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-117** REV **0**

ISSUED FOR USE
NOT FOR CONSTRUCTION

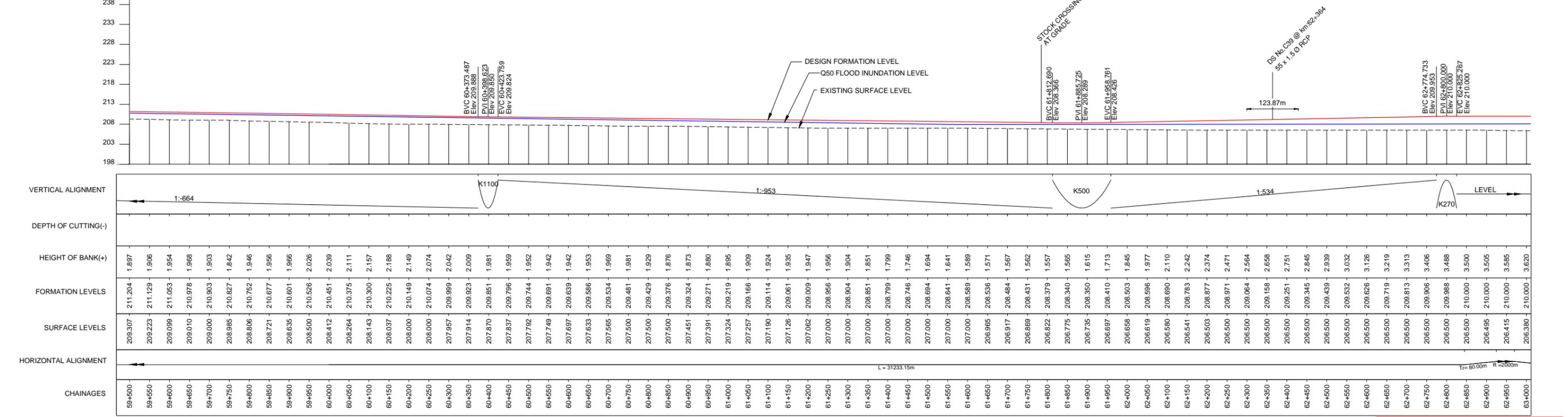
MASTER COPY



MORANBAH / QRN ← SHEET 17

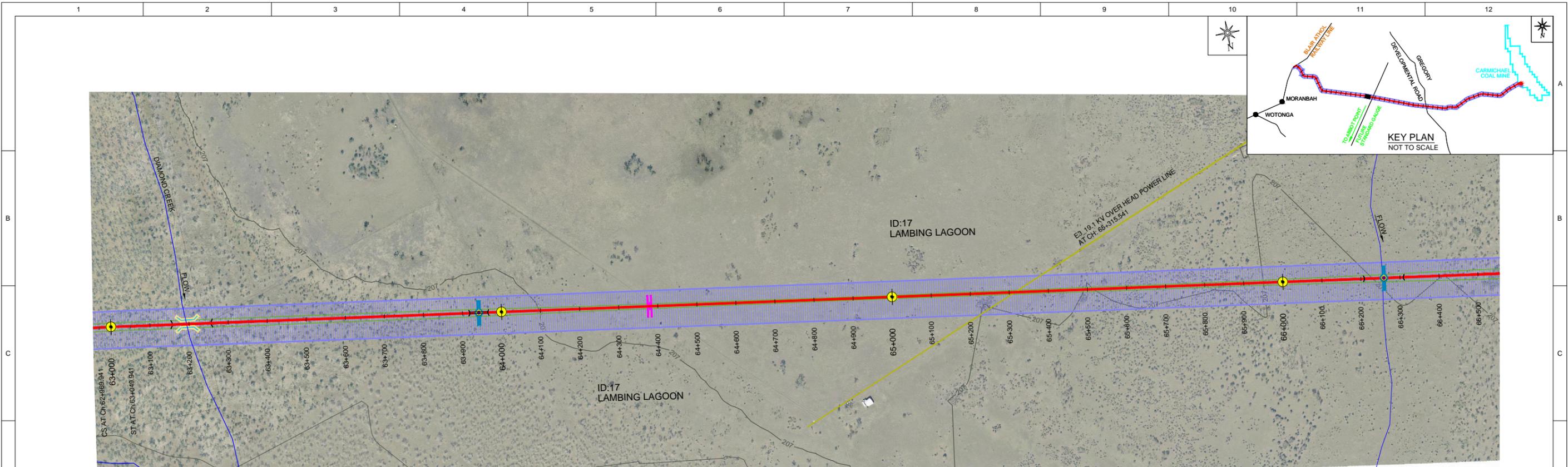
PLAN 1:5000

TO CARMICHAEL COAL MINE → SHEET 19



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL-1:5000, VERTICAL-1:500

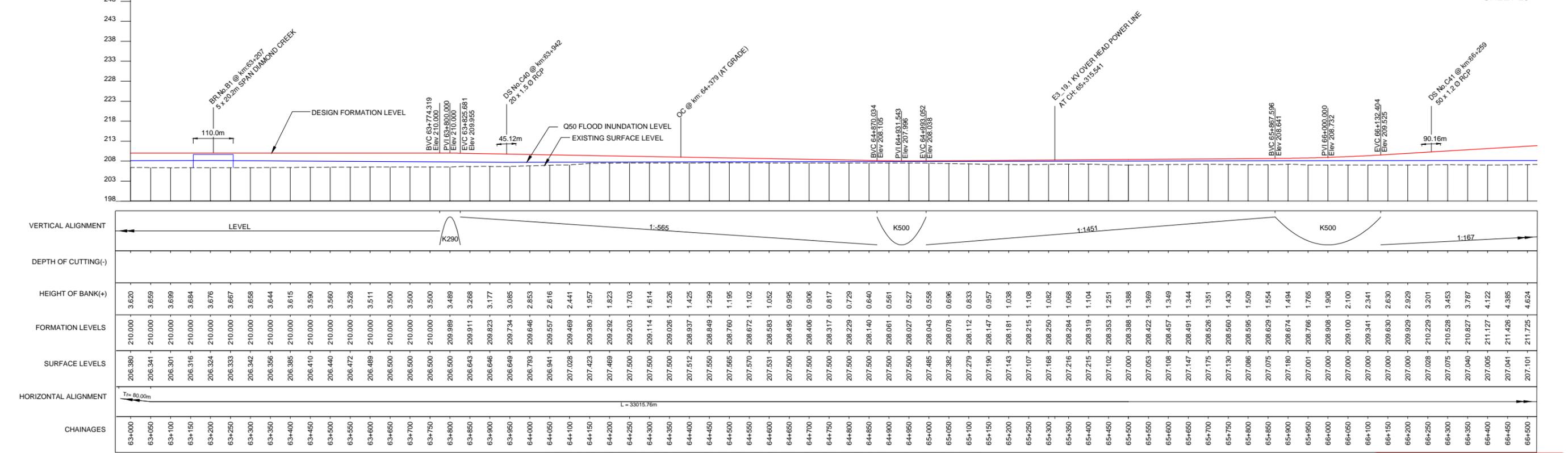
<p>REVISIONS</p> <table border="1"> <tr><th>REV</th><th>BY</th><th>DATE</th><th>DESCRIPTION</th><th>CKD</th><th>APP</th></tr> <tr><td>0</td><td>VS</td><td>18/12/12</td><td>ISSUED FOR USE</td><td>CW</td><td>RB</td></tr> </table>	REV	BY	DATE	DESCRIPTION	CKD	APP	0	VS	18/12/12	ISSUED FOR USE	CW	RB	<p>LEGEND:-</p> <ul style="list-style-type: none"> KILOMETRE POST START OF PASSING LOOP END OF PASSING LOOP PROPERTY BOUNDARY PROPOSED ALIGNMENT (OPTION-11 REV-2) EXISTING RAILWAY LINE OCCUPATIONAL CROSSING (OC) AT GRADE OCCUPATIONAL CROSSING (OC) UNDER PASS ROAD CROSSING (AT GRADE) ROAD CROSSING (RAIL OVER ROAD) ROAD CROSSING (ROAD OVER RAIL) DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY) RAILWAY BRIDGE WATER COURSE RAILWAY CORRIDOR EMBANKMENT TOE CUTTING TOE STREAM DIVERSION FUTURE PIPE LINE EXISTING SERVICES 	<p>DESIGN DATA</p> <p>DESIGN FORMATION LEVEL Q50 FLOOD INUNDATION LEVEL EXISTING SURFACE LEVEL</p> <p>STOCK CROSSING @ km 61+785 DS No C58 @ km 62+354 55 x 1.5 D Pcp</p> <p>BVC 60+373.487 Elev 209.888 PVI 60+398.623 Elev 209.850 EVC 60+423.759 Elev 209.824</p> <p>BVC 61+812.890 Elev 208.306 