

KBR

Government and Infrastructure

555 Coronation Drive • Toowong QLD 4066 • PO Box 2177 • Toowong QLD 4066 • Australia

Phone 07 3721 6555 • Fax 07 3721 6500

BEV417-C01-S0030

DN

17 July 2006

Implementation & Assessment Branch
Gold Coast City Council
PO Box 5042
GOLD COAST MC QLD 5042
AUSTRALIA



Dear Sir/Madame,

YATALA INDUSTRIAL SUBDIVISION - OPERATIONAL WORKS APPROVAL

Please find attached the documentation required for submission of Operational Works for the above named Subdivision in response to GCCC conditions Ref: PN184435/02/DA1.

Attached with this letter are;

- 1 copy of Checklist for Development Applications
- 1 copy of Engineering Drawings – Application Checklist
- 1 copy of Form 1 Development Application Part A
- 1 copy of Form 1 Development Application IDAS Assessment checklist
- 1 copy of Form 1 Development Application Part E
- 1 set of A1 & A3 drawings detailed below.

Drawing no.	Description
BEV417-C-DWG-001	Site layout, locality plan and drawing index
BEV417-C-DWG-002	Bulk earthworks - Sheet 1 of 2
BEV417-C-DWG-003	Bulk earthworks - Sheet 2 of 2
BEV417-C-DWG-004	Roadwork's and drainage - Sheet 1 of 2
BEV417-C-DWG-005	Roadwork's and drainage - Sheet 2 of 2
BEV417-C-DWG-006	Longitudinal section road - Sheet 1 of 2
BEV417-C-DWG-007	Longitudinal section road - Sheet 2 of 2
BEV417-C-DWG-008	Intersection and cul-de-sac details
BEV417-C-DWG-009	Drainage longitudinal sections - Sheet 1 of 3
BEV417-C-DWG-010	Drainage longitudinal sections - Sheet 2 of 3
BEV417-C-DWG-011	Drainage longitudinal sections - Sheet 3 of 3

GCCC-IMU



BEV417-C-DWG-012	Cul-de-sac drainage, layout plan
BEV417-C-DWG-013	Drainage miscellaneous details
BEV417-C-DWG-014	Detention / water quality basin setout - Sheet 1 of 1
BEV417-C-DWG-015	Detention / water quality basin details - Sheet 1 of 1
BEV417-C-DWG-016	Detention / water quality basin planting - Sheet 1 of 1
BEV417-C-DWG-017	Drainage calculations table - Sheet 1 of 3
BEV417-C-DWG-018	Drainage calculations table - Sheet 2 of 3
BEV417-C-DWG-019	Drainage calculations table - Sheet 3 of 3
BEV417-C-DWG-101	Cross sections road - Sheet 1 of 9
BEV417-C-DWG-102	Cross sections road - Sheet 2 of 9
BEV417-C-DWG-103	Cross sections road - Sheet 3 of 9
BEV417-C-DWG-104	Cross sections road - Sheet 4 of 9
BEV417-C-DWG-105	Cross sections road - Sheet 5 of 9
BEV417-C-DWG-106	Cross sections road - Sheet 6 of 9
BEV417-C-DWG-107	Cross sections road - Sheet 7 of 9
BEV417-C-DWG-108	Cross sections road - Sheet 8 of 9
BEV417-C-DWG-109	Cross sections road - Sheet 9 of 9
BEV417-C-DWG-110	Cross section cul-de-sac - Sheet 1 of 2
BEV417-C-DWG-111	Cross section cul-de-sac - Sheet 2 of 2
BEV417-C-DWG-112	Cross section open drain - Sheet 1 of 6
BEV417-C-DWG-113	Cross section open drain - Sheet 2 of 6
BEV417-C-DWG-114	Cross section open drain - Sheet 3 of 6
BEV417-C-DWG-115	Cross section open drain - Sheet 4 of 6
BEV417-C-DWG-116	Cross section open drain - Sheet 5 of 6
BEV417-C-DWG-117	Cross section open drain - Sheet 6 of 6
BEV417-C-DWG-118	Catchment areas
BEV417-C-DWG-202	Sewer reticulation layout plan
BEV417-C-DWG-203	Sewer rising main layout plan - Sheet 1 of 2
BEV417-C-DWG-204	Sewer rising main layout plan - Sheet 2 of 2
BEV417-C-DWG-205	Sewer reticulation main longitudinal section
BEV417-C-DWG-206	Sewer rising main longitudinal section - Sheet 1 of 3
BEV417-C-DWG-207	Sewer rising main longitudinal section - Sheet 2 of 3
BEV417-C-DWG-208	Sewer rising main longitudinal section - Sheet 3 of 3
BEV417-C-DWG-209	Water reticulation layout plan - Sheet 1 of 2
BEV417-C-DWG-210	Water reticulation layout plan - Sheet 2 of 2

The project specification and flood study have been submitted under separate correspondence.

I trust this information is acceptable for Operational Works approval.

Should you require any further information please do not hesitate to contact the undersigned.

KBR

Yours sincerely



Derek Neuhold

Senior Engineer

Enc.

Cc: Ken Fraser (Quad Consulting)

Cc: Michael Scammels (King & Co Advisory)

KBR

Government and Infrastructure

555 Coronation Drive • Toowong QLD 4066 • PO Box 2177 • Toowong QLD 4066 • Australia

Phone 07 3721 6555 • Fax 07 3721 6500

BEV417-C01-S0031

DN

17 July 2006

QUAD Consulting
99 Annerley Road
Woolloongabba
QLD 4012

Dear Sir/Madame,

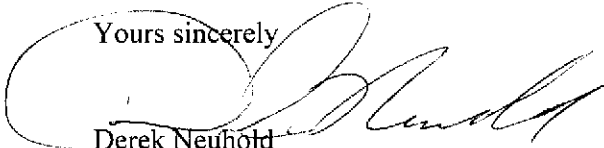
YATALA INDUSTRIAL SUBDIVISION - OPERATIONAL WORKS APPROVAL

Please find attached the documentation required for resubmission of Operational Works.

Please sign both sets of IDAS documents and return one copy for my records. The second copy should be included with the correspondence and drawings for submission to Gold Coast City Council.

Should you require any further information please do not hesitate to contact the undersigned.

Yours sincerely



Derek Neuhold

Senior Engineer

Enc.

Checklist for Development Applications

IA C02

Application Type Please ☒ / ☐

Material Change of Use (MCU)	Proposed Use:	☐ Code	☐ Impact
Operational Works (OPW)	Reconfiguration of a Lot (ROL)	☐ Code	☐ Impact
☒ Change to Ground Level / Bulk Earthworks ☒ Civil Engineering Drawings ☐ Streetlighting & Electrical Drawings ☐ Tree Works - Private/Development ☐ Landscape Works ☐ Car Parking ☒ Sewer & Water Reticulation, Stormwater Drainage ☒ Sediment & Erosion Control	☐ Boundary Realignment (BR) ☐ Access Easement (AE) ☐ Community Title (CT) ☐ Subdivision by Lease (LE) ☐ Volumetric Subdivision (VOL) ☐ Freehold Subdivision (FRE) ☐ Management Lot Subdivision (MAG) ☐ Miscellaneous (MIS)		

PART A - Mandatory Items for 'Properly Made' Application Please ☒ / ☐

	Applicant	Receiving Officer
☒ Signature of all land owners of the site which is the subject of the application (please refer to requirements listed in ITEM 1 on page 2)	☒	☐
☐ Correct application fee as prescribed by current Council Budget. Fee Paid: \$... -	☐	☐
☒ All parts of relevant IDAS application forms completed including IDAS Referrals Checklist if applicable.	☒	☐

PART B - Additional Requirements for a 'Well Made' Application Please ☒ / ☐

	Applicant	Receiving Officer
☒ IDENTIFICATION OF APPLICABLE CODES: Please ☒ all relevant Codes that apply to the proposed development.	☐	☐

Place Codes		Specific Development Codes	Constraint Codes
Local Area Plan	Domain		
☐ Beenleigh Town Centre ☐ Broadbeach ☐ Bundall Central ☐ Bundall Equestrian ☐ Burleigh ☐ Burleigh Ridge ☐ Chevron Island ☐ Coolangatta ☐ Coomera ☐ Coomera Town Centre ☐ Currumbin Hill ☐ Eagleby ☐ East Coomera/ Yawalpah Conservation ☐ Guragunbah ☐ Helensvale Town Centre ☐ Hope Island ☐ Mudgeeraba Village ☐ Nerang ☐ Palm Beach ☐ Paradise Point ☐ Robina (for later incorporation after expiry of the Robina Town Act) ☐ South Stradbroke ☐ Southport ☐ Springbrook ☐ Surfers Paradise ☐ The Spit (Gold Coast Harbour) ☐ Uplands Drive and Woodlands Way ☐ West Burleigh Township ☒ Yatala Enterprise Area	☐ Rural ☐ Park Living ☐ Village (mixed use) ☐ Detached Dwelling ☐ Residential Choice ☐ Tourist and Residential ☐ Integrated Business ☐ Local Business ☐ Fringe Business ☐ Industry 1 (high impact) ☐ Industry 2 (low impact) ☐ Extractive Industry ☐ Marine Industry ☐ Community Purposes ☐ Conservation ☐ Private Open Space ☐ Public Open Space Emerging Communities ☐ Beenleigh District Structure Plan ☐ Albert Corridor A: Ormeau Structure Plan ☐ Albert Corridor B: Oxenford/Upper Coomera Structure Plan ☐ Albert Corridor C: Otmoor Road Structure Plan ☐ Albert Corridor D: South Helensvale Structure Plan ☐ Albert Corridor E: Kopps Road Structure Plan ☐ Gilston Structure Plan ☐ Reedy Creek Structure Plan ☐ Inter-Urban Break Structure Plan	☐ Adult Entertainment Premises ☐ Advertising Devices ☐ Aged Persons Accommodation ☐ Animal Husbandry ☐ Aquaculture ☐ Attached Dwellings ☐ Bed and Breakfast Tourist Accommodation ☐ Brothels ☐ Caravan Parks ☐ Caretakers Residences ☐ Changes to Ground Level and Creation of New Waterbodies ☐ Child Care Centres ☐ Detached Dwellings ☐ Display Homes and Estate Sales Offices ☐ Ecotourism Facility ☐ Family Accommodation ☐ Farm Forestry ☐ Farm Stay ☐ High Rise Residential and Tourist Accommodation ☐ Kennels ☐ Landscape Work ☐ Low Rise Apartment Building ☐ Low Rise Commercial Tourist Accommodation ☐ Office ☐ Private Recreation ☐ Relocatable Home Parks ☐ Retail and Related Establishments ☐ Reconfiguring a Lot ☐ Rural Industry ☐ Salvage Yards ☐ Service Stations ☐ Surf Life Saving Clubs ☐ Telecommunications Facilities ☐ Temporary Use ☐ Tourist Cabins ☐ Vegetation Management ☐ Vehicle Sales ☐ Working From Home ☒ Works for Infrastructure ☐ None of the above	☐ Gold Coast Airport* ☐ Bushfire Management Areas* ☐ Canals and Waterways* ☐ Car Parking, Access and Transport Integration ☐ Cultural Heritage (Historic)* ☐ Cultural Heritage (Indigenous) ☐ Dam Catchment Areas* ☐ Flood Affected Areas ☐ Natural Wetland Areas and Natural Waterways* ☐ Nature Conservation* ☐ Ocean Front Land* ☐ Rail Corridor Environs ☐ Road Traffic Noise Management ☐ Sediment and Erosion Control ☐ Service Roads (Pacific Motorway) ☐ Steep Slopes or Unstable Soils* ☐ Unsewered Land ☐ No relevant Constraints

* The relevance of these codes can be identified by using the Integrated Spatial Information Reporting Tool (ISIRT)

Checklist for Development Applications		IA C02	
PART B - Additional Requirements for a 'Well Made' Application <i>continued</i>		Applicant	Receiving Officer
✓ Correct number of application copies including all forms and supplementary information.		☒	☐
Supporting Information: • Outlining the development proposal • Addressing the relevant codes and constraints, and • Including all necessary information as per Item 2		☒	☐
PART C - Acknowledgement Please ☒/☐			
I acknowledge that the omission of any items in Checklist PART A may result in the refusal of Council to accept the lodgement of this application as 'Properly Made' in accordance with the provisions of the Integrated Planning Act 1997.		☒	☐
I acknowledge that I have attached a proposal report and supporting documentation addressing all Checklist PART B items relevant to my application.		☒	☐
I acknowledge that I have not supplied all the information for PART B and that this may incur a surcharge.		☐	☐
PART D - OPW Application Requirements Building and Construction Industry (Portable Long Service Leave) Act 1991			
Provide evidence of one of the following: • Payment of levy, or • Payment of the first instalment of levy, or • An exemption from payment of levy, or • An exemption from immediate payment of levy		☐	☐
ITEM 1: Guide to Correct Landowners Consent			
Refer to <i>IPA Guide 1 Making an IDAS development application</i> for full requirements. Listed below are other requirements. Integrated Planning and Other Legislation Amendment Act 2003 states that the Owner's Consent is required for applications for: (a) a material change of use of premises or a reconfiguration of a lot; or (b) work on land below high-water mark and outside a canal as defined under the <i>Coastal Protection and Management Act 1995</i>; or (c) work on rail corridor land as defined under the <i>Transport Infrastructure Act 1994</i>. Body Corporate approval is required where a development is affecting the common property area - this includes exclusive use area. A resolution of the Body Corporate is required to accompany the Development Application for Owners Consent. If a change of ownership of the land has occurred within the last six (6) months, it is recommended that provision of official legal documentation advising the transfer date is attached to the application, eg Solicitor's Letter.			

Checklist for Development Applications

IA C02

ITEM 2: Information Requirements for 'Well Made' Applications Submission

		Applicant	Assessment Officer
Material Change of Use Applications 8 copies required			
Required	Internal Layout Plan (drawn to appropriate scale)	☐	☐
Required	Site Plan (drawn to appropriate scale): If applicable, should include: - North point and scale - Car Parking Layout, drawn in accordance with Gold Coast Planning Scheme Part 7 - Codes, Division 3 - Constraint Codes, Chapter 4 - Car Parking, Access and Transport Integration - Location of Bin Storage Areas - Existing Building Footprints - Proposed Building Footprints for new Building Work - Location of Ingress and Egress Points	☐	☐
Required	Building Elevations (for new building work)	☐	☐
Required	Site Analysis Plan (drawn to appropriate scale and in accordance with Planning Scheme Policy 17 for Site Analysis):	☐	☐
If applicable	Statement of Landscape Intent	☐	☐
Optional	Photographs	☐	☐
Reconfiguration of a Lot Applications 8 copies required			
Required	Subdivision Proposal Plan (drawn to appropriate scale): If applicable, should include: - Allotment layout showing proposed lots, road reserves, open space and easements. All allotments are to be fully dimensioned and include lot areas. - Contours, gully lines, areas of flood inundation and areas of proposed cut and fill. - Existing and future roads, open space and drainage linkages to adjoining sites. - Any existing improvements on the sites.	☐	☐
Required	Slope Analysis Plan defining slopes in increment of 5% for sites with slopes in excess of 10%.	☐	☐
Required	A Site Analysis (reference should be made to Planning Scheme Policy 17 for Site Analysis). These requirements should be identified on the Subdivision Proposal Plan or a separate Site Analysis Plan.	☐	☐
If applicable	Statement of Landscape Intent	☐	☐
Operational Works Applications (Code)			
Change to Ground Level / Bulk Earthworks Drawings 3 copies required			
Required	Requirements as per Land Development Guidelines Section 8.2 Engineering Drawings and Document presentation for requirements.	☒	☐
If applicable	Copy of all relevant Development Permits and approved management plans.	☒	☐

Checklist for Development Applications

IA C02

Operational Works Applications (Code) continued		Applicant	Assessment Officer
Civil Engineering Drawings, Street Lighting, Car Parking 3 copies required			
Required	Engineering Drawing Application Checklist form fully completed (refer to Appendix A of the Land Development Guidelines).	☒	☐
Required	Application for Approval of Engineering Drawings for Reconfiguration of Lot Works form fully completed (refer to Appendix B of the Land Development Guidelines). <i>N/A</i>	☐	☐
Required	Relevant supporting documentation.	☐	☐
If applicable	Details of any non-conforming design and reasons for proposing its use. <i>N/A</i>	☐	☐
If applicable	Live connection design details for water supply and sewer reticulation. The details shall be sufficient to enable early costing by Council for the connection.	☒	☐
If applicable	Copy of all relevant Development Permits and approved management plans, where relevant.	☒	☐
Tree Works Private: 1 copy required Development: 4 copies required			
Required	Site plan, drawn to scale, detailing the following information, where relevant: - Street frontage and property boundaries, - North point, - Location of all trees proposed for removal, pruning, transplanting or relocation, - The position of existing or proposed buildings, structures, roadworks/earthworks and drainage works, where applicable, - Proposed limits of clearing and construction works, - Copy of approved management plans, where applicable, - Copy of approved building envelope plan, where applicable.	☐	☐
Landscape Works 3 copies required or Streetscape/Park applicable: 4 copies required			
Required	Detailed Landscape Plan.	☐	☐
Required	Landscape plans are to be prepared by a Landscape Architect or a suitably qualified and experienced landscape design professional.	☐	☐
Required	Landscape drawings are to comply with Planning Scheme Policies: - Policy 12 - Landscape Character: Guiding the Image of the City - Policy 13 - Landscape Works Documentation Manual	☐	☐
Required	Landscape drawings should include the following general information: - North point - Location of proposed plant species to be shown graphically - Plant schedule indicating common & botanical names, pot sizes & numbers - The nature of existing development adjoining the site - Planting bed preparation detail including topsoil depths, subgrade preparation, mulch type and depth, type of turf, pebble, paving, and garden edge - Reduced levels across the site - The type and height of any retaining walls - A maintenance period Refer to Landscape Works Documentation Manual, Section B, 6.0 Submission Checklist for Detailed Landscape Plans.	☐	☐
If applicable	List of related development application approval numbers.	☐	☐
Note: Combined Material Change of Use, Reconfiguration of Lot and Operational Works Applications should address all above requirements where relevant. Where a combined application includes an OPW, the total number of copies must have the additional copies required for the OPW.			



Gold Coast City Council

APPENDIX B

OFFICE USE ONLY

FN:

PFN:

SN:

SS:

BN:

RN:

Gold Coast City Council

Surfers Paradise Office

P O Box 5042

GOLD COAST MAIL CENTRE QLD 9729

APPLICATION FOR APPROVAL OF ENGINEERING DRAWINGS

Development Name: YATALA INDUSTRIAL Stage No: 1

Council File No: PN184435/02/DA1

PROPERTY DETAILS

Real Property Description: LOT 339 W31166P

Address: CHRISTENSEN RD STONYLTON

DEVELOPER

(a) Name: BURRISIDE SYNDICATE PTY LTD

CONSULTANT

(a) Company Name: KBR KELLOGG BROWN & ROOT

(b) Address: 555 CORPORATION DRIVE Phone No: 3721 6555

(c) Contact Name: DEREK NEWHOLD Fax No: 3721 6500

(d) Engineering Design? Yes ☒ No ☐ Contract Administration? Yes ☒ No ☐

(e) Quality Assurance Accreditation? Yes ☒ No ☐

REQUIRED INFORMATION

This Application Form must be fully completed and accompanied by:

- Council's Engineering Drawings - Application Checklist with relevant Sections completed;
- Two (2) complete sets of A1 size Engineering Drawings (incomplete Drawings and partial sets will not be accepted);
- One (1) set of the Job Specification;
- Any information requested in the Development Approval Conditions;
- Any relevant supporting documents; and
- Details of a non-conforming design and reasons for its use (subject to Council Approval).

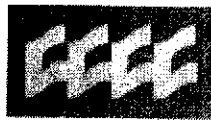
CERTIFICATION

I/We hereby certify that I/we have exercised reasonable skill, care and diligence in the design of the works in accordance with:

- Relevant Development Approvals
- Council's Land Development Guidelines, Standard Specifications and Drawings
- Relevant Australian Standards, Codes of Practice

Signature: [Signature] RPEQ No: 7307 Date: 17/1/2006

Consulting Engineer for and on behalf of (Company): KELLOGG BROWN & ROOT



Gold Coast City Council

Gold Coast City Council
Surfers Paradise Office
P O Box 5042
GOLD COAST MAIL CENTRE QLD 9729

APPENDIX A

OFFICE USE ONLY

FN:
PFN:
SN:
SS:
BN:
RN:

ENGINEERING DRAWINGS - APPLICATION CHECKLIST

Development Name: YATALA INDUSTRIAL Stage No: 1
Council File No: PN184435/02/DA1

PROPERTY DETAILS

Real Property Description: LOT 334 W311668
Address: CHRISTENSEN RD, STAPYLTON

CONSULTANT

(a) Company Name: KBR KELLOGG BROWN & ROOT RPEQ No: ...
(b) Address: 555 CORPORATION DRV, TOOWONG 4066 Phone No: 3721 6188
(c) Contact Name: DEIERK NEUHOLD Fax No: 3721 6500

CHECK LIST ITEMS SUBMITTED

(a) General	Items.....	or	☒
(b) Earthworks and Roadworks	Items.....	or	☒
(c) Stormwater Drainage	Items.....	or	☒
(d) Water Supply	Items.....	or	☒
(e) Sewerage Reticulation	Items.....	or	☒
(f) Miscellaneous	Items.....	or	☐
(g) Dual Water Reticulation	Items.....	or	? <u>N/A</u>
(h) Reduced Infiltration Gravity Sewers (RIGS)	Items.....	or	? <u>N/A</u>

COUNCIL USE ONLY:

Receiving Officers Name:
Date:/...../.....
Action Taken:
.....
.....

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

A. GENERAL

1. ADMINISTRATION		☒ Yes	☐ N/A
(i) Application Form Fully Completed		☒	
(ii) Approvals And Clearances: -			
• Queensland Department Of Transport		☐	☒
• Department of Environment		☐	☒
• Downstream Drainage Discharge Rights		☐	☒
• Clearance For Works Through Other Properties		☐	☒
• ENERGEX/Telstra		☐	☒
• Others:		☐	☒
(i) Relevant Standard Drawings Included In Application	(Not included as EDP DWGS)	☒	
(ii) Schedule Of Drawings (Submitted) Attached		☒	
2. COMPLIANCE WITH COUNCIL APPROVALS		☒ Yes	☐ N/A
(i) Rezoning, Consent or Other Council Approval		☒	☐
(ii) Provisions For Adjoining Development Requirements		☐	☒
3. All Engineering Drawings And Specifications Prepared And Signed By A Registered Professional Engineer		☒ Yes	☐ No
4. TITLE BLOCK ON ENGINEERING DRAWINGS		☒ Yes	☐ N/A
(i) Estate Name (If Any)		☐	☒
(ii) Stage Number (If Any)		☐	☒
(iii) Developers Name		☒	
(iv) Consultants Name And Address		☒	
(v) Drawing Number And Sheet Number		☒	
(vi) Scale With A Scale Bar		☒	
(vii) Locality Description		☒	
(viii) Origin Of Levels And Location Of Permanent Survey Marks		☒	
(ix) Schedule Showing Date And Nature Of Amendments		☒	
(x) Drawing Title		☒	
(xi) Signed Design Certification By An Experienced Designer		☒	
5. LOCALITY PLAN		☒ Yes	☐ N/A
(i) North Point		☒	
(ii) Major Roads Names		☒	
(iii) Adjacent Localities		☒	
(iv) Development Area Outlined And Shaded Or Crosshatched		☒	
(v) Scale Noted		☒	

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

A. GENERAL (Cont)

6. LAYOUT OR STAGE PLAN	☒ Yes	☐ N/A
(i) Layout Of Roads	☒	
(ii) Approved Road Names (Road Number Not Acceptable)	☒	
(iii) Allotment Layout	☐	N/A
(iv) Lot Numbers	☒	
(v) Access Restriction Strips	☐	☒
(vi) Stage Boundaries Clearly Shown	☐	☒
(vii) Existing Easements	☐	☒
(viii) North Point	☒	

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

B. EARTHWORKS AND ROADWORKS

1. EARTHWORKS	☒ Yes	☐ N/A
(a) Drafting - Drawings Include:-		
(i) Legend	☒	
(ii) Existing And Proposed Contours	☒	
(iii) Cut And Fill Areas Clearly Shown	☒	
(iv) Road And Allotment Layout (Indicate Numbers)	☒	
(v) Approved Road Names	☒	
(vi) Locations(s) And Level(s) Of Permanent Survey Mark(s), Reference Stations Etc Used As Datum For The Works <i>(Refer to Surveyor)</i>	☒	
(b) Design - Complies With Council's Guidelines:-		
(i) Maximum Cut Or Fill At Boundary Of Subject Land > 500mm	☒	
(ii) No Ponding Or Nuisance Created At Boundary Of Subject Land	☒	
(iii) Batter Slopes	☒	
(iv) Location And Level Of Retaining Walls (If Required)	☐	☒
(v) Defined Flood Level (If Appropriate)	☒	☐
(vi) Flood Fill Level (If Appropriate)	☒	☐

2. ROADWORKS DRAWINGS	☒ Yes	☐ N/A
(a) Drafting - Drawings Include:-		
(i) Approved Road Names And Road Reserve Boundaries	☒	
(ii) Allotment Boundaries, Numbers, Easements	☒	
(iii) Centreline Or Construction Line Showing:-		
• Chainages	☒	
• Bearings	☒	
• Offsets If Construction Line Is Not The Centreline Of Road	☐	☒
• All Intersection Points	☒	
(iv) Information For Each Curve Including:-		
• Tangent Point Chainages And Offsets	☒	
• Curve Radii	☒	
• Arc Length	☒	
• Tangent Length	☒	
• Superelevation (If Applicable)	☐	☒
• Curve Widening (If Applicable)	☐	☒
(v) Kerb Lines Including:-		
Kerb Radii (Where Not Parallel To Centreline)	☒	☐
Tangent Point Chainages (Where Not Parallel To Centreline)	☒	☐
(vi) Edge Of Pavement Where No Kerb Is Constructed	☒	☐
(vii) Position And Extent Of Channelisation	☒	☐
(viii) Location And Details Of All Traffic Signs, Guideposts, Guardrail, And Other Road Furniture, Etc	☒	☐
(ix) Pavement Markings	☒	☐
(x) Catchpit, Manhole And Pipeline Locations	☒	☐
(xi) Drainage Details (If Applicable)	☒	☐

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

B. EARTHWORKS AND ROADWORKS (Cont)

2. ROADWORKS DRAWINGS (Cont)	☒ Yes	☐ N/A
(xii) Drainage Details (If Applicable)	☒	☐
(xiii) Concrete Footpaths And Cycle Paths	☒	☐
(xiv) Location and Details for Access Points, Invert Crossings, Access Ramps	☒	☐
(xv) North Point On Each Plan View	☒	
(xvi) Changes In Surfacing Material	☒	
(b) Design - Complies With Council's Design Guidelines:-		
(i) Maximum Design Speed	☒	
(ii) Sight Distances	☒	
(iii) Horizontal and Vertical Alignment	☒	
(iv) Transit Lanes and Road Tapers	☐	☒
(v) Parking	☐	☒

3. INTERSECTION, CUL-DE-SAC AND SPEED CONTROL DEVICES	☒ Yes	☐ N/A
(a) Drafting - Drawings Include:-		
(i) Kerb Levels	☒	
(ii) Access Ramp Locations	☒	
(iii) Finished Design Contours	☒	
(iv) Channelisation Details Including Setout Details, Radii, Etc	☒	☐
(v) Location Of Traffic Signs, Guideposts	☒	
(vi) Visibility Benching (If Applicable)	☐	☒
(vii) Ducting for Future Signals (If Applicable)	☐	☒
(viii) Linemarking (Linemarking And Signage May Be Shown On A Separate Plan)	☐	☒
(ix) Speed Control Device Details (If Necessary)	☐	☒
(x) Details Of Construction Methods For Surfacing Other Than Asphalt Or Sprayed Bitumen	☐	☒
(xi) Design Vehicle Paths Shown For All Speed Control Devices And Turnaround Areas	☐	☒
(b) Design - Complies With Council's Design Guidelines:-		
(i) Layout / Configuration	☒	
(ii) Contours / Crossfall	☒	
(iii) Minimum Kerb And Channel Fall	☒	
(iv) Design Vehicle Paths And Clearances	☒	
(v) Council's Garbage Truck Manoeuvring	☒	
(vi) Parking Requirements	☒	
(vii) Sight Distances	☒	
(viii) Roundabouts	☐	☒
(ix) Access Ramps At All Turnouts At Intersections Where Barrier Kerb And Channel Is Required	☐	☒

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

B. EARTHWORKS AND ROADWORKS (Cont)

4. ROAD LONGITUDINAL SECTIONS	☒ Yes	☐ N/A
(a) Drafting - Drawings Include:-		
(i) Approved Road Names	☒	
(ii) Chainages On Centreline (And Construction Line If Used)	☒	
(iii) Existing Surface Or Peg Levels	☒	
(iv) Design Road Centreline Levels	☒	
(v) Design Grades	☒	
(vi) Length And Radii Of Vertical Curves	☒	
(vii) Chainage And Levels At Grade Intersection Points	☒	
(viii) Chainage And Levels At Vertical Curve Tangent Points	☒	
(ix) Cut And / Or Fill Depths	☒	☐
(x) Horizontal Radii And Tangent Point Chainages	☒	
(xi) Kerb Levels	☒	
(xii) Approved Road Names, Centreline And IP Chainage Of Intersecting (Side) Roads	☒	
(b) Design - Complies With Council's Design Guidelines:-		
(i) Maximum Grades	☒	
(ii) Sight Distance	☒	
(iii) Minimum Grades	☒	
(iv) Change In Grades Without VC	☐	☒
(v) Crest And Sag Curves	☒	

5. ROAD CROSS SECTIONS	☒ Yes	☐ N/A
(a) Drafting - Drawings Include:-		
(i) Approved Road Names	☒	
(ii) Road Reserve Boundaries	☒	
(iii) Road Centreline Or Construction Line	☒	
(iv) Original Natural Surface Line Profile	☒	
(v) Constructed Cross Section Profile	☒	
(vi) Chainage On Centreline Or Construction Line Together With Natural Surface Level Or Peg Level	☒	
(vii) Offset To Road Centreline From Peg Line Or Construction Line	☐	☒
(viii) Cross Fall Batter Slopes And Dimensions Where These Differ To That Shown On The Type Cross Section	☐	☒
(ix) Pavement Depths Wherever These Differ From Typical Cross Section	☐	☒
(b) Typical Cross Section Shown For Each Road Containing:-		
(i) Road Reserve Width	☒	
(ii) Road Width Between Nominal Kerb Line, Or Pavement Width Where No Kerb Is Constructed	☒	
(iii) Verge, Footpath Width	☒	
(iv) Location And Width Of Concrete Footpath Or Bikepath, Where Required	☒	☐
(v) Kerb and Channel Type	☒	☐

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

B. EARTHWORKS AND ROADWORKS (Cont)

5. ROAD CROSS SECTIONS (Cont)		☒ Yes	☐ N/A
(vi) Crossfalls And / Or Grades Of Pavement, Footpaths And Batters, Etc With Offsets To Change Of Grade Point		☒	
(vii) Type And Thickness Of Wearing Surfacing		☒	
(viii) Total Depth Of Pavement Courses With CBR Values Of Material Used (If Available)		☒	
(c) Design - Complies With Council's Design Guidelines:-			
(i) Typical Cross Sections and includes:-		☒	
• Width for Transit Lanes and Bikeways		☒	☐
• Typical Footpath Verge Widths		☒	
(ii) Access Grades / Limits To Lots		☒	
(iii) Road Crossfalls		☒	
(iv) Formation Batter Slope Stability And Scour Protection		☒	☐

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

C. STORMWATER DRAINAGE

1. STORMWATER DRAINAGE CATCHMENT PLAN		☒ Yes	☐ N/A
(i)	North Point	☒	
(ii)	Approved Road Names	☒	
(iii)	Existing And Proposed Property And Road Boundaries	☒	
(iv)	All Catchments / Sub Catchments Designated As Per Drainage Calculation Sheet	☒	
(v)	Catchment / Sub Catchment Boundaries Indicated By A Bold Line	☒	
(vi)	Existing And Proposed Contours At A Suitable Interval (In Different Line Types)	☒	
(vii)	Direction Of Watershed Along The Flow Path Giving The Longest Time Of Concentration	☒	
(viii)	Stormwater Reticulation Schematic Layout Shown Including Manhole, Inlet And Outlet Numbers (For Urban Catchments)	☒	
(ix)	All Internal And External Catchments Shown To Scale	☒	
2. STORMWATER DRAINAGE DETAIL PLANS		☒ Yes	☐ N/A
(i)	Details Of Pipe Junctions In Manholes, Where Pipe Centrelines Are Offset From Centre Point Of Manhole	☒	
(ii)	Full Details Including Reinforcing Of Non-Standard Manholes	☒	☐
(iii)	Catchpit And Field Inlet Locations (Chainage, Offset Levels Etc)	☒	
(iv)	Manhole Locations (Chainage Offset, Levels Etc)	☒	
(v)	Culvert Locations (Chainage, Offset Levels Etc)	☒	
(vi)	Invert Levels And Diameters Of Pipe Connections From Catchpits To Manholes	☒	
(vii)	Approved Road Names	☒	
(viii)	Class of Pipe Checked	☒	
3. ROOFWATER / INTER-ALLOTMENT DRAINAGE		☒ Yes	☐ N/A
(a)	Drafting - Layout Plan Contains:- <i>INCORPORATED INTO SW PLANS + L-SECTIONS.</i>		
(i)	Legend	☒	
(ii)	All Allotments And Allotment Numbers	☒	
(iii)	Existing And Finished Surface Contours	☒	
(iv)	Location And Size Of Inter-Allotment Drainage Lines	☒	
(v)	Location And Size Of Stormwater Drainage To Which System Is Connected	☒	
(vi)	Label Inter-Allotment Pits And Receiving Stormwater Structures	☒	
(vii)	Pit Or Inlet Locations, Surface Levels And Inlet / Outlet Invert Levels	☒	
(viii)	Required Easements	☒	
(ix)	Details Of Connections To Kerb And Channel (If Appropriate)	☐	☒
(b)	Design - Complies With Council Guidelines:-		
(i)	Pipe Sizes And Pipe Materials	☒	
(ii)	Cover	☒	
(iii)	Grades	☒	

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

C. STORMWATER DRAINAGE (Cont)

4. DRAINLINE LONGITUDINAL SECTIONS	☒ Yes	☐ N/A
(a) Catchpit Connection Details (May Be In Table Form)	☒	
(b) Longitudinal Section For Each Line Containing:-		
(i) Chainages	☒	
(ii) Existing Natural Surface Levels And Design Finished Surface Levels	☒	
(iii) Manhole And Endwall Chainages Together With Surface Levels And Inlet And Outlet Invert Levels	☒	
(iv) Distances Between Manholes / Catchpits / Endwalls	☒	
(v) Grade Of Each Pipe Section	☒	
(vi) Diameter And Class And Material Of Each Pipe Section (eg Marine Class)	☒	
(vii) Hydraulic Grade Lines And Levels, Design Storm Frequency	☒	
(viii) Drainline And Manhole Number	☒	
(ix) Manhole Diameters And / Or Reference To Separate Detail Drawing	☒	
(x) Road Names Where Applicable	☒	
(xi) Open Drain Details	☒	☐
(c) Open Drains:-		
(i) Cross Sections At Each Peg Chainage (Usually 20m Intervals)	☒	☐
(ii) Details Of Drop Structures, Energy Dissipators Etc (Including Top View, Section Views, Etc)	☒	☐
(d) Design - Complies With Council's Design Guidelines:-		
(i) Batter Slope / Stability	☒	☐
(ii) Scour Velocities	☒	☐
(iii) Maintenance Criteria	☒	☐

5. STORMWATER DRAINAGE CALCULATIONS	☒ Yes	☐ N/A
(a) Calculation Table:-		
Stormwater Calculations Shall Be Submitted For The Design Storms On An A1 Spreadsheet, Preferably Council's Standard Stormwater Drainage Calculation Sheet		
(b) Design - Complies With Council's Design Manual:-		
(i) Legal Point Of Discharge Identified	☒	☐
(ii) Downstream Drainage Approvals	☐	☒
(iii) Unflooded Widths	☐	☒
(iv) Calculations Provided For Major And Minor Systems	☒	☐
(v) Blockage Factors To Catchpits For Major Systems	☒	☐

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

C. STORMWATER DRAINAGE (Cont)

6. DETENTION BASIN DETAILS		☒ Yes	☐ N/A
(a) Drawings Contain:-			
(i)	Plan View	☒	
(ii)	Sectional Views	☒	
(iii)	Details Of Basin Wall Construction	☒	
(iv)	Details Of Outlet Structures (Low And High Level Outlets)	☒	
(v)	Extent Of Any Permanent Storage	☒	
(vi)	Maximum Storage Level	☒	
(vii)	Extent And Nature Of Any Landscaping	☒	☐
(b) Design - Complies With Council Guidelines and QUDM:-			
(i)	Affect On Runoff Hydrograph For Catchment Checked	☒	
(ii)	Batter Slopes	☒	
(iii)	Minor Flood Flows	☒	
(iv)	Maximum Flooded Depth	☒	
(v)	Inlets And Outlets	☒	
(vi)	Scour Protection	☒	
(vii)	Base Slopes / Crossfall For Active Recreation Use	☐	☒
(viii)	High Level Outlet	☒	
(ix)	Earthworks	☒	☒
7. WATER QUALITY, SILT MANAGEMENT/RUNOFF CONTROL WORKS		☒ Yes	☐ N/A
(i)	Plan Layout / Extent	☒	
(ii)	Site's Existing Topography	☒	
(iii)	How And When It Will Be Altered	☐	
(iv)	Typical Device Details / Materials For Erosion And Sediment Control Measures Proposed	☒	
(v)	Temporary And Permanent Works Indicated	☒	
(vi)	Catchment Boundaries And Direction Of Flow For Different Drainage Areas Before And After Development	☒	
(vii)	Design Complies With QUDM Section 9.03.5	☒	
8. GROSS POLLUTANT TRAPS		☒ Yes	☐ N/A
(i)	Plan Layout	☒	
(ii)	Long Section And Cross Sections	☒	
(iii)	Structural Elements Detailed	☒	
(iv)	All Materials Specified / Indicated	☒	

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

D. WATER SUPPLY

1. WATER RETICULATION PLANS	☒ Yes	☐ N/A
(a) Drafting - Drawings Include:-		
(i) Road Name and Road Reserve Boundaries	☒	
(ii) Relevant Land Zonings	☒	
(iii) Allotment Boundaries and Numbers	☒	
(iv) Easements (If Applicable)	☒	☐
(v) North Point	☒	
(vi) Existing Water Mains Including Alignment, Type and Size	☒	
(vii) Proposed Water Mains Including:-		
• Mains Shown On Correct Alignment From Property Boundaries	☒	
• Pipe Diameter, Material and Class	☒	
• Chainages (If Applicable)	☐	☒
• Bearings (If Applicable)	☐	☒
• Symbols for Fittings Clearly Shown	☒	
• Road Crossings - Ductile Iron - Size and Class	☒	
(viii) Hydrant Locations - Standard and Swabbing	☒	
(ix) Valves	☒	
(x) Bends	☒	
(xi) Other Fittings - Air Valves, Scour Valves, Swabbing Pits	☒	☐
(xii) Road Crossing Conduits - Future Water Services	☒	☐
(xiii) Water Service Details - Class, Material (If Applicable)	☒	☐
(xiv) Water Services to Parks, Entry Treatments (If Applicable)	☐	☒
(xv) Services Information		
• Proposed and Existing Kerb and Channel	☒	
• Proposed and Existing Stormwater Drainage Including Manholes, Outlets, Overland Flow Paths etc	☒	
• Proposed and Existing Sewer Mains	☒	
• Proposed and Existing Public Utility Services	☒	
(xvi) Conflict Points With Other Services (CHECKED)	☒	☐
(xvii) Technical Detail Drawings		☐
• Reservoirs	☒	
• Top Water Level (TWL)	☒	
• Major Thrust Blocks (REF GCC DWGS.)	☒	
• Capacity	☒	
• Pressure Reducing Valves (PRV)	☒	
• Control Settings	☒	
• Water Supply Zone (High Level Areas)	☒	
(b) Design - Complies With Council's Design Guidelines:-		
(i) Flow Requirements	☒	
(ii) Pressure - Including Firefighting	☒	
(iii) Storage Facilities (If Required)	☐	☒
(iv) Cover Over Mains	☒	

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

D. WATER SUPPLY (Cont)

2. RESERVOIRS	☐ Yes	☒ N/A
(a) Drafting - Drawings Include:-		
(i) Locality Plan	☐	
(ii) Vehicle Access Details:-	☐	
• Horizontal Geometry	☐	
• Longitudinal Section (If Applicable)	☐	
• Cross Sections (If Applicable)	☐	
(iii) Fencing Requirements	☐	
• Height	☐	
• Type	☐	
• Gates	☐	
• Security	☐	
(iv) Reservoir Design Plan	☐	
• Earthworks	☐	
• Contours	☐	
• Water Levels	☐	
• Design Details - Materials, Reinforcing, Roofing etc	☐	
• Pipework - Diameter, Material and Class	☐	
• Valve Details	☐	
• Telemetry - Control Equipment, Security For Structure	☐	
• Landscaping (If Applicable)	☐	
(b) Design - Complies With Council's Design Guidelines		
(i) Storage Parameters	☐	
(ii) Capacity	☐	
(iii) Mechanical And Electrical Requirements	☐	
(iv) Pumps	☐	
(v) Pressure Control	☐	
(vi) Vehicle Access and Site Manoeuvrability	☐	

3. WATER SUPPLY PUMP STATIONS	☐ Yes	☒ N/A
(a) Drafting - Drawings Include:-		
(i) Locality Plan		
(ii) Vehicle Access Details	☐	☐
(iii) Relevant Detail - Fittings etc		
(iv) Pump Station Design		
• Pipework - Diameter, Material and Class	☐	
• Valve Details	☐	
• Pipe and Fitting Schedule	☐	
• Pump Description	☐	
• Pump Station Layout - Valve Box or Building	☐	
• Telemetry	☐	☐
• Security Fencing	☐	☐
• Landscaping	☐	☐

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

D. WATER SUPPLY (Cont)

3. WATER SUPPLY PUMP STATIONS (CONT)	☐ Yes	☒ N/A
(b) Design - Complies With Council's Design Guidelines		
(i) Pump Station Criteria	☐	
• Flow	☐	
• Head	☐	
• In Accordance with Council's Pump Station Standard Detail Drawing	☐	
(ii) Pump Curves	☐	
(iii) Mechanical and Electrical Requirements	☐	
(iv) Control Cabinet	☐	
(v) Overflows	☐	
(vi) Noise Protection Provision	☐	

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

E. SEWERAGE RETICULATION

1. SEWERAGE RETICULATION PLANS	☒ Yes	☐ N/A
(a) Drafting - Drawings Include:-		
(i) Approved Road Names and Road Reserve Boundaries	☒	
(ii) Allotment Boundaries and Numbers	☒	
(iii) Easements (If Applicable)	☒	☒
(iv) Proposed and Existing Contours	☒	
(v) North Point	☒	
(vi) Proposed Sewer Mains Including:-		
• Mains Shown on Correct Alignment From Property Boundaries	☒	
• Pipe Diameter, Material, Class	☒	
• Chainages (If Applicable)	☒	☐
• Bearings (If Applicable)	☒	☒
• Manhole Locations - Number and Alignment	☒	
• House Connection Branches	☒	
(vii) Flow Arrows On Each Allotment	☒	
(viii) House Connection Invert Levels On Each Allotment Including House Connection Type	☒	
(ix) Services Information		
• Proposed and Existing Kerb and Channel	☒	
• Proposed and Existing Stormwater Drainage Including Manholes, Outlets, Overland Flow Paths etc	☒	
• Proposed and Existing Water Mains Including Hydrants and Valve etc	☒	
• Proposed and Existing Public Utility Services	☒	
(x) Conflict Points With Other Services	☒	☐
(b) Design - Complies With Council's Design Guidelines		
(i) Based on Preliminary Sewer Concept Plan	☒	
(ii) Alignment of Mains and Access for Maintenance	☒	
(iii) Precast Manholes Not In Areas Prone To Flooding	☒	☐
(iv) Manholes Not In Road Carriageways, Central Medians and Roundabouts	☒	

2. SEWERAGE LONGITUDINAL SECTIONS (GRAVITY MAINS)	☒ Yes	☐ N/A
(a) Drafting - Drawings Include:-		
(i) Longitudinal Section for Each Line	☒	
(ii) Running Chainage and Distance Between Manholes	☒	
(iii) Existing and Proposed Finished Surface Levels	☒	
(iv) Manhole Details To Include:-		
• Manhole Type - Precast or Cast Insitu	☒	
• Manhole Diameter	☒	
• Drop Types	☒	
• Cover Lid Types	☒	
• Junction Invert Levels - All Sewers Entering	☒	

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

E. SEWERAGE RETICULATION (Cont)

2. SEWERAGE LONGITUDINAL SECTIONS (GRAVITY MAINS) (Cont)	☒ Yes	☐ N/A
(v) Equivalent Population, Pipe Capacity, Design Capacity	☒	
(vi) Pipe Diameter, Material, Class	☒	
(vii) Pipe Grades on Each Section	☒	
(viii) Concrete Anchor Blocks (If Applicable)	☐	☒
(ix) Location of Each Section - Private Property, Road etc	☒	
(x) Sewer Line and Manhole Numbers	☒	
(xi) House Connections for Each Allotment on Sewer Line To Include: -		
• Diameter	☒	
• Invert Level	☒	
• Junction Type	☒	
(xii) Flood Level (If Applicable)	☐	☒
(xiii) Sewer Lines Requiring Anchor Blocks	☐	☒
(xiv) Downstream Discharge Manholes Including All Incoming Sewers	☒	
(xv) Datum Shown on Long Sections	☒	
(xvi) Invert Level of all other Underground Services - Stormwater, Water, Public Utilities	☒	
(b) Design - Complies With Council's Design Guidelines		
(i) Pipe Velocity	☒	
(ii) Minimum Grades	☒	
(iii) Drops Through Manholes	☒	
(iv) Capacity	☒	
(v) Cover Over Mains	☒	
(vi) Concrete Anchor Block Requirements	☐	☒

3. SEWERAGE LONGITUDINAL SECTIONS (PRESSURE MAINS)	☒ Yes	☐ N/A
(a) Drafting - Drawings Include:-		
(i) Longitudinal Section for Each Line	☒	
(ii) Running Chainage and Distance Between Pump Station and Receiving Main	☒	
(iii) Existing and Proposed Finished Surface Levels	☒	
(iv) Equivalent Population, Pipe Capacity, Design Capacity	☒	
(v) Pipe Diameter, Material, Class	☒	
(vi) Pipe Grades on Each Section	☒	
(vii) Concrete Anchor Blocks (If Applicable)	☐	☒
(viii) Location of Each Section - Private Property, Road etc	☒	
(ix) Sewer Line Manhole and Pump Station Numbers	☒	
(x) Receiving Manhole Protection	☒	
(xi) Flood Level (If Applicable)	☐	☒
(xii) Thrust Blocks (If Applicable)	☐	☒
(xiii) Datum Shown on Long Sections	☒	
(xiv) Invert Level of all other Underground Services - Stormwater, Water, Public Utilities	☒	