PVI 61+865.725 Elev 208.289 EVC 61+958.761 Elev 208.426</p> <p>BVC 62+774.733 Elev 209.953 PVI 62+800.000 Elev 210.000 EVC 62+825.267 Elev 210.000</p>	<p>PROJECT INFORMATION</p> <p>PROJECT MANAGER: RICHARD BROMILOW</p> <p>SIGNED: CHRIS WARNOCK NAME: CHRIS WARNOCK RPEQ No: 03423</p> <p>18/12/12</p> <p>18/12/12</p> <p>18/12/12</p> <p>18/12/12</p>	<p>CLIENTS</p> <p>Calibre Operations Pty. Ltd. Ground Floor, 545 Queen St. Brisbane QLD 4000 Australia Tel: +61 (0)7 3001 6000 Fax: +61 (0)7 3001 6050</p> <p>adani</p> <p>CARMICHAEL COAL MINE AND RAIL PROJECT ADANI CLIENT'S ENGINEER - RAIL CIVIL-EARTHWORKS PLAN AND PROFILE - CH 59.5 - CH 63.0 - SHEET 18</p> <p>PROJECT No. CARP12033 DRG No. CARP12033-1000-DWG-Y-118</p>	<p>ISSUED FOR USE NOT FOR CONSTRUCTION</p> <p>MASTER COPY</p> <p>ORIGINAL SIZE A1</p> <p>REV 0</p>
REV	BY	DATE	DESCRIPTION	CKD	APP												
0	VS	18/12/12	ISSUED FOR USE	CW	RB												



MORANBAH / QRN TO CARMICHAEL COAL MINE

SHEET 18 SHEET 20

PLAN
1:5000



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL: 1:5000, VERTICAL: 1:500

LEGEND:-

- KILOMETRE POST
- START OF PASSING LOOP
- END OF PASSING LOOP
- PROPERTY BOUNDARY
- PROPOSED ALIGNMENT (OPTION-11 REV-2)
- EXISTING RAILWAY LINE
- OCCUPATIONAL CROSSING (OC) AT GRADE
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- DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY)
- RAILWAY BRIDGE
- WATER COURSE
- RAILWAY CORRIDOR
- EMBANKMENT TOE
- CUTTING TOE
- STREAM DIVERSION
- FUTURE PIPE LINE
- EXISTING SERVICES

DRAWN: V SURESH 18/12/12

DRAFTING CHECK: A S SUBRAHMANYAM 18/12/12

ENG. APPROVED: AN KESKAR 18/12/12

PROJECT MANAGER: RICHARD BROMILOW 18/12/12

RPEQ APPROVAL: CHRIS WARNOCK 18/12/12

SIGNED: CHRIS WARNOCK 18/12/12

NAME: CHRIS WARNOCK

RPEQ No: 03423

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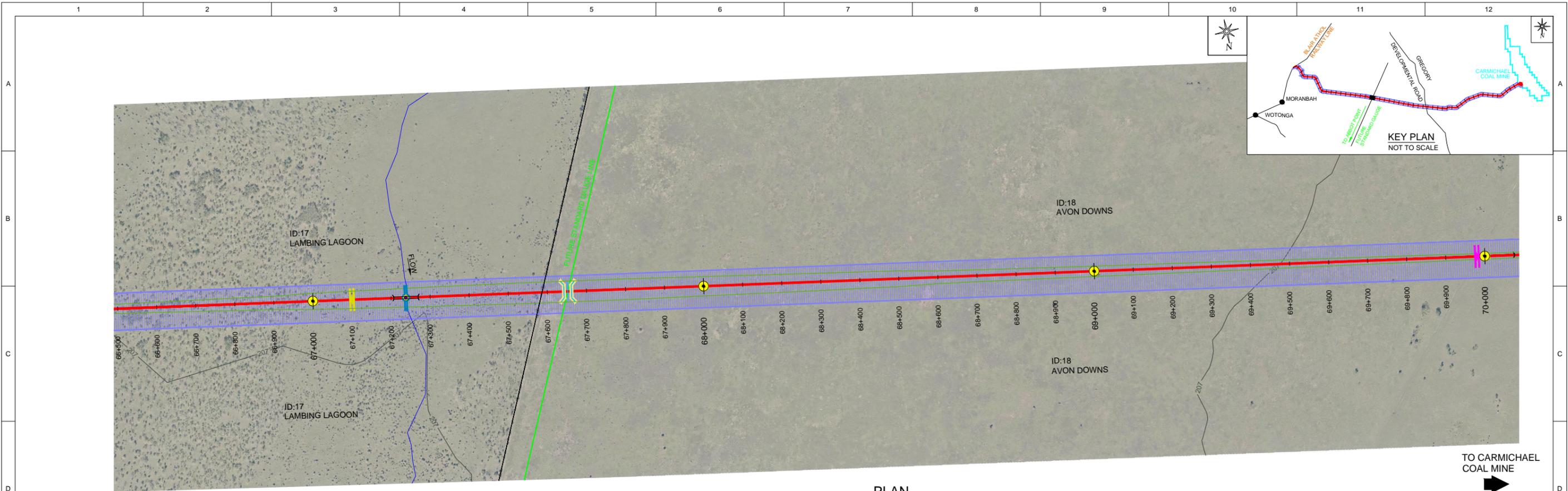
ORIGINAL SIZE A1

ISSUED FOR USE
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MASTER COPY

CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL-EARTHWORKS
PLAN AND PROFILE - CH 63.0 - CH 66.5 - SHEET 19

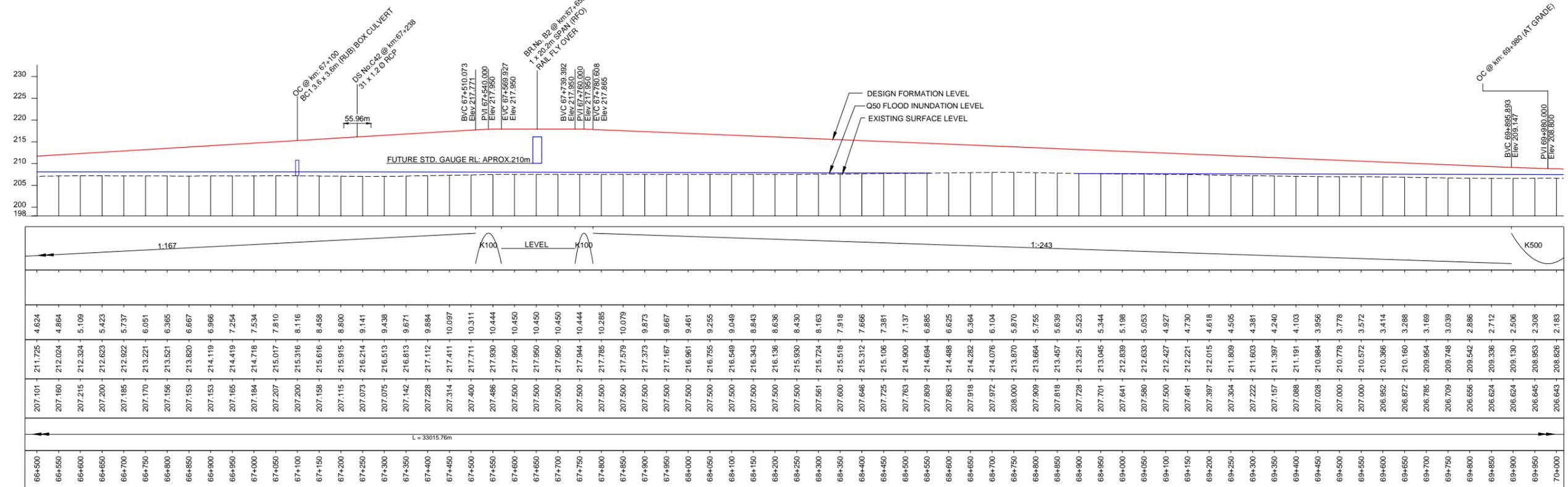
PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-119** REV **0**