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

E. SEWERAGE RETICULATION (Cont)

3. SEWERAGE LONGITUDINAL SECTIONS (PRESSURE MAINS) (Cont)		☒ Yes	☐ N/A
(b) Design - Complies With Council's Design Guidelines			
(i) Pipe Velocity		☒	
(ii) Capacity		☒	
(iii) Cover Over Mains		☒	
(iv) Concrete Anchor Block Requirements <i>(Per GCC Dwg 15)</i>		☒	☐

4. SEWERAGE PUMP AND LIFT STATIONS		☒ Yes	☐ N/A
(a) Drafting - Drawings Include:-			
(i) Locality Plan		☒	
(ii) Vehicle Access Details (If Applicable)		☒	☐
(iii) Relevant Detail - Fittings etc		☒	
(iv) Pump Station Design Including:-			
• Pipework - Diameter, Material and Class		☒	
• Valve Detail		☒	
• Pipe and Fitting Schedule <i>(SHELF ITEM)</i>		☒	
• Pump Description		☒	
• Pump Station Layout - Valve Box etc <i>(SHELF ITEM)</i>		☒	
• Telemetry		☒	
(b) Design - Complies With Council's Design Guidelines:-			
(i) Pump Station Criteria			
• Flow		☒	
• Head		☒	
• In Accordance With Council's Pump Station Diagrammatic Layout		☒	
(ii) Pump Curves		☒	
(iii) Mechanical and Electrical Requirements		☒	
(iv) Control Cabinet		☒	
(v) Overflows		☒	
(vi) Noise Protection Provisions		☒	

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

F. MISCELLANEOUS

1. NOISE ATTENUATION WORKS		☐ Yes	☒ N/A
(i) Earthworks / Mounds - Plan, Sections And Batter Slopes	☐	☐	
(ii) Typical Barrier / Fence Details	☐	☐	
(iii) Landscaping	☐	☐	
(iv) Road Number Or Name	☐		

2. RETAINING WALLS		☐ Yes	☒ N/A
(i) Approved Road Names	☐		
(ii) Plan Layout - Extent	☐		
(iii) Typical Cross Section	☐		
(iv) Foundation Details	☐		
(v) Drainage Details	☐		
(vi) Design Certified By Registered Professional Engineer	☐		

3. LANDSCAPE WORKS		☐ Yes	☒ N/A
(i) Drawings for landscape works are in accordance with Council's Landscape Strategy Part 2 - Landscape Documentation manual and the required elements of Queensland Streets	☐		

4. PUBLIC UTILITY SERVICES		☒ Yes	☐ N/A
(a) Drafting - Drawings Include:-		☒ ☐ ☐ ☐	
(i) Existing Light Poles And Power Poles Etc			
(ii) Existing Underground Services			
(iii) Proposed Services			
(iv) Alternation To Existing Services		☐	
(b) Public Utility Service Drawings:-		☐ ☐	
(i) Public Utility Service Designs Sighted			
(ii) Check For Conflict With Civil Works			

5. BIKEWAY AND PEDESTRIAN NETWORKS		☒ Yes	☐ N/A
(a) Drafting - Drawings Include:-		☒ ☒ ☒ ☒	
(i) All Bikepaths and Footpaths Clearly Shown			
(ii) Chicanes Provided To Each End Of All Pathways			
(iii) Access Ramps Shown Where Bikepaths and Footpaths Link To Kerb			
(iv) Bikeways Clearly Shown With Widths As Per Approval		☒	
(b) Design - Complies With Council's Design Guidelines:-		☒ ☒	N/A
(i) GCCC Bikeways Strategy Plan			
(ii) Maximum Grade			

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

G. DUAL WATER RETICULATION SUPPLY

1. DUAL WATER RETICULATION PLANS (Potable & Recycled)		☐ Yes	☒ N/A
(a) Drafting - Drawings Include:			
(i) Approved Road Name and Road Reserve Boundaries	☐		
(ii) Allotment Boundaries and Numbers	☐		
(iii) Easements (If Applicable)	☐	☐	
(iv) Duplex Dwelling Allotments	☐	☐	
(v) North Point	☐		
(vi) Existing Water Mains including Alignment, Type and Size	☐		
(vii) Proposed Dual Water Reticulation Mains including:	☐		
• Mains shown on correct alignment from property boundaries	☐		
• Trenching Type	☐		
• Symbols for Fittings Clearly Shown	☐		
• Road Crossings - Ductile Iron	☐		
• Road Crossings - Polyethylene (Conduit)	☐		
(viii) Hydrants/Flushing Points	☐		
(ix) Valves	☐		
(x) Other Fittings - Air Valves, Scour Valves, Reducers, Swabbing Pits, etc	☐	☐	
(xi) Readytap water supply connection points	☐		
(xii) Water Service Details - 25 or 32mm only (If Applicable)	☐	☐	
(xiii) Services Information	☐		
• Proposed and Existing Kerb and Channel	☐		
• Proposed and Existing Stormwater Drainage Including Manholes, Outlets, Overland Flow Paths etc	☐		
• Proposed and Existing Sewer Mains	☐		
• Proposed and Existing Public Utility Services	☐		
(xiv) Conflict Points With Other Services	☐	☐	
(xv) Main cross connection location(s)	☐	☐	
(xvi) Technical Detail Drawings	☐	☐	
• Reservoirs	☐		
• Top Water Level (TWL)	☐		
• Major Thrust Blocks	☐		
• Capacity	☐		
• Pressure Reducing Valves (PRV)	☐		
• Control Settings	☐		
• Water Supply Zone (High Level Areas)	☐		
(b) Design - Complies With Council's Design Guidelines:			
(i) Flow Requirements	☐		
(ii) Pressure	☐		
(iii) Storage Facilities (If Required)	☐	☐	
(iv) Cover Over Mains	☐		

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

H. REDUCED INFILTRATION GRAVITY SEWERAGE RETICULATION

2. REDUCED INFILTRATION GRAVITY SEWERAGE PLANS		☐ Yes	☒ N/A
(a) Drafting - Plan/Layout Drawings Include:			
(i) Approved Road Name and Road Reserve Boundaries	☐	☐	
(ii) Allotment Boundaries and Numbers	☐		
(iii) Easements (If Applicable)	☐		
(iv) Proposed and Existing Contours	☐		
(v) North Point	☐		
(vi) Proposed Reduced Infiltration Gravity Sewerage mains including:			
• Mains shown on correct alignment from property boundaries	☐		
• Manholes, Maintenance Shafts and Rodding Ends - Numbered	☐		
• House Connection Branches	☐		
(vii) Services information	☐		
• Proposed and Existing Kerb and Channel	☐		
• Proposed and Existing Stormwater Drainage including Manholes, Outlets, Overland Flow Paths etc	☐		
• Proposed and Existing Water Mains including Hydrants, Valves etc	☐		
• Proposed and Existing Public Utility Services	☐		
(viii) Conflict points with other services	☐	☐	
(b) Design - Complies With Council's Design Guidelines:-			
(i) Based on Preliminary Sewer Concept Plan	☐	☐	
(ii) Alignment of Mains and Access for Maintenance	☐		
(iii) Precast Manholes not in Areas Prone to Flooding	☐		
(iv) Manholes, maintenance shafts or Rodding ends not in road carriageways, central medians and roundabouts (Unless authorised by GCW)	☐		
(v) Sewer lines not to be located below retaining walls that are aligned parallel with the pipe service.	☐	☐	
(vi) Pipe Velocity	☐		
(vii) Minimum grades	☐		
(viii) Drops through manholes	☐		
(ix) Capacity	☐		
(x) Cover over mains	☐		
(xi) Concrete anchor block requirements	☐		

ENGINEERING DRAWINGS - APPLICATION CHECKLIST (Cont)

2. REDUCED INFILTRATION GRAVITY SEWERAGE (Cont.)	☐ Yes	☒ N/A
(c) Drafting - Longitudinal Drawings include: -		
(i) Longitudinal Section for each line		
• Running Chainage and distance between manholes • Existing and proposed surface & invert levels • Depth to invert • Line numbers • Property Descriptions • Datum • Grades • Diameter, material, class • Invert levels of all other underground services - stormwater, water, public utilities	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	
(ii) Manhole details to include: -		
• Manhole type - Precast or In-situ • • Manhole diameter • Drop types • Manhole numbers • Cover lid types • Junction invert levels - All sewers entering	☐ ☐ ☐ ☐ ☐ ☐	
(iii) Maintenance shaft details to include:		
• Type of intersection (refer Dwg 597X2) • Bends required to connect to base section (If applicable) • Maintenance Shaft numbers • Junction invert levels - All sewers entering • Kickers (vertical shaft bends) required	☐ ☐ ☐ ☐ ☐	
(iv) Rodding End details to include:		
• Bends required to connect to base section (If applicable) • Maintenance Shaft numbers • Junction invert levels - All sewers entering	☐ ☐ ☐	
(v) House Connections for each allotment on sewer line to include:		
• Diameter • Invert level & depth • Chainage from D/S manhole	☐ ☐ ☐	
(vi) Flood Level (if applicable)	☐	
(vii) Sewer lines requiring anchor blocks/bulkheads	☐	
(viii) Downstream discharge manholes including all incoming sewer	☐	

Form 1 Development Application

idas

Common details

The completion of all applicable questions on Part A is mandatory for all applications.

Part A must be accompanied by one (1) or more other completed parts of the Form.

Any information requested in the form may be provided in an attachment to the application.

For further information about completing the following details, refer to Guide 1 Making an IDAS Application.

Description of land

All land the subject of the application, must be identified.

A description of the land is not required in relation to a mobile or temporary environmentally relevant activity.

Advice for completing Q2

Q2 applies if development is proposed within a water body or watercourse.

Advice for completing Q3

Most land can be identified by a lot on plan description. These details can be obtained from title documents or through the local government.

However, if the land on which the development is proposed does not have a lot on plan description (i.e. the development is proposed in a water body or watercourse) provide--

- (i) the lot on plan description for the adjoining/adjacent land; or
- (ii) GPS coordinates where there is no adjoining/adjacent land (eg. in Moreton Bay).

Advice for completing Q7

Q7 does not apply if the development is proposed within a water body or watercourse.

Advice for completing Q8

Q8 applies if development is proposed within a local government area.

Note: Areas below high water mark are not within a local government's area unless provided for under the Local Government Act 1993.

Advice for completing Q9

Q9 applies if development is proposed on strategic port land or a strategic port land tidal area.

For more information refer to Guide 11 Development on strategic port land

1. Street address: (including house number, street name, suburb/locality name & postcode) (if applicable)
Christensen Road, Yatala (Lot 334 W311668)
2. Name of water body or watercourse, within which the development is proposed: (if applicable)
N/A
3. Lot on plan description (eg. Lot 123 on RP 4567) / GPS coordinates:
Lot 334 W311668
4. The above description is for: (tick applicable box)
☒ (i) the land on which the development is proposed; or
☐ (ii) the land adjoining the water body or watercourse, within which the development is proposed; or
☐ (iii) the water body or watercourse.
5. Shop / tenancy number: (if applicable)
6. Storey / level: (if applicable)
7. Total area of land: (m² or ha) (if applicable)
23,876 Ha
8. Local government area in which the land is situated: (eg. Brisbane, Esk, Harvey Bay, Woomoo etc.) (if applicable)
Gold Coast
9. Port authority for the strategic port land or strategic port land tidal area on which the development is proposed (eg. Port of Brisbane, Port of Townsville) (if applicable)
N/A
10. Existing use of the land: (eg. vacant, single house, shop etc.)
Vacant
11. Proposed use of the land: (eg. 6 unit apartment building, 30 lot residential subdivision, ERA for aquaculture in ponds with a total area of 7 ha for which wastes are released into waters etc.)
Industrial

Proposal details

Other applicable parts of Form 1

Part A of Form 1 must always be accompanied by other completed parts of Form 1.

For information about when a part of Form 1 may apply for an application refer to Guide 1 Making an IDAS development application.

Applicant details

Clearly identify who is making the application. The applicant need not be the owner of the land.

When signing and lodging this application
The applicant is responsible for ensuring the information provided is correct. The assessment manager, any referral agency and the Chief Executive (where applicable) will rely on this information when assessing and deciding the application.

If the applicant is a company

A contact person must be shown. All correspondence will be mailed to this address.

12. Other parts of Form 1 completed as part of this application: (eg, Part D, Part I, etc)

Part E

13. Name: KING & CO ADVISORY C/-

Kellogg Brown & Root Pty Ltd

14. Postal address:

PO Box 2177, Toowong 4066

15. Signature:

[Signature]

16. Date:

24/7/06

17. Contact person:

Derek Neuhold

18. Telephone number:

07 3721 6188

19. Mobile phone number: (if applicable)

0424416064

20. Facsimile number: (if applicable)

07 3721 6500

21. Email address: (if applicable)

Derek.Neuhold@hallburton.com

Land owner's consent (if applicable)

Section 3.2.1(10)(a) of the IPA prescribes that an application can not be taken to be properly made without the land owner's consent.

For more information about land owner's consent refer to Guide 1 Making an IDAS development application.

An application must be supported by the consent of the land owner if the application involves:

- (i) a material change of use;
- (ii) reconfiguration of a lot;
- (iii) work on land below high water mark & not within a canal as defined under the Coastal Protection and Management Act 1995; or
- (iv) work on rail corridor land defined under the Transport Infrastructure Act 1994.

For a mobile or temporary ERA

Land owner's consent is not required.

If an owner has signed this form as applicant

Their signature is not required again in this section.

If there are multiple owners

The consent of each owner is required.

If the owner is a company

Refer to Guide 1.

22. Name/s:

Burnside Syndicate Pty Ltd

23. Signature/s:

[Signature]

24. Date:

10/1/05

Resource entitlement (if applicable)

Section 3.2.1(10)(b) of the IPA prescribes that an application can not be taken to be properly made without evidence of the resource entitlement.

Advice for completion Q25

Refer to schedule 10 of the Integrated Planning Regulation 1996 that prescribes the nature of evidence required by the State in support of the lodging of this development application.

25. Does this application involve taking or interfering with (other than interfering with quarry material on State coastal land under the Coastal Protection and Management Act 1995) a State resource?

☒ NO - go to Q28

☐ YES - go to Q26

26. This application is required by regulation to be accompanied by: (tick the applicable box)

☐ (i) evidence of the allocation of, or entitlement to, the resource - attach evidence

☐ (ii) evidence the chief executive of the department administering the resource is satisfied the development is consistent with an allocation of, or entitlement to, the resource - go to Q 27

☐ (iii) evidence the chief executive of the department administering the resource is satisfied the development application may proceed in the absence of an allocation of, or entitlement to, the resource - go to Q 27

Advice for completion Q27

The information in (i) – (v) is mandatory if evidence is required under Q26 (i) or (ii) above.

The official stamp of the Department of Natural Resources and Mines is mandatory where the application involves taking or interfering with water or riverine quality material under the Water Act 2000.

27. Evidence of the resource entitlement:

(i) Resource entitlement / authority details

(ii) Name of delegated officer

(iii) Position of delegated officer

(iv) Signature of delegated officer

(v) Date

(iv) Official stamp of the department administering the resource (if applicable)

Referral triggers

The Referrals Checklist must be completed and lodged with all IDAS development applications, other than those requiring the completion of Parts A and B of the Form only.

28. Is the Referrals Checklist completed and attached to this application?
☒ YES

☐ NO – the assessment manager may refuse to accept this application on the grounds that the application has not been properly made
Plans / drawings / reports

An application should be accompanied by details to support the proposal & enable the assessment manager, referral agencies and any person viewing the application during public scrutiny or public notification to understand the scope of the proposal and any potential impact.

29. Plans/drawings/reports accompanying this application:

Plan / Drawing / Report Number	Title	Date
(i) Refer Drawing Index for Full List		
(ii)		
(iii)		
(iv)		
(v)		
(vi)		
(vii)		
(viii)		
(ix)		
(x)		

PLEASE NOTE

The assessment manager may refuse to accept an application that, at the time of lodgement, fails to provide all applicable information required by Part A and any other relevant part of Form 1.

OFFICE USE ONLY (applicable to assessment manager's)

FEE (\$)	DATE RECEIVED	RECEIVING OFFICER'S NAME/S	REFERENCE NUMBERS
----------	---------------	----------------------------	-------------------

Form 1 Development Application

idas

Operational &/or building work

assessable against a local government's planning scheme

PART E

Completion of **all question** on Part E is **mandatory** for all applications involving the assessment of operational work and/or building work (including detailed engineering plans and other plans, detailed engineering plans for subdivisional works and conceptual design plans for engineering & building work when the application does not involve assessment of a material change of use of premises at the same time) assessable against a local government's planning scheme.

Nature of the application

A development permit authorises development to occur, while a preliminary approval is a step in the approval process and does not authorise development to occur.

The types of work that are assessable against a planning scheme are determined by the scheme for a particular local government and will vary across the State.

To determine the types of work that are assessable under a particular planning scheme, contact the relevant local government.

1. This application is for (tick one (1) or both if applicable)

☐ **Preliminary approval** - provide details of the type of work eg. roadwork, stormwater, water and sewerage infrastructure, etc

AND / OR

☒ **Development permit** - provide details of the type of work eg. roadwork, stormwater, water and sewerage infrastructure, etc

Operational Works

2. Are the works subsequent to a previous development approval?

☐ NO

☒ YES - provide details of all previous approvals (eg. file references)

PN184435/02/DA1

3. Is the subdivision for a canal estate?

☒ NO

☐ YES

Portable Long Service Leave levy (if applicable)

Prior to issuing a development permit for the works, the assessment manager is required by law to "sign" an approved form, issued by Qleave, which signifies that the PLSL levy has been paid.

4. Is payment of a Portable Long Service Leave (PLSL) levy applicable to the proposal?

☒ YES - complete Q5

☐ NO - Q5, 6 & 7 do not apply

5. Has the PLSL levy been paid?

☒ YES - complete Q6

☐ NO - the applicable levy must be paid before a development permit can be given for the works

6. How much was paid?

\$9811

7. What is the receipt number of the payment?

A606197

PLEASE NOTE

This application **cannot** be accepted unless accompanied by Part A of Form 1.

The assessment manager may refuse to accept an application that, at the time of lodgement, fails to provide all applicable information requested by Part A and any other relevant part of Form 1.

OFFICE USE ONLY (applicable to assessment manager)

DATE RECEIVED	REFERENCE NUMBER/S

Form 1 Development Application

idas

IDAS Assessment Checklist

(Formerly the "Referrals Checklist")

IMPORTANT NOTE FOR ALL APPLICANTS:

1. This checklist was formerly referred to as the "Referrals Checklist". Some of the 'Guides' to using the IDAS Application Forms continue to refer to this document as the "Referrals Checklist". The name of this checklist was changed from 25 July 2005 to more accurately describe its function.
2. Under the IPA and IDAS framework, an application may require assessment by the local Council and/or certain Queensland State entities (e.g. Environmental Protection Agency, Dept. of Natural Resources and Mines, Queensland Heritage Council etc.).
3. This checklist is provided to assist applicants to determine when an application requires assessment by a Queensland State entity and may also assist the applicant to determine the assessment manager¹ for the application.
4. Therefore, the completion of **all questions** in section 1 of this checklist is **mandatory** for all applications (other than those requiring the completion of Parts A & B only).
5. It is the responsibility of the applicant to accurately complete this checklist.
6. Depending on the nature of the application, an applicable State entity may be either the assessment manager or an IDAS referral agency for the application.
7. The assessment manager for the application will rely on the information provided in this checklist (as well as any material lodged in support of the application) to identify any applicable referral agencies for the application in the Acknowledgement Notice. The assessment manager will also rely on this information when identifying if the application triggers referral coordination².
8. To assist you in answering the following questions a series of guides are available free from www.ipa.qld.gov.au.
9. Any other parts of Form 1 that this checklist requires to be completed are available from the Council or the applicable State entity, or can be downloaded free from www.ipa.qld.gov.au.
10. Section 2 provides advice about the referrals that can be required for applications for building work assessable against the *Standard Building Regulation 1993* (SBR).

SECTION 1 - STATE ASSESSMENT (completion mandatory)

Note: The following state assessment triggers apply to development other than for building work assessable against the *Standard Building Regulation 1993* (SBR)).

Environmentally relevant activity

For more information refer to [Guide 4](#).

Unless you answered "none of the above" to Q1, the application requires assessment by the administering authority³.

If an entity, other than the administering authority, is the assessment manager for the application, the administering authority is a concurrence agency for the application in relation to this matter.

Note: An application involving ERA 19 and/or 20 will also require completion of Part K₁ of Form 1 for approval where an allocation under the *Water Act 2000* is required.

1. The application involves: (tick applicable box/es)

- ☐ (i) an environmentally relevant activity (ERA) for which a code for environmental compliance has **not** been made - complete Part G of Form 1
- ☐ (ii) a mobile or temporary ERA for which a code of environmental compliance has **not** been made - complete Part G of Form 1
- ☒ (iii) none of the above

State-controlled road matters

For more information refer to [Guide 3](#).

Unless you answered "none of the above" to Q2, the application triggers referral to the [Department of Main Roads](#) (DMR) as a referral agency.

In certain circumstances DMR will be an advice agency, while in other circumstances DMR will be a concurrence agency.

Schedule 2 of the *IP Regulation* will assist you to determine where DMR is an advice or concurrence agency for the application.

2. The application involves: (tick applicable box/es)

- ☐ (i) development on land **contiguous**⁴ to a State controlled road and for -
- ☐ (a) **material change of use** assessable against the planning scheme;
- ☐ (b) **reconfiguring a lot** unless -
- the total number of lots is not increased; and
 - the total number of lots abutting the State-controlled road is not increased;
- ☐ (c) **operational work** (not associated with a material change of use assessable against the planning scheme or reconfiguring a lot mentioned in (b) above)-
- associated with access to a State-controlled road; or
 - for filling or excavation; or
 - involving the redirection or intensification of site stormwater from the land, through a pipe with a cross-sectional area greater than 625 cm² that directs stormwater to a State-controlled road.

¹ The assessment manager is responsible for assessing and deciding an IDAS application. The assessment manager for an application is prescribed in schedule 8A of the IPA.

² For additional information refer to Guide 6 'Does my application trigger the referral coordination process?'

³ The 'administering authority' may be either the Environmental Protection Agency, the relevant local government (for a devolved ERA) or the Queensland Department of Primary Industries and Fisheries (for a delegated ERA).

⁴ Land contiguous to a State-controlled road is defined in schedule 14 of the IP Regulation to mean land - if part of the land is within 100m of the State-controlled road; or that is part of a future State-controlled road.

Major hazard facilities or possible major hazard facilitiesFor more information refer to Guide 17.If you answered "YES" to Q6, the application requires assessment by the Department of Emergency Services (DES).

If an agency other than DES is the assessment manager for the application, DES is a concurrence agency for the application in relation to this matter.

6. Does the application involve a **material change of use** for a major hazard facility or possible major hazard facility as defined under the *Dangerous Goods Safety Management Act 2001*?

☒ NO
☐ YES - complete Part L of Form 1

Water related development under the Water Act 2000For more information about items (a) – (d), refer to Guide 15. For more information about item (e), refer to Guide 14 Does my application involve assessment of a referable dam?Unless you answered "none of the above" to Q7, the application requires assessment by the Department of Natural Resources and Mines (NR&M).

If an agency other than NR&M is the assessment manager for the application, NR&M is a concurrence agency for the application in relation to this matter.

7. The application involves:

- ☐ (i) **operational work**, for taking or interfering with water under the *Water Act 2000*, that is: (tick applicable box/es)
- ☐ (a) in a watercourse, lake or spring, or from a dam constructed on a watercourse (eg. a pump, gravity diversion, stream re-direction, weir or dam) - complete Part K₂, K₃, K₄, K₆, or K₉ of Form 1 whichever is applicable;
- ☐ (b) for an artesian bore anywhere in the State, no matter what the use - complete Part K₁ of Form 1;
- ☐ (c) for a subartesian bore, in declared groundwater area⁷, for use for purposes other than stock and/or domestic use - complete Part K₁ of Form 1;
- ☐ (d) for a subartesian bore, in certain declared groundwater area, for use for stock and/or domestic purposes - complete Part K₁ of Form 1;
- ☐ (e) for constructing a referable dam⁸ or that will increase the storage capacity of a referable dam by more than 10% - complete Part K₅ of Form 1; or
- ☐ (f) for taking or interfering with overland flow water - complete Parts K₆ and G of Form 1
- ☒ (ii) none of the above.

Removal of quarry material from a watercourseFor more information refer to Guide 16.If you answered "YES" to Q8, the application requires assessment by the Department of Natural Resources and Mines (NR&M).

If an agency other than NR&M is the assessment manager for the application, NR&M is a concurrence agency for the application in relation to this matter.

Note: Part G of Form 1 is required to be completed as the activity of removing quarry material from a watercourse is also an Environmentally Relevant Activity (ERA).

8. Does the application involve development for the removal of quarry material from a watercourse⁹ requiring an allocation notice under the *Water Act 2000*?

☒ NO
☐ YES - complete Parts K₇ and G of Form 1

Operational works in a tidal area or coastal management districtFor more information refer to Guide 18. For more information about prescribed tidal work in local government tidal areas refer to Guide 24.Unless you answered "none of the above" to Q9, the application requires assessment by the Environmental Protection Agency (EPA).

If an agency other than EPA is the assessment manager for the application, EPA is a concurrence agency for the application in relation to this matter.

Local government is the assessment manager for all prescribed tidal work.

9. The application involves **operational work** that is: (tick the applicable box/es)

- ☐ (i) **tidal work**¹⁰ as defined under the *Coastal Protection and Management Act 1995* (the Coastal Act) that is not prescribed tidal work - complete Part M of Form 1; or
- ☐ (ii) tidal work that is **prescribed tidal work**¹¹ other than in a canal¹² - complete Part P of Form 1; or
- ☐ (iii) carried out within a **coastal management district** under the Coastal Act and for - complete Part M of Form 1 if any box/es (a) to (i) below are ticked.
- ☐ (a) constructing or installing works in a watercourse between MHWS and HAT (i.e. other than those works in tidal water) where the development has been determined not to be assessable against the *Water Act 2000*;
- ☐ (b) constructing a canal¹² intended to be connected to tidal waters;
- ☐ (c) constructing an artificial waterway;
- ☐ (d) reclaiming land under tidal water;
- ☐ (e) disposing of dredge spoil or other solid waste material in tidal water;
- ☐ (f) interfering with quarry material on State coastal land above high-water mark;
- ☐ (g) draining or allowing drainage or flow of water or other matter across State coastal land above high-water mark;
- ☐ (h) removing or interfering with coastal dunes on land, other than State coastal land, that is in an erosion prone area and above high-water mark;
- ☐ (i) constructing a bank or bund wall to establish a ponded pasture on land, other than State coastal land, above high-water mark; or
- ☒ (iv) none of the above.

7 The declared ground water areas are listed in Guide 13 Development in a declared catchment area.

8 Referable dam is defined under the *Water Act 2000*.

9 Watercourse is defined in sch 10 of the IPA.

10 Tidal work is defined in sch 10 of the IPA.

11 Prescribed tidal work is defined in the *Coastal Protection and Management Regulation 2003* and includes certain tidal works completely or partly within a local government tidal area.

12 Canal means canal as defined under the *Coastal Protection and Management Act 1995*

concurrence agencies for the application.

Heritage

For further information refer to Guide 19.

If you answered "YES" to Q15, the application triggers referral to the Queensland Heritage Council as concurrence agency for the application.

15. Does the application involve development in a heritage registered place as defined under the *Queensland Heritage Act 1992*?

- ☒ NO
☐ YES – complete Part C of Form 1

Declared catchment areas

For more information, including a list of the declared catchment areas within Queensland, refer to Guide 13.

Unless you answered "none of the above" to Q16, the application requires assessment by the Department of Natural Resources and Mines (NR&M).

If an agency other than NR&M is the assessment manager for the application, NR&M is a concurrence agency for the application in relation to this matter.

16. The application is in an area declared to be a catchment area under the *Water Act 2000* and involves: (tick the applicable box/es)

- ☐ (i) **reconfiguring a lot**, if any lot resulting from the reconfiguration is less than 16 hectares;
☐ (ii) development assessable against the planning scheme involving the establishment or expansion of a waste water disposal system, other than a disposal system for carrying out an environmentally relevant activity under the *Environmental Protection Act 1994*;
☒ (iii) none of the above

Contaminated land

Applications involving material change of use and / or reconfiguring a lot may trigger this referral.

For more information refer to Guide 5.

Unless you answered "none of the above" to Q17, the application requires assessment by the Environmental Protection Agency (EPA). If an agency other than EPA is the assessment manager for the application, EPA will be a concurrence agency for the application in relation to this matter.

17. The application involves: (tick the applicable box/es)

- ☐ (i) **reconfiguring a lot** for which all of part of the premises are –
 (a) premises mentioned in the IPA, schedule 8, part 1, table 2 –
 • item 5, including the exemption otherwise provided for by paragraph (d);
 • item 6, including the exemption otherwise provided for by paragraph (e); or
 • item 7, including the exemption otherwise provided for a mining activity or petroleum activity; or
 (b) in an area for which an area management advice has been given for unexploded ordnance - complete Part N of Form 1
☐ (ii) a **material change of use** –
 (a) made assessable under the IPA, schedule 8, part 1, table 2, items 5 to 7; or
 (b) assessable against the planning scheme and if all or part of the premises is in an area for which an area management advice has been given for unexploded ordnance - complete Part N of Form 1
☒ (iii) none of the above

Electricity Infrastructure

For more information refer to schedule 2 of the IP Regulation.

Unless you answered "none of the above" to Q18, the application triggers referral to the agency to which the easement is granted in favour of as advice agency.

18. The application involves: (tick the applicable box/es)

- ☐ (i) **reconfiguring a lot** where any part of the lot is –
 • subject to an easement in favour of a distribution entity or transmission entity under the *Electricity Act 1994* and the easement is for a transmission grid or supply network under that Act; or
 • situated within 100m of a substation site;
☐ (ii) a **material change of use**, assessable against a planning scheme and not associated with reconfiguring a lot if –
 • any part of the premises is subject to an easement in favour of a distribution entity or transmission entity under the *Electricity Act 1994* and the easement is for a transmission grid or supply network under that Act; and
 • any structure or work that is the natural and ordinary consequence of the use is, or will be, located wholly or partly in the easement;
☐ (iii) a **material change of use**, assessable against a planning scheme and not associated with reconfiguring a lot if any part of the premises is situated within 100m of a substation site;
☐ (iv) **operational work** that is filling or excavation assessable against the planning scheme, not associated with reconfiguring a lot, if –
 • any part of the premises is subject to an easement in favour of a distribution entity or transmission entity under the *Electricity Act 1994* and the work is located wholly or partly in the easement;
 • the work is located wholly or partly within 10m of a substation site;
☒ (v) none of the above.

Integration of land use and public transport

For more information refer to Guide 23, schedule 8A of the IPA & schedule 2 of the IP Regulation.

Unless you answered "none of the above", the application triggers referral to QT as a concurrence agency.

22. The application involves: (tick the applicable box/es)–

- ☐ (i) a **material change of use** assessable against the planning scheme for a purpose mentioned in schedule 13C of the IP Regulation and exceeding the thresholds set by that schedule.
- ☐ (ii) **reconfiguring a lot**–
- ☐ (a) on land that is completely or partly within a public transport corridor, and the total number of lots increases;
 - ☐ (b) on land that is completely or partly within a future public transport corridor or an airport's public safety area;
 - ☐ (c) on land that is within 400m of a public passenger transport facility or a future public passenger transport facility, and the total site area is 5000m² or greater;
 - ☐ (d) for a residential purpose within the 25 ANEF contour for an airport;
 - ☐ (e) for a residential purpose resulting in 100 or more allotments.
- ☐ (iii) **operational work** assessable against the planning scheme, but not associated with a material change of use mentioned in (i) above or reconfiguring a lot mentioned in (ii) above, on land that–
- ☐ (a) is completely or partly within a public transport corridor or a future public transport corridor;
 - ☐ (b) will result in work that encroaches into an airport's operational airspace.
- ☒ (iv) none of the above.

Railway safety and efficiency

For more information refer to Guide 23, schedule 8A of the IPA & schedule 2 of the IP Regulation.

Unless you answered "none of the above", the application triggers referral to QT as a concurrence agency.

23. The application involves: (tick the applicable box/es)–

- ☐ (i) a **material change of use** assessable against the planning scheme for a purpose mentioned in schedule 13D of the IP Regulation and exceeding the thresholds set by that schedule.
- ☐ (ii) **reconfiguring a lot**–
- ☐ (a) on land that is completely or partly within a future public transport corridor, future railway land or a railway tunnel easement;
 - ☐ (b) on land that is within 400m of a Citytrain passenger railway station or a future Citytrain passenger railway station, and the total site area is 5000m² or greater;
 - ☐ (c) on land that abuts rail corridor land, commercial corridor land or future railway land, and the total number of lots increases;
 - ☐ (d) on land that abuts rail corridor land, commercial corridor land or future railway land and an easement abutting the corridor or future railway land is created;
 - ☐ (e) on land that is completely or partly within 100m of, and abutting an approach to, a railway level crossing, and the total number of lots increases;
 - ☐ (f) for a residential purpose resulting in 100 or more allotments.
- ☐ (iii) **operational work** assessable against the planning scheme, but not associated with a material change of use mentioned in (i) above or reconfiguring a lot mentioned in (ii) above, involving extracting, excavating or filling greater than 50m³, on land that–
- ☐ (a) is completely or partly within rail corridor land or commercial corridor land, and the work is not for rail transport infrastructure or other rail infrastructure;
 - ☐ (b) is completely or partly within future railway land, or a railway tunnel easement;
 - ☐ (c) abuts rail corridor land, commercial corridor land or future railway land, and the work is within 25m of the railway boundary.
- ☒ (iv) none of the above.

Referral coordination

An information request requires referral coordination if the application involves –

- (i) 3 or more concurrence agencies; or
- (ii) a facility or area assessable under a planning scheme and prescribed in schedule 7 or 8 of the IP Regulation; or
- (iii) development which is subject to an application for preliminary approval mentioned in s3.1.6 of the IPA.

For more information go to Guide 2 and Guide 6.

24. Does the application trigger referral coordination?

- ☒ NO
- ☐ YES, as the application: (tick the applicable box/es)
- ☐ (i) triggers 3 or more concurrence agencies;
 - ☐ (ii) involves a **material change of use** made assessable under a planning scheme and prescribed in schedule 7 of the IP Regulation;
 - ☐ (iii) involves a **material change of use** (other than a dwelling house, outbuilding or farm building) made assessable under a planning scheme, or **reconfiguring a lot**, in an area prescribed in schedule 8 of the IP Regulation;
 - ☐ (iv) is for a preliminary approval mentioned in s3.1.6 of the IPA

SECTION 2 – BUILDING REFERRALS (completion **not** mandatory)

Note: Below is a list of the referrals that can apply to an application for building work assessable against the *Standard Building Regulation 1993* (SBR)). This section of the IDAS Assessment Checklist is provided for **advice only**. This section of the IDAS Assessment Checklist is **not** required to be completed and lodged with an application for building work assessable against the SBR only.

Fire safety For more information go to schedule 2 of the <i>IP Regulation</i>	1. An application may trigger referral to Qld Fire and Rescue Services as an advice agency if the building work the subject of the application requires the installation of a fire safety system.
Fire safety for budget accommodation For more information go to schedule 2 of the <i>IP Regulation</i>	2. An application may trigger referral to Qld Fire and Rescue Services as an advice agency if the building work the subject of the application requires the installation of a fire safety system for a budget accommodation building.
Spray painting For more information go to schedule 2 of the <i>IP Regulation</i>	3. An application may trigger referral to the Department of Industrial Relations (DIR) as a concurrence agency if the application involves a workplace incorporating spray painting.
Retail meat premises For more information go to schedule 2 of the <i>IP Regulation</i>	4. An application may trigger referral to Safe Food Qld as a concurrence agency if the application involves a retail meat premises.
Private health facilities For more information go to schedule 2 of the <i>IP Regulation</i>	5. An application may trigger referral to the Department of Health as a concurrence agency if the application involves a private health facility.
Workplace area less than 2.3m² For more information go to schedule 2 of the <i>IP Regulation</i>	6. An application may trigger referral to the Department of Industrial Relations (DIR) as an advice agency if the application involves a work place area less than 2.3m ² .
Land contiguous to a State-controlled road For more information go to schedule 2 of the <i>IP Regulation</i>	7. An application may trigger referral to the Department of Main Roads as a concurrence agency or advice agency if the application involves land contiguous to a State-controlled road.
Pastoral workers accommodation For more information go to schedule 2 of the <i>IP Regulation</i>	8. An application may trigger referral to the Department of Industrial Relations (DIR) as a concurrence agency if the application involves pastoral workers accommodation.
Child care centre For more information go to schedule 2 of the <i>IP Regulation</i>	9. An application may trigger referral to the Department of Communities as a concurrence agency if the application involves a childcare centre.
Coastal development For more information go to schedule 2 of the <i>IP Regulation</i>	10. An application may trigger referral to the Environmental Protection Agency (EPA) as a concurrence agency if the application involves land completely or partly seaward of a coastal building line ²⁶ .
Heritage For more information go to schedule 2 of the <i>IP Regulation</i>	11. An application may trigger referral to the Heritage Council as a concurrence agency if the application involves a heritage registered place.
Fisheries matters For more information go to schedule 2 of the <i>IP Regulation</i>	12. An application may trigger referral to the Department of Primary Industries and Fisheries (DPI&F) as a concurrence agency if the application involves assessable building work in a declared fish habitat area; or as an advice agency if the application involves assessable building work on land that adjoins a declared fish habitat area.
Integration of land use and public transport For more information go to schedule 2 of the <i>IP Regulation</i>	13. An application may trigger referral to Queensland Transport as a concurrence agency if the application involves existing or future public transport corridors, or airport operational airspace ²⁷ .
Railway safety and efficiency For more information go to schedule 2 of the <i>IP Regulation</i>	14. An application may trigger referral to Queensland Transport as a concurrence agency if the application involves future railway land.

²⁶ Coastal building lines are prescribed under the *Coastal Protection and Management Act 1995*.

²⁷ Operational airspace is as defined in State Planning Policy 1/02 "Development in the Vicinity of Certain Airports and Aviation Facilities".

Mark Scammells

From: HALLGATH Ray [RHALLGATH@goldcoastwater.com.au]
Sent: Monday, 24 July 2006 12:49 PM
To: Mark Scammells
Subject: RE: Christensen Road, Yatala

Mark,
Thankyou,
I'm looking at getting the water connected latter this week or early next week,
Are all the water works your end completed to allow this to happen?
Regards, Ray

-----Original Message-----

From: Mark Scammells [mailto:M.Scammells@Kingco.com.au]
Sent: Monday, 24 July 2006 12:20
To: HALLGATH Ray
Cc: Michael Scammells
Subject: Christensen Road, Yatala

Dear Ray,

Thank you for our meeting 14th July, 2006 to resolve outstanding issues and for your subsequent letter dated 20th July, 2006 regarding new OPW to be issued with revised conditions.

I have instructions from the property owners that they are prepared to consent to this approach based upon the specific contents of your letter dated 20th July, 2006.

We are arranging for fresh application including Forms and all supporting engineering plans to be hand delivered to you at your office this afternoon.

We look forward to receiving revised approval conditions asap, connection date for water and connection date and quotation for sewer.

regards

Mark Scammells LLB
Director
King & Co Advisory
99 Annerley Road
Woolloongabba Qld 4102
Ph: 07 3844 7388
Fax: 07 3844 7399
Mobile: 0412 625 200

24/07/2006



Disclaimer - This e-mail and its contents contain privileged information that is intended solely for the recipient. If you are not the intended recipient you are hereby notified that any use, dissemination, distribution or reproduction of this e-mail is prohibited. If you have received this e-mail in error please notify the Postmaster at postmaster@kingco.com.au immediately.

Any opinions or views expressed in this e-mail are of the individual sender and may not necessarily reflect the views of King & Co Advisory

Disclaimer - This e-mail and its contents contain privileged information that is intended solely for the recipient. If you are not the intended recipient you are hereby notified that any use, dissemination, distribution or reproduction of this e-mail is prohibited. If you have received this e-mail in error please notify the Postmaster at postmaster@kingco.com.au immediately. Any opinions or views expressed in this e-mail are of the individual sender and may not necessarily reflect the views of King & Co Property Consultants Pty Ltd

This email and its contents is confidential to the Gold Coast City Council, and un-authorised use is strictly prohibited.

24/07/2006

Date: 20 July 2006
Author: R Hallgath
Location: Nerang Office
Phone: (07) 5582 8936
Your Ref:
Our Ref: PN184435/01/DA1
OPW2500239



King & Co Advisory
99 Annerley Road
Woolloongabba QLD 4102

Attention: Mr M Scammells

Dear Michael

**DEVELOPMENT PERMIT - PN184435/02/DA1
OPERATIONAL WORKS APPROVAL - OPW2500239
CONNECTION TO WATER SUPPLY AND SEWERAGE
VARIATIONS TO APPROVALS**

I refer to Gassman Development Perspectives' letter of 29 June 2006 and our meeting of last Friday, 14 July 2006.

It is understood that you wish to gradually develop Lot 334 on WD311668, Christensen Road, Stapylton with a view to either keeping it in a single holding with industrial development or potentially subdividing the land some time into the future.

Development Permits PN184435/020/DA2 and OPW2500239 are premised upon a Reconfiguring a Lot scenario. The requested changes in direction for the development of the land towards industrial development upon a single allotment configuration are of such a nature that a new Operational Works Application is required.

I wish to advise that Council would support industrial development within a single allotment configuration subject to the following comments:

- A new Operational Works Application is made. You are advised that Council would accept the original material with the necessary amendments. In addition the normal fees for this new submission would be waived;
- Any inspections and tests associated with the previous OPW approval (OPW2500239) that have successfully complied with Council's standards will be recognised and accepted as being compliant under the fresh OPW application;
- Council will require the payment of water supply and sewerage developer contributions by way of condition within the new OPW approval;

Continued...2

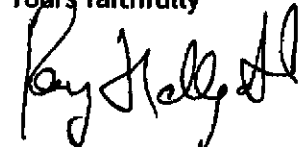


PO Box 5042 Gold Coast MC Qld 9729 Australia Email: waterinfo@goldcoastwater.com.au
Nerang Administration Centre Southport-Nerang Road NERANG QLD 4211 Ph: 1300 366 692 Fax: (07) 5596 3653

- Council will allow the payment of water supply and sewerage developer contributions to be staged with the progressive development of the site with payment due and payable at prior to any Certificate of Classification at the rates applicable at the time of payment;
- Developer contributions to be assessed at 10ET/hectare where the Developer is prepared to enter into Council's standard Commercial and Industry Water Conservation Scheme, otherwise 16ET/hectare would apply;
- Council recognises your payment of water supply and sewerage developer contributions in respect of lease areas 1 to 4 in the amount of \$389,406.03 for 35.75ET based upon 3.5745 hectares at 10/ET per hectare. Council will require the standard Commercial and Industry Water Conservation Scheme agreement to be executed for lease allotments 1 to 4 prior to the first building being issued a Certificate of Classification;
- In order for the site to be potentially the subject of an ROL, Council would request that easements be provided over all sewerage mains within private property;
- Council would relax Condition 14 of the previous OPW that requires a bond for \$466,644. We would though require a performance bond for the decommissioning of the proposed private pump station and for the future construction of a gravity sewer main between that private pump station and the ultimate connection point for the development from the Sandy Creek direction. We would be pleased to accept submissions upon the amount of this bond and the nature of the bond;
- Until the ultimate sewerage connection becomes available from Sandy Creek, the site will be limited to a maximum wastewater discharge of 5L/s;
- In respect of water supply, and upon your representations, Council would accept and maintain separate water meters for each lease allotment provided that the lease allotment has frontage to Christensen Road and the meter is located according to Council's standard practice; and
- Council only allows a maximum draw-off of 30L/s under fire load conditions per building and per allotment (in this case a lease allotment) and per meter point.

Upon receipt of a fresh OPW application Council will take steps to connect your development to water. In addition arrangements are now being made for Council to prepare a cost for connection to sewer that you have previously requested. Should you have any queries please contact me.

Yours faithfully

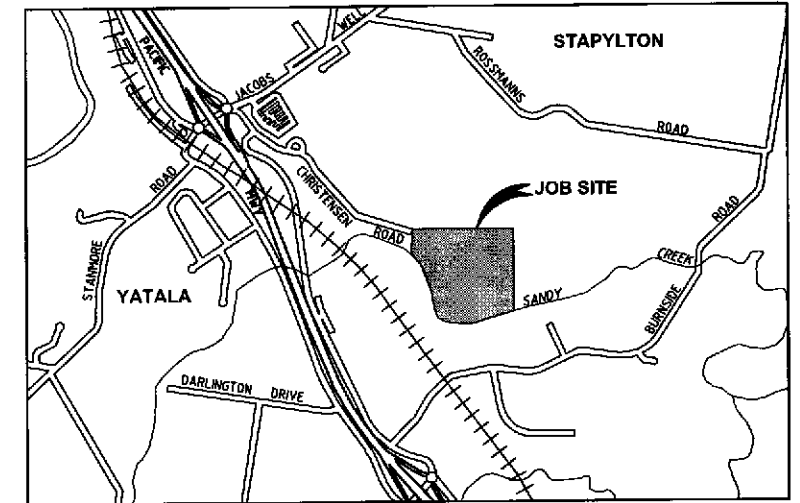


Ray Hallgath
Coordinator Development Control
for the Chief Executive Officer

INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA

RP DESCRIPTION
LOT 334 ON
W311668

SURVEY DATUM
GASSMAN & ASSOCIATES PTY LTD
LICENSED SURVEYORS & DEVELOPMENT CONSULTANTS
PH 07 3807 3333



LOCALITY PLAN
N.T.S.