PLAN
1:5000

MORANBAH / QRN
←
SHEET 19

TO CARMICHAEL
COAL MINE
→
SHEET 21



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL-1:5000, VERTICAL-1:500



ISSUED FOR USE
NOT FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	CKD	APP
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LEGEND:-	
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	OCCUPATIONAL CROSSING (OC) UNDER PASS
	ROAD CROSSING (AT GRADE)
	ROAD CROSSING (RAIL OVER ROAD)
	ROAD CROSSING (ROAD OVER RAIL)
	DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY)
	RAILWAY BRIDGE
	WATER COURSE
	RAILWAY CORRIDOR
	EMBANKMENT TOE
	CUTTING TOE
	STREAM DIVERSION
	FUTURE STANDARD GAUGE LINE

DRAWN	V SURESH	18/12/12
DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12
ENG. APPROVED	AN KESKAR	18/12/12
PROJECT MANAGER	RICHARD BROMILOW	18/12/12
RPEQ APPROVAL		
SIGNED:	CHRIS WARNOCK	18/12/12
NAME:	CHRIS WARNOCK	
RPEQ No:	03423	

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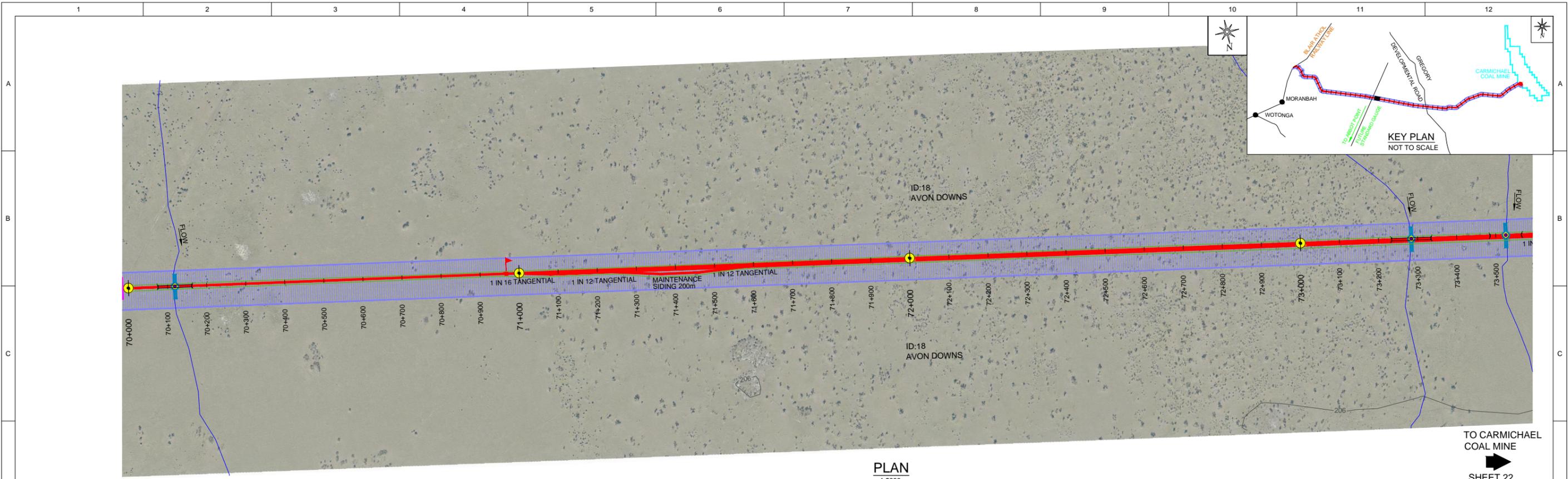
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
PLAN AND PROFILE - CH 66.5 - CH 70.0 - SHEET 20

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-120** REV **0**

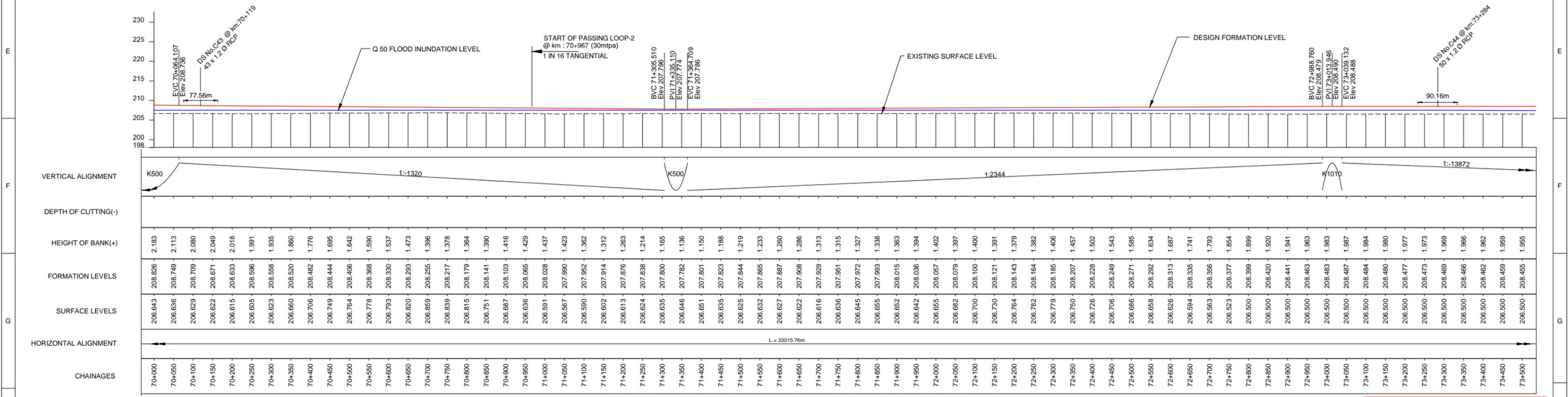
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PLAN
1:5000

MORANBAH / QRN
← SHEET 20

TO CARMICHAEL COAL MINE
→ SHEET 22

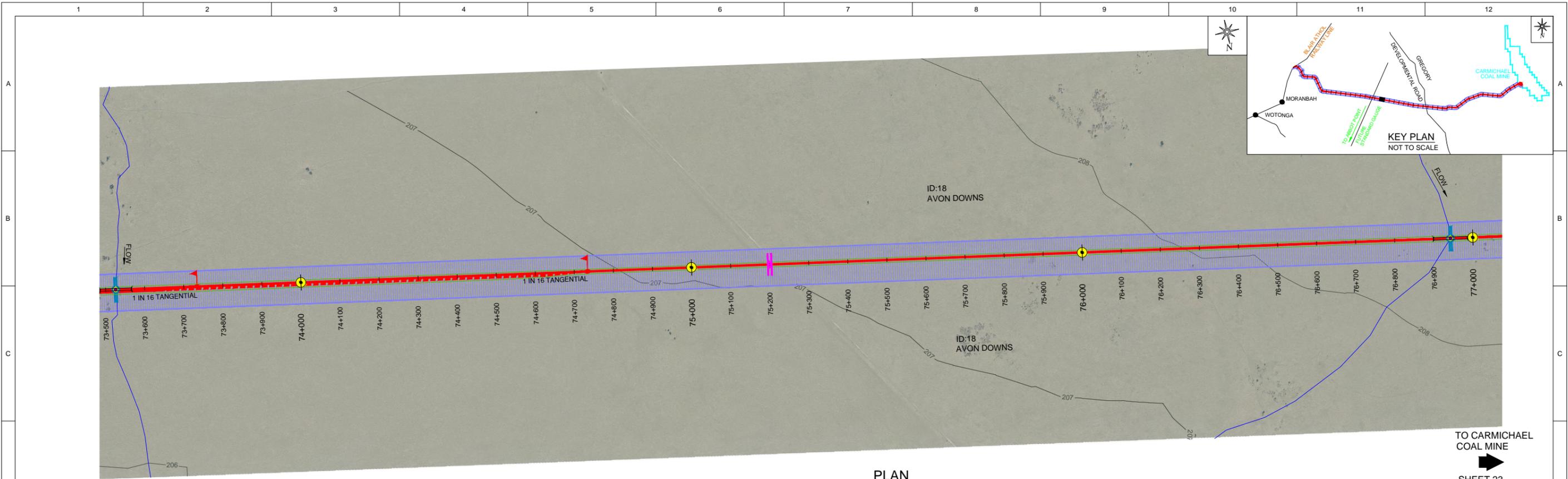


LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL: 1:5000, VERTICAL: 1:500

REVISIONS <table border="1"> <tr><th>REV</th><th>BY</th><th>DATE</th><th>DESCRIPTION</th><th>CKD</th><th>APP</th></tr> <tr><td>0</td><td>VS</td><td>18/12/12</td><td>ISSUED FOR USE</td><td></td><td></td></tr> </table>		REV	BY	DATE	DESCRIPTION	CKD	APP	0	VS	18/12/12	ISSUED FOR USE			LEGEND:- <ul style="list-style-type: none"> KILOMETRE POST START OF PASSING LOOP END OF PASSING LOOP PROPERTY BOUNDARY PROPOSED ALIGNMENT (OPTION-11 REV-2) EXISTING RAILWAY LINE OCCUPATIONAL CROSSING (OC) AT GRADE OCCUPATIONAL CROSSING (OC) UNDER PASS ROAD CROSSING (AT GRADE) ROAD CROSSING (RAIL OVER ROAD) ROAD CROSSING (ROAD OVER RAIL) DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY) RAILWAY BRIDGE WATER COURSE RAILWAY CORRIDOR EMBANKMENT TOE CUTTING TOE STREAM DIVERSION FUTURE PIPE LINE EXISTING SERVICES 		<table border="1"> <tr><td>DRAWN</td><td>V SURESH</td><td>18/12/12</td></tr> <tr><td>DRAFTING CHECK</td><td>A S SUBRAHMANYAM</td><td>18/12/12</td></tr> <tr><td>ENG. APPROVED</td><td>AN KESKAR</td><td>18/12/12</td></tr> <tr><td>PROJECT MANAGER</td><td>RICHARD BROMILOW</td><td>18/12/12</td></tr> <tr><td>RPEQ APPROVAL</td><td></td><td></td></tr> <tr><td>SIGNED:</td><td>CHRIS WARNOCK</td><td></td></tr> <tr><td>NAME:</td><td>CHRIS WARNOCK</td><td>18/12/12</td></tr> <tr><td>RPEQ No:</td><td>03423</td><td></td></tr> </table>		DRAWN	V SURESH	18/12/12	DRAFTING CHECK	A S SUBRAHMANYAM	18/12/12	ENG. APPROVED	AN KESKAR	18/12/12	PROJECT MANAGER	RICHARD BROMILOW	18/12/12	RPEQ APPROVAL			SIGNED:	CHRIS WARNOCK		NAME:	CHRIS WARNOCK	18/12/12	RPEQ No:	03423		<table