DRAWING INDEX - ROADWORKS AND DRAINAGE

DRAWING No.	DESCRIPTION
BEV417-C-DWG-001	SITE LAYOUT, LOCALITY PLAN AND DRAWING INDEX
BEV417-C-DWG-002	BULK EARTHWORKS - SHEET 1 OF 2
BEV417-C-DWG-003	BULK EARTHWORKS - SHEET 2 OF 2
BEV417-C-DWG-004	ROADWORKS AND DRAINAGE - SHEET 1 OF 2
BEV417-C-DWG-005	ROADWORKS AND DRAINAGE - SHEET 2 OF 2
BEV417-C-DWG-006	LONGITUDINAL SECTION ROAD - SHEET 1 OF 2
BEV417-C-DWG-007	LONGITUDINAL SECTION ROAD - SHEET 2 OF 2
BEV417-C-DWG-008	INTERSECTION AND CUL-DE-SAC DETAILS
BEV417-C-DWG-009	DRAINAGE LONGITUDINAL SECTIONS - SHEET 1 OF 3
BEV417-C-DWG-010	DRAINAGE LONGITUDINAL SECTIONS - SHEET 2 OF 3
BEV417-C-DWG-011	DRAINAGE LONGITUDINAL SECTIONS - SHEET 3 OF 3
BEV417-C-DWG-012	CUL-DE-SAC DRAINAGE, LAYOUT PLAN
BEV417-C-DWG-013	DRAINAGE MISCELLANEOUS DETAILS
BEV417-C-DWG-014	DETENTION \ WATER QUALITY BASIN SETOUT SHEET 1 OF 1
BEV417-C-DWG-015	DETENTION \ WATER QUALITY BASIN DETAILS SHEET 1 OF 1
BEV417-C-DWG-016	DETENTION \ WATER QUALITY BASIN PLANTING SHEET 1 OF 1
BEV417-C-DWG-017	DRAINAGE CALCULATIONS TABLE - SHEET 1 OF 3
BEV417-C-DWG-018	DRAINAGE CALCULATIONS TABLE - SHEET 2 OF 3
BEV417-C-DWG-019	DRAINAGE CALCULATIONS TABLE - SHEET 3 OF 3
BEV417-C-DWG-101	CROSS SECTIONS ROAD - SHEET 1 OF 9
BEV417-C-DWG-102	CROSS SECTIONS ROAD - SHEET 2 OF 9
BEV417-C-DWG-103	CROSS SECTIONS ROAD - SHEET 3 OF 9
BEV417-C-DWG-104	CROSS SECTIONS ROAD - SHEET 4 OF 9
BEV417-C-DWG-105	CROSS SECTIONS ROAD - SHEET 5 OF 9
BEV417-C-DWG-106	CROSS SECTIONS ROAD - SHEET 6 OF 9
BEV417-C-DWG-107	CROSS SECTIONS ROAD - SHEET 7 OF 9
BEV417-C-DWG-108	CROSS SECTIONS ROAD - SHEET 8 OF 9
BEV417-C-DWG-109	CROSS SECTIONS ROAD - SHEET 9 OF 9
BEV417-C-DWG-110	CROSS SECTIONS CUL-DE-SAC - SHEET 1 OF 2
BEV417-C-DWG-111	CROSS SECTIONS CUL-DE-SAC - SHEET 2 OF 2
BEV417-C-DWG-112	CROSS SECTIONS OPEN DRAIN - SHEET 1 OF 6
BEV417-C-DWG-113	CROSS SECTIONS OPEN DRAIN - SHEET 2 OF 6
BEV417-C-DWG-114	CROSS SECTIONS OPEN DRAIN - SHEET 3 OF 6
BEV417-C-DWG-115	CROSS SECTIONS OPEN DRAIN - SHEET 4 OF 6
BEV417-C-DWG-116	CROSS SECTIONS OPEN DRAIN - SHEET 5 OF 6
BEV417-C-DWG-117	CROSS SECTIONS OPEN DRAIN - SHEET 6 OF 6
BEV417-C-DWG-118	CATCHMENT PLAN

DRAWING INDEX - SEWER AND WATER RETICULATION

DRAWING No.	DESCRIPTION
BEV417-C-DWG-202	SEWER RETICULATION LAYOUT PLAN
BEV417-C-DWG-203	SEWER RISING MAIN LAYOUT PLAN - SHEET 1 OF 2
BEV417-C-DWG-204	SEWER RISING MAIN LAYOUT PLAN - SHEET 2 OF 2
BEV417-C-DWG-205	SEWER RETICULATION MAIN LONGITUDINAL SECTION
BEV417-C-DWG-206	SEWER RISING MAIN LONGITUDINAL SECTION - SHEET 1 OF 3
BEV417-C-DWG-207	SEWER RISING MAIN LONGITUDINAL SECTION - SHEET 2 OF 3
BEV417-C-DWG-208	SEWER RISING MAIN LONGITUDINAL SECTION - SHEET 3 OF 3
BEV417-C-DWG-209	WATER RETICULATION LAYOUT PLAN - SHEET 1 OF 2
BEV417-C-DWG-210	WATER RETICULATION LAYOUT PLAN - SHEET 2 OF 2

0 20 40 60 80 100
SCALE OF METRES
SCALE 1:2000

NOT FOR CONSTRUCTION

© Kellogg Brown & Root Pty Ltd XREFS:Address_block /NEW_A1_APAC_STD_xr_bk /Survey Base /Design Road /Control Lines

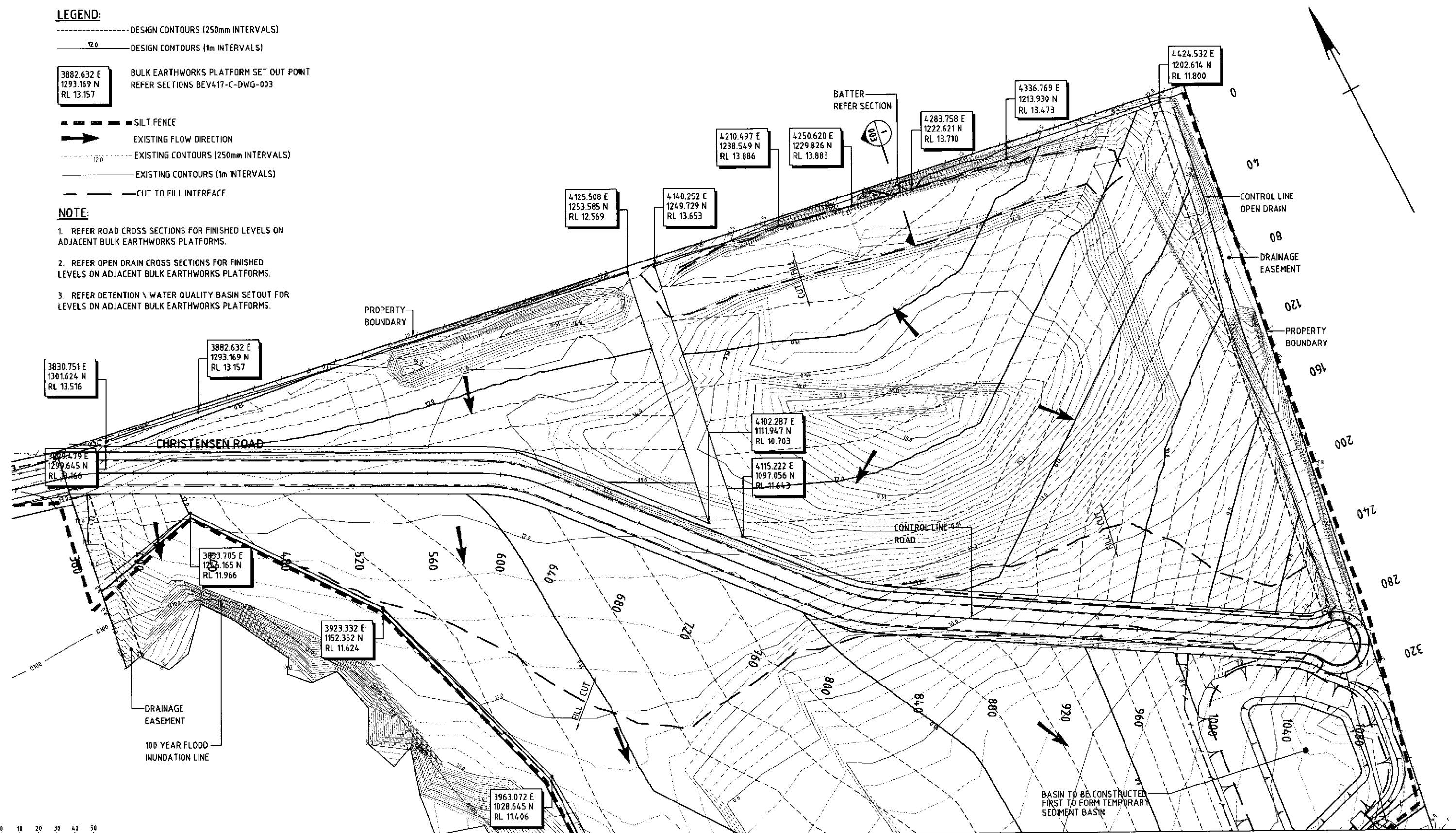
KBR		INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA SITE LAYOUT, LOCALITY PLAN AND DRAWING INDEX	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR		KBR	
KBR</			

LEGEND:

- DESIGN CONTOURS (250mm INTERVALS)
- 12.0 ----- DESIGN CONTOURS (1m INTERVALS)
- 3882.632 E
1293.169 N
RL 13.157 BULK EARTHWORKS PLATFORM SET OUT POINT
REFER SECTIONS BEV417-C-DWG-003
- SILT FENCE
- EXISTING FLOW DIRECTION
- 12.0 ----- EXISTING CONTOURS (250mm INTERVALS)
- EXISTING CONTOURS (1m INTERVALS)
- CUT TO FILL INTERFACE

NOTE:

1. REFER ROAD CROSS SECTIONS FOR FINISHED LEVELS ON ADJACENT BULK EARTHWORKS PLATFORMS.
2. REFER OPEN DRAIN CROSS SECTIONS FOR FINISHED LEVELS ON ADJACENT BULK EARTHWORKS PLATFORMS.
3. REFER DETENTION \ WATER QUALITY BASIN SETOUT FOR LEVELS ON ADJACENT BULK EARTHWORKS PLATFORMS.



0 10 20 30 40 50
SCALE OF METRES
SCALE 1:1000

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Control Lines /Design Road /Survey Base /Design Platform /Design Basin

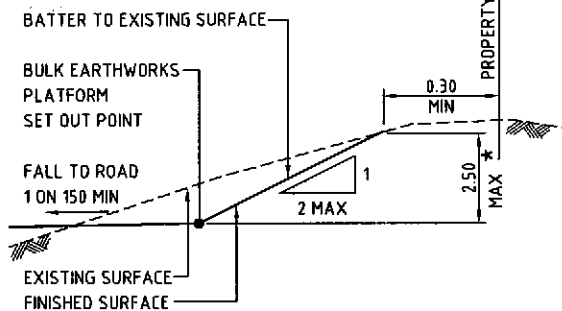
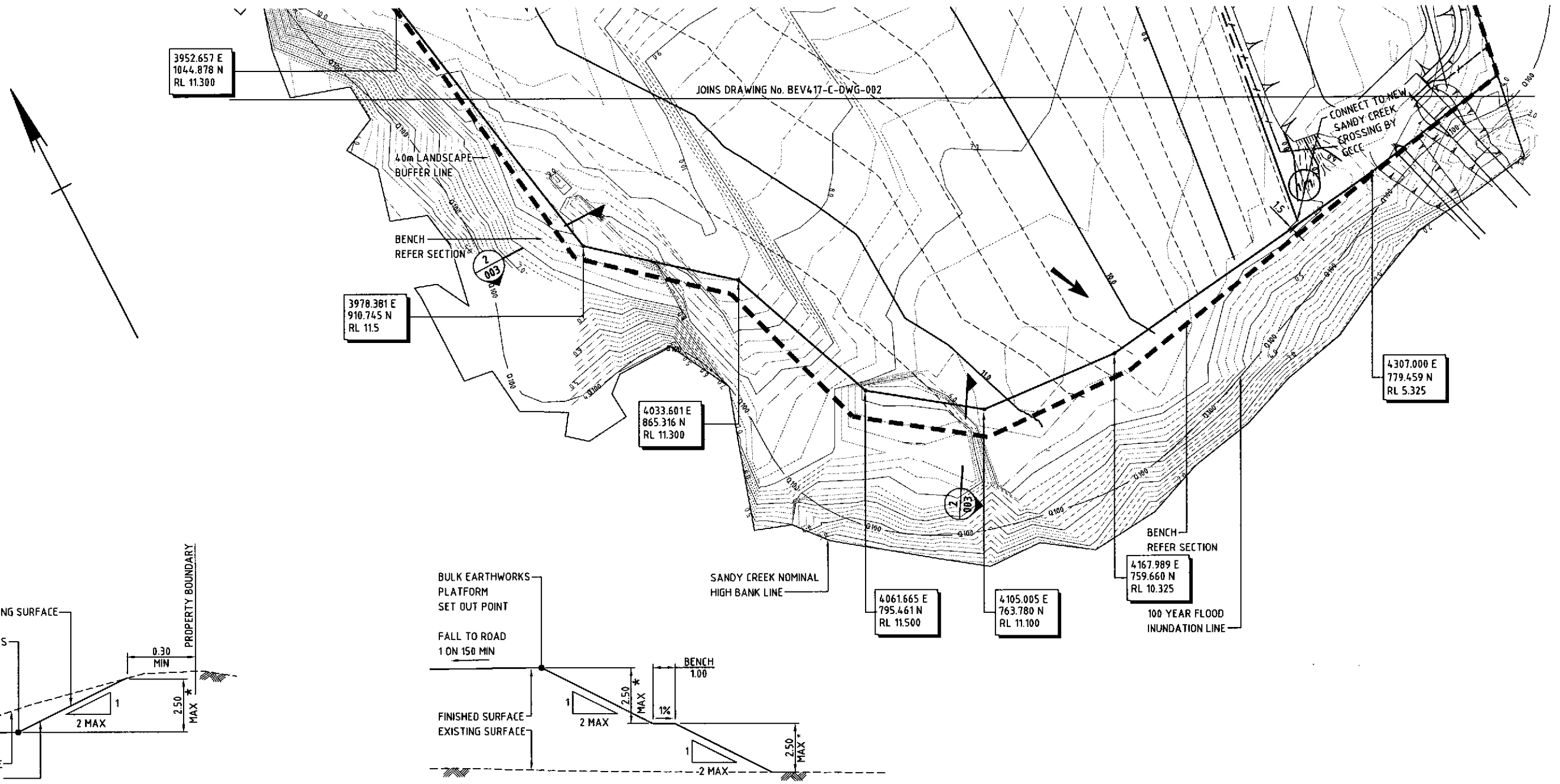
BURNSIDE DEVELOPMENTS PTY LTD	
99 ANNERLEY ROAD	
WOOLLOONGABBA QLD 4102	
DRAWING No.	DESCRIPTION
REFERENCE DRAWINGS	
NOTES	

REV	DESCRIPTION	DATE
A	FIRST ISSUE	
REVISIONS		

NAME	SIGNATURE
DRAFTING J POMROY	JP
DESIGN J POMROY	JP
DESIGN VERIFICATION D NEUHOLD	DN
PROJECT APPROVAL GC LOVELL	GL
APPROVALS	

Kellogg Brown & Root Pty Ltd		
KBR		
Kellogg Brown & Root Pty Ltd ABN 91 007 640 317 555 Coronation Drive, Taewang, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500		
DRAWING SCALE 1:1000 (A1)	DRG. SIZE A1	PROJECT No. BEV417
DRAFTER: AM FRANGIOSA CAD FILE: BEV417-C-DWG-002.dwg		

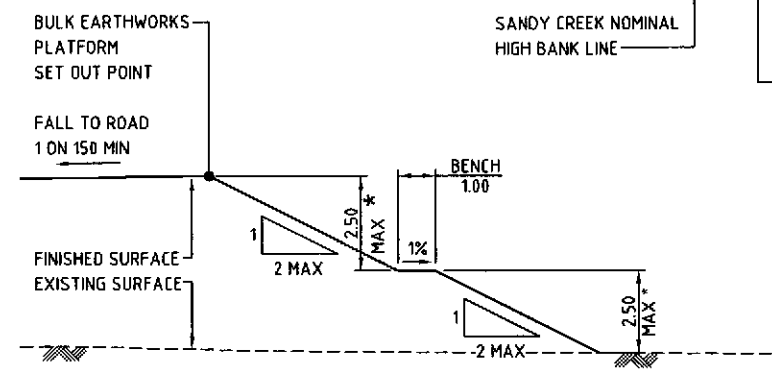
INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA BULK EARTHWORKS PLAN SHEET 1 OF 2	
DRAWING No. BEV417-C-DWG-002	REVISION A



* NOTE: BATTERS > 2.50m HIGH
REQUIRE BENCHING

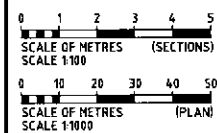
REFER SECTION 2 OPPOSITE
FOR BENCH

SECTION 1 TYPICAL
SCALE 1:100



* NOTE: BATTERS > 2.50m HIGH
REQUIRE BENCHING

SECTION 2 TYPICAL
SCALE 1:100

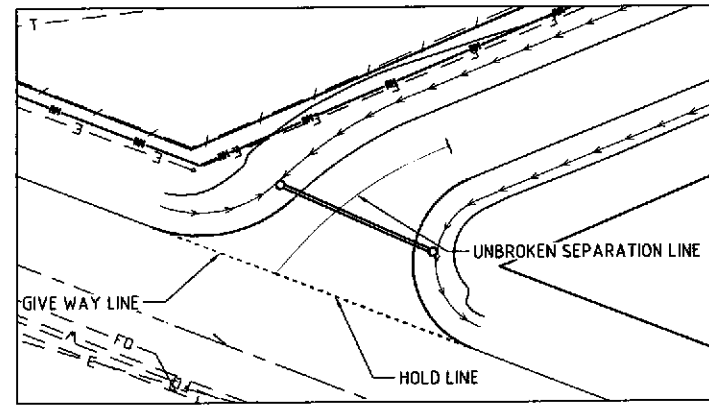


© Kellogg Brown & Root Pty Ltd XREFS:Address_block /NEW_A1_APAC_STD_xr_bk /Control Lines /Design Road /Survey Base /Design Platform /Design Basin /Christensen Road /1396 Christensen Road Alignment /BEV417-C-DWG-204 /Design SEW

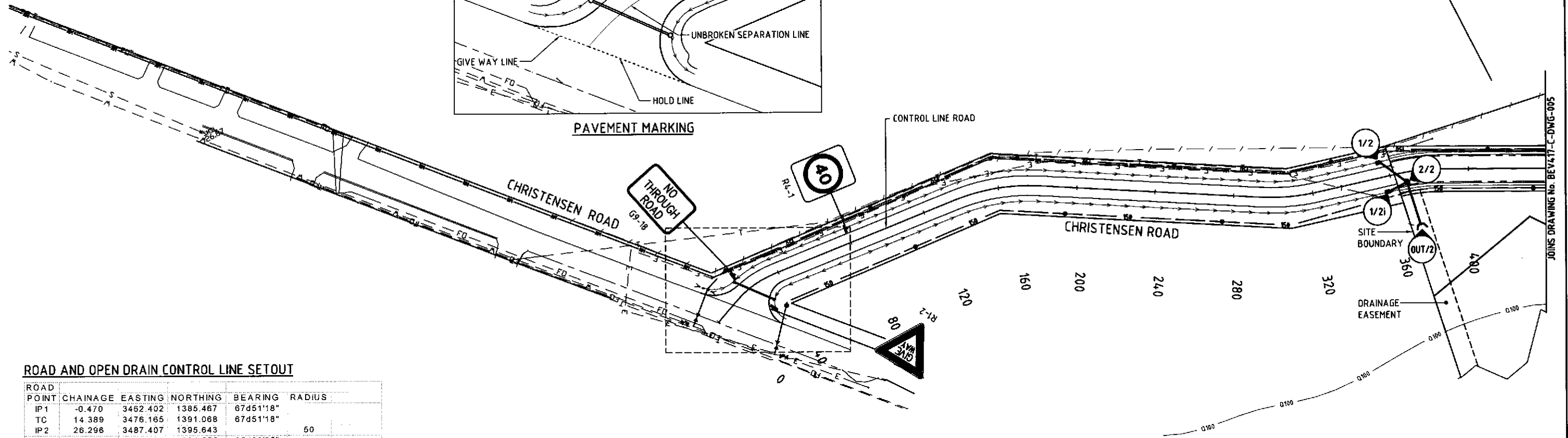
		100mm ON ORIGINAL DRAWING																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
--	--	---------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

NOTE:

FOR ROADWORKS AND DRAINAGE NOTES AND
LEGEND REFER DRAWING No. BEV417-C-DWG-005

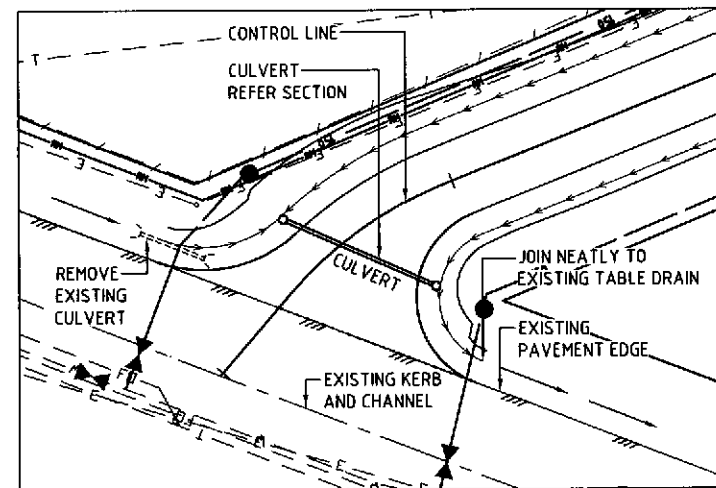


PAVEMENT MARKING



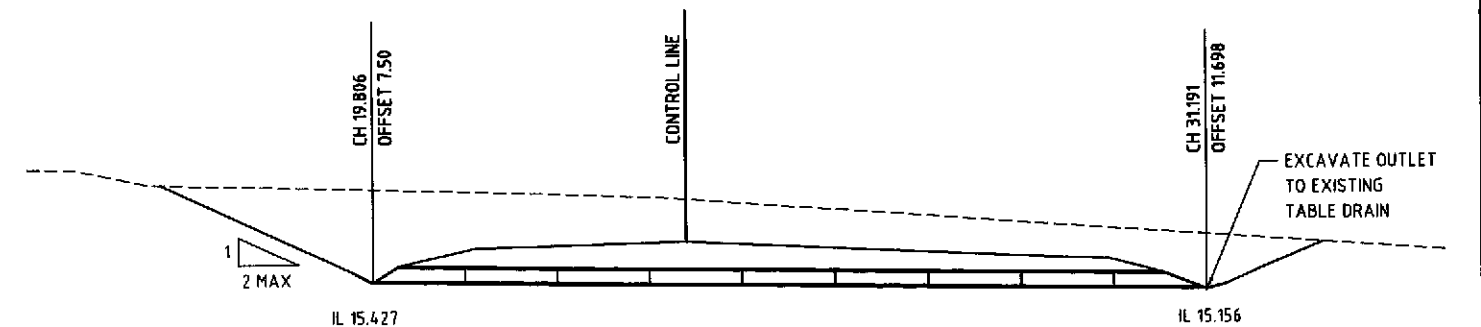
ROAD AND OPEN DRAIN CONTROL LINE SETOUT

ROAD POINT	CHAINAGE	EASTING	NORTHING	BEARING	RADIUS
IP1	-0.470	3462.402	1385.467	67d51'18"	
TC	14.389	3476.165	1391.068	67d51'18"	
IP2	26.296	3487.407	1395.643		50
CT	38.202	3499.495	1394.555	95d08'35"	
TC	136.758	3597.653	1385.720	95d08'35"	
IP3	158.773	3619.942	1383.714		100
CT	180.789	3639.249	1372.400	120d22'17"	
TC	293.931	3736.864	1315.195	120d22'17"	
IP4	307.675	3748.798	1308.202		100
CT	321.420	3762.182	1304.710	104d37'16"	
TC	364.433	3803.801	1293.853	104d37'16"	
IP5	375.488	3814.540	1291.051		100
CT	386.539	3824.403	1285.963	117d17'13"	
TC	587.633	4003.120	1193.772	117d17'13"	
IP6	606.830	4020.393	1184.862		100
CT	626.026	4033.072	1170.130	139d17'05"	
TC	791.571	4141.057	1044.654	139d17'05"	
IP7	807.279	4151.388	1032.649		100
CT	822.987	4164.923	1024.424	121d17'05"	
IP8	1087.609	4391.088	887.008	121d17'05"	
OPEN DRAIN POINT	CHAINAGE	EASTING	NORTHING	BEARING	RADIUS
IP1	0.000	4429.881	1196.556	188d47'60"	
IP2	60.000	4420.702	1137.263	188d47'60"	
IP3	115.082	4409.324	1083.369	191d55'20"	
IP4	140.082	4405.499	1058.663	188d47'60"	
IP5	180.194	4402.344	1018.675	184d30'39"	
IP6	285.000	4386.310	915.103	188d47'60"	
IP7	406.894	4367.657	794.645	188d48'10"	



PLAN
SCALE 1:500

FOR INTERSECTION CONSTRUCTION
DETAILS REFER DRAWING No.
BEV417-C-DWG-008

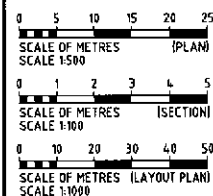


SECTION
SCALE 1:100

CULVERT - SKEW
450 RCP, RRJ, CLASS 3, 21.96m (9x2.44m)
HEADWALLS - PRECAST SLOPING

CULVERT DETAILS

NOT FOR CONSTRUCTION



© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Control Lines/Design Road/Survey Base/Design SW/Design SEW

		100mm ON ORIGINAL DRAWING										NAME		SIGNATURE		Kellogg Brown & Root Pty Ltd		TITLE		INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA ROADWORKS AND DRAINAGE SHEET 1 OF 2	
		BURNSIDE DEVELOPMENTS PTY LTD 99 ANNERLEY ROAD WOOLLOONGABBA QLD 4102										DRAFTING		J POMROY				KBR			
												DESIGN		J POMROY				Kellogg Brown & Root Pty Ltd ABN 91 007 660 317 555 Coronation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500			
												DESIGN VERIFICATION		D NEUHOLD							
												PROJECT APPROVAL		GC LOVELL							
												A FIRST ISSUE						DRAWING SCALE		DRAWING No.	
												REV		DESCRIPTION		DATE		CLIENT		ORIG. SIZE	
																		1:1000 (A1)		A1	
																		PROJECT No.		BEV417	
																		DRAWING No.		BEV417-C-DWG-004	
																		DRAFTER: AM FRANGIOSA		CAD FILE: BEV417-C-DWG-004.dwg	
																				REVISION	
																				A	

1. NOTWITHSTANDING THE LIMITS OF CUTTING AND FILLING SHOWN ON THE DRAWINGS THE ACTUAL LIMITS SHALL BE DETERMINED ON SITE BY THE SUPERINTENDENT DURING CONSTRUCTION.

2. ROAD CONSTRUCTION WITHIN THE SITE (BETWEEN CH 360 AND 1000) SHALL COMPLY WITH THE INDUSTRIAL COLLECTOR STREET CROSS SECTION AS DETAILED ON GCCC STANDARD DRAWING No. 03-02-004. BARRIER KERB AND CHANNEL (HEAVY DUTY) AS DETAILED ON GCCC STANDARD DRAWING No. 03-02-102 IS REQUIRED. SUBSOIL DRAINS IN ACCORDANCE WITH GCCC STANDARD DRAWING No. 03-02-103 SHALL BE CONSTRUCTED UNDER ALL KERB AND CHANNEL.

3. ROAD CONSTRUCTION EXTERNAL TO THE SITE (CH 0 TO 360) SHALL COMPLY WITH TYPICAL SECTION AS SHOWN ON CONTROL LINE ROAD CH 100 ON DRAWING No. BEV417-C-DWG-016.

4. ALL STORMWATER PIPES UNDER ROADWAYS AND FOOTPATHS SHALL BE CLASS (2) RCP UNLESS NOTED OTHERWISE. ALL PIPES UP TO AND INCLUDING 600mm DIA. SHALL BE RUBBER RING JOINTED. ALL JOINTS IN STORMWATER LINES 180 TO 750mm SHALL BE SEALED EXTERNALLY WITH OTHER ROOFED "DENSO TAPE" OR AN APPROVED EQUIV. 38
121
R/L

5. FOOTPATHS TO BE TOPSOILED (75mm THICK) AND TURFED BETWEEN KERB AND FOOTPATH AND FOR TWO TURF STRIPS ADJACENT TO FOOTPATH BETWEEN FOOTPATH AND PROPERTY BOUNDARY.

6. ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE.

7. THE CONTRACTOR SHALL INITIALLY EXCAVATE THE PAVEMENT BOX TO 300mm BELOW THE FINISHED PAVEMENT LEVEL SHOWN ON THE DRAWINGS AND THEN NOTIFY THE SUPERINTENDENT, WHO WILL FIX THE DEPTH OF PAVEMENT FOLLOWING A REVIEW OF THE RESULTS OF SUB-GRADE CBR TESTS AS SUPPLIED BY THE CONTRACTOR. PAVEMENT DEPTHS WILL BE CALCULATED ON THE INDUSTRIAL COLLECTOR STREET CLASSIFICATION AS DESCRIBED WITHIN GCCC DEVELOPMENT GUIDELINES.

8. THE PAVEMENT SHALL CONFORM TO GCCC STANDARD REQUIREMENTS AS DESCRIBED WITHIN GCCC DEVELOPMENT GUIDELINES. FOR A INDUSTRIAL COLLECTOR STREET CLASSIFICATION ROAD AS FOLLOWS : (MINIMUM COURSE THICKNESS)

ASPHALT - 35
BASE COURSE
CBR 80 (CLASS 1A) - 125
UPPER SUB BASE
CBR 45 (CLASS 2) - 125
LOWER SUB BASE
CBR 15 (CLASS 3) - FINAL THICKNESS IS DEPENDENT ON
SUBGRADE CBR TEST RESULTS.

9. PRIOR TO COMMENCEMENT OF ANY WORKS ON SITE THE RELEVANT AUTHORITIES SHALL BE CONTACTED BY THE CONTRACTOR FOR DETAILED LOCATION OF ALL EXISTING SERVICES. ANY DAMAGE TO EXISTING SERVICES SHALL BE RECTIFIED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT OF ANY DISCREPANCIES 21 DAYS PRIOR TO COMMENCEMENT OF WORK.

10. LEVELS FOR THE CONNECTION TO EXISTING WORKS MAY BE VARIED (UPON APPLICATION TO THE SUPERINTENDENT) WHERE NECESSARY ON SITE TO ACHIEVE A SATISFACTORY SMOOTH FINISH TO THE EXISTING WORKS.

11. LENGTHS OF STORMWATER DRAINS HAVE BEEN CALCULATED FROM THE SETOUT POINT OF DRAINAGE STRUCTURES.

12. ALL GULLY PITS TO BE CHANNEL LIP IN LINE IN ACCORDANCE WITH
GCCC STANDARD DRAWING No.03-03-003 UNLESS NOTED OTHERWISE.

13. REFER TO GCCC STANDARD DRAWING No. 03-03-201 FOR BEDDING/BACKFILL DETAILS. SUPPORT FOR CONCRETE PIPES TO BE H2 UNLESS NOTED OTHERWISE.

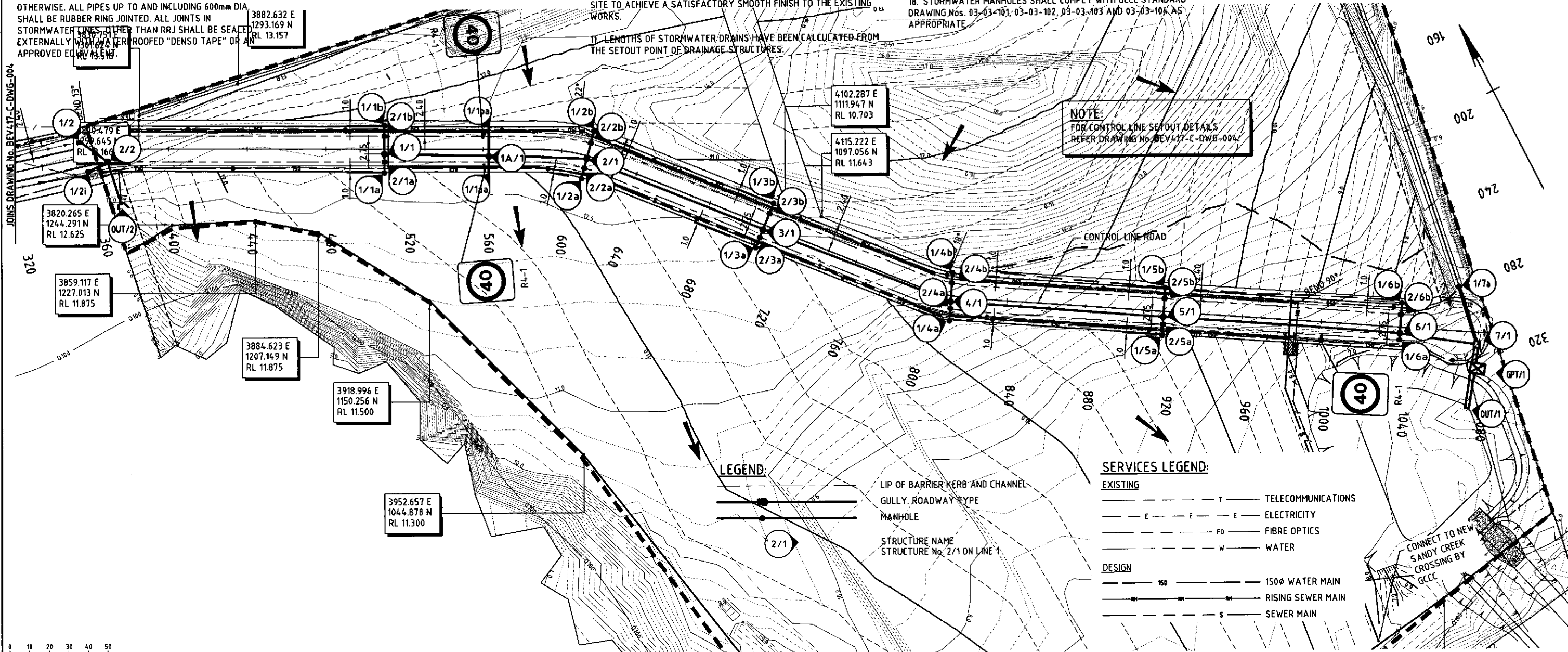
14. PAVEMENT CONSTRUCTION AT CONNECTION OF NEW PAVEMENT TO EXISTING SHALL COMPLY WITH GCCC STANDARD DRAWING No.03-02-603.

15. 1200mm WIDE CONCRETE FOOTPATHS SHALL BE PROVIDED WITHIN SITE (CH 360 TO 1080) WITHIN FOOTPATH RESERVE ON BOTH SIDES OF ROAD IN ACCORDANCE WITH GCC STANDARD DRAWING Nos. 03-02-005, 03-02-201, 03-02-205.

16. SERVICE CONDUIT ROAD CROSSINGS WHERE SPECIFIED SHALL COMPLY WITH GCCC STANDARD DRAWING No. 03-02-601.

17. SERVICE INSTALLATION WITHIN EXISTING ROADWAYS SHALL COMPLY WITH GCCC STANDARD DRAWING No. 03-02-602.

18. STORMWATER MANHOLES SHALL COMPLY WITH GCCC STANDARD
DRAWING Nos. 03-03-101, 03-03-102, 03-03-103 AND 03-03-104 AS
APPROPRIATE.



NOT FOR CONSTRUCTION

0 10 20 30 40 50
SCALE OF METRES
SCALE 1:1000

© Kellogg Brown & Root Pty Ltd YPFES:address block /MFW A1 APAC STD yr bk /Control Lines /Design Road /Survey Base /Design SW /Design SFW /Design Basin /Christensen Road /1396 Christensen Road Alignment /BEV417-C-DWG-204 /Design Platform

BURNSIDE DEVELOPMENTS PTY LTD
99 ANNERLEY ROAD
WOOLLOONGABBA QLD 4102

DRAWING No.	DESCRIPTION
REFERENCE DRAWINGS	

NOTES

REV	DESCRIPTION	DATE
REVISIONS		

	NAME	SIGNATURE
DRAFTING	J POMROY	JP
DESIGN	J POMROY	JP
DESIGN VERIFICATION	D NEUHOOLD	DN
PROJECT APPROVAL	GC LOVELL	GL
CLIENT		
APPROVALS		

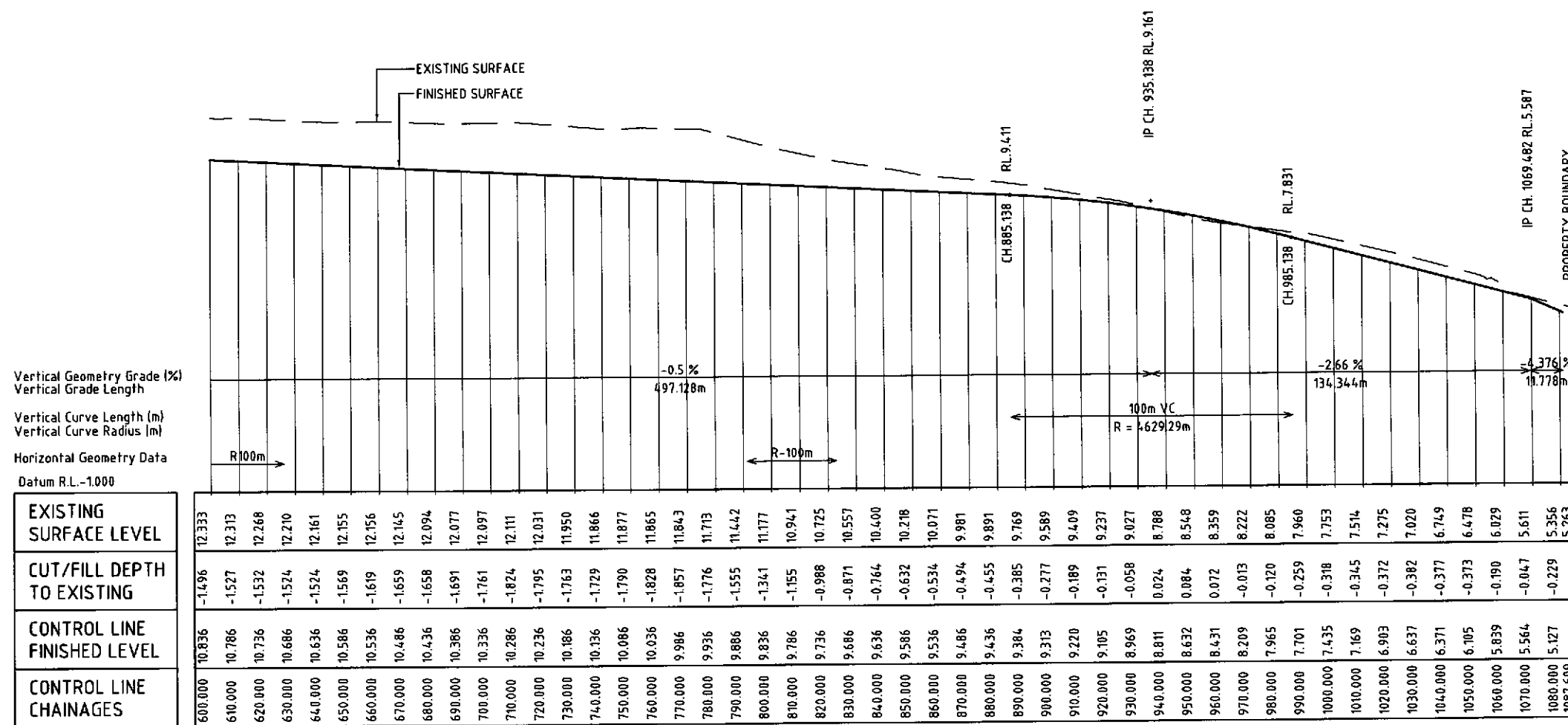
Kellogg Brown & Root Pty Ltd KBR Kellogg Brown & Root Pty Ltd ABN 51 007 660 317 <i>2107</i> 555 Coronation Drive, Toowoomba, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6580		
DRAWING SCALE	ORIG. SIZE	PROJECT NO.
1:1000 (A1)	A1	BEV417
DRAFTER: AM FRANGOSA		CAD FILE: BEV417-C-DWG-C

TITLE

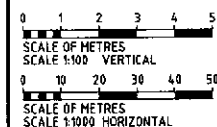
INDUSTRIAL ESTATE
CHRISTENSEN ROAD, YATALA
ROADWORKS AND DRAINAGE
SHEET 2 OF 2

DRAWING No. BEV417-C-DWG-005

REVISION	
Δ	



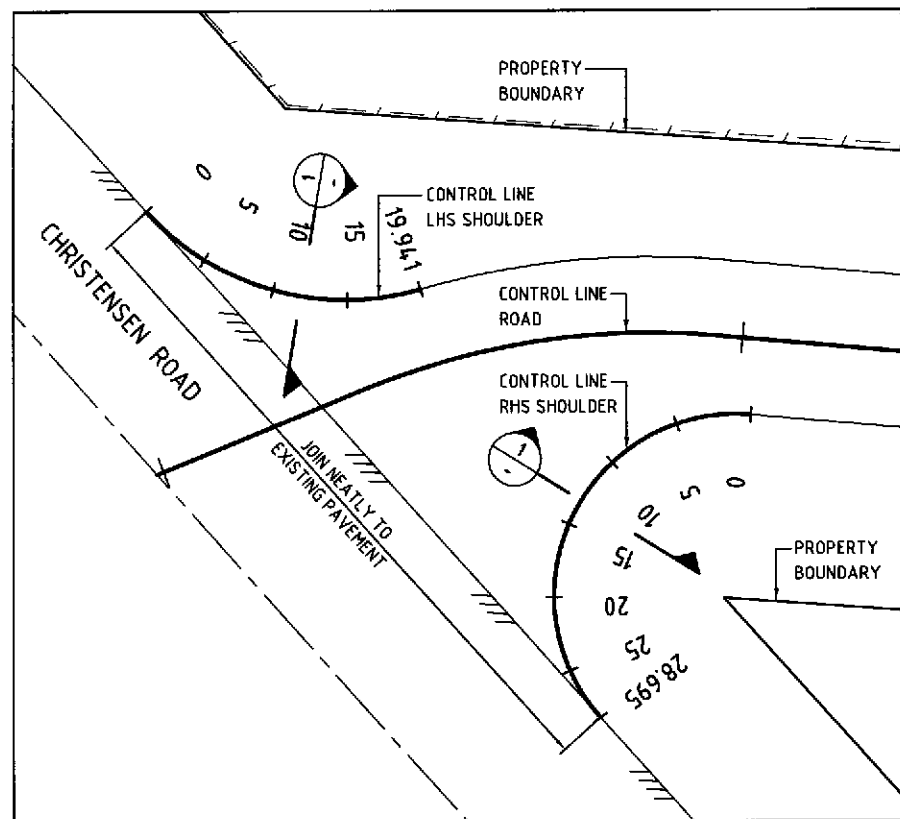
CHRISTENSEN ROAD



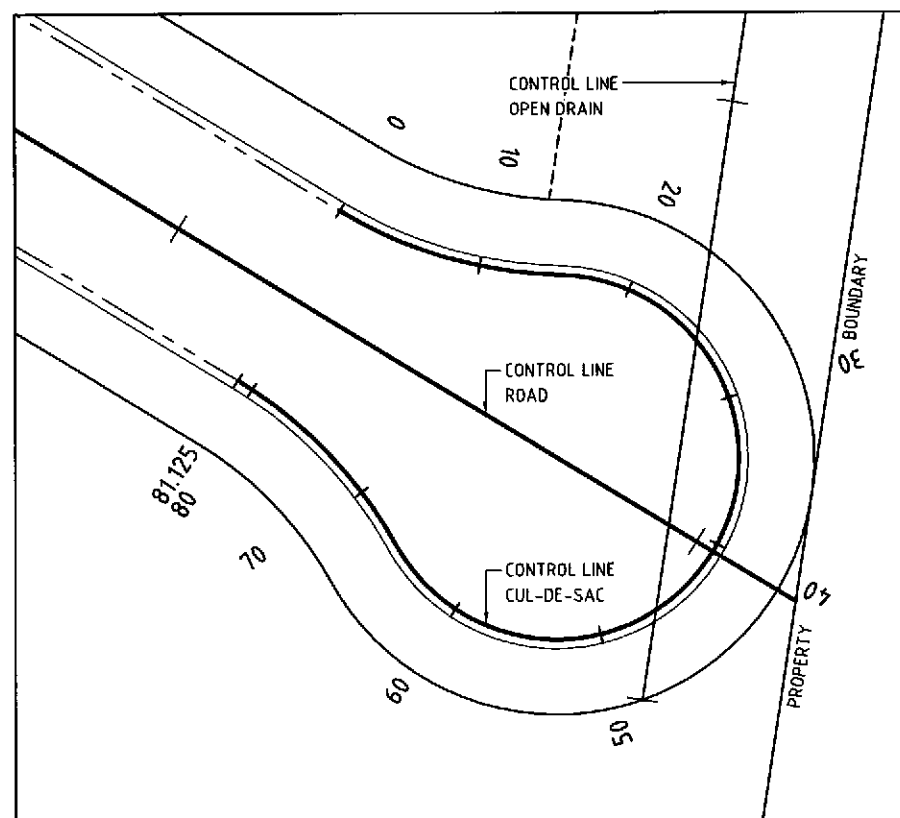
© Kellogg Brown & Root Pty Ltd XREFS:Address_black/NEW_A1_APAC_STD_xr_bk/LS Base

DRAWING No.		DESCRIPTION		REFERENCE DRAWINGS		NOTES		A FIRST ISSUE		REV		DESCRIPTION		DATE		CLIENT		APPROVALS		DRAFTING		NAME		SIGNATURE		DESIGN		DESIGN VERIFICATION		PROJECT APPROVAL		KBR Kellogg Brown & Root Pty Ltd 555 Coronation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500		DRAWING SCALE		ORIG. SIZE		PROJECT No.		DRAWING No.		TITLE		REVISION			
						BURNSIDE DEVELOPMENTS PTY LTD 99 ANNERLEY ROAD WOOLLOONGABBA QLD 4102																J POMROY		J POMROY		D NEUHOLD		GC LOVELL				1:1000 (A1)		A1		BEV417		BEV417-C-DWG-007		INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA LONGITUDINAL SECTION ROAD SHEET 2 OF 2		A					