border="1"> <tr><td colspan="2">Calibre Operations Pty. Ltd. Ground Floor, 545 Queen St. Brisbane QLD 4000 Australia Tel: +61 (0)7 3001 6000 Fax: +61 (0)7 3001 6050</td></tr> <tr><td colspan="2"></td></tr> <tr><td colspan="2">Aarvee associates Aarvee Associates Pty. Ltd. Suite 39, Level 22, 69 Ann St Brisbane QLD 4000 Australia Tel: +61 (0)7 3112 5297 Fax: +61 (0)7 3112 5101</td></tr> <tr><td colspan="2"></td></tr> </table>		Calibre Operations Pty. Ltd. Ground Floor, 545 Queen St. Brisbane QLD 4000 Australia Tel: +61 (0)7 3001 6000 Fax: +61 (0)7 3001 6050				Aarvee associates Aarvee Associates Pty. Ltd. Suite 39, Level 22, 69 Ann St Brisbane QLD 4000 Australia Tel: +61 (0)7 3112 5297 Fax: +61 (0)7 3112 5101				<table border="1"> <tr><td colspan="2"></td></tr> <tr><td colspan="2">CARMICHAEL COAL MINE AND RAIL PROJECT ADANI CLIENT'S ENGINEER - RAIL CIVIL - EARTHWORKS PLAN AND PROFILE - CH 70.0 - CH 73.5 - SHEET 21</td></tr> <tr><td colspan="2">PROJECT No. CARP12033</td></tr> <tr><td colspan="2">DRG No. CARP2033-1000-DWG-Y-121</td></tr> <tr><td colspan="2">REV 0</td></tr> </table>				CARMICHAEL COAL MINE AND RAIL PROJECT ADANI CLIENT'S ENGINEER - RAIL CIVIL - EARTHWORKS PLAN AND PROFILE - CH 70.0 - CH 73.5 - SHEET 21		PROJECT No. CARP12033		DRG No. CARP2033-1000-DWG-Y-121		REV 0	
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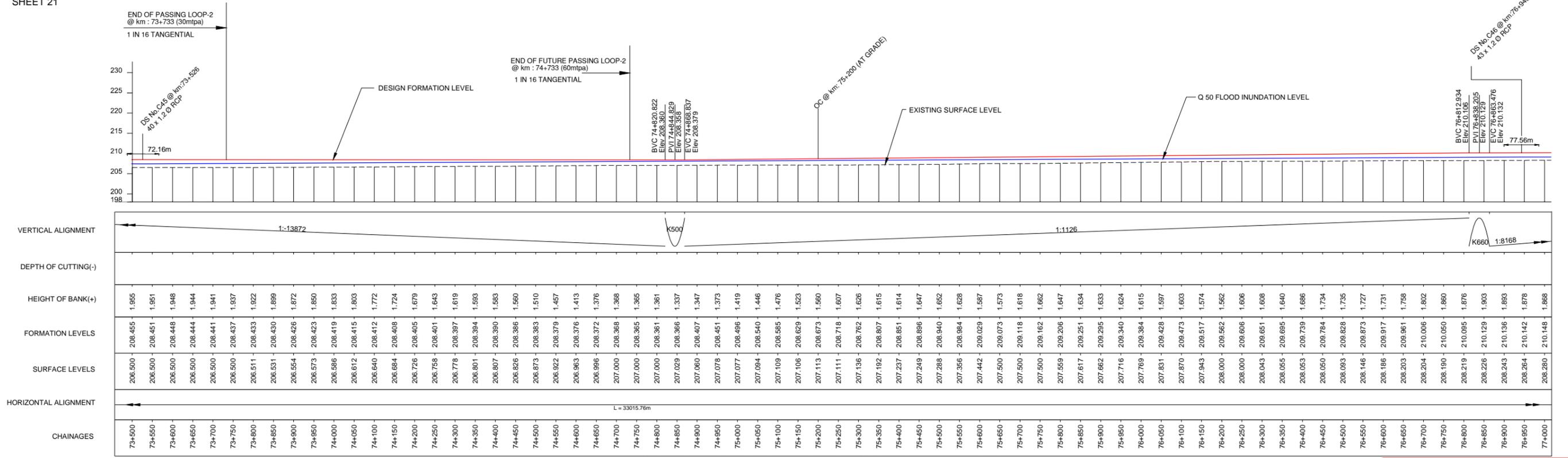
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PLAN
1:5000

MORANBAH / QRN
SHEET 21

TO CARMICHAEL
COAL MINE
SHEET 23



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL-1:5000, VERTICAL-1:500



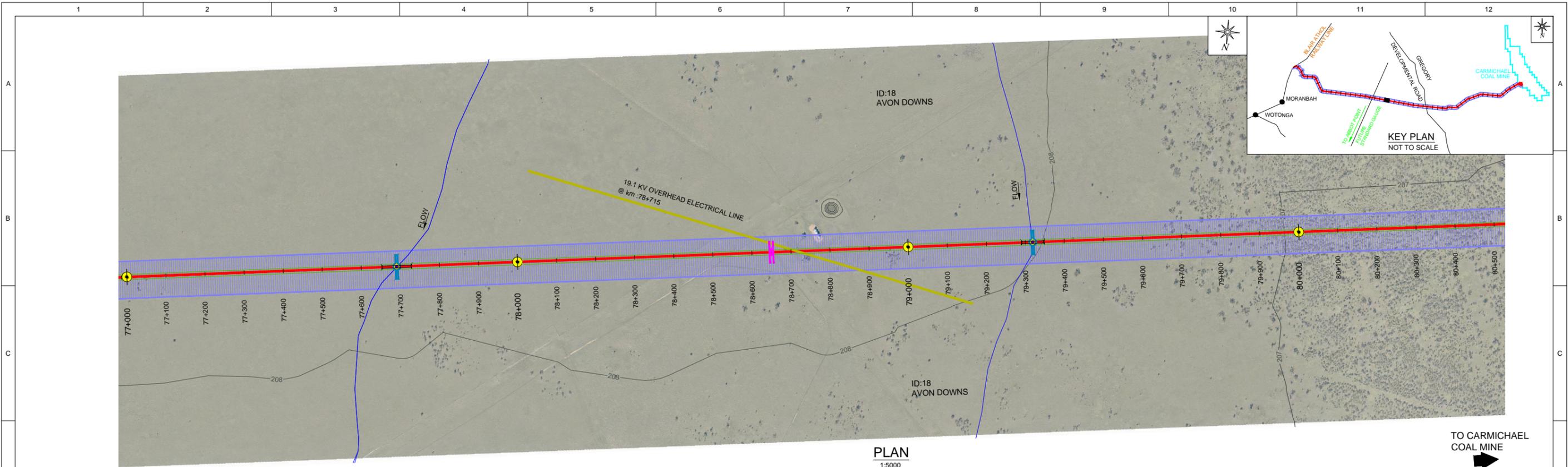
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REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE	CW	RB

NO.	DESCRIPTION	DATE	BY	APP.
1	DRAWN	18/12/12	V SURESH	
2	DRAFTING CHECK	18/12/12	A S SUBRAHMANYAM	
3	ENG. APPROVED	18/12/12	AN KESKAR	
4	PROJECT MANAGER	18/12/12	RICHARD BROMILOW	
5	RPEQ APPROVAL	18/12/12	CHRIS WARNOCK	
6	SIGNED	18/12/12	CHRIS WARNOCK	
7	NAME		CHRIS WARNOCK	
8	RPEQ No.		03423	

NO.	DESCRIPTION	DATE	BY	APP.
1	Calibre Operations Pty. Ltd. Ground Floor, 545 Queen St Brisbane QLD 4000 Australia Tel: +61 (0)7 3001 6000 Fax: +61 (0)7 3001 6050			
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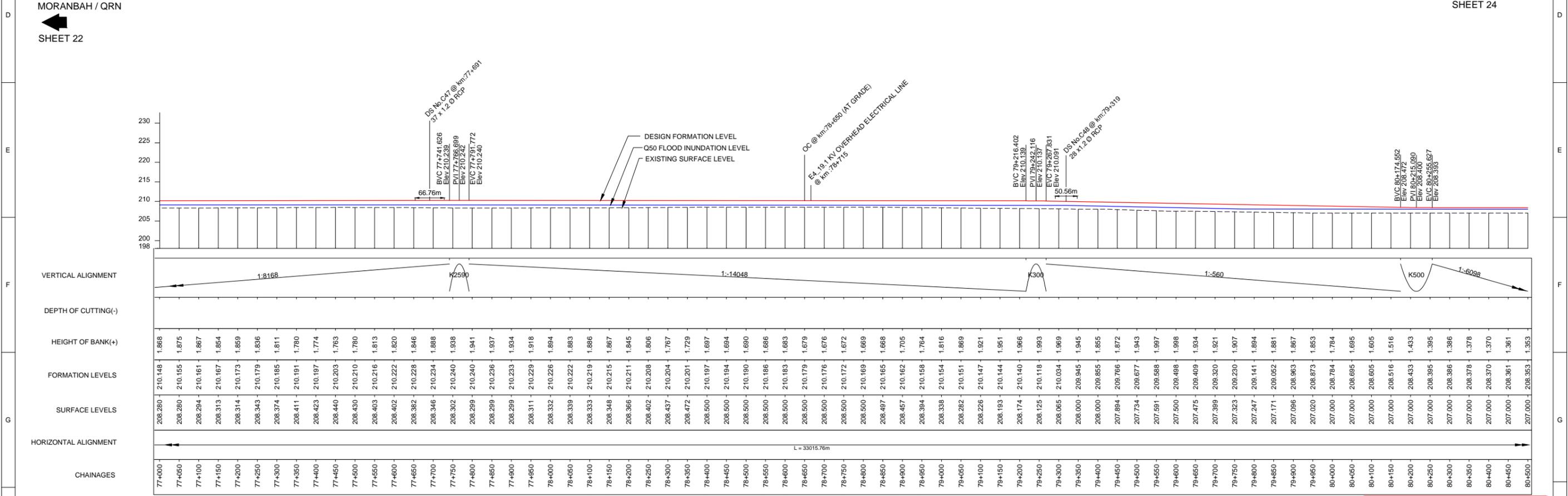
NO.	DESCRIPTION	DATE	BY	APP.
1	CARMICHAEL COAL MINE AND RAIL PROJECT ADANI CLIENT'S ENGINEER - RAIL CIVIL - EARTHWORKS PLAN AND PROFILE - CH 73.5 - CH 77.0 - SHEET 22			
2	PROJECT No. CARP12033			
3	DRG No. CARP12033-1000-DWG-Y-122			
4	REV 0			



PLAN
1:5000

MORANBAH / QRN
SHEET 22

TO CARMICHAEL
COAL MINE
SHEET 24



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL-1:5000, VERTICAL-1:500



ISSUED FOR USE
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REV	BY	DATE	DESCRIPTION	CKD	APP
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LEGEND:-	
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	START OF PASSING LOOP
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	ROAD CROSSING (ROAD OVER RAIL)
	DRAINAGE STRUCTURE (DS) (INDICATIVE ONLY)
	RAILWAY BRIDGE
	WATER COURSE
	RAILWAY CORRIDOR
	EMBANKMENT TOE
	CUTTING TOE
	STREAM DIVERSION
	FUTURE PIPE LINE
	EXISTING SERVICES

DRAWN	V SURESH	18/12/12
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adani