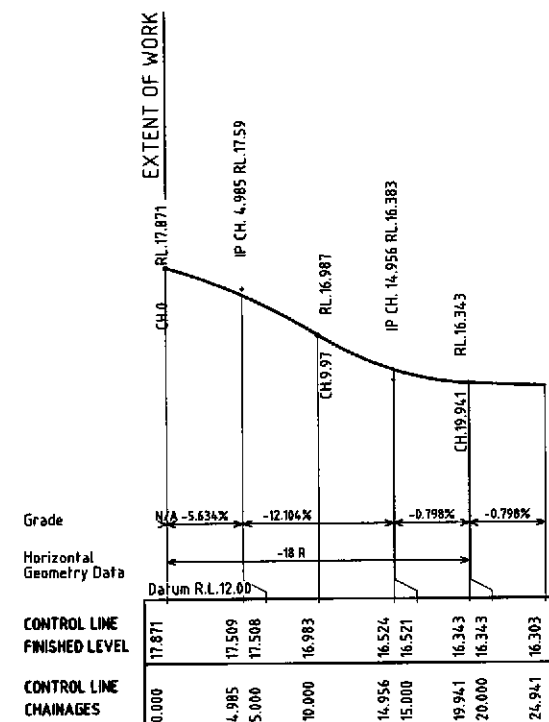
NOT FOR CONSTRUCTION



PLAN - INTERSECTION



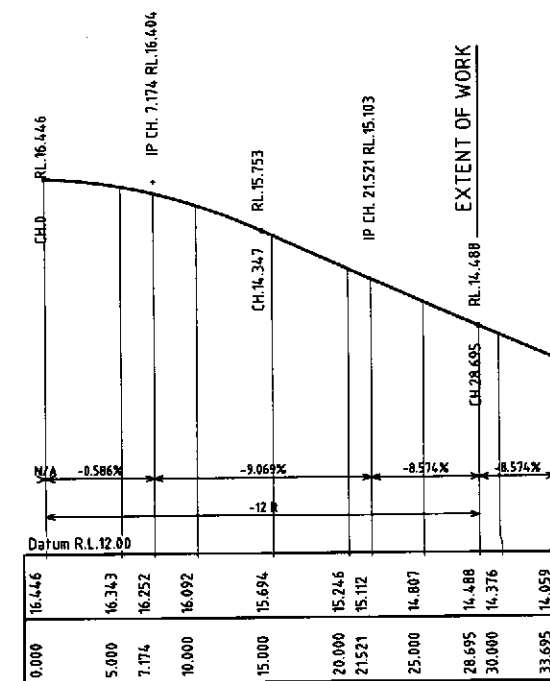
PLAN - CUL-DE-SAC



CONTROL LHS SHOULDER

CONTROL LINE LHS SHOULDER SETOUT

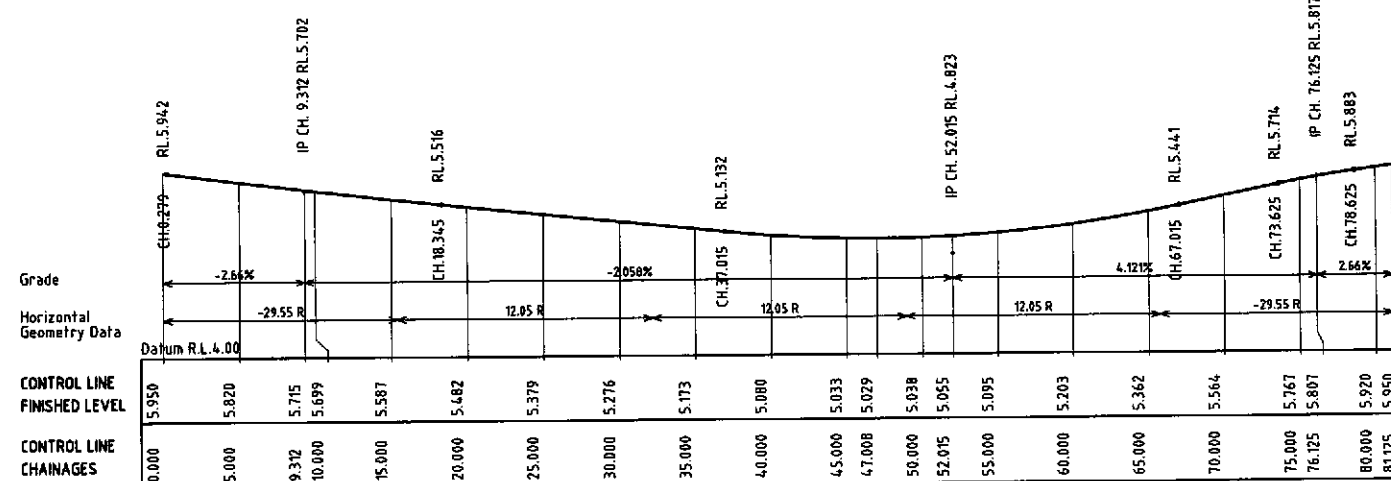
POINT	CHAINAGE	EASTING	NORTHING	BEARING	RADIUS
IP1	0	3461.689	1402.798	137d32'09"	18.000
TC	0	3461.689	1402.798	137d32'09"	
IP2	9.970	3469.205	1394.585		
CT	19.941	3479.910	1397.642	74d03'44"	
IP3	19.941	3479.910	1397.642	74d03'44"	



CONTROL RHS SHOULDER

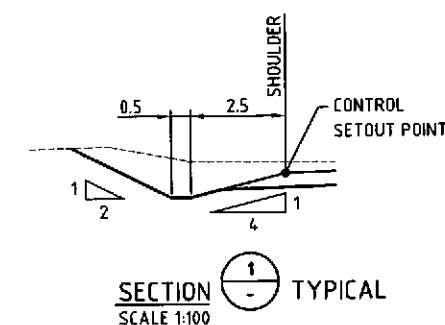
CONTROL LINE RHS SHOULDER SETOUT

POINT	CHAINAGE	EASTING	NORTHING	BEARING	RADIUS
IP1	0	3501.805	1389.327	275d08'35"	12.000
TC	0	3501.805	1389.327	275d08'35"	
IP2	14.347	3471.457	1392.058		
CT	28.695	3491.793	1369.367	138d08'04"	
IP3	28.695	3491.793	1369.367	138d08'04"	



CONTROL LINE CUL-DE-SAC

FOR CROSS SECTIONS
REFER DRAWING No's. BEV417-C-DWG-025 AND 026



CONTROL LINE CUL-DE-SAC SETOUT

POINT	CHAINAGE	EASTING	NORTHING	BEARING	RADIUS
IP1	0	4361.080	912.895	121d17'05"	
TC	0	4361.080	912.895	121d17'05"	
IP2	7.684	4367.798	908.812		29.550
CTP	15.368	4375.658	908.608	91d29'15"	
IP3	23.766	4385.741	908.346		12.050
CT	32.164	4387.258	898.374	171d21'09"	
TC	32.164	4387.258	898.374	171d21'09"	
IP4	40.563	4388.775	888.402		12.050
CT	48.961	4379.225	885.154	251d13'02"	
TC	48.961	4379.225	885.154	251d13'02"	
IP5	57.359	4369.675	881.906		12.050
CTP	65.758	4364.797	890.735	331d04'56"	
IP6	73.441	4360.996	897.617		29.550
CT	81.125	4354.277	901.700	301d17'05"	
IP7	81.125	4354.277	901.700	301d17'05"	

NOT FOR CONSTRUCTION

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Survey Base /Control Lines /Design Road /LS Base

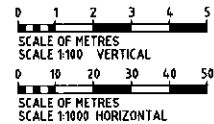
DRAWING No.	DESCRIPTION
	REFERENCE DRAWINGS
	NOTES
	REVISIONS
	DATE
	APPROVALS
	CLIENT
	APPROVALS
	CLIENT

NAME	SIGNATURE
DRAFTING	J POMROY
DESIGN	J POMROY
DESIGN VERIFICATION	D NEUHOLD
PROJECT APPROVAL	GC LOVELL
CLIENT	
APPROVALS	
CLIENT	

DRAWING SCALE	ORIG. SIZE	PROJECT No.
AS SHOWN	A1	BEV417
DRAFTER: AM FRANGIOSA	CAD FILE: BEV417-C-DWG-008.dwg	

TITLE	DRAWING No.	REVISION
INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA INTERSECTION AND CUL-DE-SAC DETAILS	BEV417-C-DWG-008	A

STRUCTURE NAME
STRUCTURE DESCRIPTION



VELOCITY (m/s)	1.350	1.960	2.514	3.118	5.589	5.719	2.270	3.194
PIPE GRADE %	0.437%	0.616%	0.522%	0.611%	2.176%	1.242%	0.643%	0.151%
PIPE FLOW (m3/s)	0.302	0.895	1.461	3.026	4.168	5.496	5.944	5.944
PIPE SIZEmm (Class)	525 (2)	750 (2)	1050 (2)	1350 (2)	1500 (2)	1650 (2)	1800 (2)	1800 (2)

DATUM	-11.000
DEPTH TO INVERT	1.516
HYDRAULIC GRADE LEVEL	10.604
INVERT LEVEL OF DRAIN	9.691
DESIGN SURFACE LEVEL	11.207
EXISTING SURFACE LEVEL	12.393
ROAD CHAINAGE	509.701
RUNNING CHAINAGE	103.904

LINE
© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/LS sw base

DRAWING No.	DESCRIPTION
REFERENCE DRAWINGS	NOTES

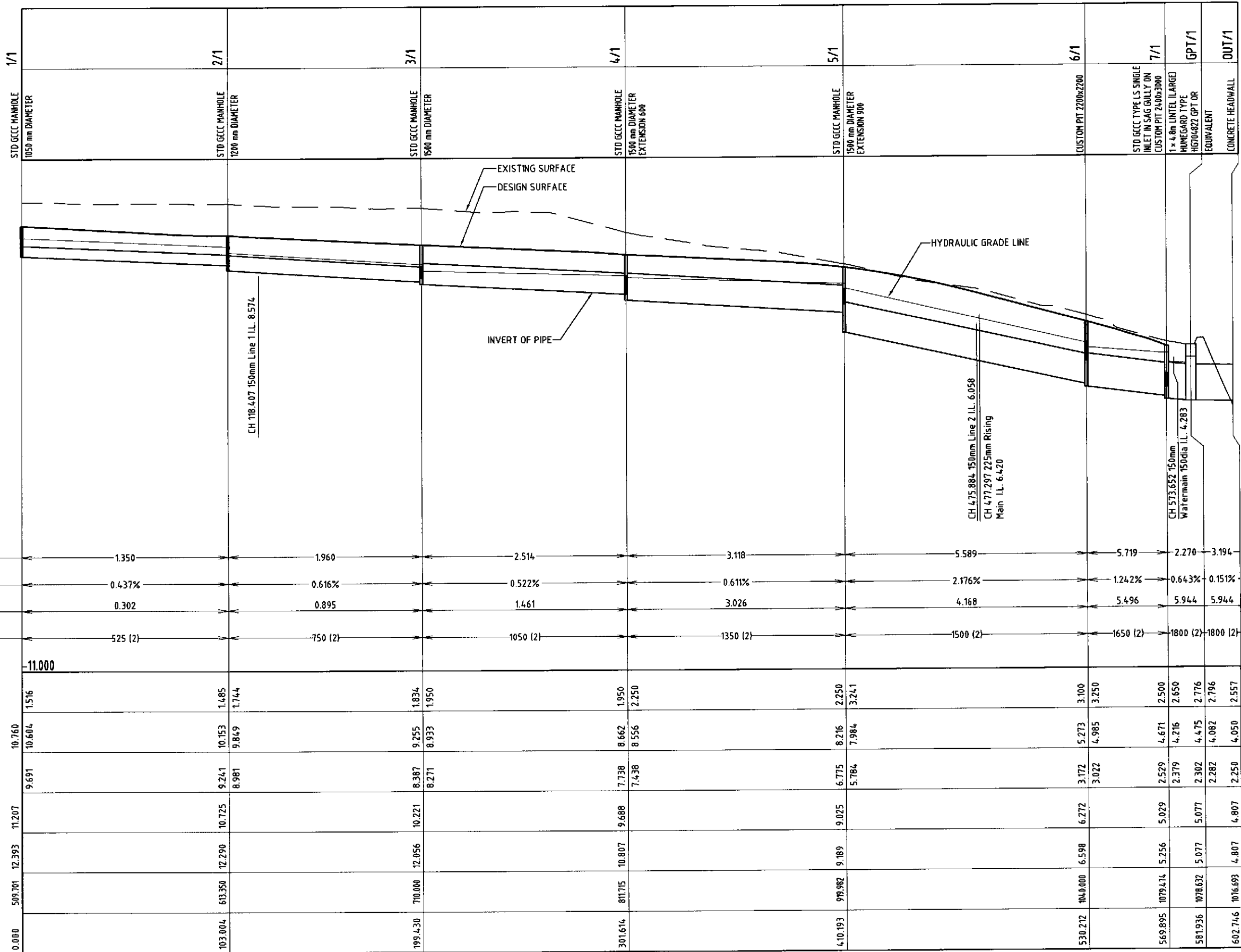
BURNSIDE DEVELOPMENTS PTY LTD	
99 ANNERLEY ROAD	
WOOLLOONGABBA QLD 4102	

A	FIRST ISSUE	DATE
REV	DESCRIPTION	REVISIONS

NAME	SIGNATURE
DRAFTING J POMROY	JP
DESIGN J POMROY	JP
DESIGN VERIFICATION D NEUHOLD	DN
PROJECT APPROVAL GC LOVELL	GL
CLIENT	APPROVALS

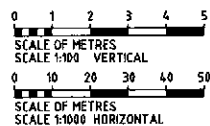
Kellogg Brown & Root Pty Ltd		
KBR		
Kellogg Brown & Root Pty Ltd ABN 91 007 660 317 555 Coronation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500		
DRAWING SCALE 1:1000 (A1)	ORIG. SIZE A1	PROJECT No. BEV417
DRAFTER: AM FRANGIOSA		CAD FILE: BEV417-C-DWG-009.dwg

INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA DRAINAGE LONGITUDINAL SECTIONS SHEET 1 OF 3	
DRAWING No. BEV417-C-DWG-009	REVISION A

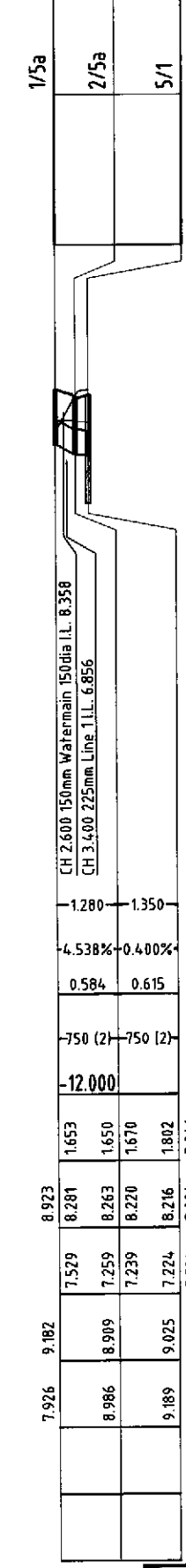
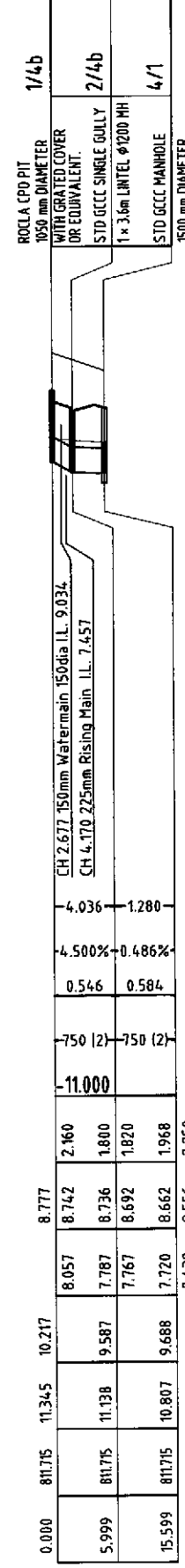
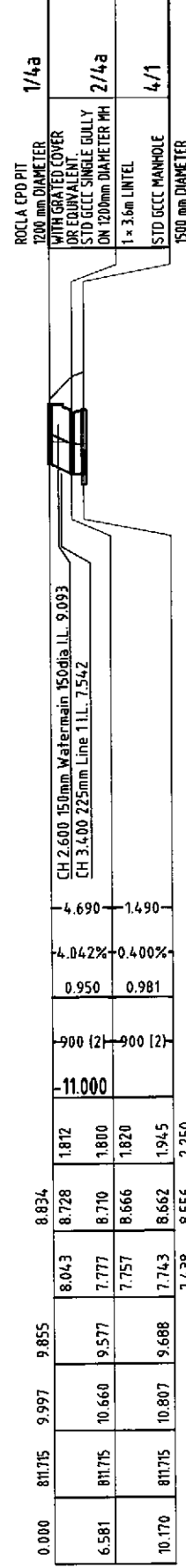
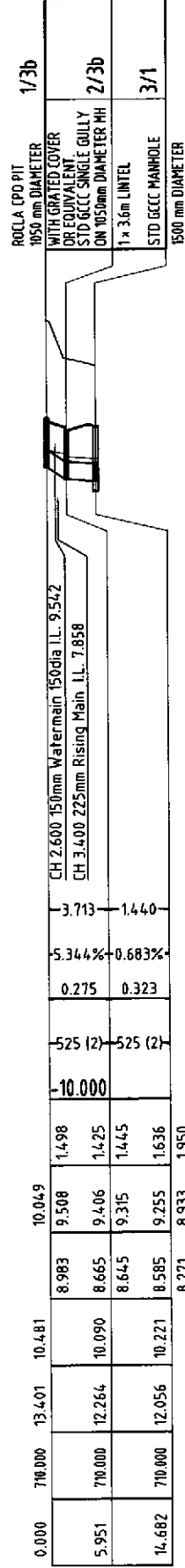
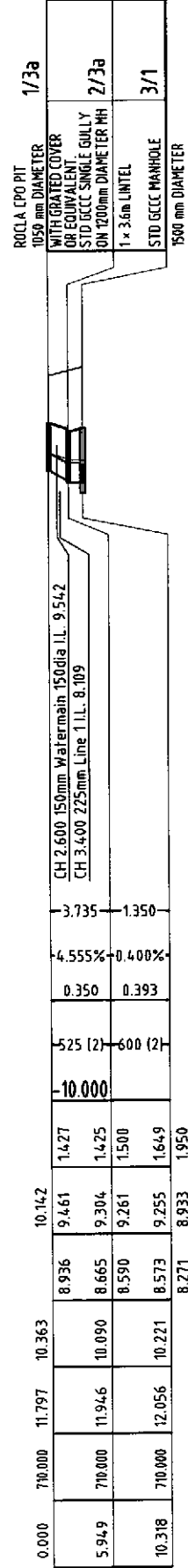
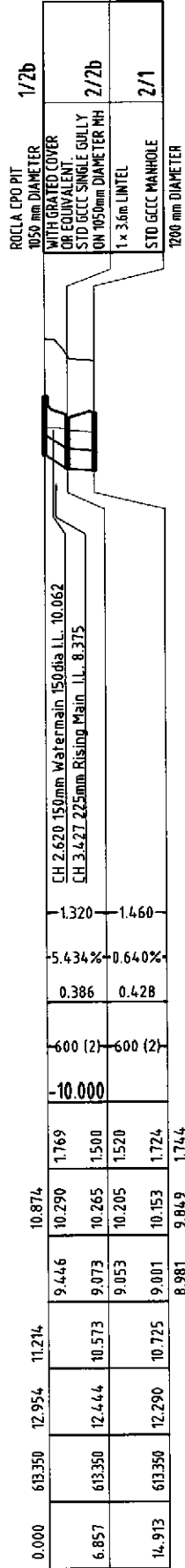
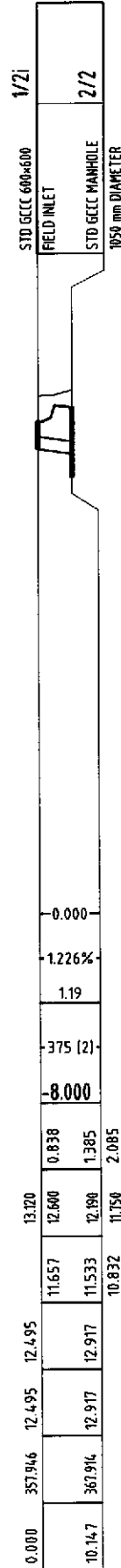
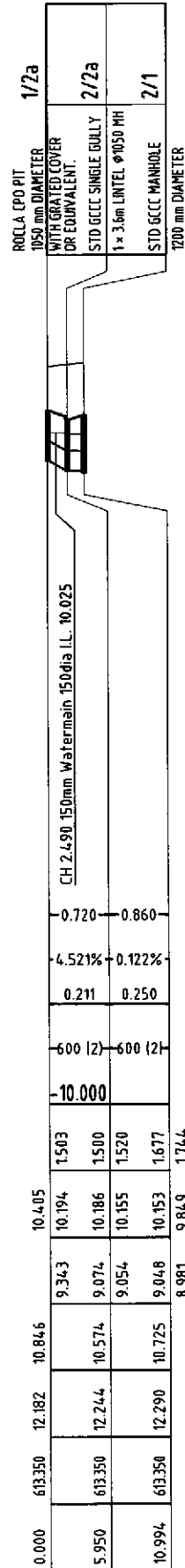
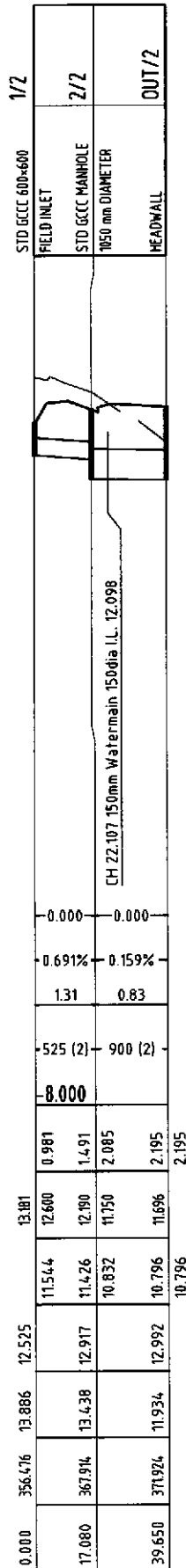
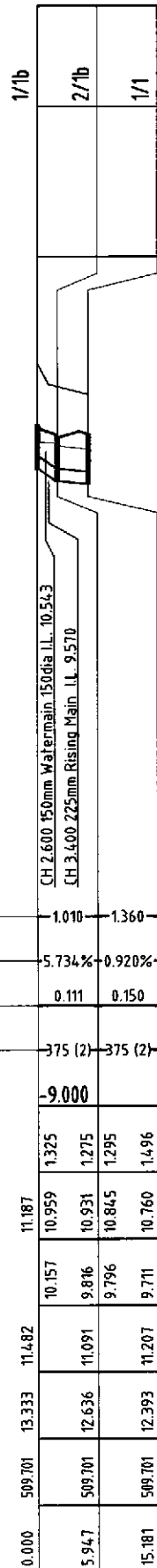


NOT FOR CONSTRUCTION

STRUCTURE NAME
STRUCTURE DESCRIPTION



VELOCITY (m/s)	1.010	1.360
PIPE GRADE %	5.734%	0.920%
PIPE FLOW (m3/s)	0.111	0.150
PIPE SIZEmm (Class)	375 (2)	375 (2)
DATUM	-9.000	
DEPTH TO INVERT	11.187	11.187
HYDRAULIC GRADE LEVEL	10.959	10.959
INVERT LEVEL OF DRAIN	10.157	10.157
DESIGN SURFACE LEVEL	11.482	11.482
EXISTING SURFACE LEVEL	13.333	13.333
ROAD CHAINAGE	509.701	509.701
RUNNING CHAINAGE	5.947	5.947



LINE 1b 2 2a 2i 2b 3a 3b 4a 4b 5a

BURNSIDE DEVELOPMENTS PTY LTD
99 ANNERLEY ROAD
WOOLLOONGABBA QLD 4102

DATE	DESCRIPTION	REVISIONS
A	FIRST ISSUE	

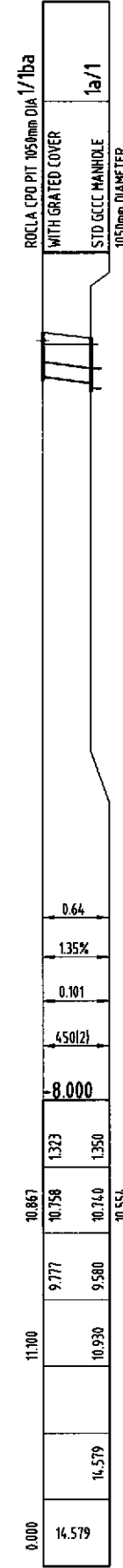
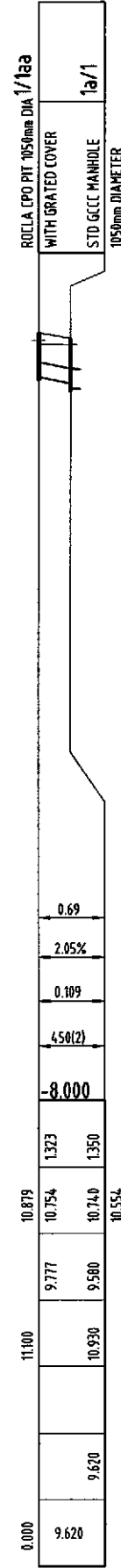
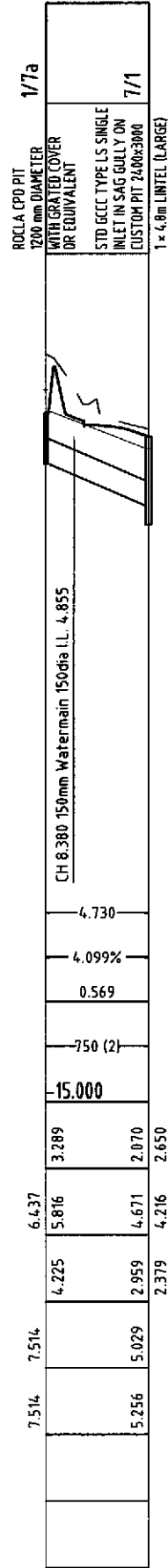
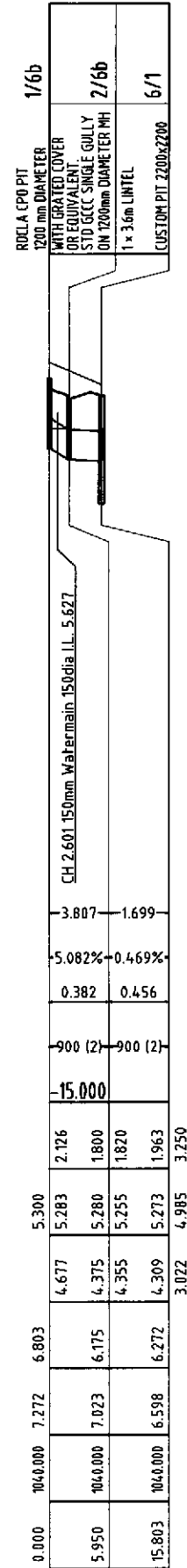
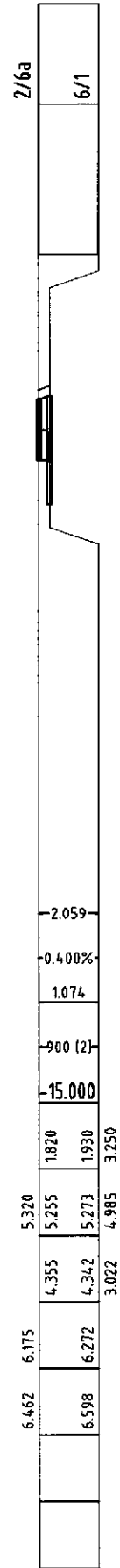
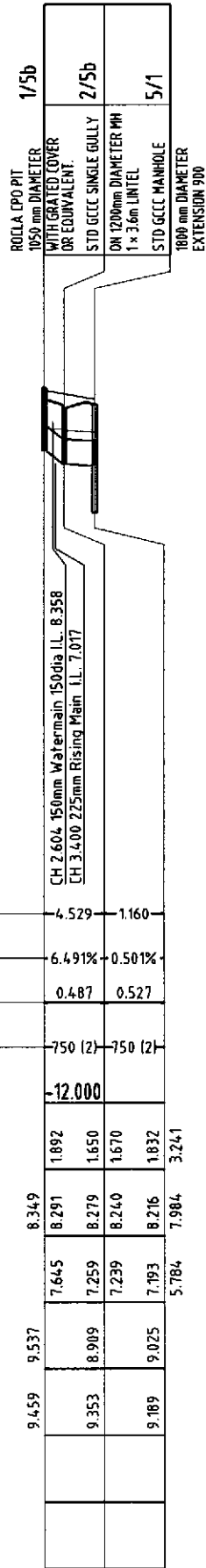
NAME	SIGNATURE
DRAFTING	J POMROY
DESIGN	J POMROY
DESIGN VERIFICATION	D NEUHOLD
PROJECT APPROVAL	GC LOVELL
CLIENT	

Kellogg Brown & Root Pty Ltd		
KBR		
Kellogg Brown & Root Pty Ltd ABN 91 007 668 317 555 Coronation Drive, Toowoomba, Brisbane, Queensland, 4064 ph (07) 3721-6555 fax (07) 3721-6580		
DRAWING SCALE	ORIG. SIZE	PROJECT No.
1:1000 (A1)	A1	BEV417
DRAFTER: AM FRANGIOSA		CAD FILE: BEV417-C-DWG-010.dwg

INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA DRAINAGE LONGITUDINAL SECTIONS SHEET 2 OF 3	
DRAWING No.	REVISION
BEV417-C-DWG-010	A

STRUCTURE NAME
STRUCTURE DESCRIPTION

VELOCITY (m/s)	4.529	1.160
PIPE GRADE %	6.491%	0.501%
PIPE FLOW (m3/s)	0.487	0.527
PIPE SIZEmm (Class)	750 (2)	750 (2)
DATUM	-12.000	
DEPTH TO INVERT	1.892	1.850
HYDRAULIC GRADE LEVEL	8.349	8.291
INVERT LEVEL OF DRAIN	7.645	7.259
DESIGN SURFACE LEVEL	9.537	8.909
EXISTING SURFACE LEVEL	9.353	7.239
ROAD CHAINAGE	9.189	9.025
RUNNING CHAINAGE	5.784	7.984



LINE 5b 6a

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/LS sw base

DRAWING No.	DESCRIPTION
REFERENCE DRAWINGS	
NOTES	
REVISIONS	

BURNSIDE DEVELOPMENTS PTY LTD
99 ANNERLEY ROAD
WOOLLOONGABBA QLD 4102

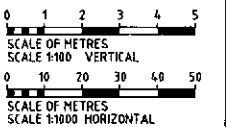
D:\BRS\Projects\bev\BEV417\Drawings\ISSUED REV A\BEV417-C-DWG-011.dwg 17.7.06 09:26

NAME	SIGNATURE
DRAFTING	J POMROY
DESIGN	J POMROY
DESIGN VERIFICATION	D NEUHOLD
PROJECT APPROVAL	GC LOVELL
CLIENT	

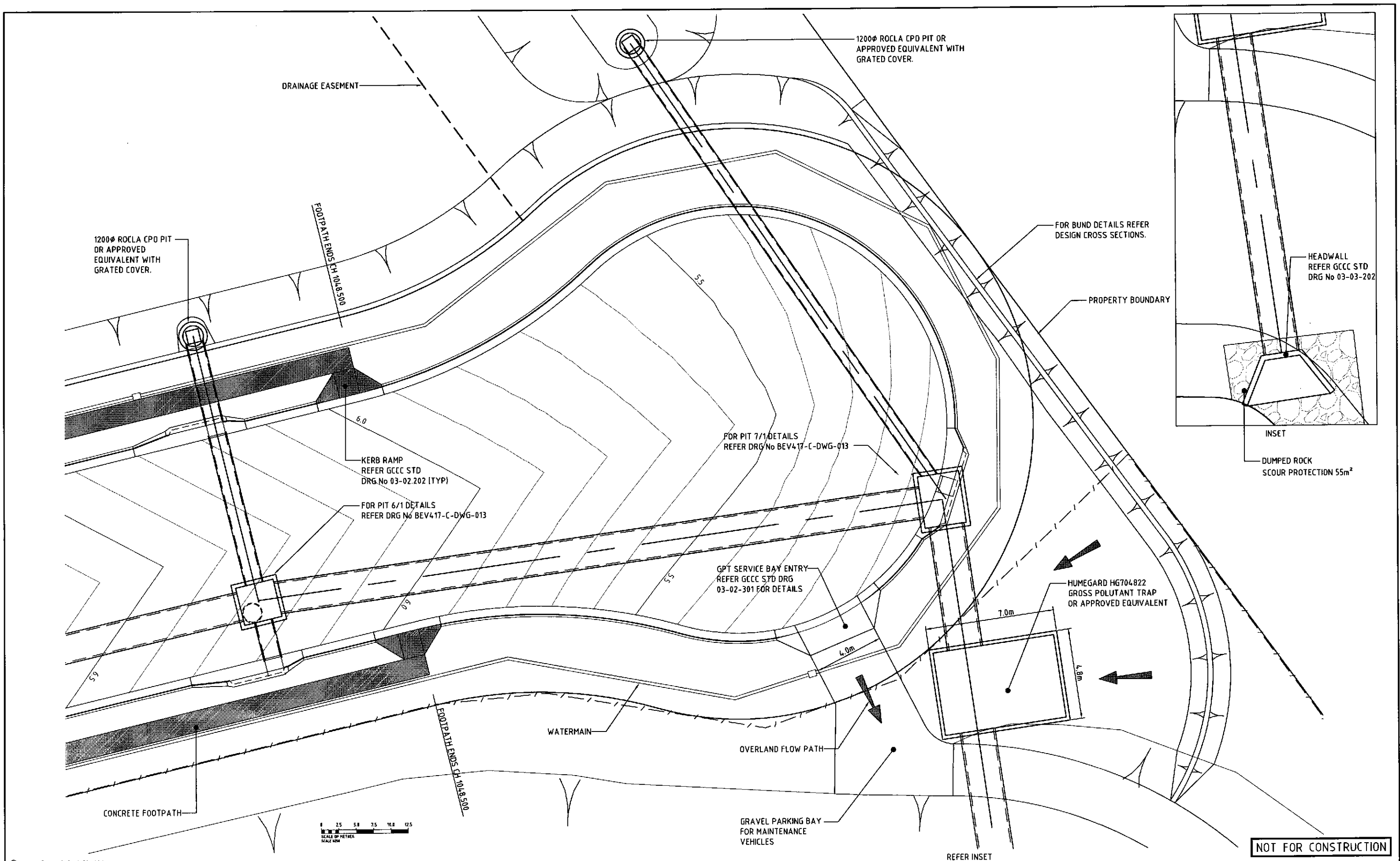
NAME	SIGNATURE
DRAFTING	J POMROY
DESIGN	J POMROY
DESIGN VERIFICATION	D NEUHOLD
PROJECT APPROVAL	GC LOVELL
CLIENT	

Kellogg Brown & Root Pty Ltd		
KBR		
Kellogg Brown & Root Pty Ltd ABN 91 907 660 317 655 Coronation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500		
DRAWING SCALE	ORIG. SIZE	PROJECT No.
1:1000 (A1)	A1	BEV417
DRAFTER: AM FRANGIOSA		CAD FILE: BEV417-C-DWG-011.dwg

TITLE	
INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA DRAINAGE LONGITUDINAL SECTIONS SHEET 3 OF 3	
DRAWING No.	REVISION
BEV417-C-DWG-011	A

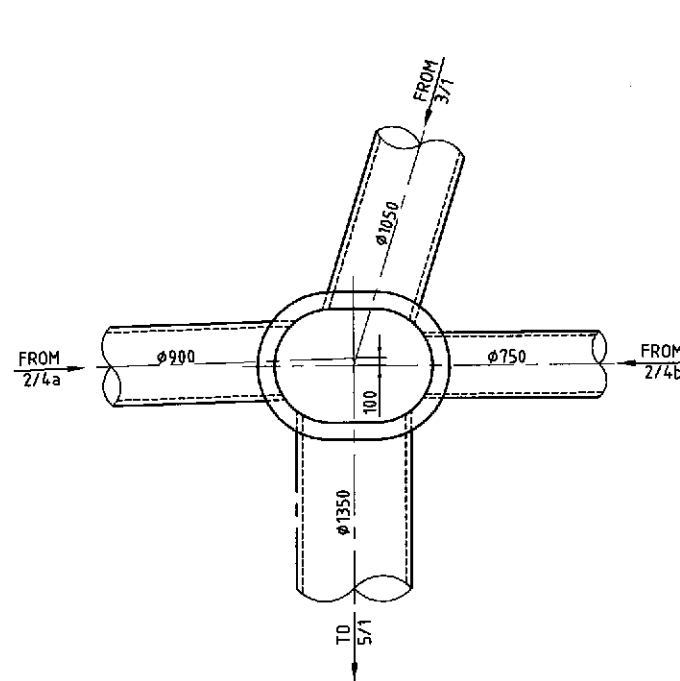


NOT FOR CONSTRUCTION

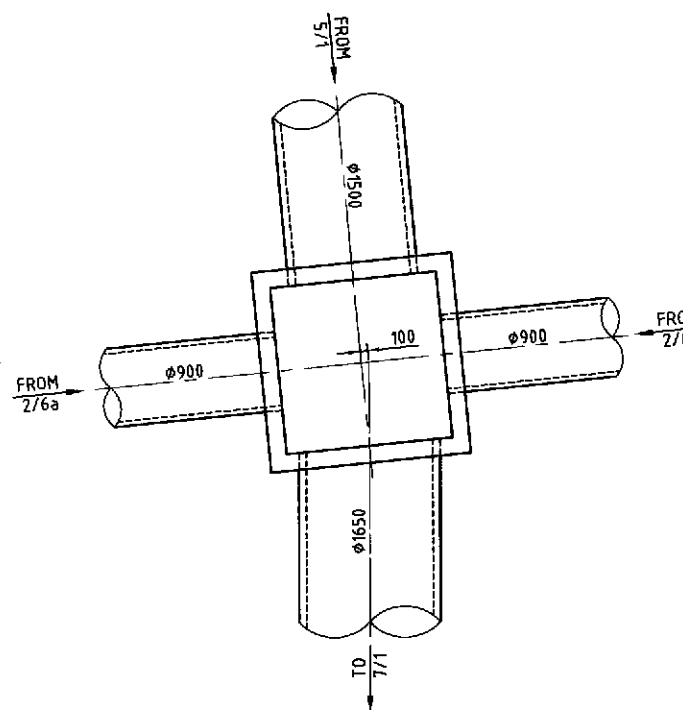


© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Survey Base/Control Lines/Design Road/Design SW/Design Basin

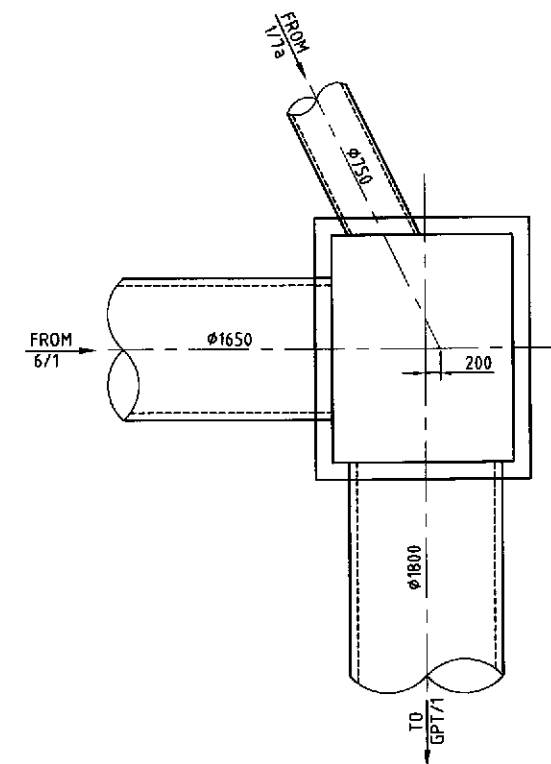
BURNSIDE DEVELOPMENTS PTY LTD 99 ANNERLEY ROAD WOOLLOONGABBA QLD 4102		DRAFTING J POMROY DESIGN J POMROY DESIGN VERIFICATION D NEUHOLD PROJECT APPROVAL GC LOVELL		NAME SIGNATURE J POMROY D NEUHOLD GC LOVELL		Kellogg Brown & Root Pty Ltd KBR Kellogg Brown & Root Pty Ltd ABN 91 907 660 317 555 Coronation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500		TITLE INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA CUL-DE-SAC DRAINAGE LAYOUT PLAN	
DRAWING No.	DESCRIPTION	A	FIRST ISSUE	DATE	CLIENT	DRAWING SCALE	ORIG. SIZE	PROJECT No.	DRAWING No.
	REFERENCE DRAWINGS	REV	DESCRIPTION			AS SHOWN	A1	BEV417	BEV417-C-DWG-012
NOTES			REVISIONS		APPROVALS		REVISION		
							A		



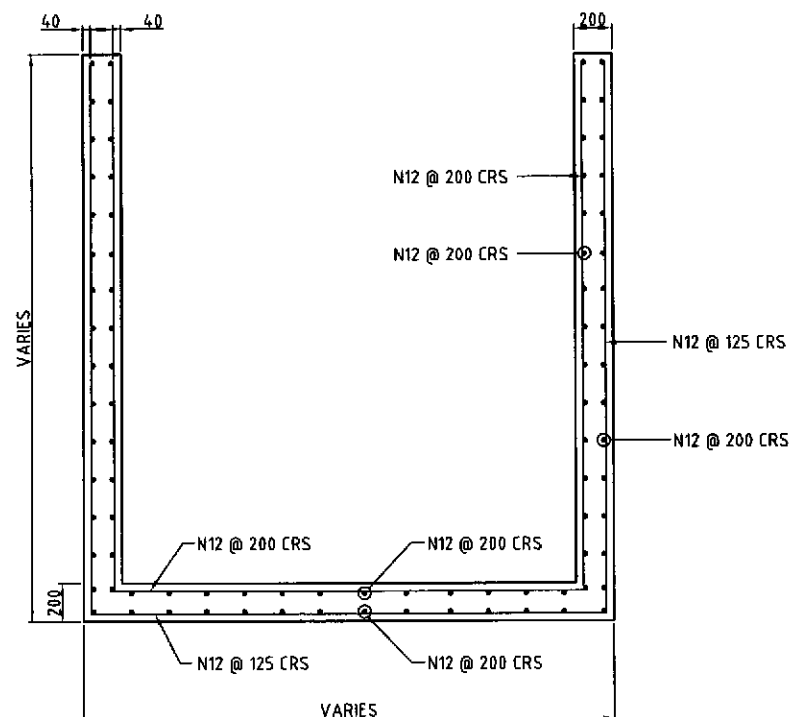
PIT 4/1
Ø1500 EXTEND 600
SCALE: 1:50



PIT 6/1
CUSTOM PIT 2200x2200
SCALE: 1:50



PIT 7/1
CUSTOM PIT 2400x3000
SCALE: 1:50



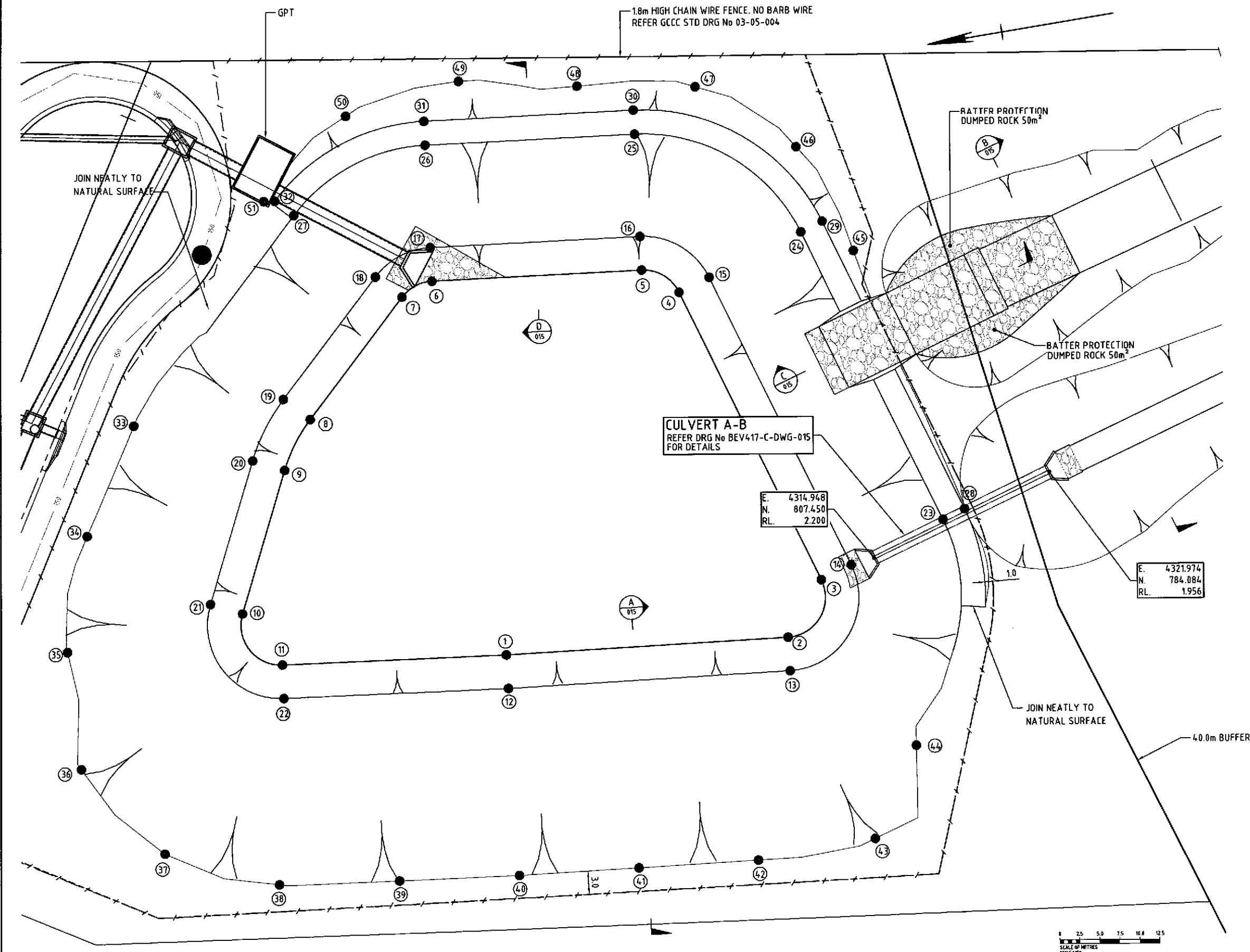
TYPICAL PIT REINFORCEMENT
PIT 6/1 & PIT 7/1
SCALE: 1:20



NOT FOR CONSTRUCTION

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk

100mm ON ORIGINAL DRAWING BURNSIDE DEVELOPMENTS PTY LTD 99 ANNERLEY ROAD WOOLLOONGABBA QLD 4102		Kellogg Brown & Root Pty Ltd KBR Kellogg Brown & Root Pty Ltd ABN 91 007 660 317 555 Coronation Drive, Taavong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500		INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA DRAINAGE MISCELLANEOUS DETAILS															
DRAWING No.	DESCRIPTION	A	FIRST ISSUE	DATE	CLIENT	DRAFTING	J POMROY	SIGNATURE	J POMROY	DRAWING SCALE	AS SHOWN	ORIG. SIZE	A1	PROJECT No.	BEV417	DRAWING No.	BEV417-C-DWG-013	REVISION	A
REFERENCE DRAWINGS		NOTES		REVISIONS		APPROVALS		DRAFTER: AM FRANGIOSA		CAD FILE: BEV417-C-DWG-013.dwg									



BASIN SETOUT			
PTNo	EASTING	NORTHING	LEVEL
12	4306.333	855.346	2.200
13	4302.740	820.154	2.200
14	4314.557	810.417	2.200
15	4353.037	822.104	2.200
16	4359.506	829.882	2.200
17	4362.441	856.053	2.200
18	4359.932	863.462	2.200
19	4346.644	877.293	2.200
20	4339.699	882.342	2.200
21	4322.748	880.457	2.200
22	4309.629	883.253	2.200
23	4318.287	798.170	5.400
24	4356.758	809.856	5.400
25	4372.226	828.456	5.400
26	4375.161	854.637	5.400
27	4369.163	872.330	5.400
28	4319.159	795.299	5.400
29	4357.630	806.986	5.400
30	4375.208	828.121	5.400
31	4378.142	854.303	5.400
32	4371.326	874.408	5.400
33	4346.402	886.363	6.088
34	4333.648	904.297	6.498
35	4319.693	909.085	6.651
36	4304.924	909.694	7.624
37	4292.795	901.110	7.936
38	4286.704	887.555	8.080
39	4284.762	872.704	8.064
40	4283.005	857.807	8.065
41	4281.504	842.882	8.069
42	4280.009	827.957	8.051
43	4280.274	813.074	8.002
44	4290.931	806.107	6.119
45	4353.369	803.722	4.929
46	4357.346	808.700	4.607
47	4376.792	819.957	4.448
48	4379.309	834.627	4.582
49	4382.333	849.217	4.217
50	4380.347	863.933	4.629
51	4371.500	875.782	5.131

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Control Lines /Design Road /Survey Base /Design Platform /Design Basin

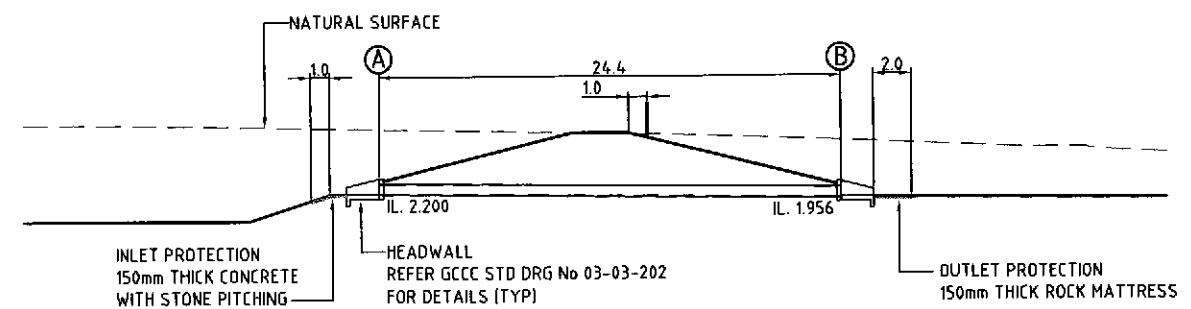
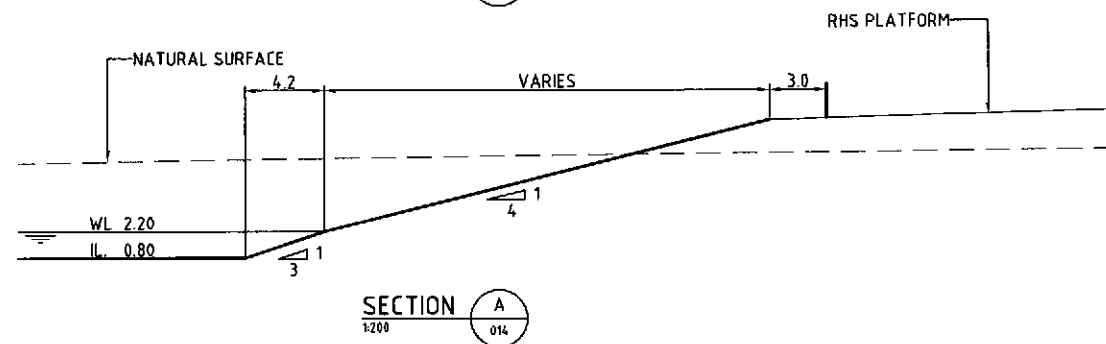
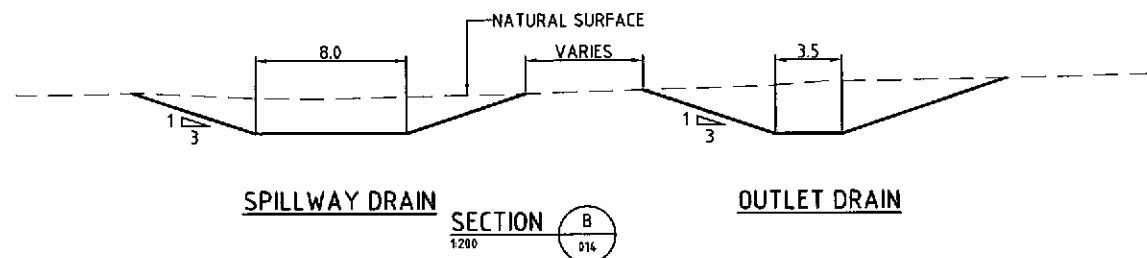
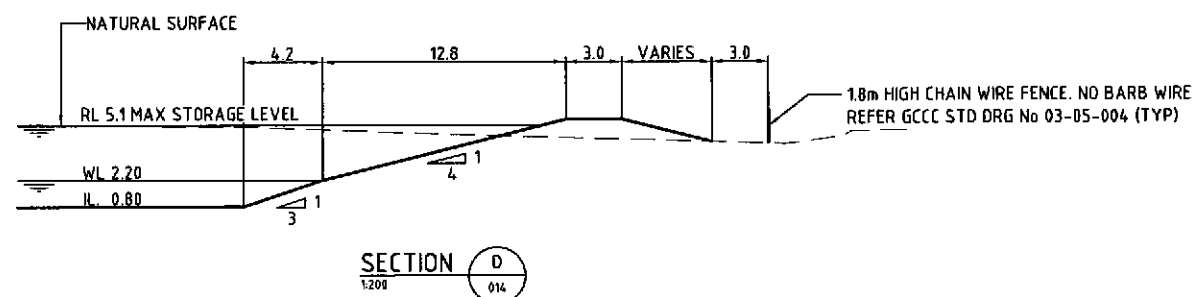
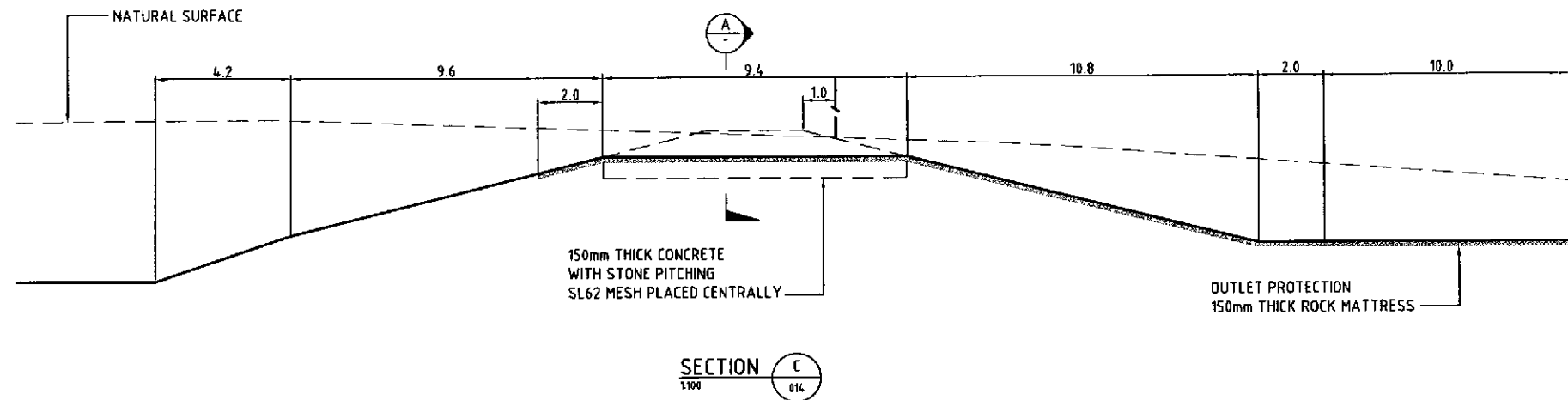
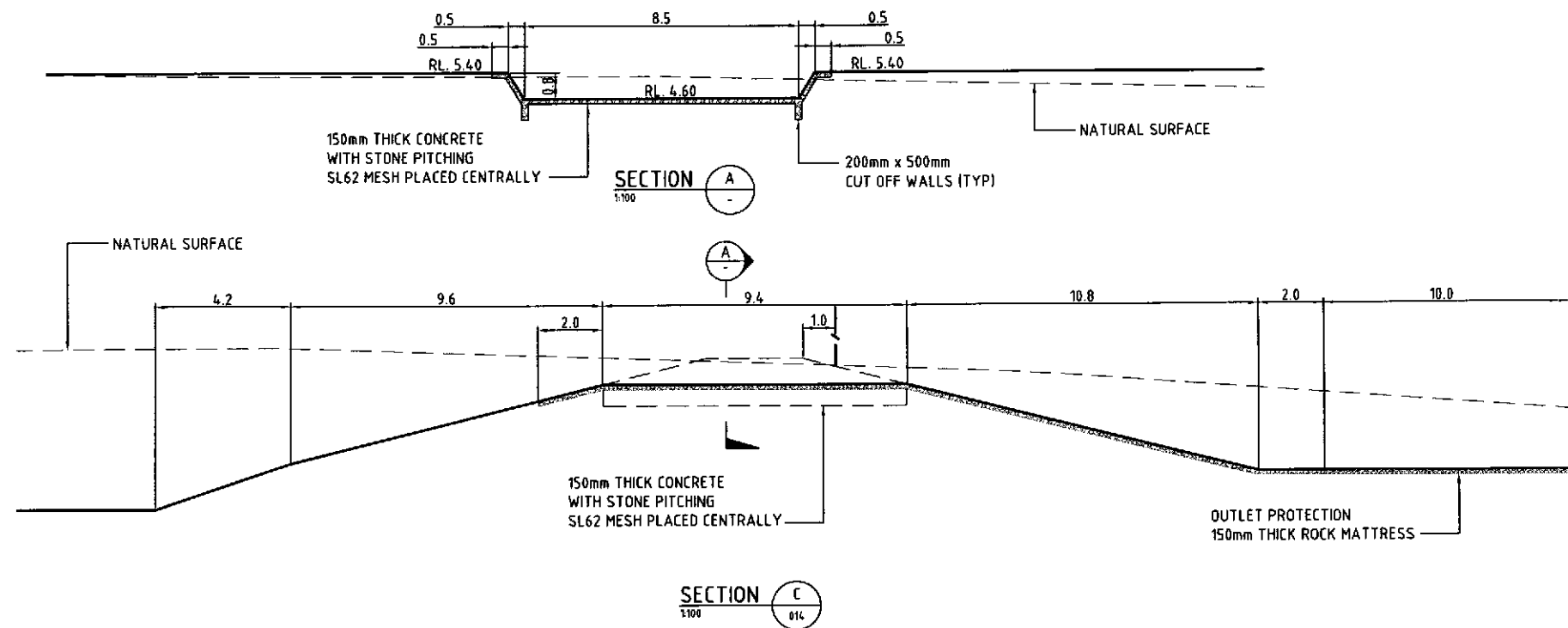
DRAWING No.		DESCRIPTION
REFERENCE DRAWINGS		NOTES
BURNSIDE DEVELOPMENTS PTY LTD		
99 ANNERLEY ROAD		
WOOLLOONGABBA QLD 4102		

REV	DESCRIPTION	DATE
A	FIRST ISSUE	
REVISIONS		
APPROVALS		
CLIENT		
DRAFTING		
DESIGN		
DESIGN VERIFICATION		
PROJECT APPROVAL		
NAME		
SIGNATURE		

Kellogg Brown & Root Pty Ltd		
KBR		
Kellogg Brown & Root Pty Ltd ABN 91 007 640 317		
555 Coronation Drive, Taavong,		
Brisbane, Queensland, 4086		
ph (07) 3721-6555 fax (07) 3721-6500		
DRAWING SCALE	ORIG. SIZE	PROJECT No.
1:1000 (A1)	A1	BEV417
DRAFTER: AM FRANGIOSA		CAD FILE: BEV417-C-DWG-014.dwg

TITLE		REVISION
INDUSTRIAL ESTATE		
CHRISTENSEN ROAD, YATALA		
DETENTION \ WATER QUALITY BASIN		
SETOUT SHEET 1 OF 1		
DRAWING No.	BEV417-C-DWG-014	A

NOT FOR CONSTRUCTION

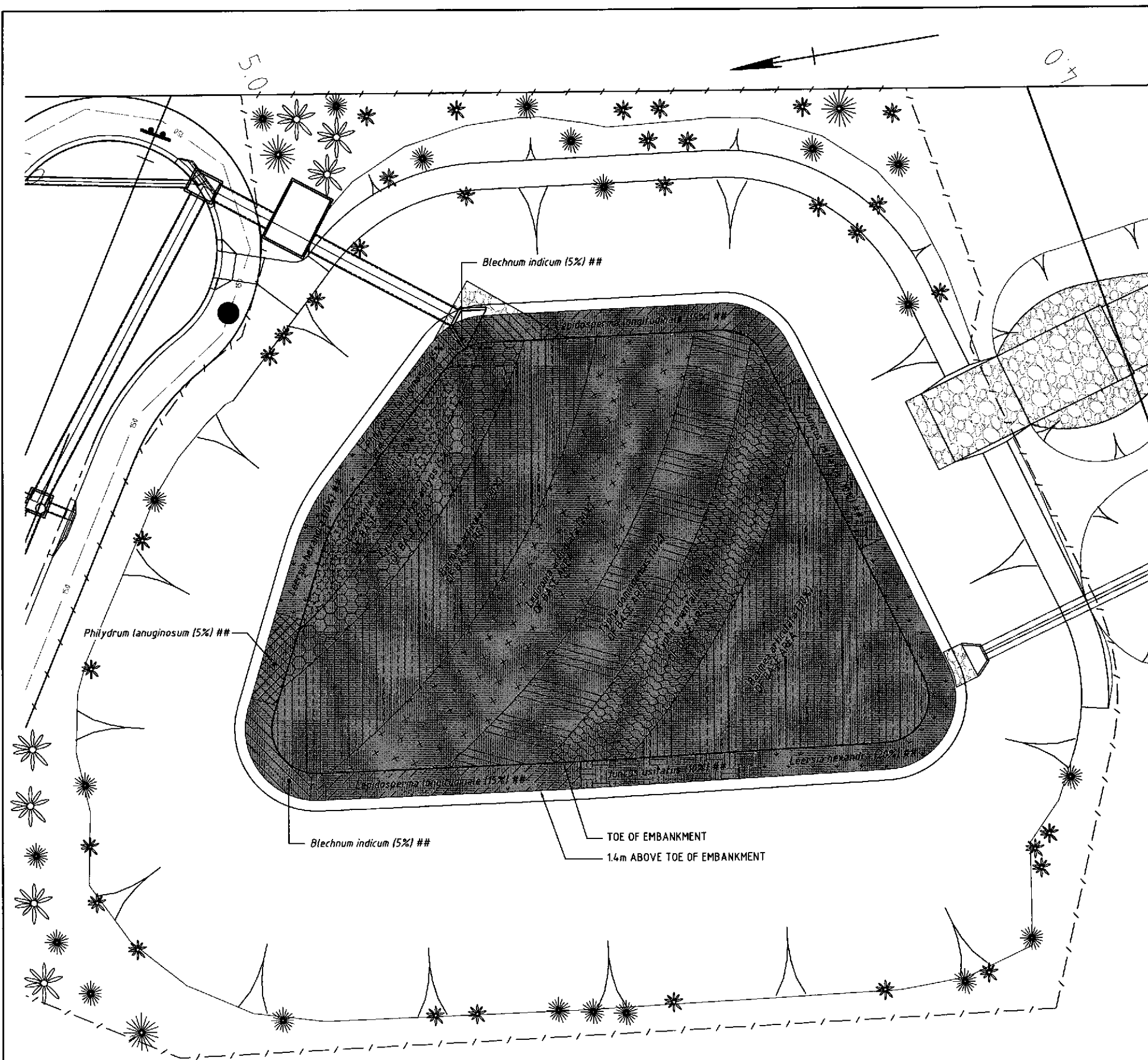


CULVERT A-B
2/600 RCP, RRJ, CLASS 2, 24.4m (10x2.44m)
SCALE 1:200

NOT FOR CONSTRUCTION

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk

100mm ON ORIGINAL DRAWING BURNSIDE DEVELOPMENTS PTY LTD 99 ANNERLEY ROAD WOOLLOONGABBA QLD 4102		NAME SIGNATURE		Kellogg Brown & Root Pty Ltd KBR Kellogg Brown & Root Pty Ltd ABN 91 007 660 317 555 Coronation Drive, Toowoomba, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500		TITLE INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA DETENTION \ WATER QUALITY BASIN DETAILS SHEET 1 OF 1	
DRAWING No.	DESCRIPTION	A	REV	DESCRIPTION	DATE	CLIENT	APPROVALS
REFERENCE DRAWINGS	NOTES	REV	DESCRIPTION	REVISIONS	DATE	CLIENT	APPROVALS
DRAWING SCALE AS SHOWN		ORIG. SIZE A1		PROJECT No. BEV417		DRAWING No. BEV417-C-DWG-015	
DRAFTER: AM FRANGIOSA		CAD FILE: BEV417-C-DWG-015.dwg		REVISION A		REVISION A	



REVEGETATION TABLE

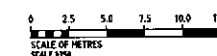
SPECIES	COMMON NAME	SYMBOL	No.	DENSITY/m²	EMERGENT	EDGE/BANKS
Baumea articulata	JOINTED TWIGRUSH (TUBESTOCK)	[Symbol]	4500	3.0	X	
Blechnum indicum	SWAMP WATER FERN (TUBESTOCK)	[Symbol]	200	4.0		X
Cyperus polystachyos	BUNCHY SEDGE (TUBESTOCK)	[Symbol]	608	4.0	X	
Juncus usitatus	COMMON RUSH (TUBESTOCK)	[Symbol]	504	6.0		X
Leersia hexandra	SWAMP RICE GRASS (TUBESTOCK)	[Symbol]	520	4.0		X
Lepidosperma longitundinale	PITHY SWORDSEDE (TUBESTOCK)	[Symbol]	2150	4.0		X
Lepironia articulata	- (TUBESTOCK)	[Symbol]	1800	3.0	X	
Philydrum lanuginosum	FROGSMOUTH (TUBESTOCK)	[Symbol]	360	6.0		X
Schoenoplectus validus	- (TUBESTOCK)	[Symbol]	640	4.0	X	
Typha domingensis	CUMBUNGI, BULRUSH (TUBESTOCK)	[Symbol]	1200	4.0	X	
Typha orientalis	CUMBUNGI, BULRUSH (TUBESTOCK)	[Symbol]	1200	4.0	X	
Callistemon viminalis *	RED BOTTLEBRUSH (45L POTS)	[Symbol]	100	0.2		X
Lophostemon suaveolens *	SWAMP MAHOGANY (45L POTS)	[Symbol]	100	0.2		X
TOTAL			13882			

* ABOVE TOP OF EMBANKMENT

% OF AREA BETWEEN TOE OF EMBANKMENT
AND 1.4m ABOVE TOE OF EMBANKMENT.

LEGEND

- [Symbol] - MACROPHYTE ZONE
- [Symbol] - ROCK PROTECTION



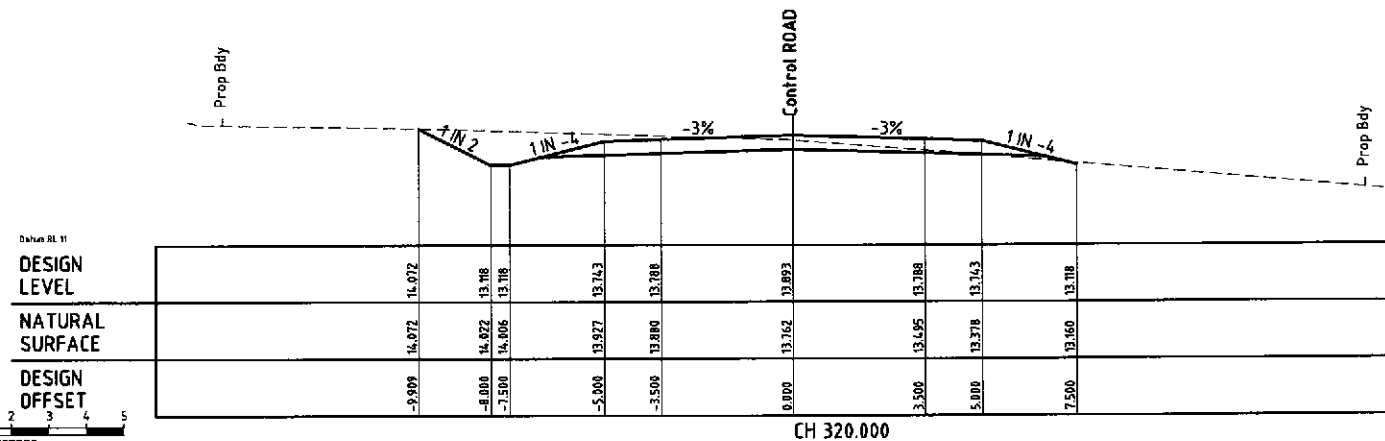
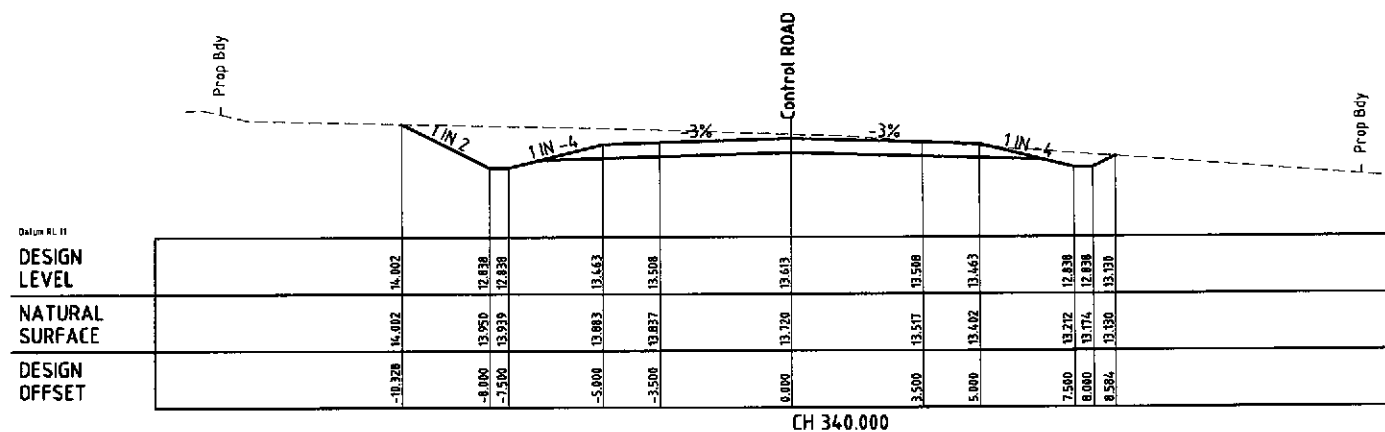
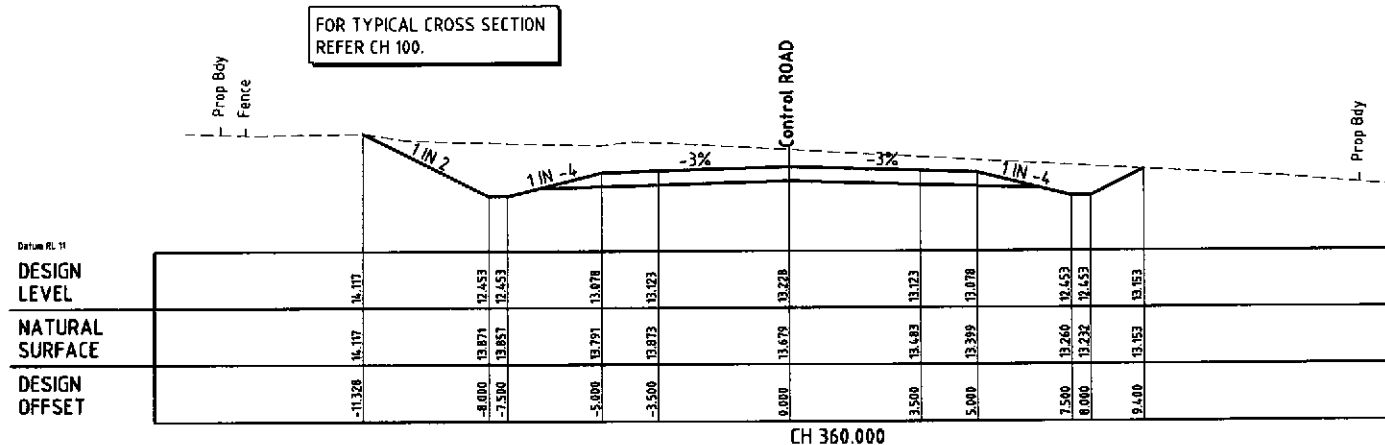
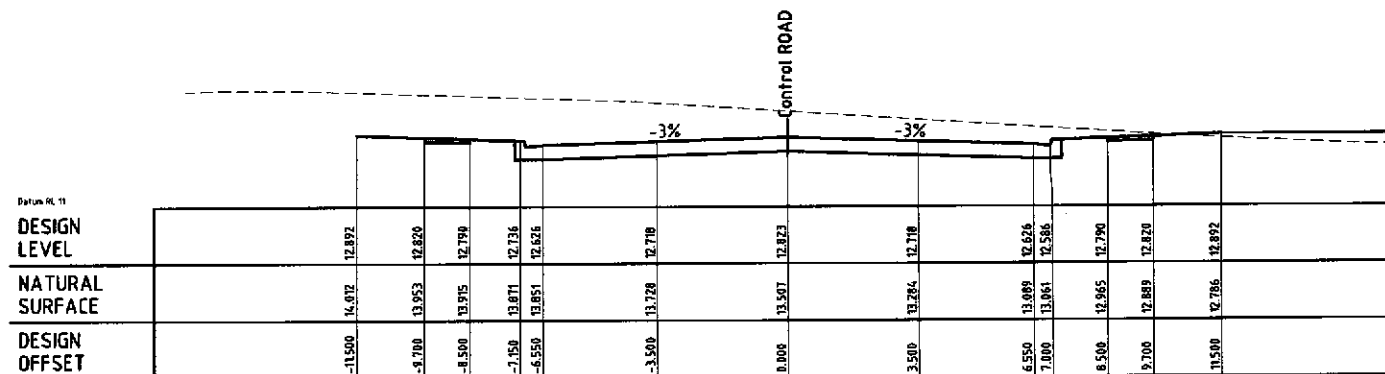
NOT FOR CONSTRUCTION

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Control Lines /Design Road /Survey Base /Design Platform /Design Basin /Christensen Road /1396 Christensen Road Alignment /BEV417-C-DWG-204 /Design SEW

100mm ON ORIGINAL DRAWING		NAME		SIGNATURE		TITLE	
BURNSIDE DEVELOPMENTS PTY LTD		DRAFTING	J POMROY	[Signature]		INDUSTRIAL ESTATE	
99 ANNERLEY ROAD		DESIGN	J POMROY	[Signature]		CHRISTENSEN ROAD, YATALA	
WOOLLOONGABBA QLD 4102		DESIGN VERIFICATION	D NEUHOLD	[Signature]		DETENTION \ WATER QUALITY BASIN	
		PROJECT APPROVAL	GC LOVELL	[Signature]		PLANTING ARRANGEMENT SHEET 1 OF 1	
DRAWING No.		CLIENT		APPROVALS		DRAWING No.	REVISION
REFERENCE DRAWINGS		DATE		DRAWING SCALE		BEV417-C-DWG-016	
NOTES		DESCRIPTION		1:1000 (A1)		A	
		REVISIONS		ORIG. SIZE			
				PROJECT No.			
				A1			
				BEV417			
				DRAFTER: AM FRANGIOSA			
				CAD FILE: BEV417-C-DWG-016.dwg			

NOT FOR CONSTRUCTION

TITLE	INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA DRAINAGE CALCULATIONS TABLE SHEET 1 OF 3	
DRAWING No.	BEV417-C-DWG-017	REVISION
g		A



BULK EARTHWORKS
PLATFORM REFER DWG No's.
BEV417-C-DWG-002 & 003

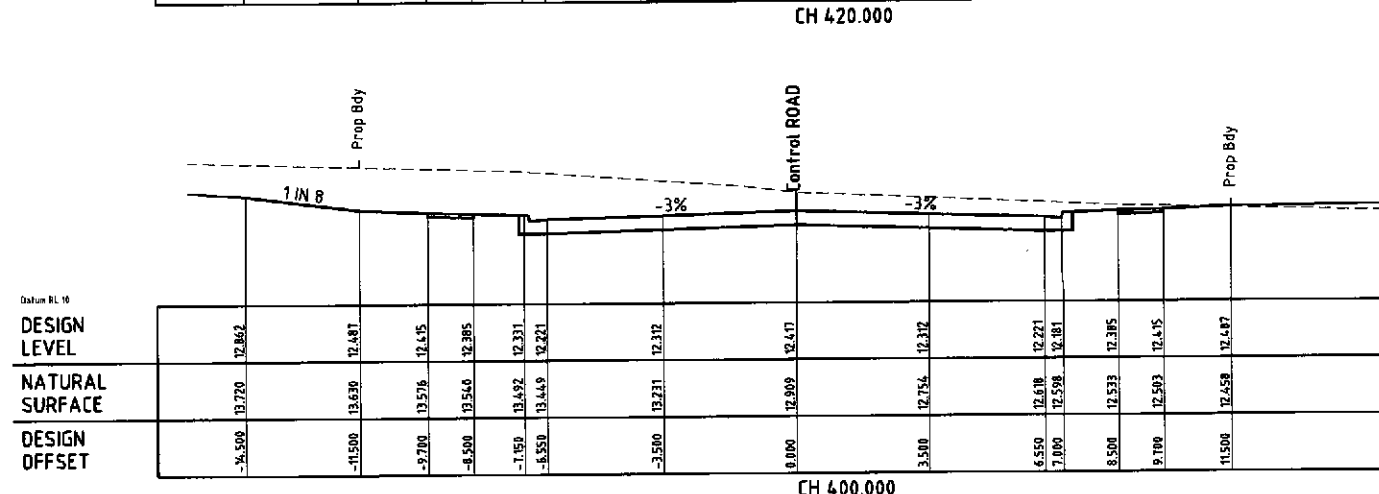
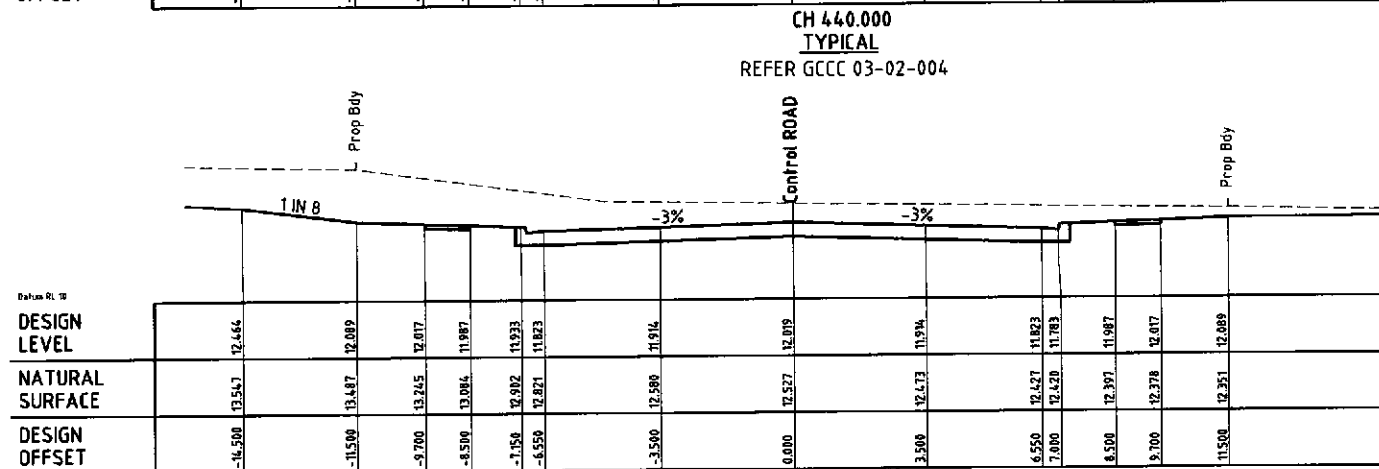
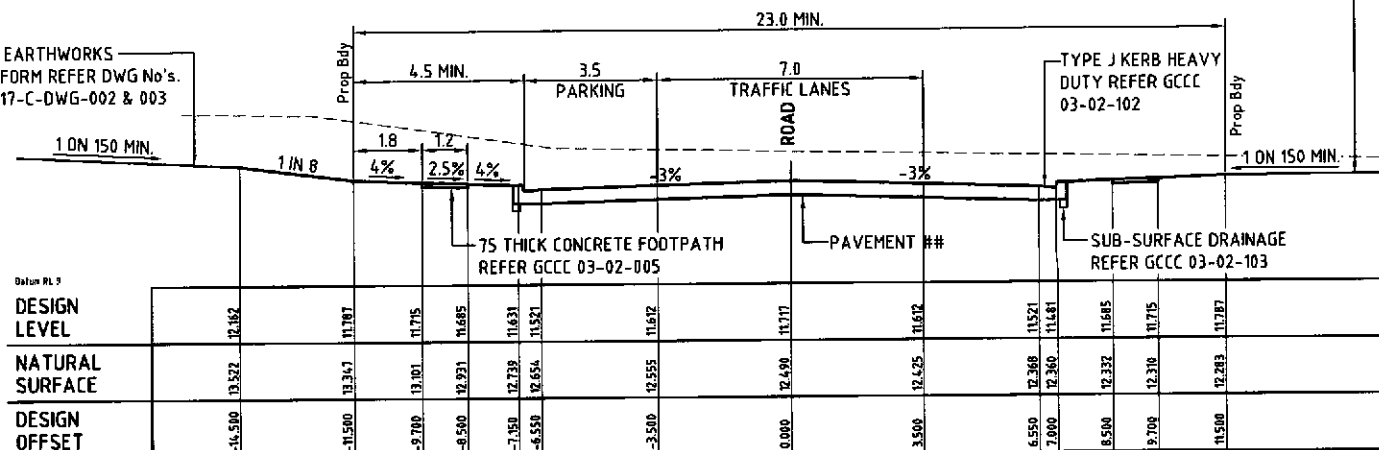


Table with 2 columns: Pavement Design, CBR. Rows: 35mm AC, 125mm BASE, 125mm SUB BASE, 85mm SUB BASE.

BULK EARTHWORKS
PLATFORM REFER DWG No's.
BEV417-C-DWG-002 & 003

CHRISTENSEN ROAD

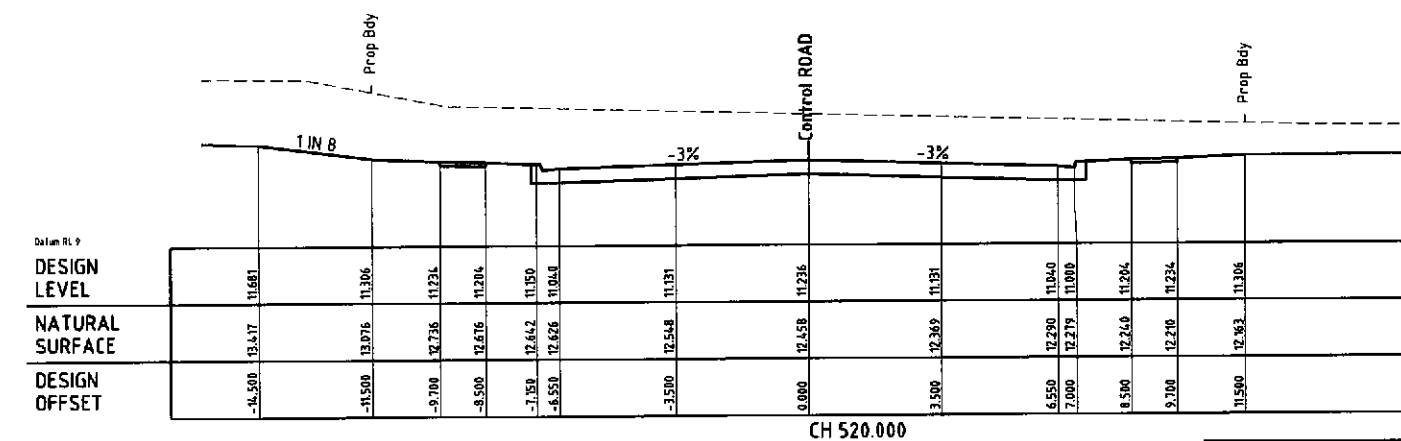
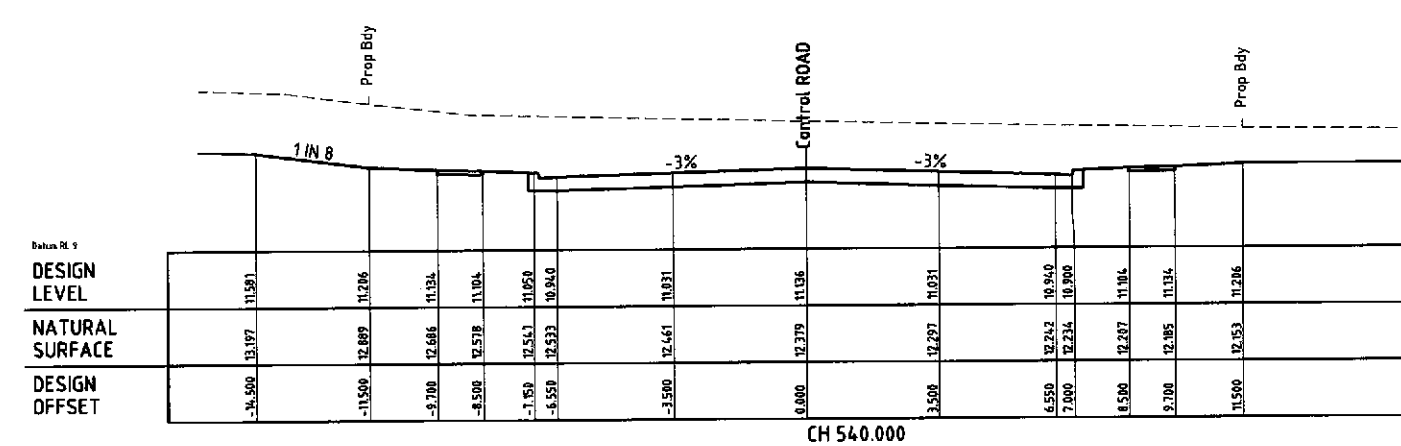
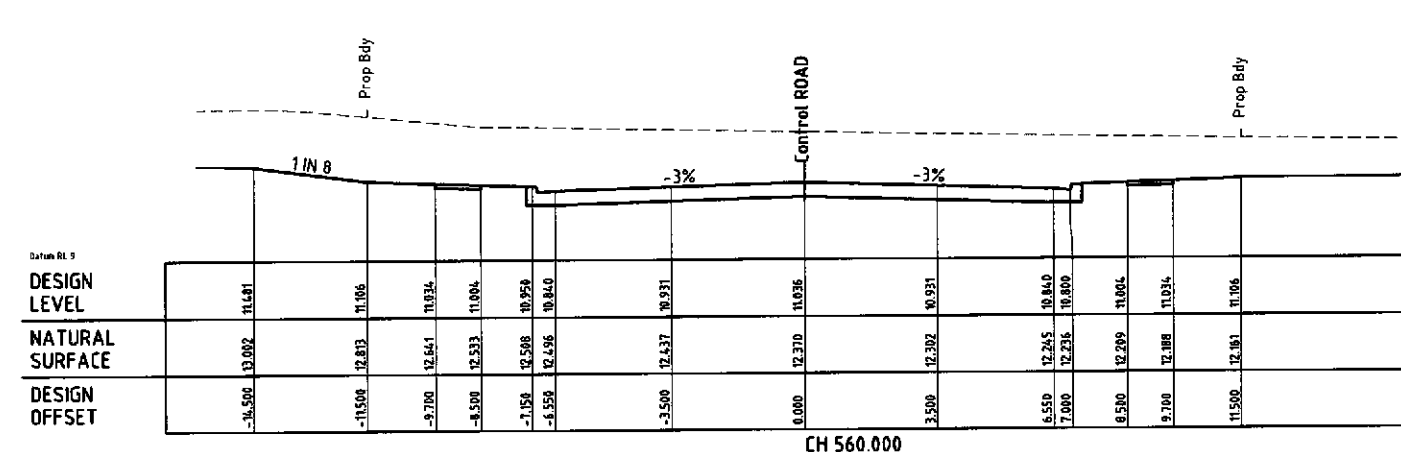
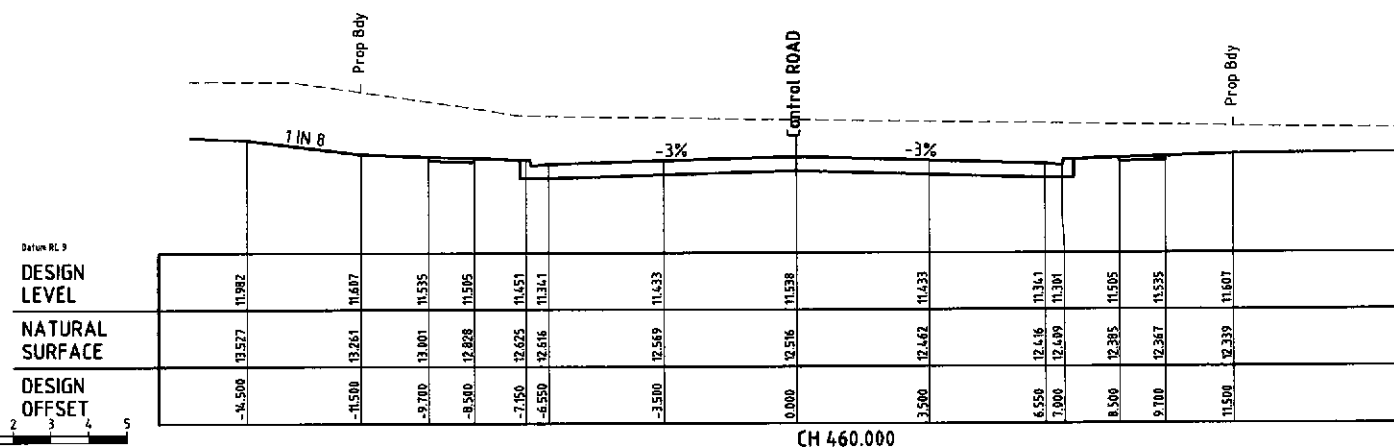
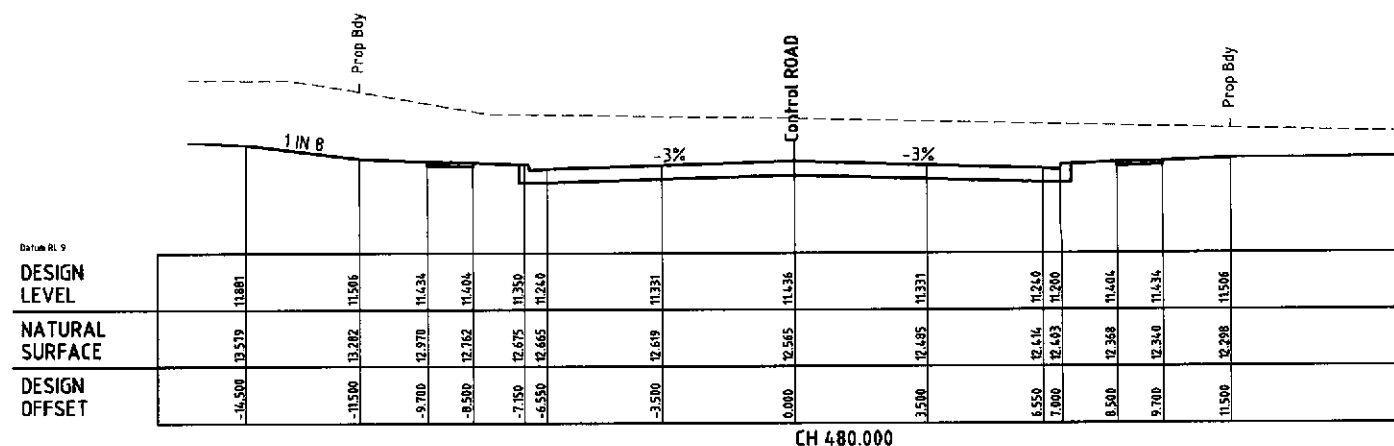
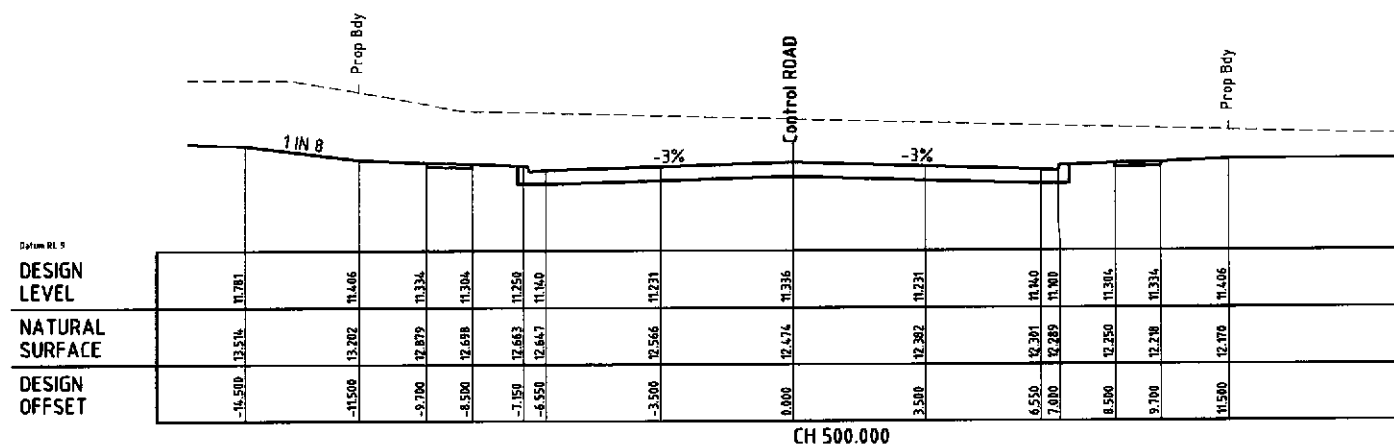
NOT FOR CONSTRUCTION

SCALE OF METRES
SCALE 1:100

© Kellogg Brown & Root Pty Ltd XREFS:Address_black/NEW_A1_APAC_STD_xr_bh/Xsec_mc01_1

Project information block containing: Burnside Developments Pty Ltd, 99 Annerley Road, Woolloongabba QLD 4102; Kellogg Brown & Root Pty Ltd logo and contact info; Drawing title: INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA CROSS SECTIONS ROAD SHEET 3 OF 9; Drawing No: BEV417-C-DWG-103; Revision: A.