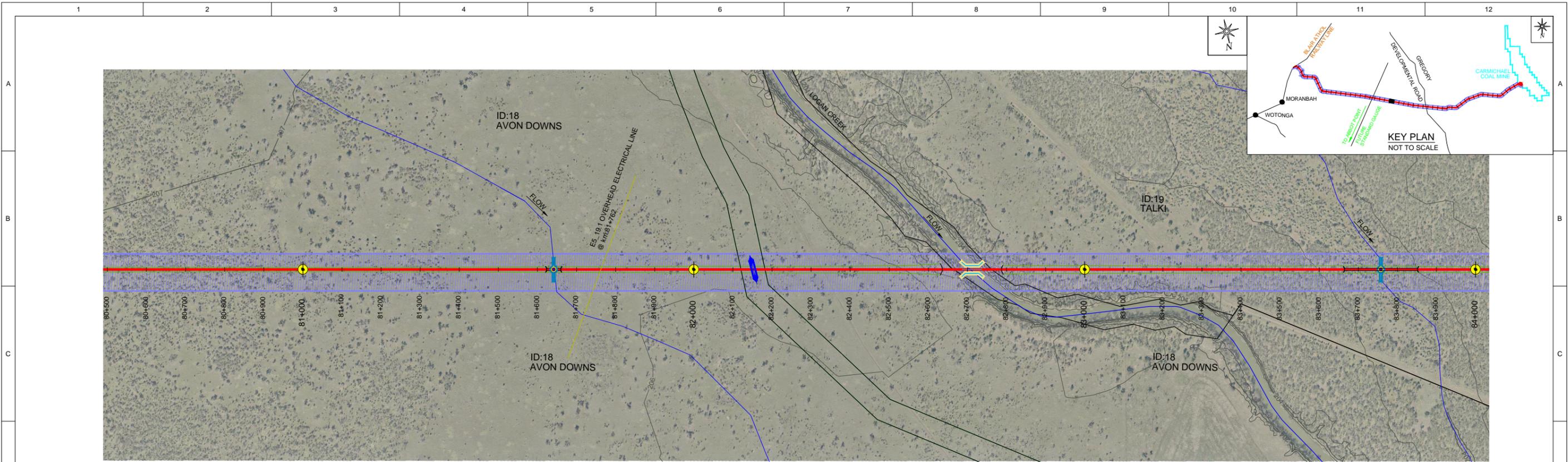
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ORIGINAL SIZE A1

CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
PLAN AND PROFILE - CH 77.0 - CH 80.5 - SHEET 23

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-123** REV **0**

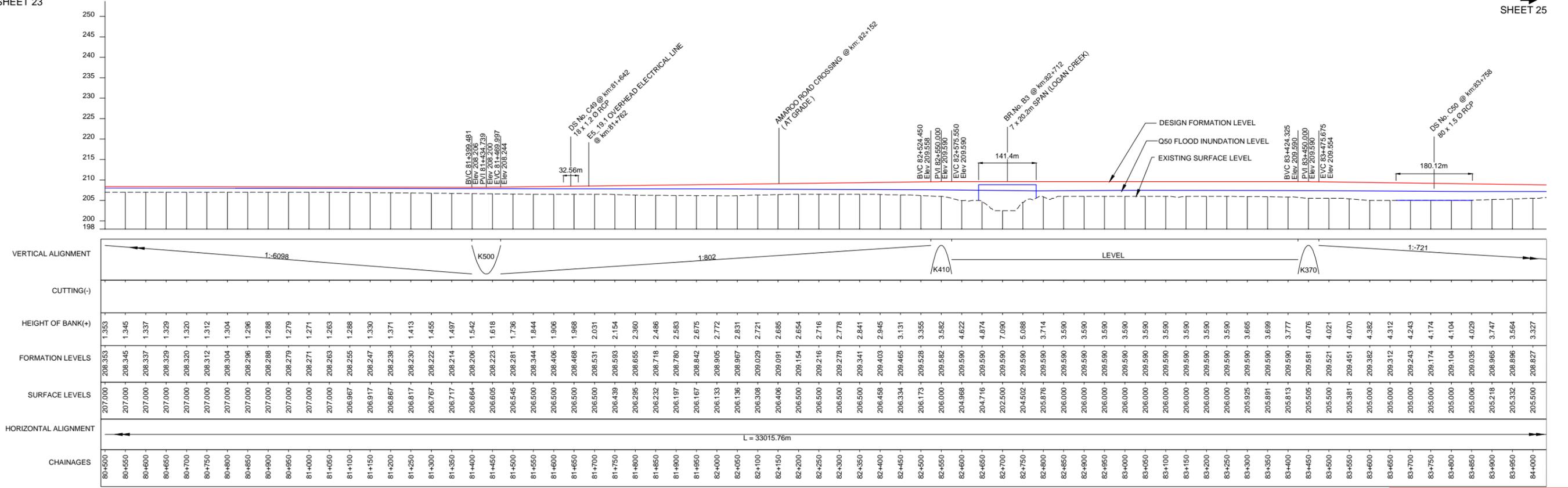
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PLAN
1:5000

MORANBAH / QRN
SHEET 23

TO CARMICHAEL COAL MINE
SHEET 25



LONGITUDINAL PROFILE ALONG RAIL FORMATION CENTRE LINE
HORIZONTAL-1:5000, VERTICAL-1:500



ISSUED FOR USE
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REV	BY	DATE	DESCRIPTION	CKD	APP
0	VS	18/12/12	ISSUED FOR USE	CW	RB

LEGEND:-

KILOMETRE POST	OCCUPATIONAL CROSSING (OC) AT GRADE	RAILWAY BRIDGE
START OF PASSING LOOP	OCCUPATIONAL CROSSING (OC) UNDER PASS	WATER COURSE
END OF PASSING LOOP	ROAD CROSSING (AT GRADE)	RAILWAY CORRIDOR
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CARMICHAEL COAL MINE AND RAIL PROJECT
ADANI CLIENT'S ENGINEER - RAIL
CIVIL - EARTHWORKS
PLAN AND PROFILE - CH 80.5 - 84.0 - SHEET 24

PROJECT No. **CARP12033**
DRG No. **CARP12033-1000-DWG-Y-124** REV **0**

ORIGINAL SIZE A1

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