FOR TYPICAL CROSS SECTION
REFER CH 440.



CHRISTENSEN ROAD

NOT FOR CONSTRUCTION

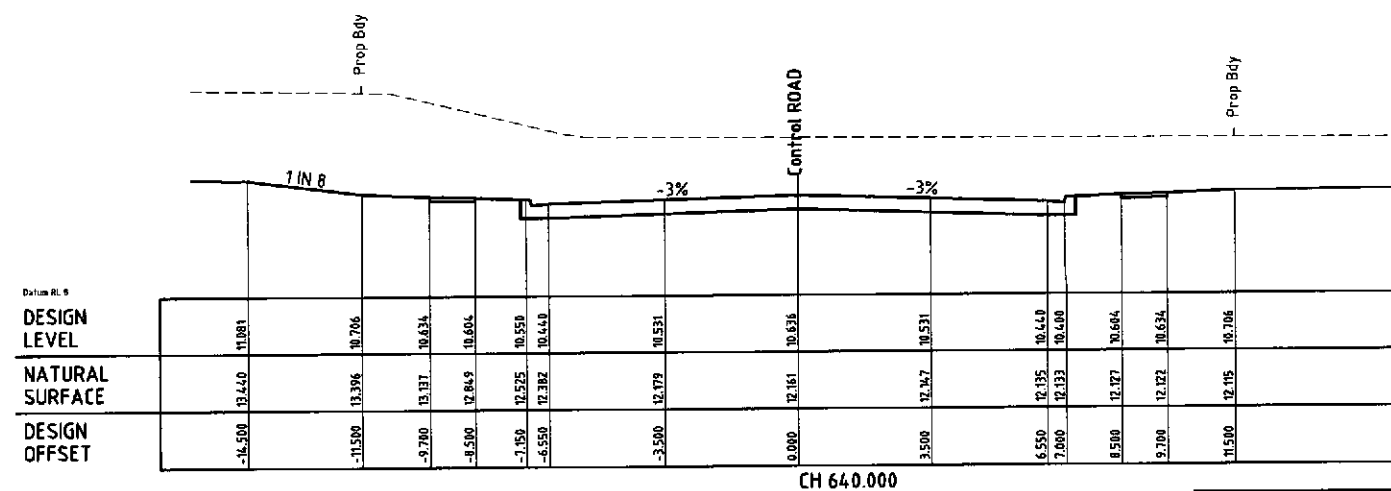
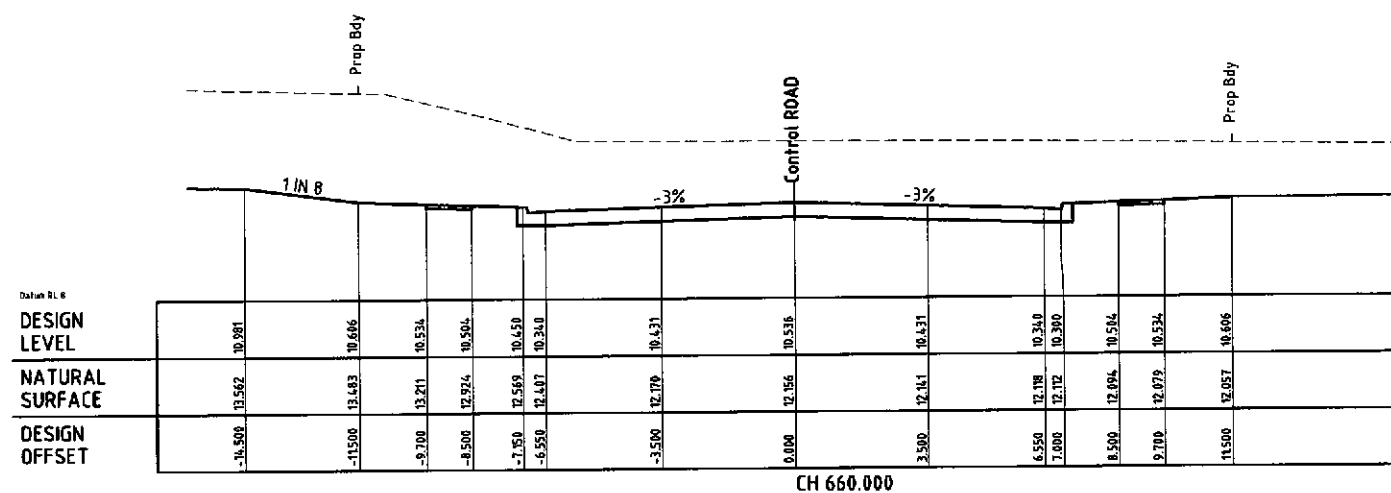
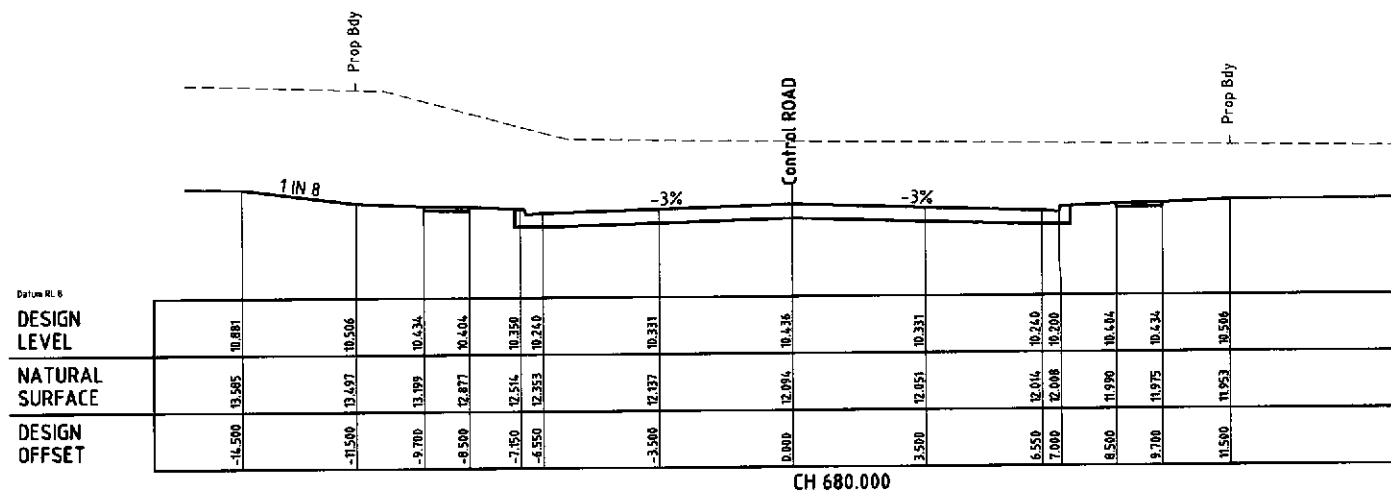
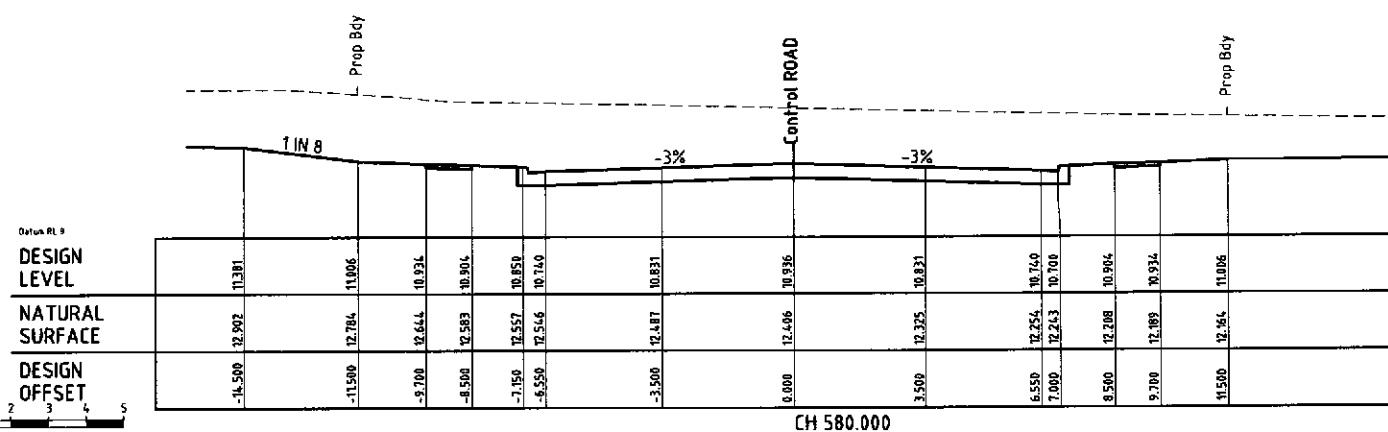
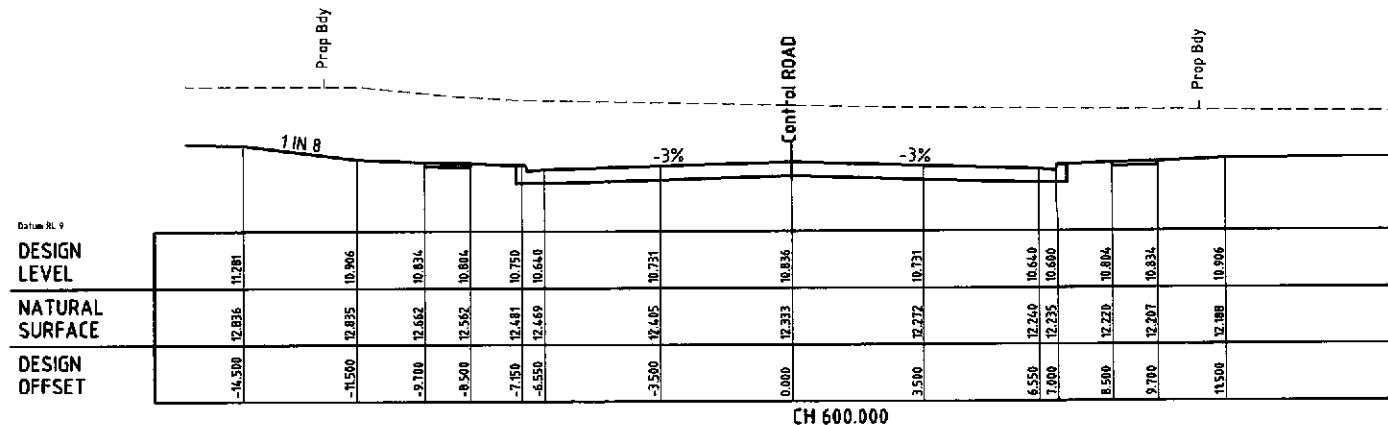
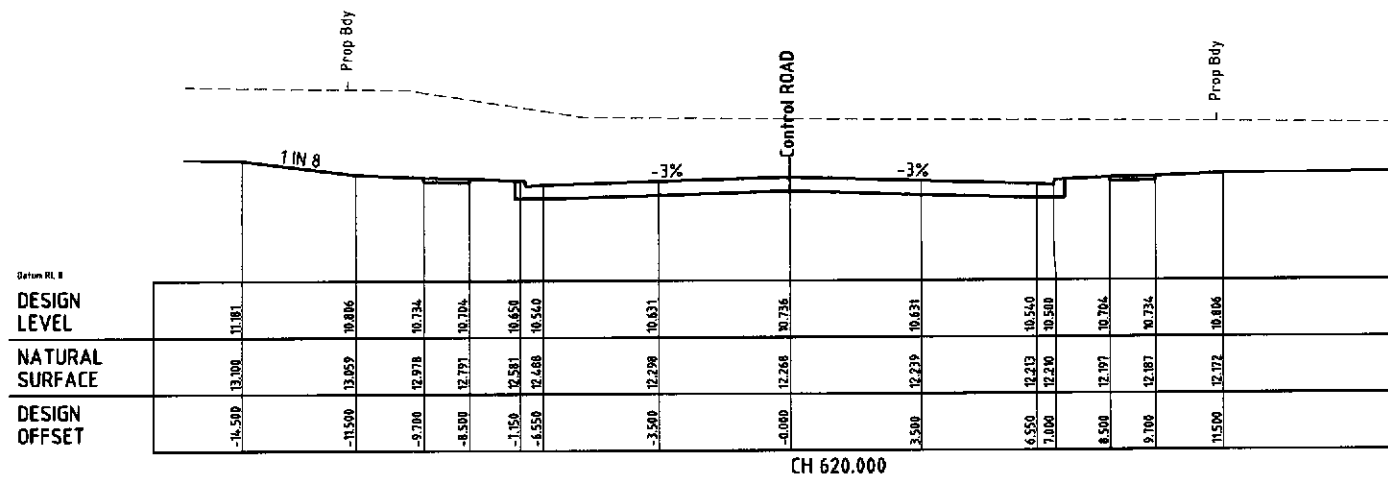
BURNSIDE DEVELOPMENTS PTY LTD
99 ANNERLEY ROAD
WOOLLOONGABBA QLD 4102

NAME	SIGNATURE
DRAFTING J POMROY	JP
DESIGN J POMROY	JP
DESIGN VERIFICATION D NEUROLO	DN
PROJECT APPROVAL GC LOVELL	GL
CLIENT	
APPROVALS	
DATE	
REVISIONS	
DESCRIPTION	
DATE	
REV	
A	FIRST ISSUE

Kellogg Brown & Root Pty Ltd		
KBR		
Kellogg Brown & Root Pty Ltd ABN 91 007 669 317 555 Coronation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 Fax (07) 3721-6500		
DRAWING SCALE	DRG. SIZE	PROJECT No.
1:100 (A1)	A1	BEV417
DRAFTER: AM FRANGIOSA		CAD FILE: BEV417-C-DWG-104.dwg

TITLE		REVISION
INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA CROSS SECTIONS ROAD SHEET 4 OF 9		A
DRAWING No.		
BEV417-C-DWG-104		

FOR TYPICAL CROSS SECTION
REFER CH 440.



CHRISTENSEN ROAD

NOT FOR CONSTRUCTION

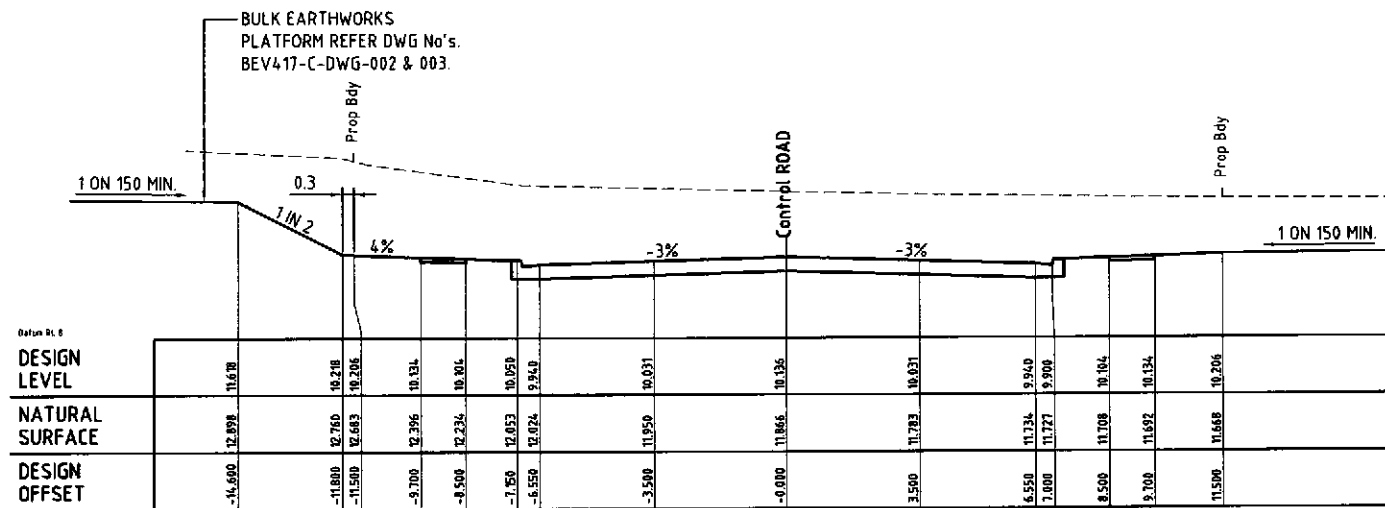
0 1 2 3 4 5
SCALE OF METRES
SCALE 1:100

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bh/Xsec_mc01_1

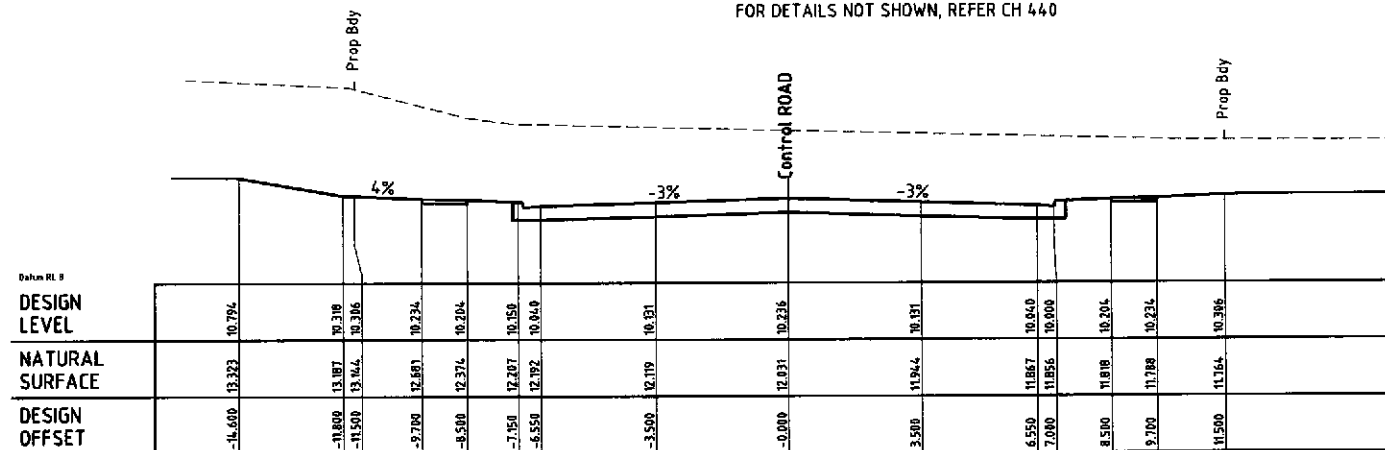
100mm ON ORIGINAL DRAWING BURNSIDE DEVELOPMENTS PTY LTD 99 ANNERLEY ROAD WOOLLOONGABBA QLD 4102		NAME J POMROY		SIGNATURE <i>[Signature]</i>	
		DESIGN J POMROY		SIGNATURE <i>[Signature]</i>	
DESIGN VERIFICATION D NEUHOLD		DESIGN J POMROY		SIGNATURE <i>[Signature]</i>	
PROJECT APPROVAL GC LOVELL		DESIGN J POMROY		SIGNATURE <i>[Signature]</i>	
CLIENT		APPROVALS		APPROVALS	
DRAFTING J POMROY		DESIGN J POMROY		DESIGN VERIFICATION D NEUHOLD	
PROJECT APPROVAL GC LOVELL		CLIENT		APPROVALS	
DATE		DATE		DATE	
REV		REV		REV	
DESCRIPTION		DESCRIPTION		DESCRIPTION	
REVISIONS		REVISIONS		REVISIONS	
NOTES		NOTES		NOTES	

Kellogg Brown & Root Pty Ltd KBR Kellogg Brown & Root Pty Ltd ABN 91 007 660 317 555 Coronation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500			TITLE INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA CROSS SECTIONS ROAD SHEET 5 OF 9	
DRAWING SCALE 1:100 (A1)	ORIG. SIZE A1	PROJECT No. BEV417	DRAWING No. BEV417-C-DWG-105	REVISION A
DRAFTER: AM FRANGIOSA CAD FILE: BEV417-C-DWG-105.dwg				

BULK EARTHWORKS
PLATFORM REFER DWG No's.
BEV417-C-DWG-002 & 003.

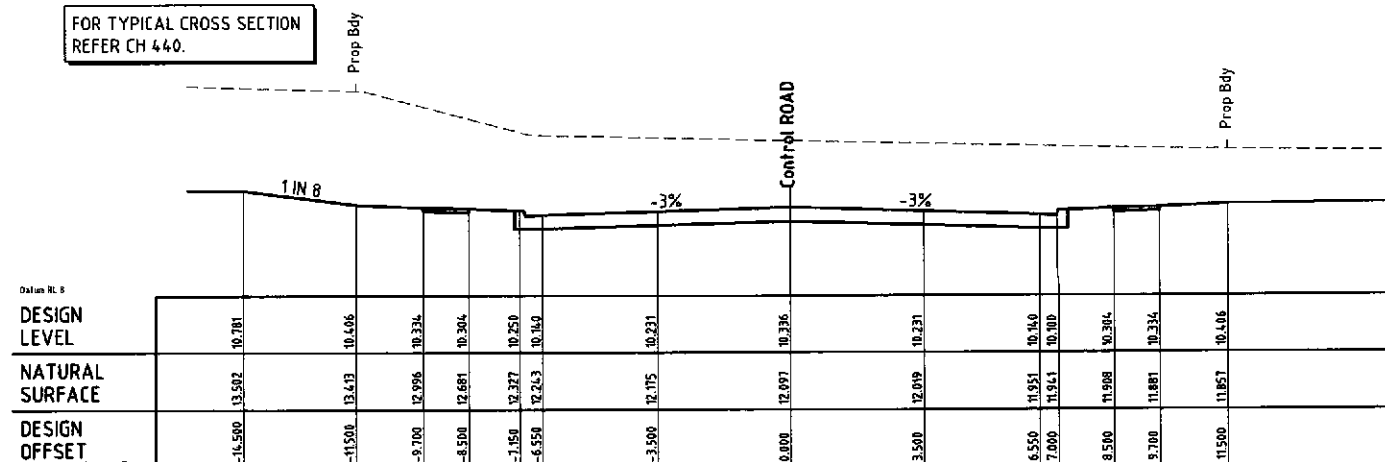


CH 740.000
TYPICAL
REFER GCCC 03-02-004
FOR DETAILS NOT SHOWN, REFER CH 440

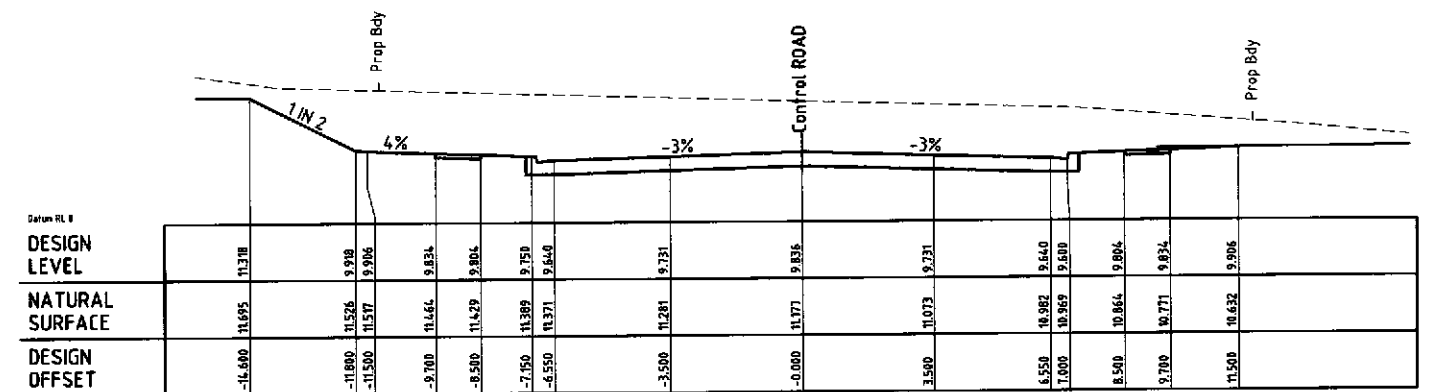


CH 720.000

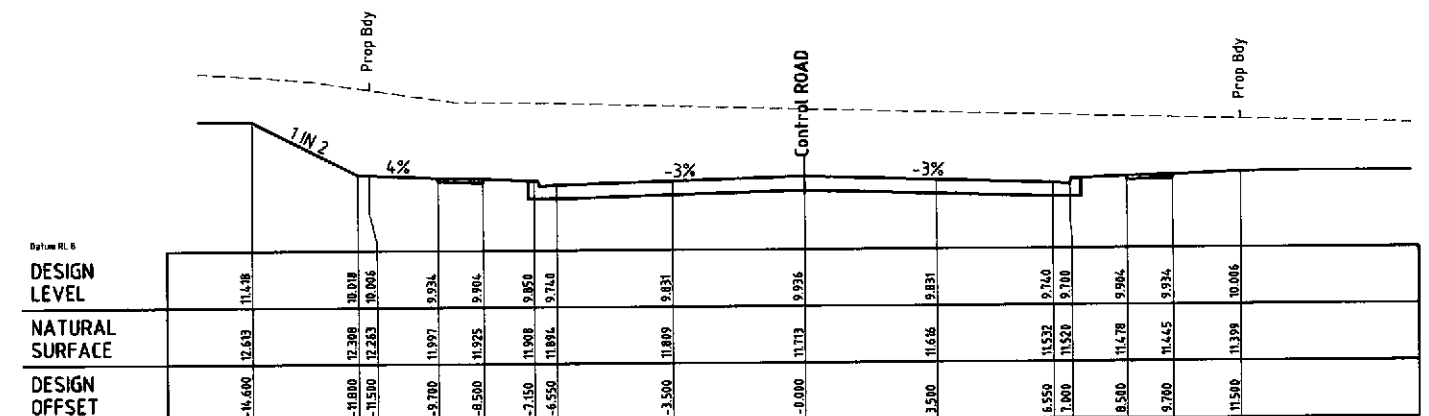
FOR TYPICAL CROSS SECTION
REFER CH 440.



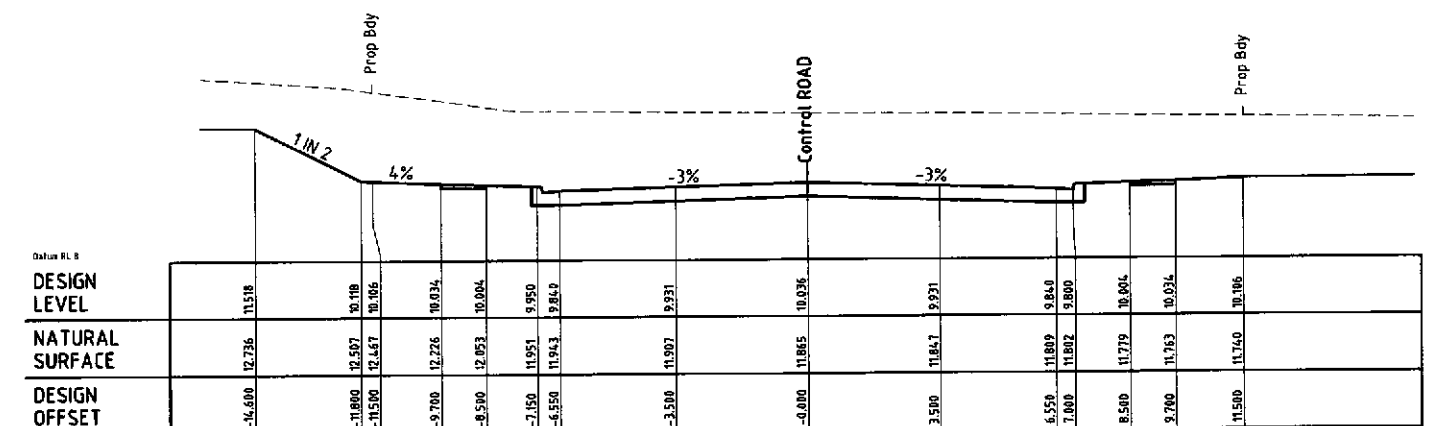
CH 700.000



CH 800.000



CH 780.000



CH 760.000

CHRISTENSEN ROAD

NOT FOR CONSTRUCTION

BURNSIDE DEVELOPMENTS PTY LTD
99 ANNERLEY ROAD
WOOLLOONGABBA QLD 4102

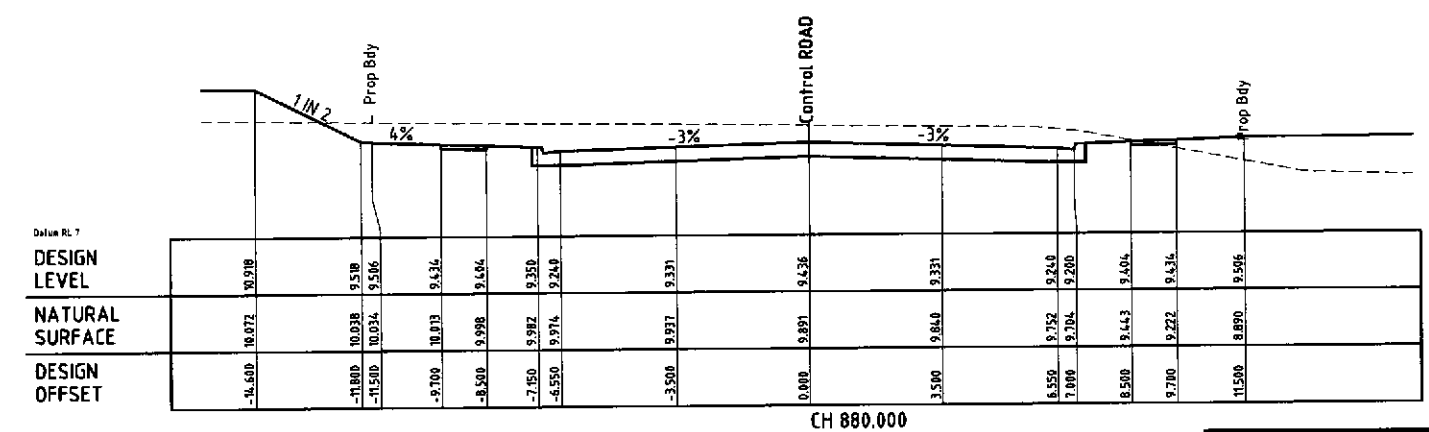
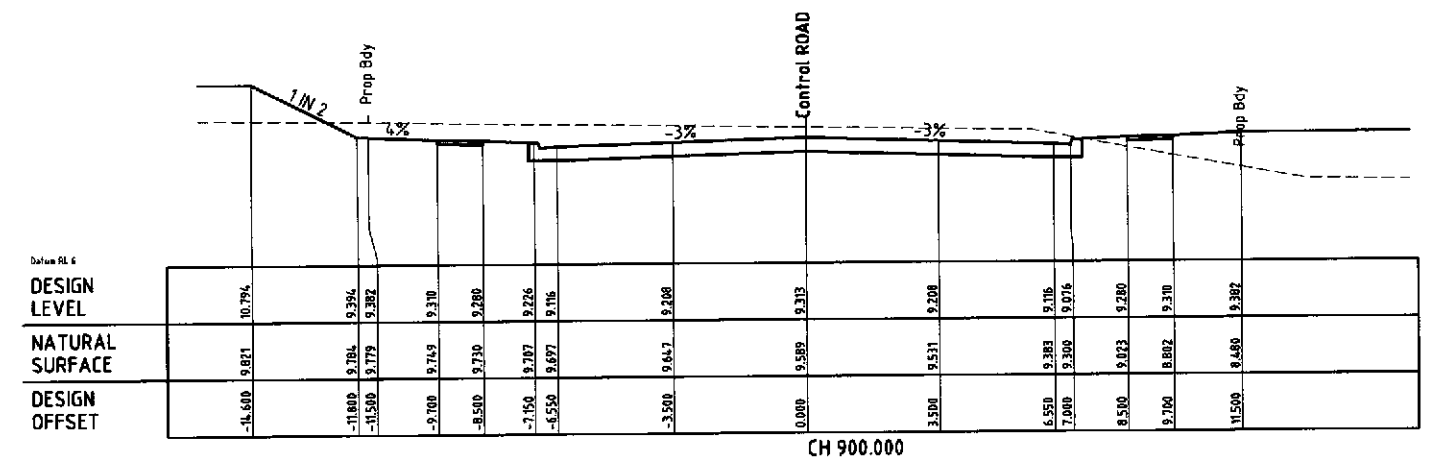
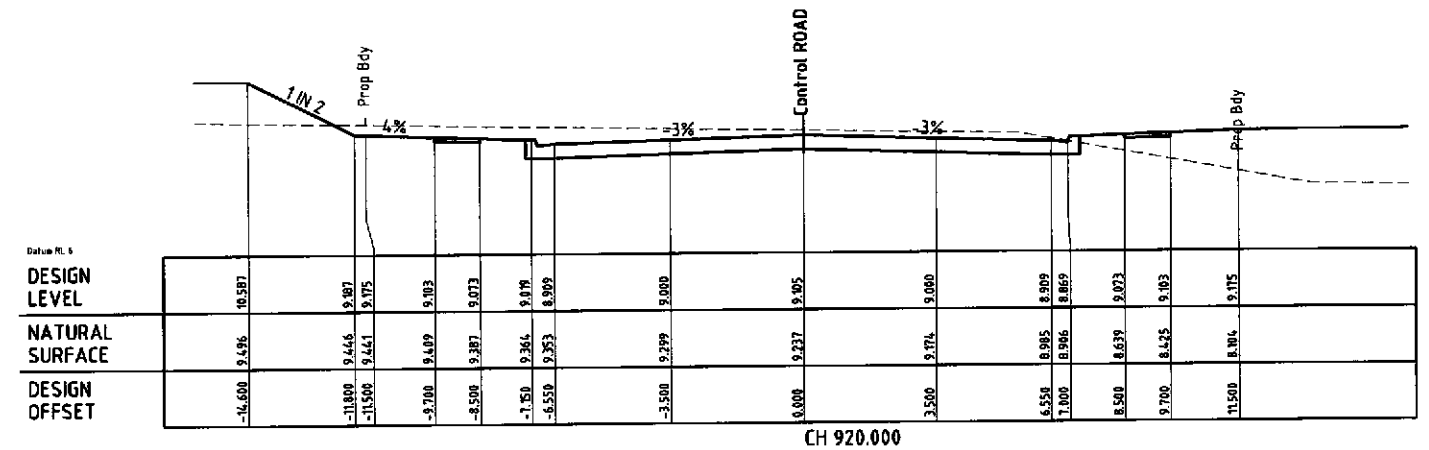
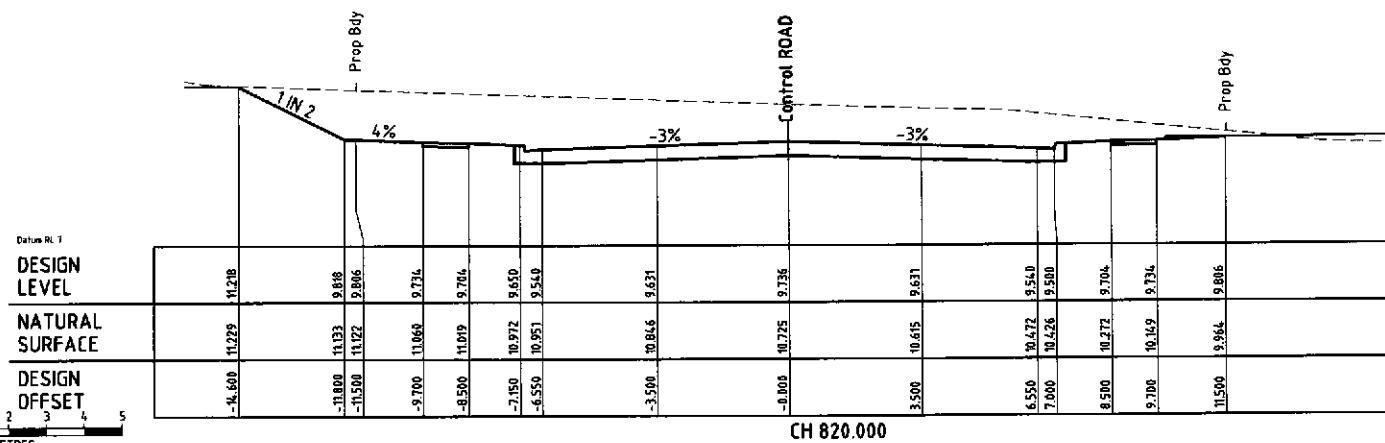
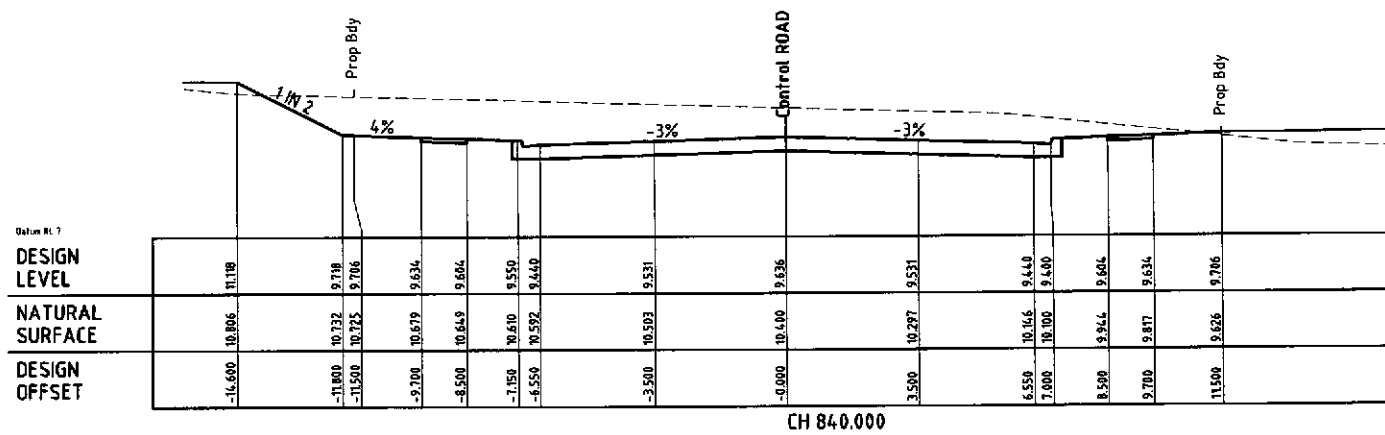
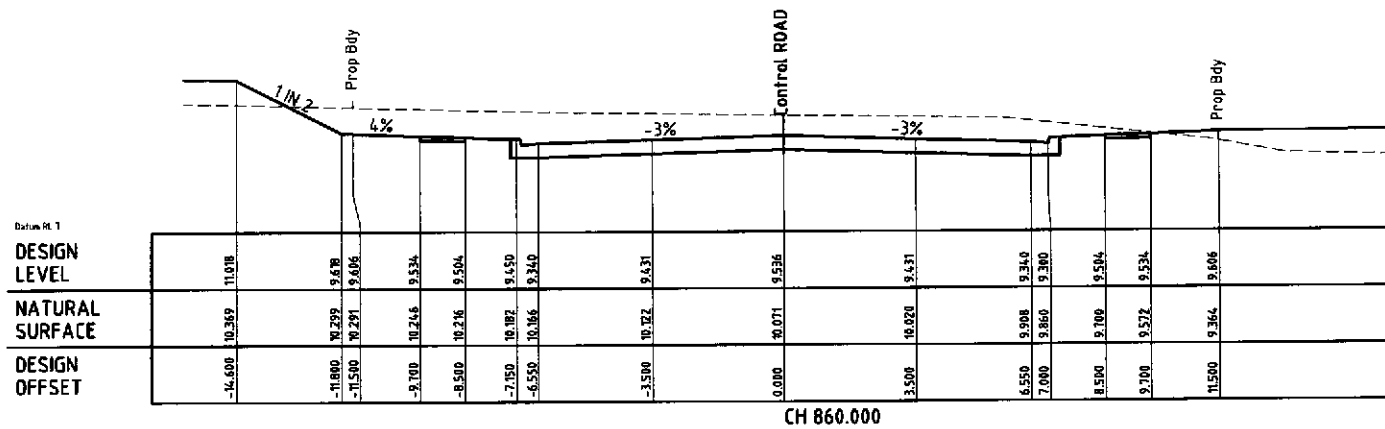
REV	DESCRIPTION	DATE
A	FIRST ISSUE	

NAME	SIGNATURE
DRAFTING J POMROY	
DESIGN J POMROY	
DESIGN VERIFICATION D NEUHOLO	
PROJECT APPROVAL GC LOVELL	
CLIENT	

Kellogg Brown & Root Pty Ltd		
KBR		
Kellogg Brown & Root Pty Ltd ABN 91 007 660 317 665 Coronation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500		
DRAWING SCALE 1:100 (A1)	ORIG. SIZE A1	PROJECT No. BEV417
DRAFTER: AM FRANKIOSA		CAD FILE: BEV417-C-DWG-106.dwg

TITLE	REVISION
INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA CROSS SECTIONS ROAD SHEET 6 OF 9	
DRAWING No. BEV417-C-DWG-106	A

FOR TYPICAL CROSS SECTION
REFER CH 740.



0 1 2 3 4 5
SCALE OF METRES
SCALE 1:100

© Kellogg Brown & Root Pty Ltd XREFS:Address_black/NEW_A1_APAC_STD_xr_bh/Xsec_mc01_1

BURNSIDE DEVELOPMENTS PTY LTD	
99 ANNERLEY ROAD	
WOOLLOONGABBA QLD 4102	
DRAWING No.	DESCRIPTION
REFERENCE DRAWINGS	
NOTES	

A FIRST ISSUE	
REV	DESCRIPTION
REVISIONS	

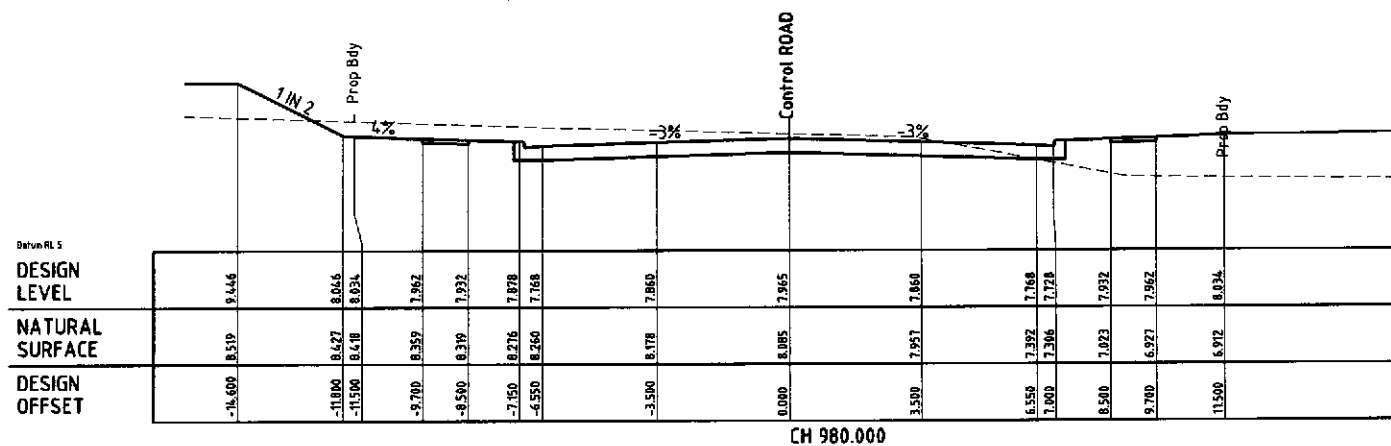
NAME	SIGNATURE
DRAFTING J POMROY	J
DESIGN J POMROY	J
DESIGN VERIFICATION D NEUHOLD	D
PROJECT APPROVAL GC LOVELL	GC
CLIENT	

Kellogg Brown & Root Pty Ltd	
KBR	
Kellogg Brown & Root Pty Ltd ABN 91 007 660 317 555 Coronation Drive, Tapwong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500	
DRAWING SCALE 1:100 (A1)	ORIG. SIZE A1
PROJECT No. BEV417	
DRAFTER: AM FRANGIOSA CAD FILE: BEV417-C-DWG-107.dwg	

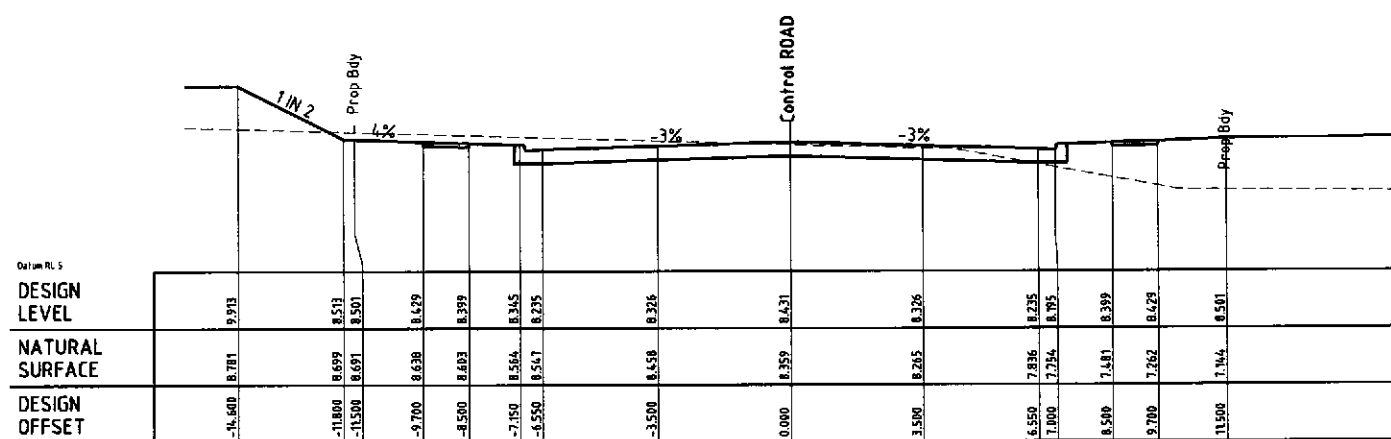
INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA CROSS SECTIONS ROAD SHEET 7 OF 9	
DRAWING No. BEV417-C-DWG-107	REVISION A

NOT FOR CONSTRUCTION

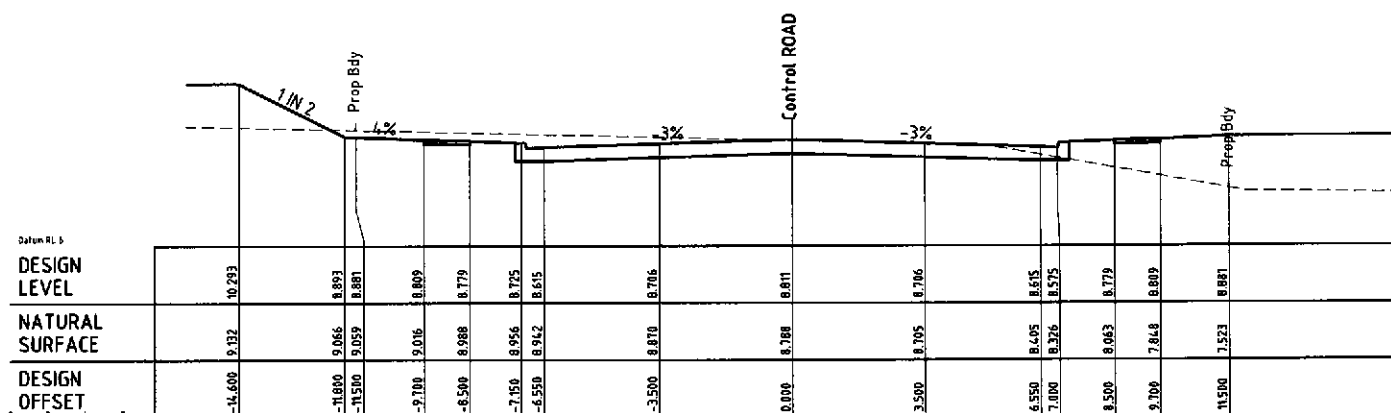
FOR TYPICAL CROSS SECTION
REFER CH 740.



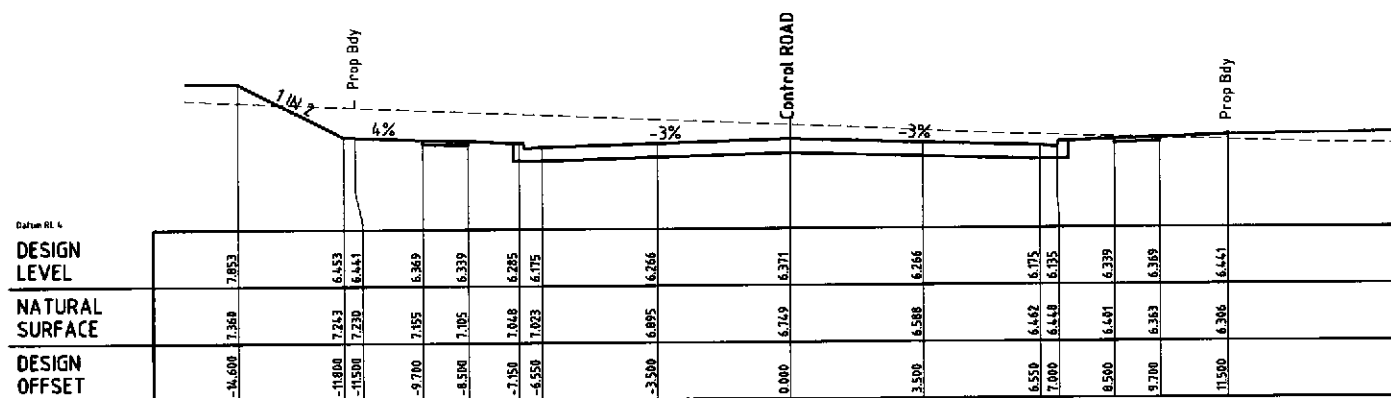
CH 980.000



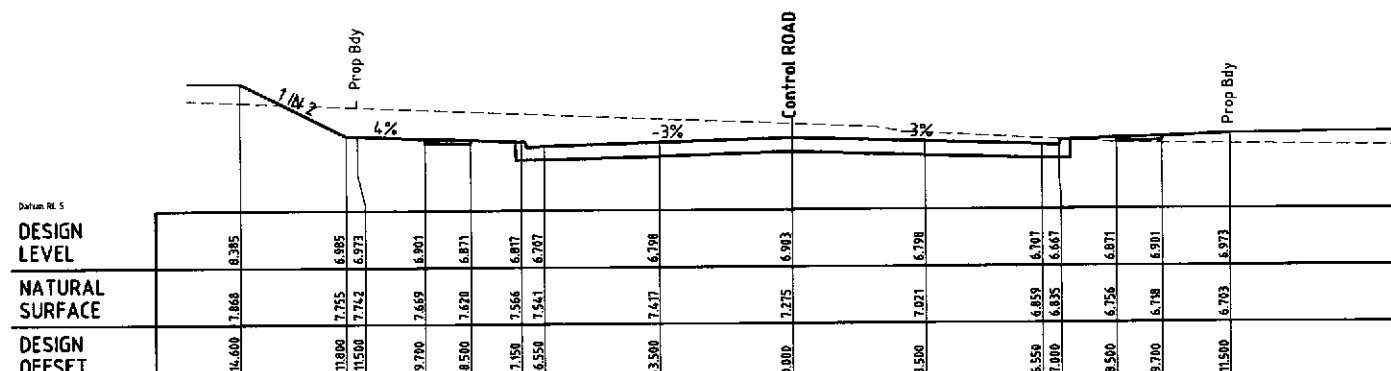
CH 960.000



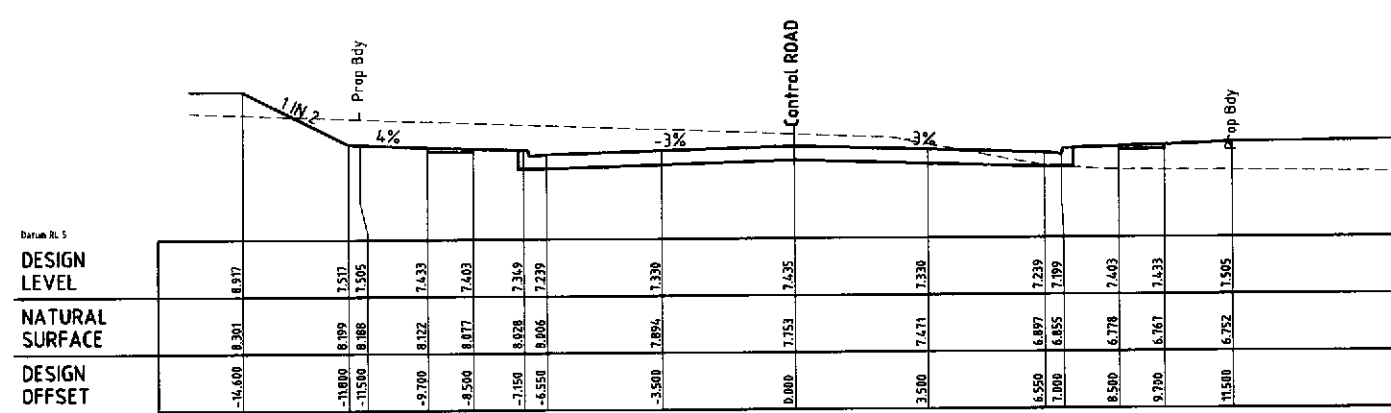
CH 940.000



CH 1040.000



CH 1020.000



CH 1000.000

CHRISTENSEN ROAD

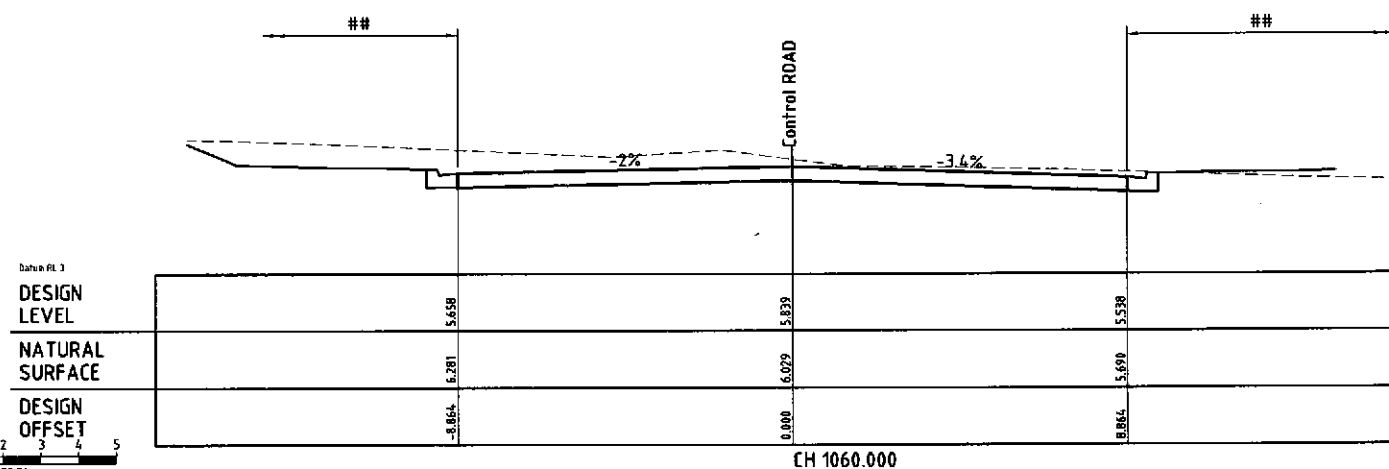
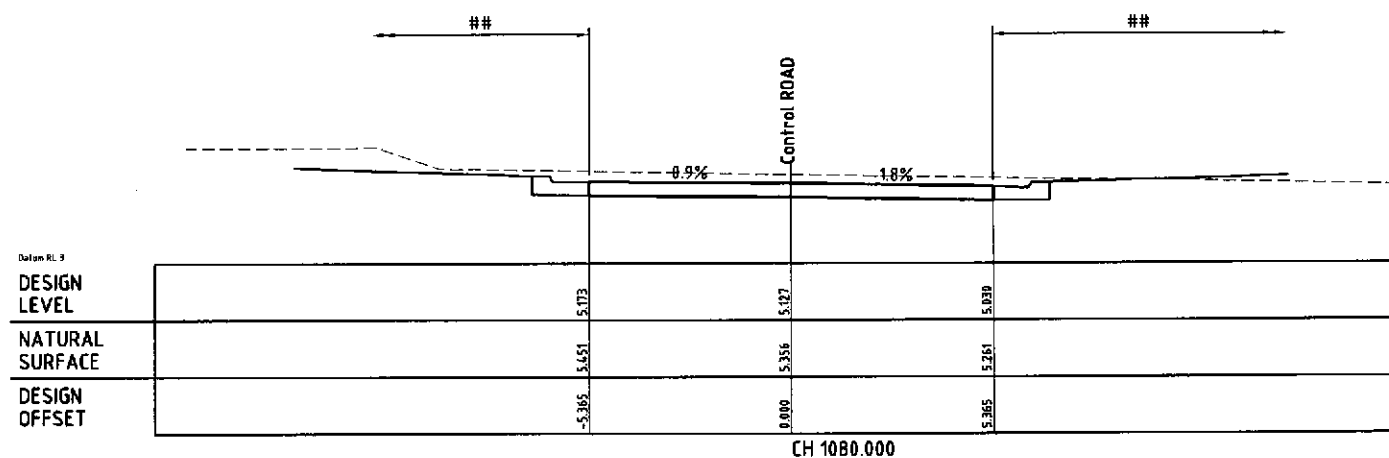
NOT FOR CONSTRUCTION

SCALE OF METRES
SCALE 1:100

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Xsec_mr01_1

100mm ON ORIGINAL DRAWING BURNSIDE DEVELOPMENTS PTY LTD 99 ANNERLEY ROAD WOOLLOONGABBA QLD 4102		DATE REVISIONS		NAME SIGNATURE		Kellogg Brown & Root Pty Ltd KBR Kellogg Brown & Root Pty Ltd ABN 91 007 660 317 555 Coronation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500		TITLE INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA CROSS SECTIONS ROAD SHEET 8 OF 9	
DRAWING No. DESCRIPTION		DATE REVISIONS		DATE REVISIONS		DRAWING SCALE 1:100 (A1)		ORIG. SIZE A1	
REFERENCE DRAWINGS		NOTES		APPROVALS		PROJECT No. BEV417		DRAWING No. BEV417-C-DWG-108	
REVISIONS		REVISIONS		REVISIONS		DRAFTER: AM FRANGIOSA		REVISION A	

REFER CUL-DE-SAC CROSS SECTIONS



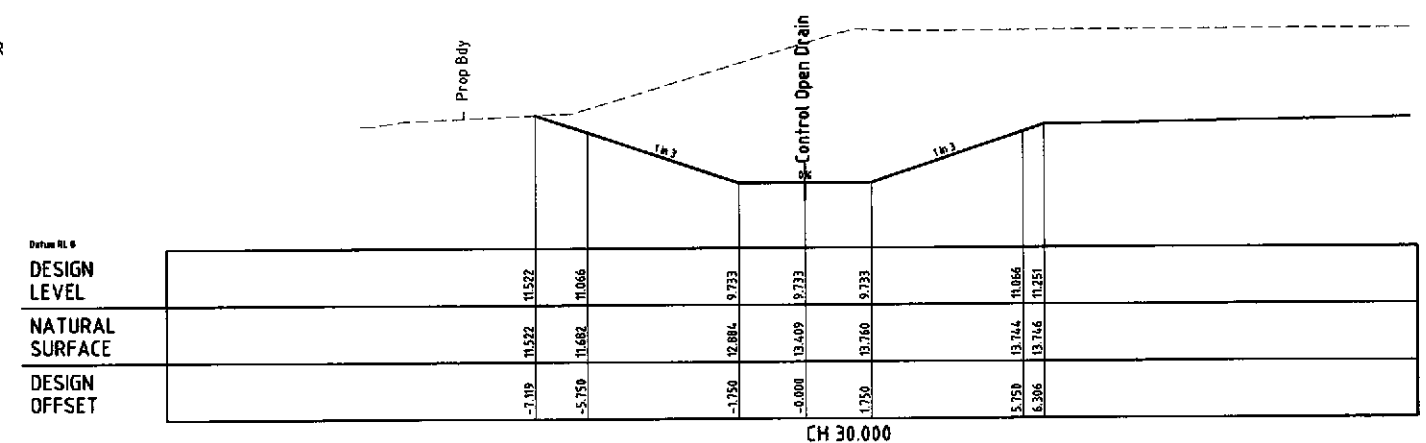
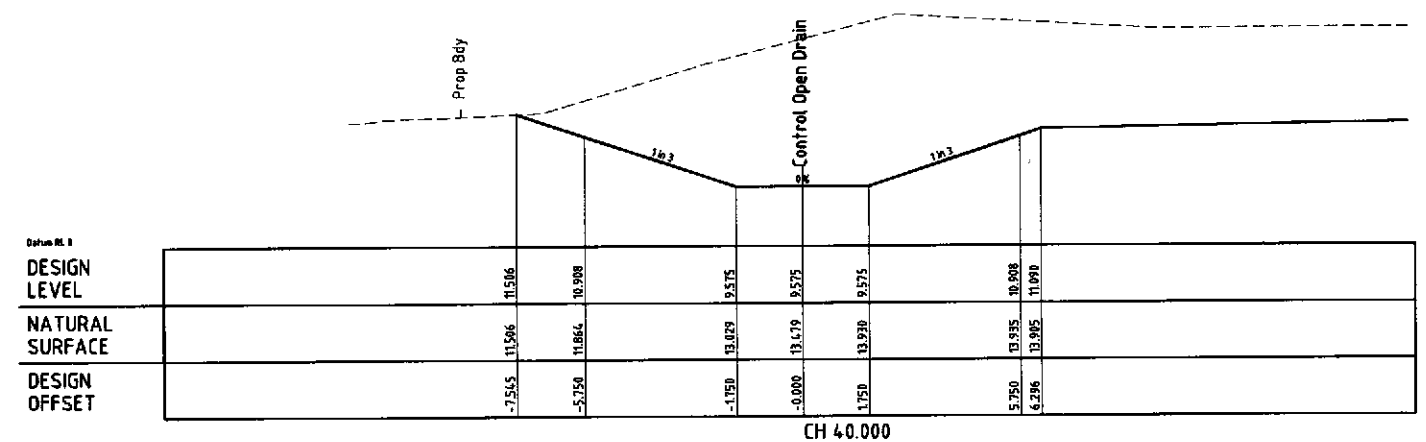
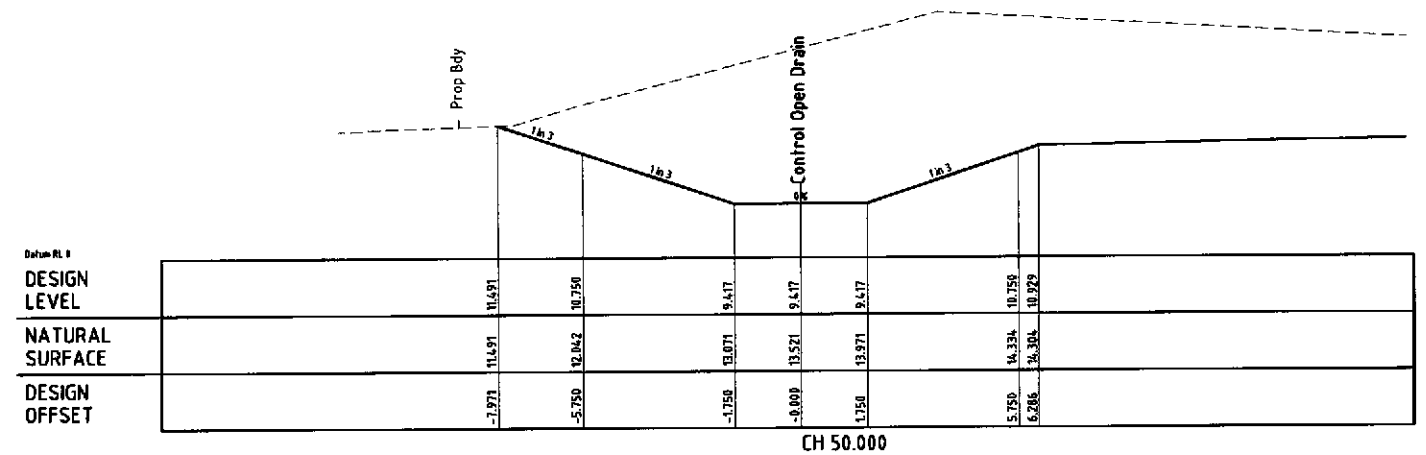
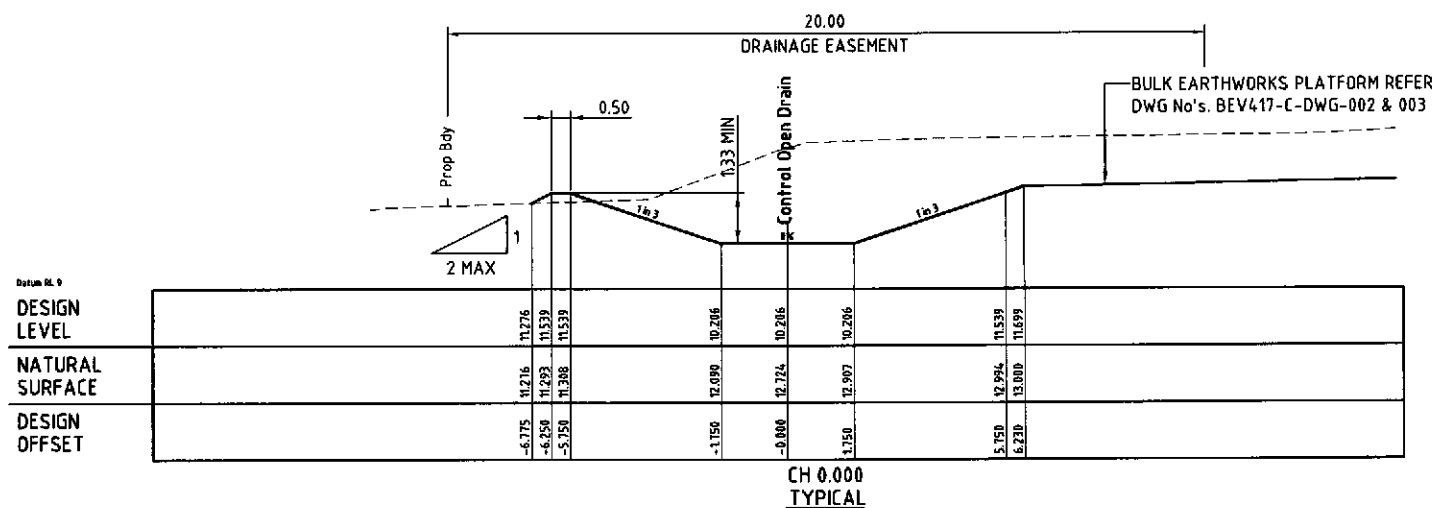
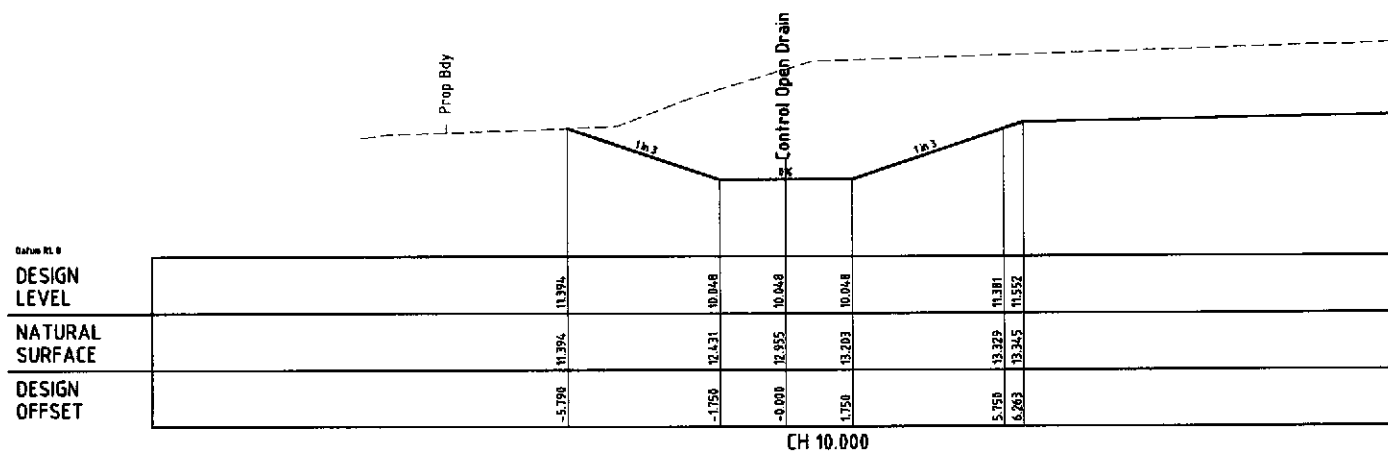
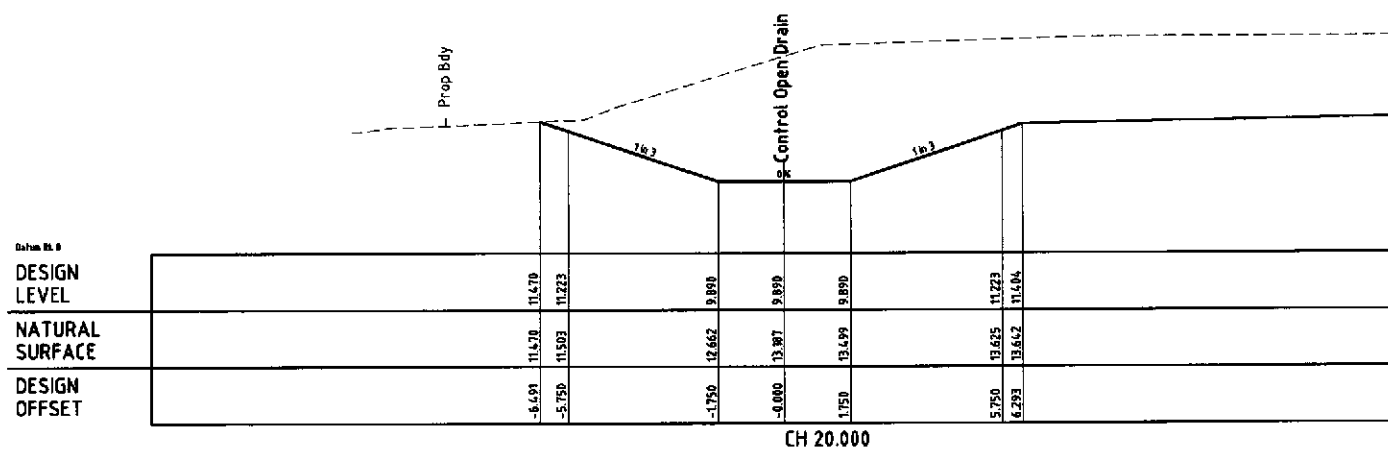
0 1 2 3 4 5
SCALE OF METRES
SCALE 1:100

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Xsec_mc01_1

CHRISTENSEN ROAD

NOT FOR CONSTRUCTION

BURNSIDE DEVELOPMENTS PTY LTD 99 ANNERLEY ROAD WOOLLOONGABBA QLD 4102		100mm ON ORIGINAL DRAWING		NAME		SIGNATURE		Kellogg Brown & Root Pty Ltd KBR Kellogg Brown & Root Pty Ltd ABN 91 007 640 317 855 Coronation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6508		TITLE INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA CROSS SECTIONS ROAD SHEET 9 OF 9											
		DRAFTING	J POMROY	J Pomroy																	
		DESIGN	J POMROY	J Pomroy																	
		DESIGN VERIFICATION	D NEUHOLD	D Neuhold																	
DRAWING No.		DESCRIPTION		PROJECT APPROVAL		GC LOVELL		DRAWING SCALE		ORIG. SIZE		PROJECT No.		DRAWING No.		REVISION					
REFERENCE DRAWINGS		NOTES		REV		DESCRIPTION		DATE		CLIENT		APPROVALS		DRAFTER: AM FRANGIOSA		CAD FILE: BEV417-C-DWG-109.dwg		BEV417-C-DWG-109		A	



0 1 2 3 4 5
SCALE OF METRES
SCALE 1:100

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Xsec_m00_1

		100mm ON ORIGINAL DRAWING	
		BURNSIDE DEVELOPMENTS PTY LTD 99 ANNERLEY ROAD WOOLLOONGABBA QLD 4102	
DRAWING No.	DESCRIPTION		
REFERENCE DRAWINGS		NOTES	

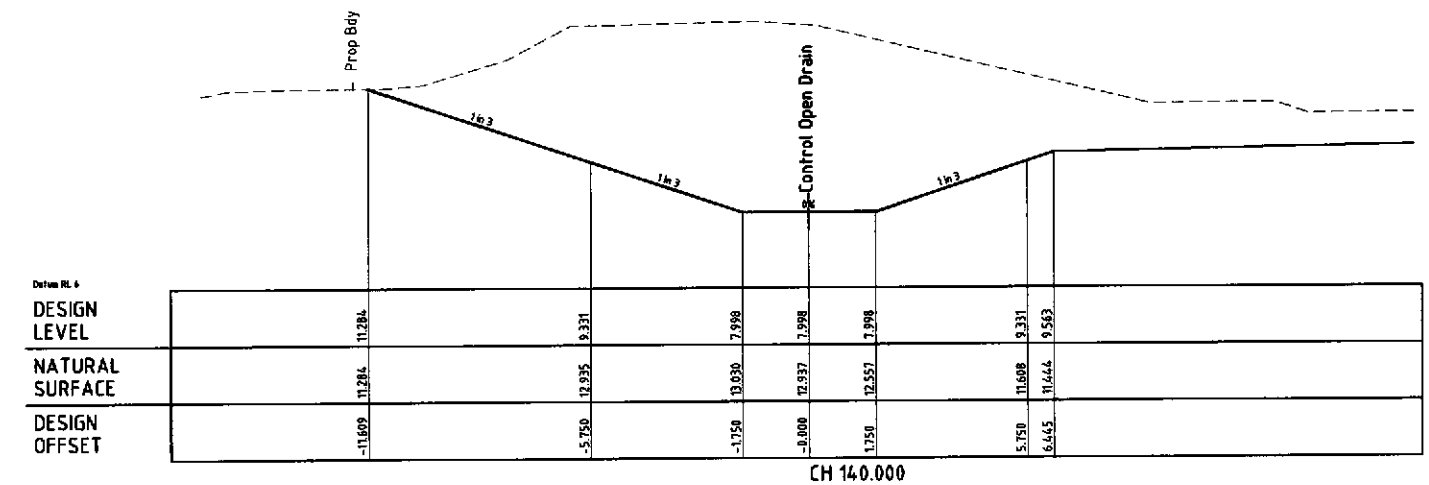
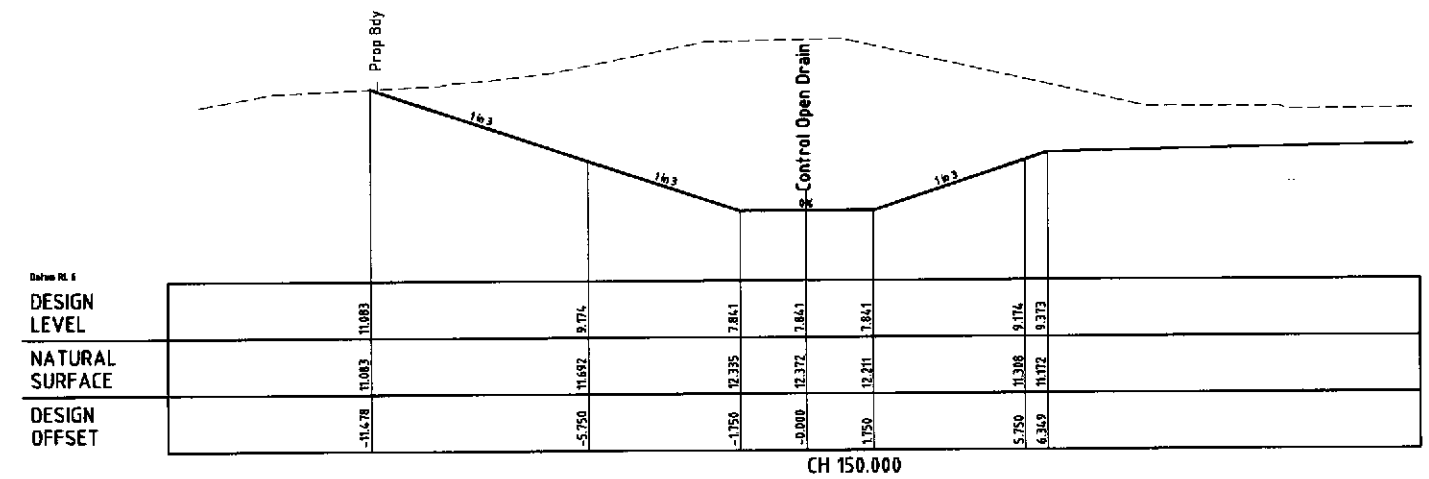
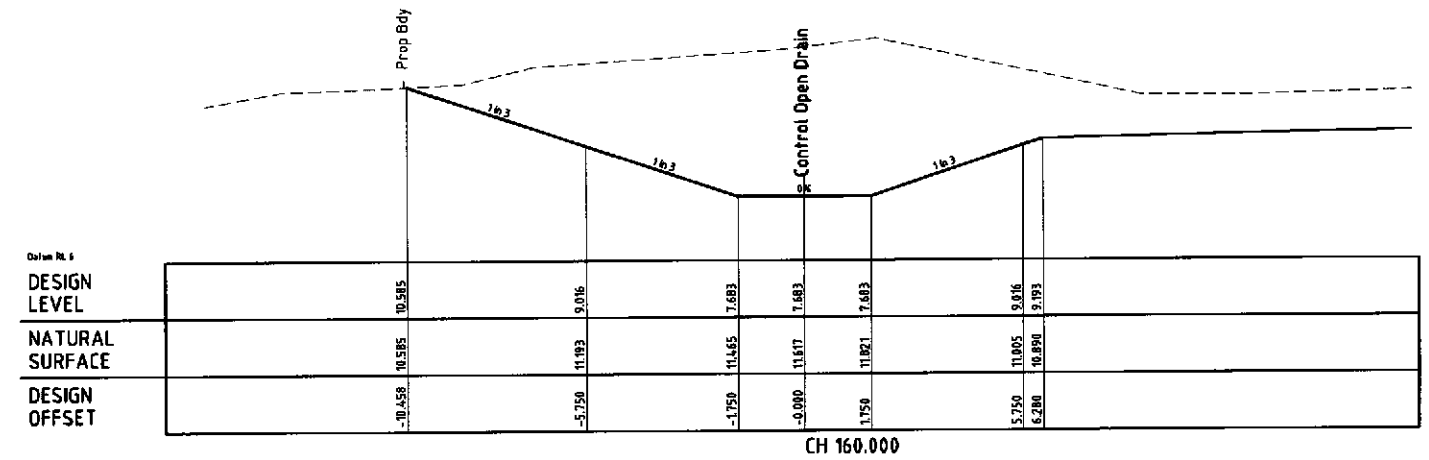
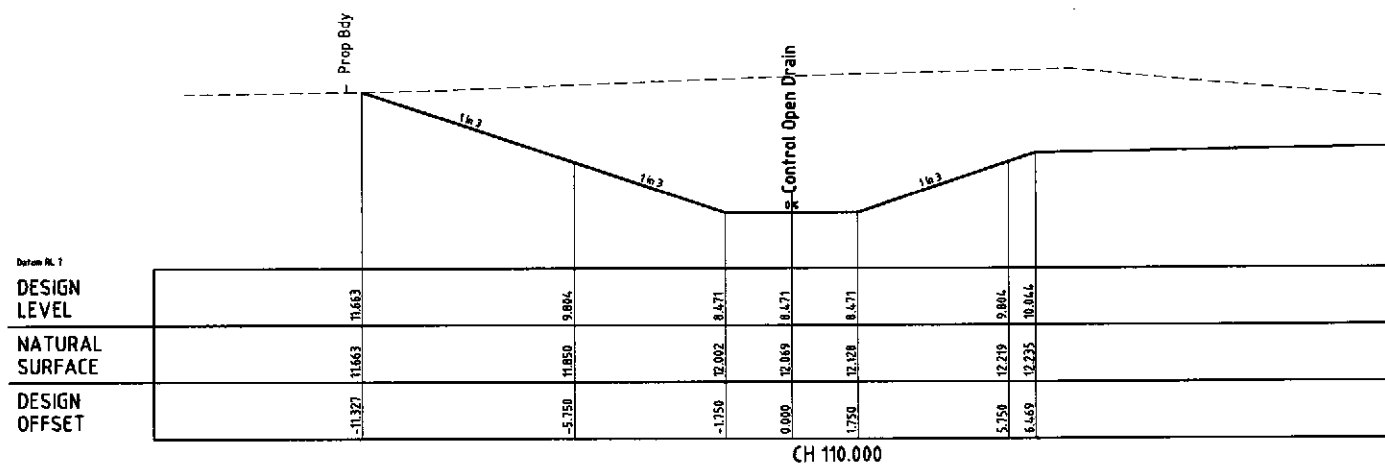
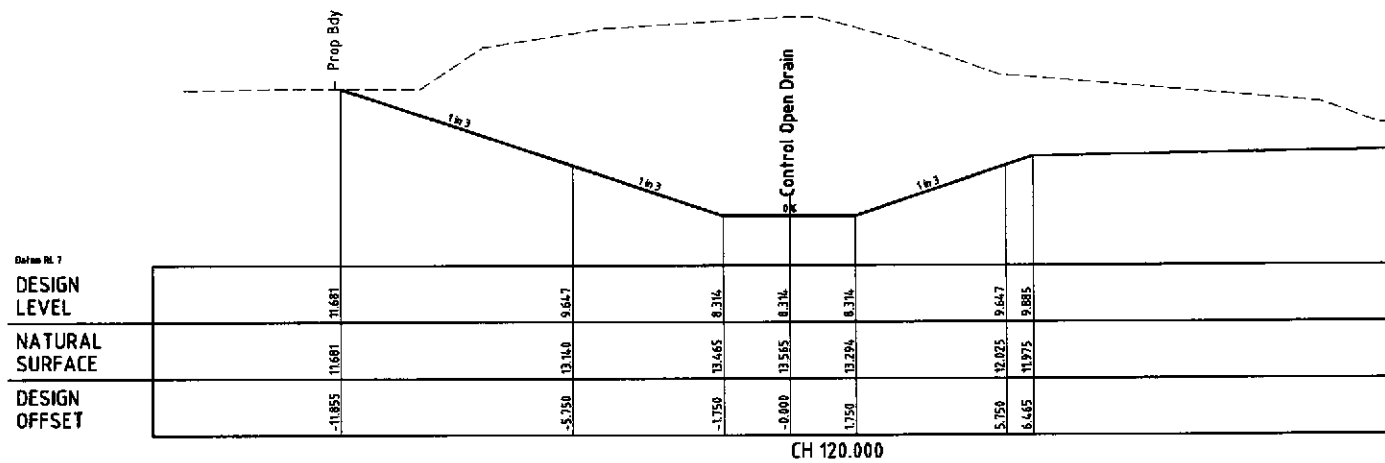
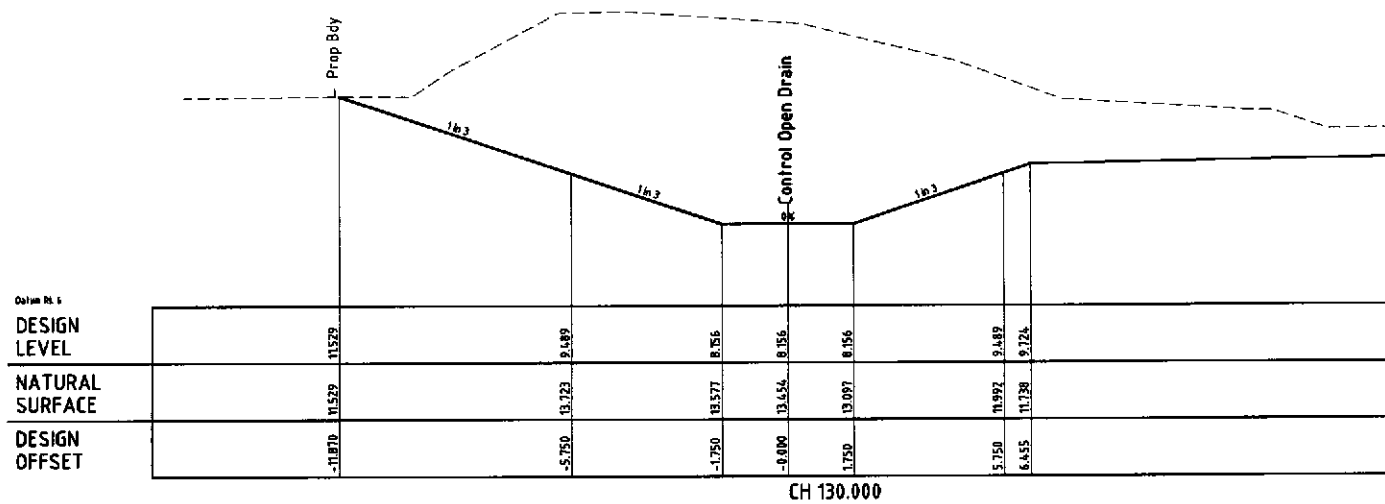
REV	DATE	DESCRIPTION
A		FIRST ISSUE

NAME	SIGNATURE
DRAFTING J POMROY	
DESIGN J POMROY	
DESIGN VERIFICATION D NEUHOLD	
PROJECT APPROVAL GC LOVELL	
CLIENT	

Kellogg Brown & Root Pty Ltd		
KBR		
Kellogg Brown & Root Pty Ltd ABN 91 007 660 317 555 Coronation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500		
DRAWING SCALE 1:100 (A1)	DRG. SIZE A1	PROJECT No. BEV417
DRAFTER: AM FRANGIOSA CAD FILE: BEV417-C-DWG-112.dwg		

TITLE		REVISION
INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA CROSS SECTIONS OPEN DRAIN SHEET 1 OF 6		
DRAWING No. BEV417-C-DWG-112	A	

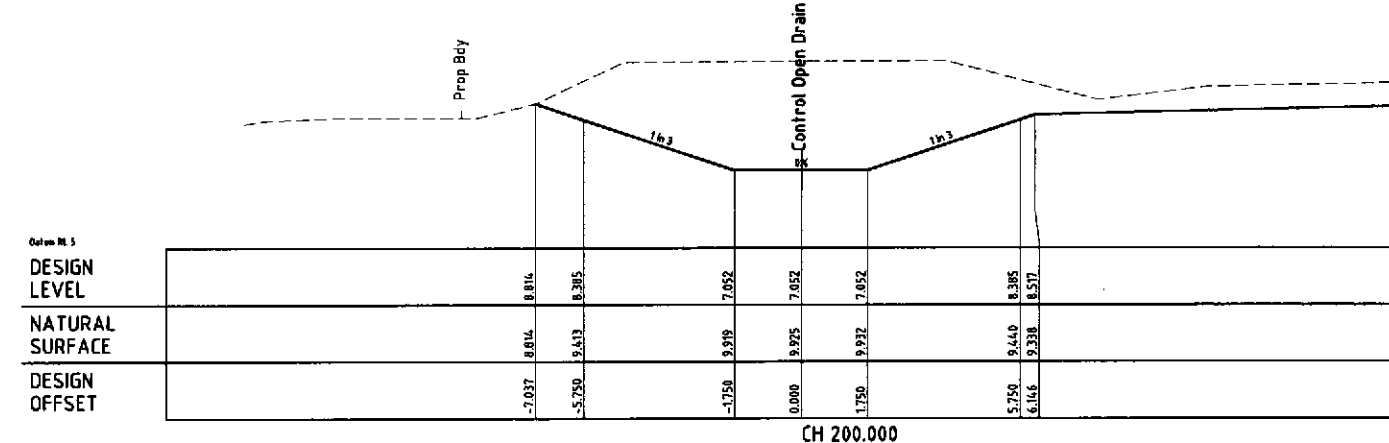
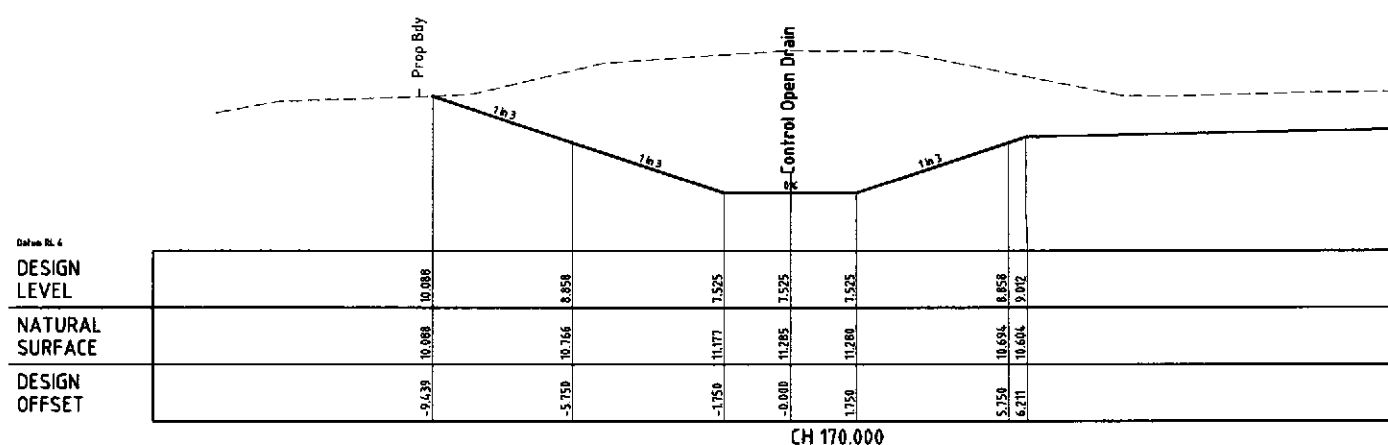
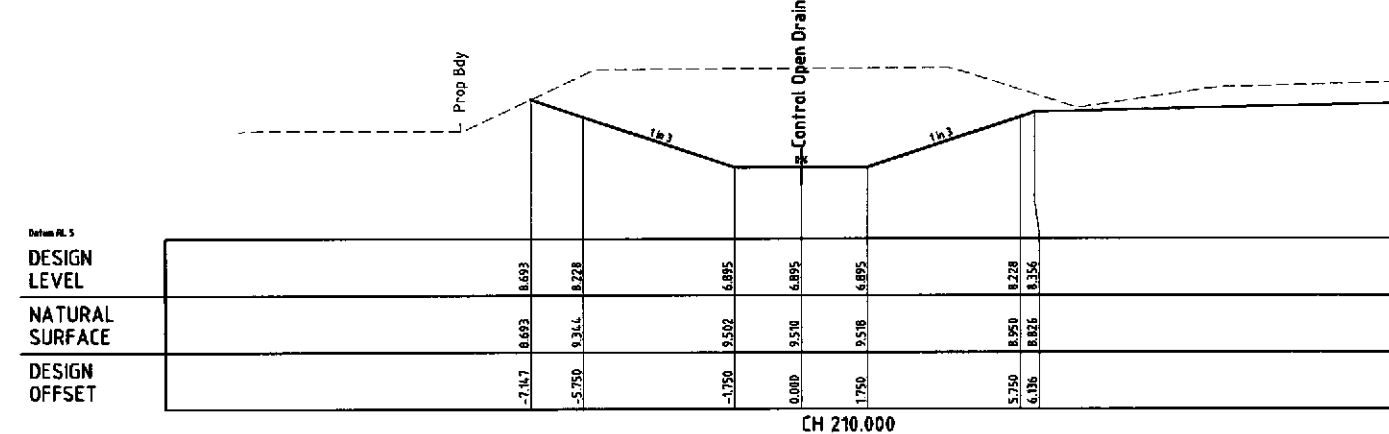
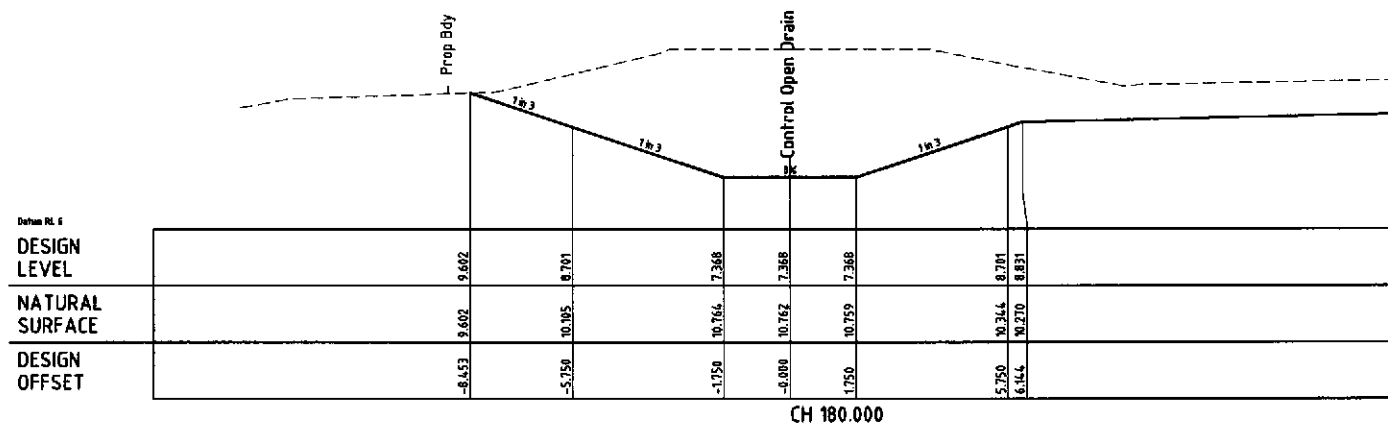
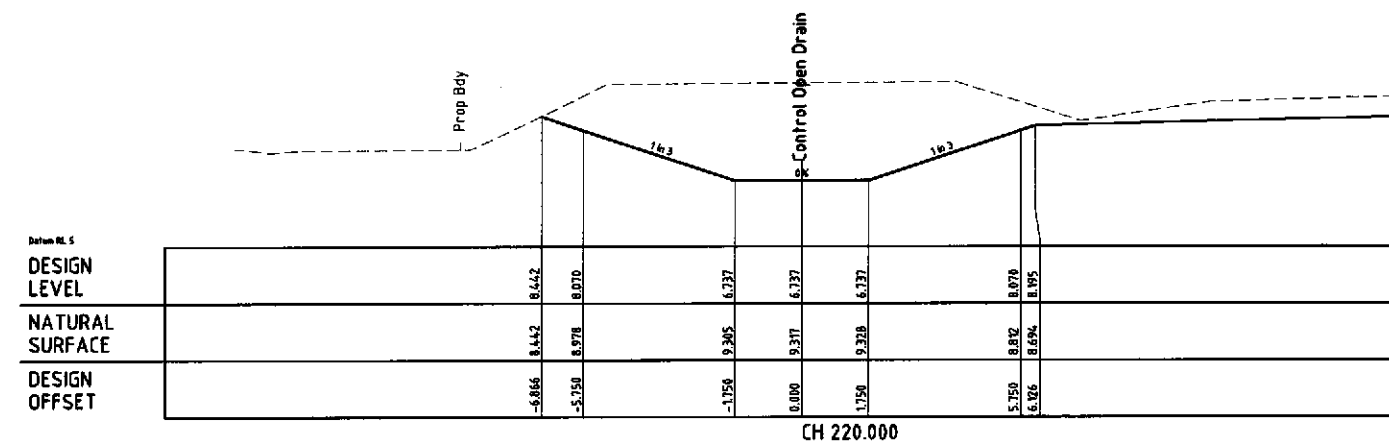
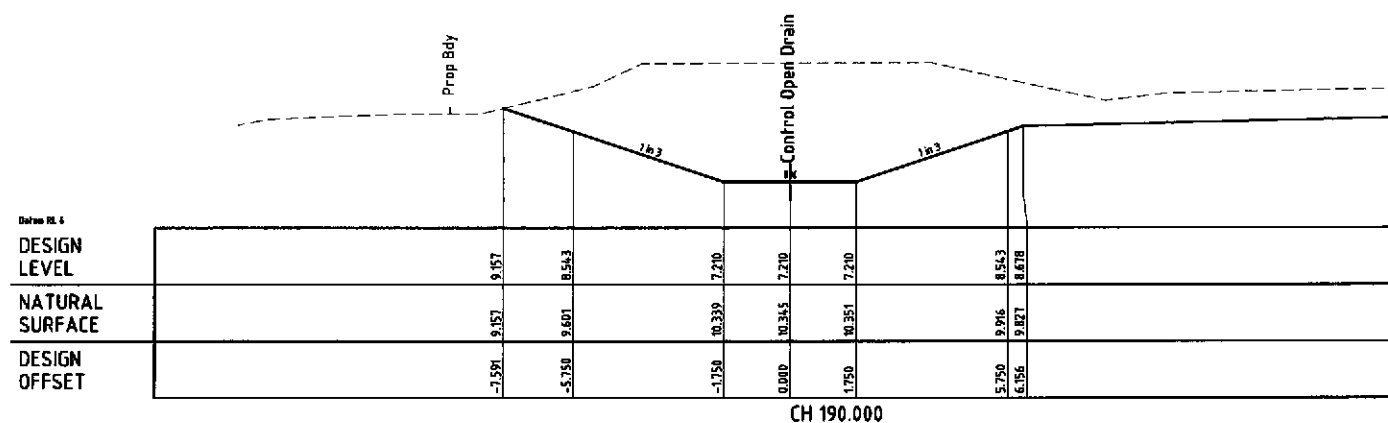
NOT FOR CONSTRUCTION



0 1 2 3 4 5
SCALE OF METRES
SCALE 1:100

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Xsec_rn00_1

100mm ON ORIGINAL DRAWING BURNSIDE DEVELOPMENTS PTY LTD 99 ANNERLEY ROAD WOOLLOONGABBA QLD 4102		NOT FOR CONSTRUCTION		NAME SIGNATURE		Kellogg Brown & Root Pty Ltd KBR Kellogg Brown & Root Pty Ltd ABN 91 007 660 317 555 Coronation Drive, Toowang, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500		TITLE INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA CROSS SECTIONS OPEN DRAIN SHEET 3 OF 6													
				DRAFTING J POMROY																	
				DESIGN J POMROY																	
				DESIGN VERIFICATION D NEUHOLD																	
PROJECT APPROVAL GC LOVELL		CLIENT		APPROVALS		DRAWING SCALE 1:100 (A1)		ORIG. SIZE A1		PROJECT No. BEV417		DRAWING No. BEV417-C-DWG-114		REVISION A							
DRAFTING J POMROY		DESIGN J POMROY		DESIGN VERIFICATION D NEUHOLD		PROJECT APPROVAL GC LOVELL		CLIENT		APPROVALS		DRAWING SCALE 1:100 (A1)		ORIG. SIZE A1		PROJECT No. BEV417		DRAWING No. BEV417-C-DWG-114		REVISION A	

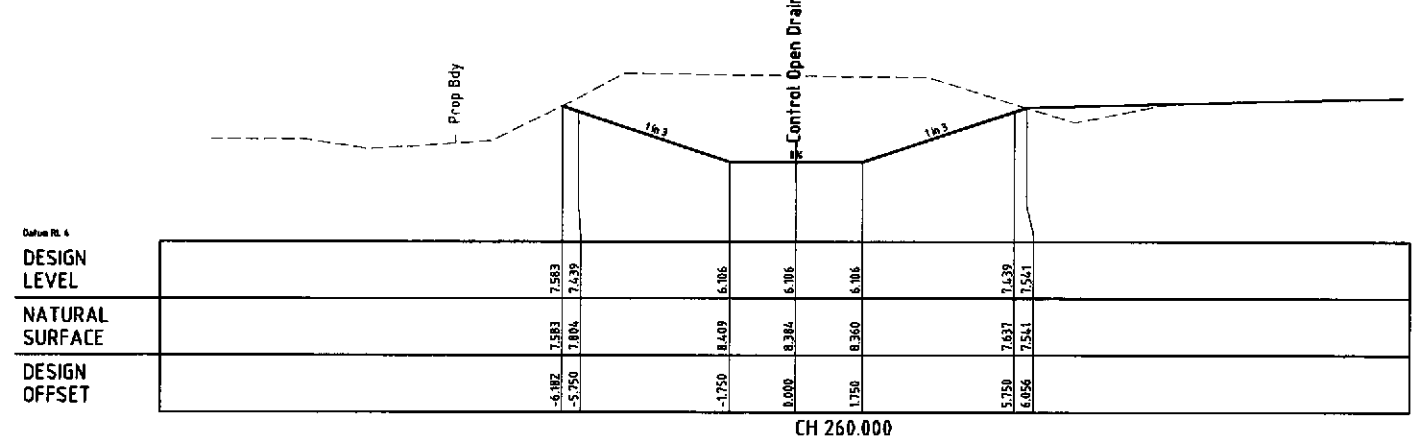
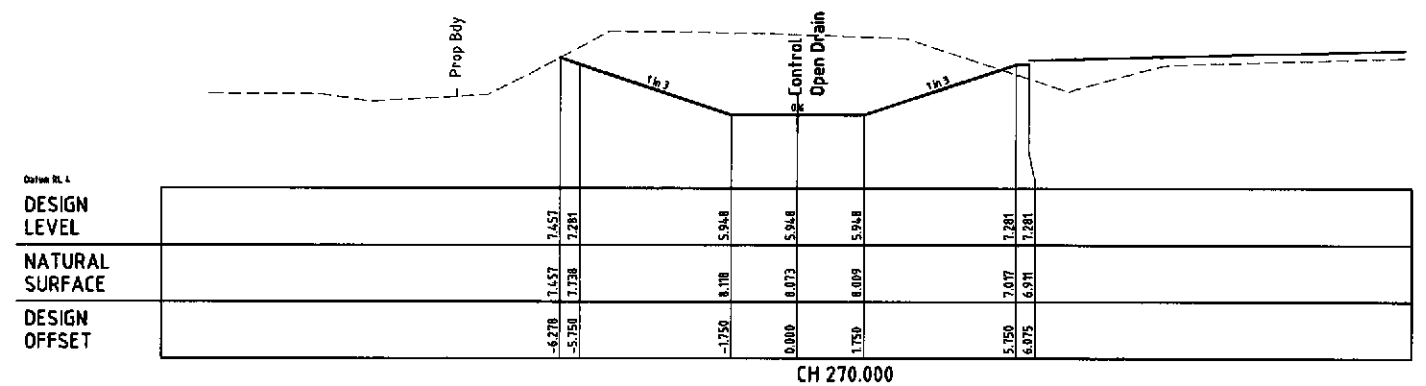
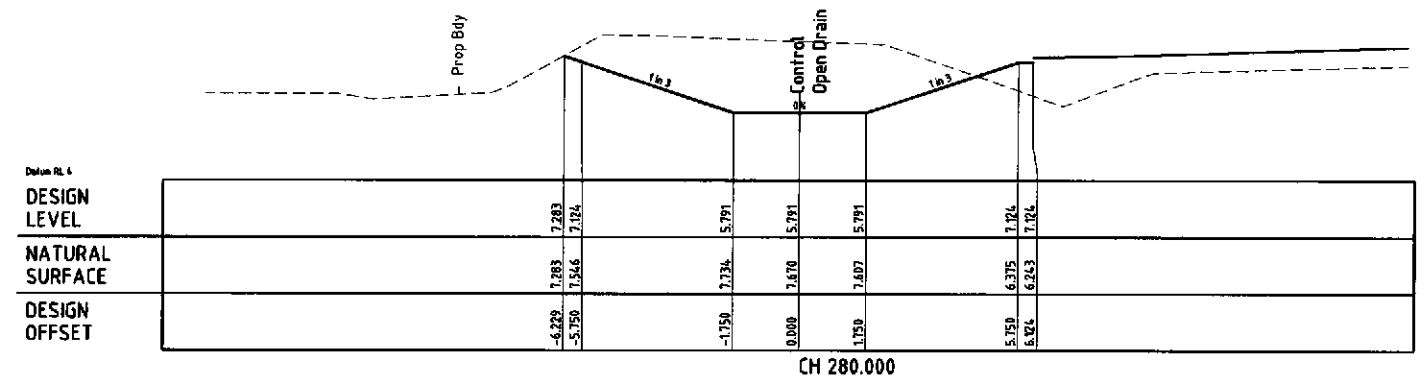
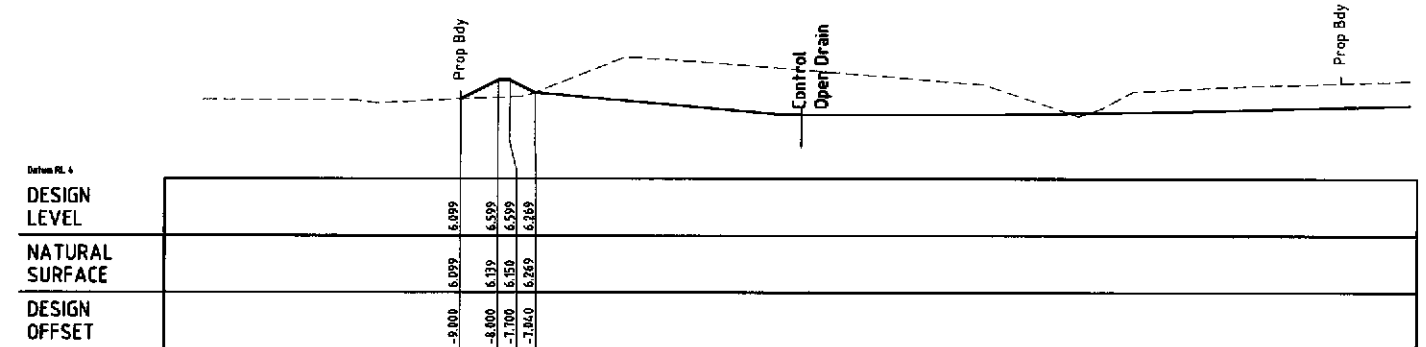
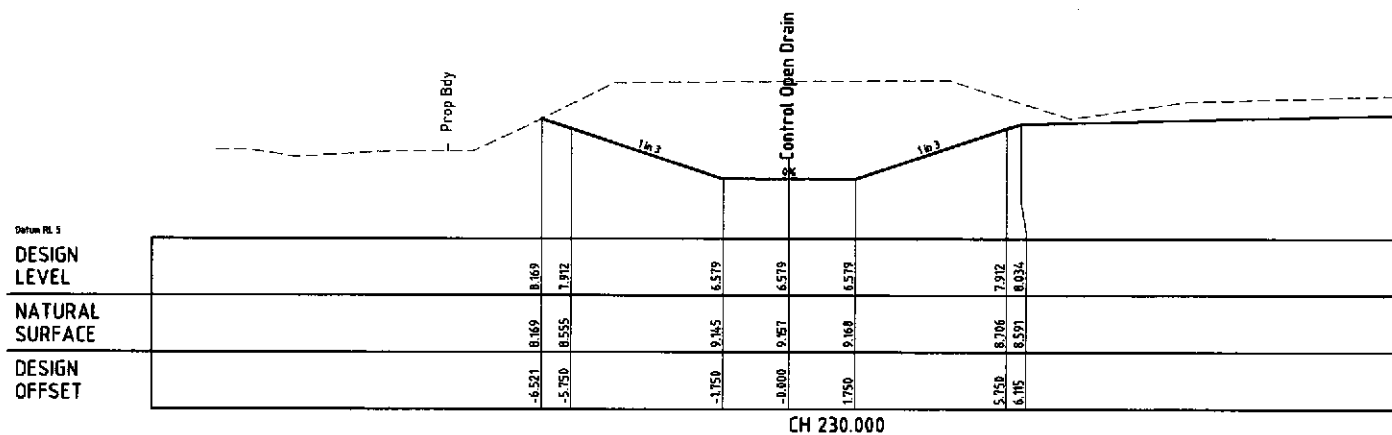
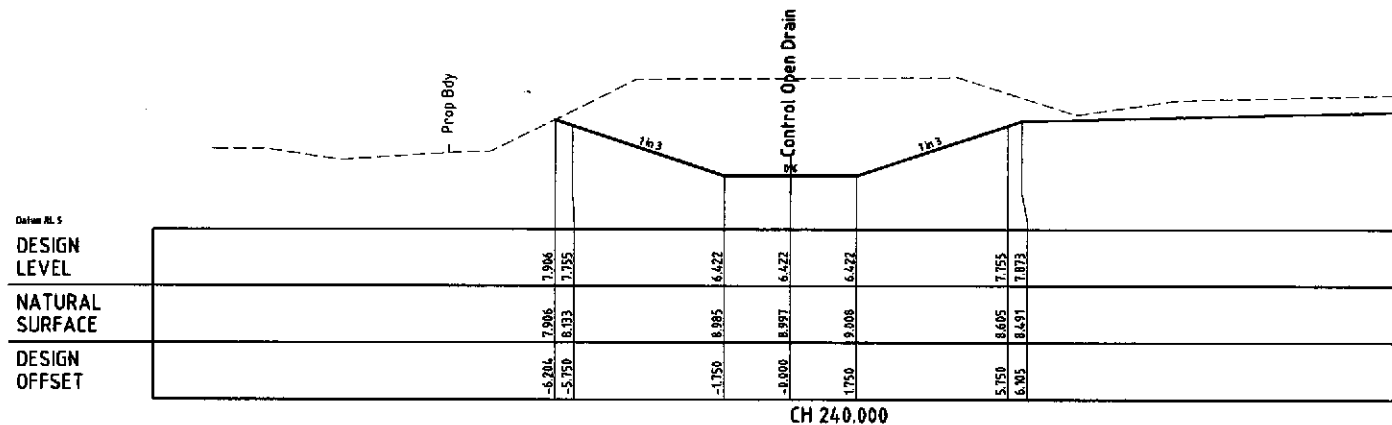
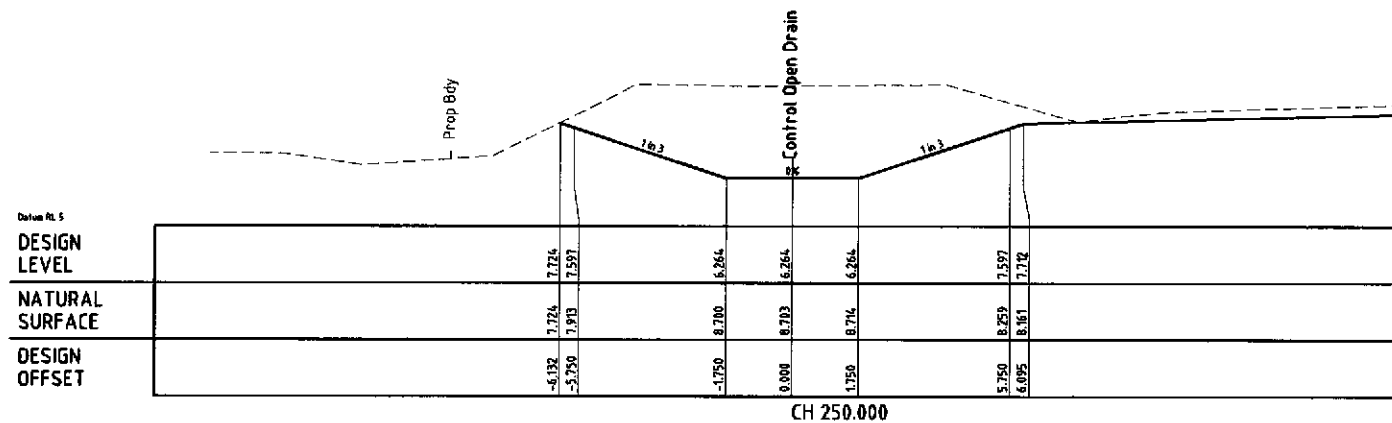


0 1 2 3 4 5
SCALE OF METRES
SCALE 1:100

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Xsac_mc00_1

100mm ON ORIGINAL DRAWING BURNSIDE DEVELOPMENTS PTY LTD 99 ANNERLEY ROAD WOOLLOONGABBA QLD 4102		NAME J POMROY J POMROY D NEUHOLD GC LOVELL		SIGNATURE [Signature] [Signature] [Signature] [Signature]		Kellogg Brown & Root Pty Ltd KBR Kellogg Brown & Root Pty Ltd ABN 91 007 660 317 255 Coronation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500		TITLE INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA CROSS SECTIONS OPEN DRAIN SHEET 4 OF 6	
DRAWING No. REFERENCE DRAWINGS		NOTES		CLIENT		DRAFTING SCALE 1:100 (A1)		ORIG. SIZE A1	
DATE		DATE		APPROVALS		PROJECT No. BEV417		DRAWING No. BEV417-C-DWG-115	
REVISIONS		REVISIONS		REVISIONS		DRAFTER: AM FRANGIOSA		REVISION A	

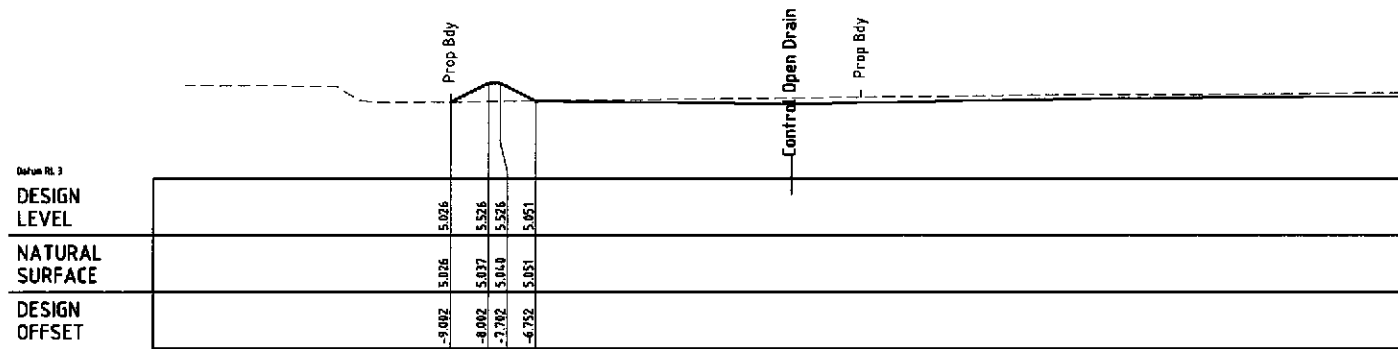
NOT FOR CONSTRUCTION



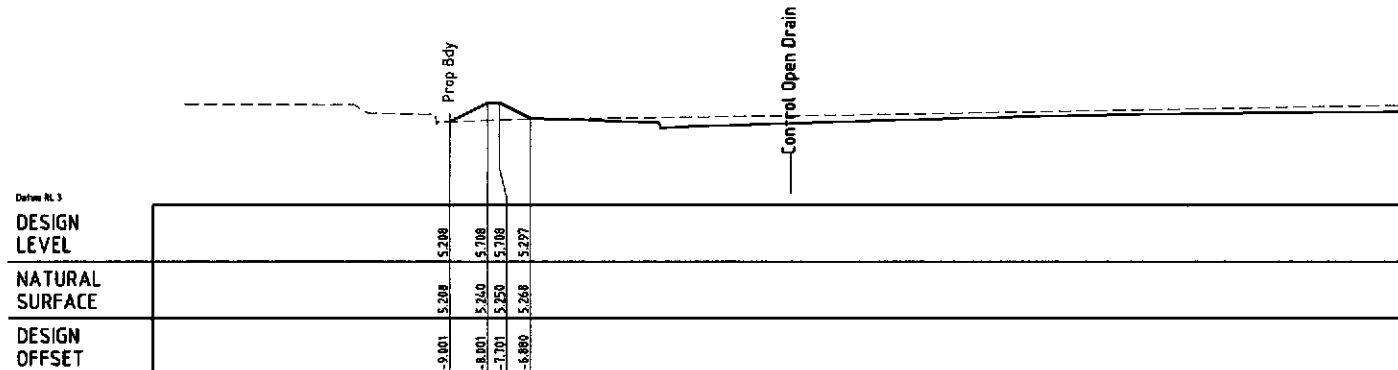
0 1 2 3 4 5
SCALE OF METRES
SCALE 1:100

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Xsec_mcd0_1

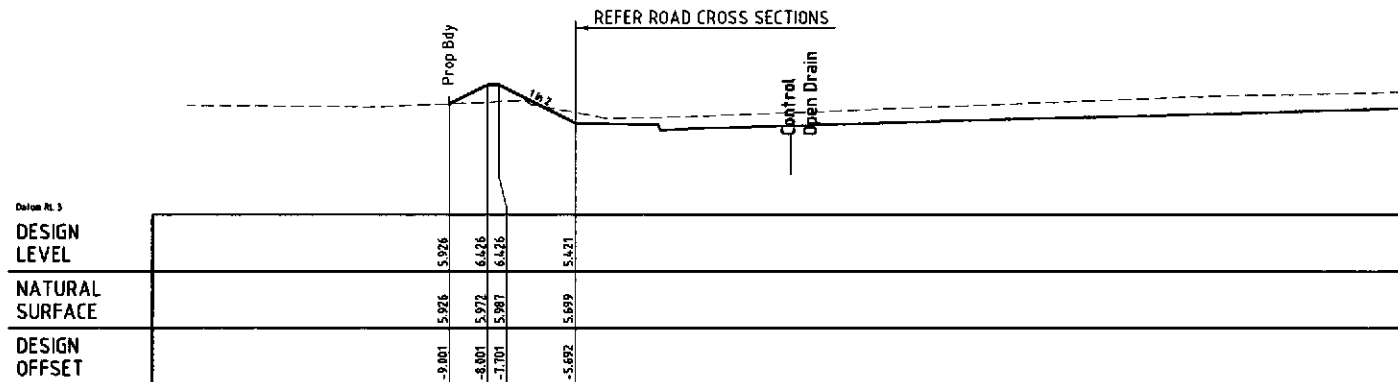
100mm ON ORIGINAL DRAWING BURNSIDE DEVELOPMENTS PTY LTD 99 ANNERLEY ROAD WOOLLOONGABBA QLD 4102		NAME		SIGNATURE		Kellogg Brown & Root Pty Ltd KBR Kellogg Brown & Root Pty Ltd ABN 91 007 660 317 355 Corporation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6500		TITLE INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA CROSS SECTIONS OPEN DRAIN SHEET 5 OF 6		
		DRAFTING	J POMROY	[Signature]						
		DESIGN	J POMROY	[Signature]						
		DESIGN VERIFICATION	D NEUHOLD	[Signature]						
A FIRST ISSUE		DATE	CLIENT	APPROVALS		DRAWING SCALE	ORIG. SIZE	PROJECT No.	DRAWING No.	REVISION
REV		DESCRIPTION	DATE	CLIENT	APPROVALS	1:100 (A1)	A1	BEV417	BEV417-C-DWG-116	A



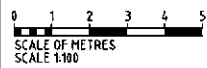
CH 320.000



CH 310.000



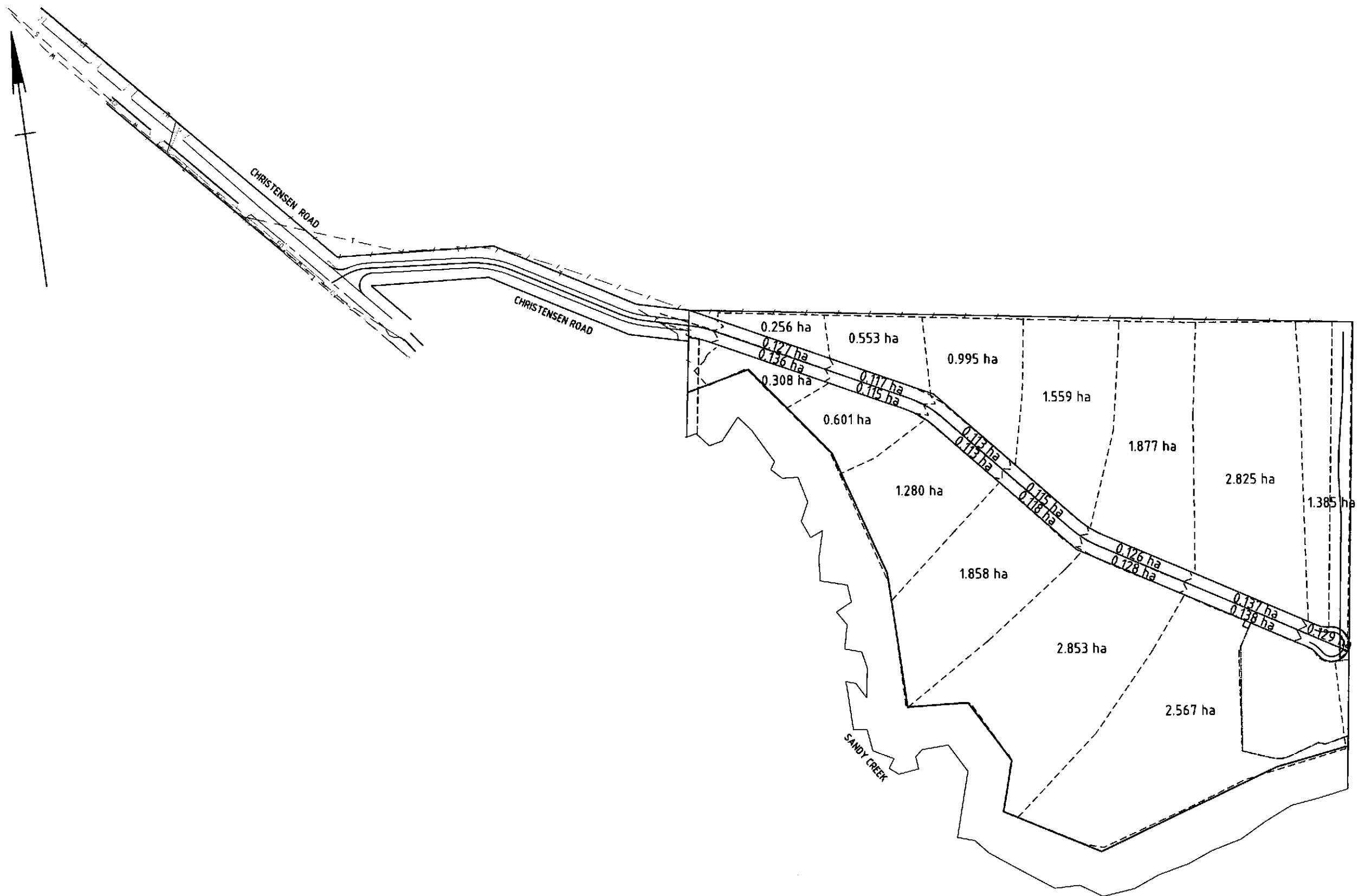
CH 300.000
TYPICAL
CH 285.000 - 330.000



© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Xsec_mc00_1

NOT FOR CONSTRUCTION

		100mm ON ORIGINAL DRAWING																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
--	--	---------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



0 20 40 60 80 100
SCALE OF METRES
SCALE 1:2000

NOT FOR CONSTRUCTION

© Kellogg Brown & Root Pty Ltd XREFS:Address_block /NEW_A1_APAC_STD_xr_bk /Survey Base /Design Road /Control Lines /Design Catchments /Design Basin /Design Platform

—105mm ON ORIGINAL DRAWING.

BURNSIDE DEVELOPMENTS PTY LTD
99 ANNERLEY ROAD
WOOLLOONGABBA QLD 4102

				NAME		SIGNATURE	
				DRAFTING	J POMROY	JP	
				DESIGN	J POMROY	JP	
				DESIGN VERIFICATION	D NEUMOLD	DN	
				PROJECT APPROVAL	GC LOVELL	GC	
A	FIRST ISSUE			CLIENT			
REV	DESCRIPTION	DATE	APPROVALS				
	REVISIONS						

Kellogg Brown & Root Pty Ltd

KBR

Kellogg Brown & Root Pty Ltd ABN 91 007 660 317
555 Coronation Drive, Toowong,
Brisbane, Queensland, 4066
ph (07) 3721-6555 fax (07) 3721-6500

DRAWING SCALE

ORIG. SIZE	
------------	--

PROJECT No.

DRAFTER: AM FRANGIOSA

CAD FILE: BEV417-C-DWG-11B.dwg

TITLE

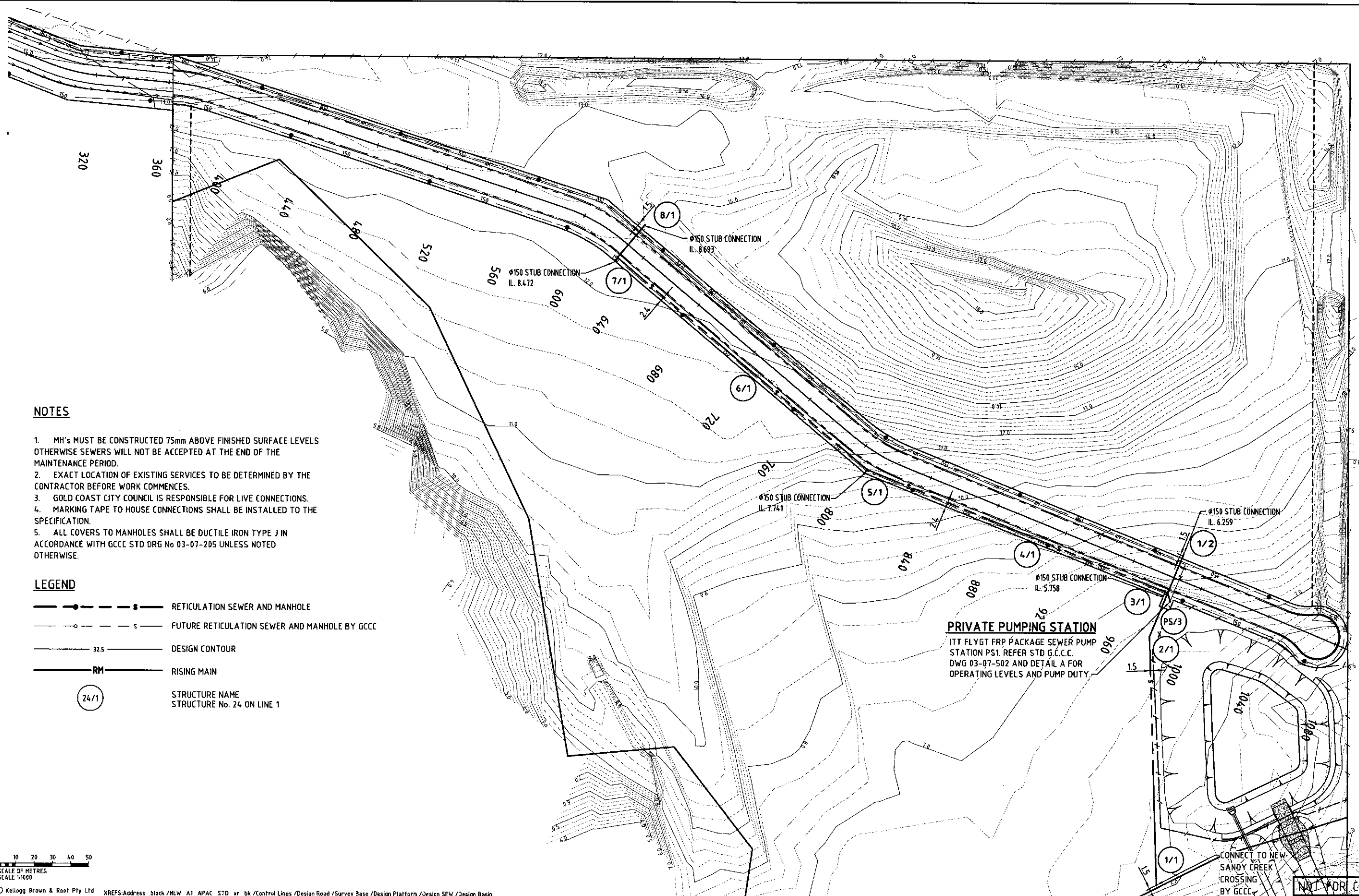
INDUSTRIAL ESTATE
CHRISTENSEN ROAD, YATALA
CATCHMENT PLAN

DRAWING No.	
-------------	--

BEV417-C-DWG-118

REVISION

A



NOTES

- 1. MH's MUST BE CONSTRUCTED 75mm ABOVE FINISHED SURFACE LEVELS OTHERWISE SEWERS WILL NOT BE ACCEPTED AT THE END OF THE MAINTENANCE PERIOD.
- 2. EXACT LOCATION OF EXISTING SERVICES TO BE DETERMINED BY THE CONTRACTOR BEFORE WORK COMMENCES.
- 3. GOLD COAST CITY COUNCIL IS RESPONSIBLE FOR LIVE CONNECTIONS.
- 4. MARKING TAPE TO HOUSE CONNECTIONS SHALL BE INSTALLED TO THE SPECIFICATION.
- 5. ALL COVERS TO MANHOLES SHALL BE DUCTILE IRON TYPE J IN ACCORDANCE WITH GCCC STD DRG No 03-07-205 UNLESS NOTED OTHERWISE.

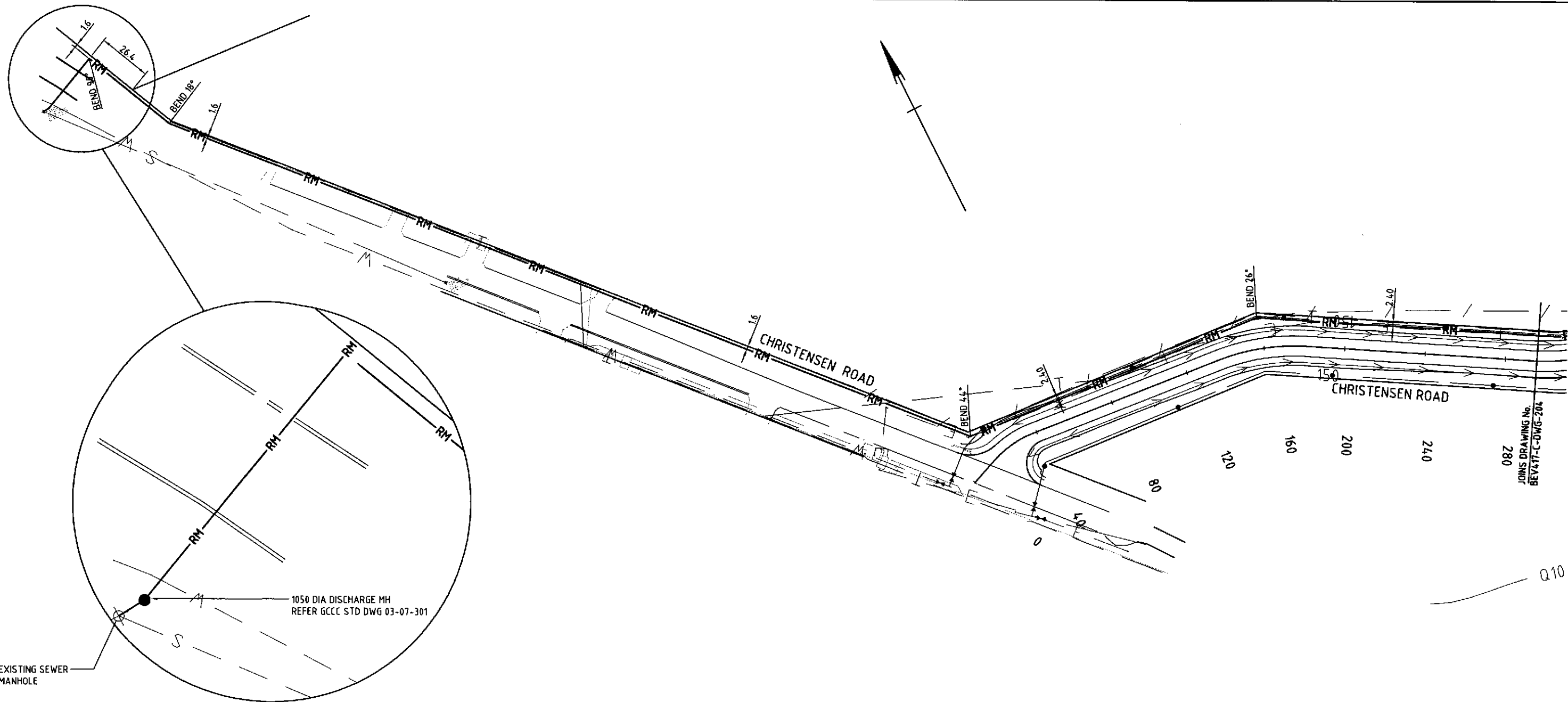
LEGEND

- RETICULATION SEWER AND MANHOLE
- FUTURE RETICULATION SEWER AND MANHOLE BY GCCC
- DESIGN CONTOUR
- RM RISING MAIN
- STRUCTURE NAME
STRUCTURE No. 24 ON LINE 1

0 10 20 30 40 50
SCALE OF METRES
SCALE 1:1000

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Control Lines/Design Road/Survey Base/Design Platform/Design SEW/Design Basin

		150mm ON ORIGINAL DRAWING																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
--	--	---------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



NOTES

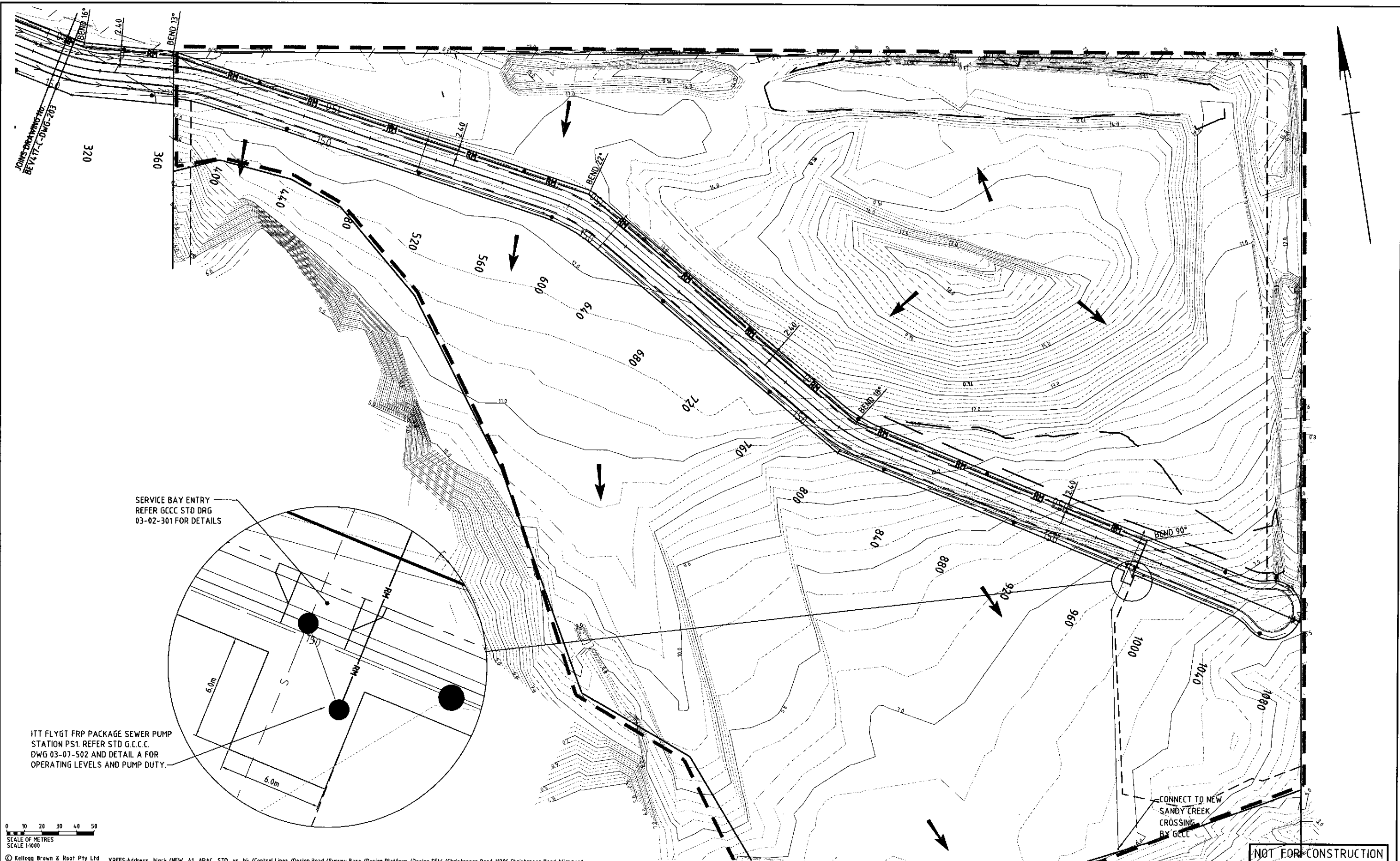
1. RISING MAIN THRUST BLOCKS IN ACCORDANCE WITH GCCC STD DRAWING No 03-07-104.

0 10 20 30 40 50
SCALE OF METRES
SCALE 1:1000

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Control Lines/Design Road /Survey Base /Design SEW

NOT FOR CONSTRUCTION

		100mm ON ORIGINAL DRAWING																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
--	--	---------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

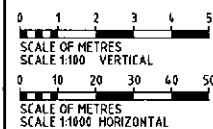


0 10 20 30 40 50
SCALE OF METRES
SCALE 1:1000

© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Control Lines/Design Road/Survey Base/Design Platform/Design SEW/Christensen Road/1396 Christensen Road Alignment

		100mm DN ORIGINAL DRAWING										NAME		SIGNATURE		Kellogg Brown & Root Pty Ltd		TITLE	
				BURNSIDE DEVELOPMENTS PTY LTD								DRAFTING		J POMROY				INDUSTRIAL ESTATE	
				99 ANNERLEY ROAD								DESIGN		J POMROY				CHRISTENSEN ROAD, YATALA	
				WOOLLOONGABBA QLD 4102								DESIGN VERIFICATION		D NEUHOLD				SEWER RISING MAIN LAYOUT PLAN	
												PROJECT APPROVAL		GC LOVELL				SHEET 2 OF 2	
DRAWING No.		DESCRIPTION				A		FIRST ISSUE				CLIENT				DRAWING SCALE		DRAWING No.	
						REV		DESCRIPTION		DATE						1:1000 (A1)		BEV417-C-DWG-204	
								REVISIONS								ORIG. SIZE		REVISION	
																PROJECT No.			
																A1		A	
																DRAWER: AM FRANGIOSA		BEV417-C	
																CAD FILE: BEV417-C-DWG-204.dwg		BEV417-C-DWG-204	
																		A	

1. MINIMUM GRADE 1:500
2. MINIMUM COVER 900mm TO TOP OF PIPE.
3. PIPE TO CONSIST OF 225 DIA. uPVC PN16, EXCEPT WHERE NOTED OTHERWISE.



© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/L5 sew base

		100mm DN ORIGINAL DRAWING				NAME		SIGNATURE		Kellogg Brown & Root Pty Ltd KBR Kellogg Brown & Root Pty Ltd ABN 91 007 668 317 555 Coronation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6580		TITLE		INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA SEWER RISING MAIN LONGITUDINAL SECTION - SHEET 1 OF 3	
		BURNSIDE DEVELOPMENTS PTY LTD				DRAFTING		J POMROY		  					
		99 ANNERLEY ROAD				DESIGN		J POMROY							
		WOOLLOONGABBA QLD 4102				DESIGN VERIFICATION		D NEUHOLD							
						PROJECT APPROVAL		GC LOVELL							
DRAWING No.		DESCRIPTION		A		FIRST ISSUE				DRAWING SCALE		ORIG. SIZE		PROJECT No.	
				REV		DESCRIPTION		DATE		1:1000 (A1)		A1		BEV417	
						REVISIONS				APPROVALS		DRAWER: AM FRANGIOSA		CAD FILE: BEV417-C-DWG-206.dwg	
												DRAWING No.		REVISION	
												BEV417-C-DWG-206		A	

0:\BRS\Projects\bev\BEV417\Drawings\ISSUED REV A\BEV417-C-DWG-206.dwg 17.7.06 08:49

NOTE:

1. MINIMUM GRADE 1:500
2. MINIMUM COVER 900mm TO TOP OF PIPE.
3. PIPE TO CONSIST OF 100 DIA. uPVC PN16, EXCEPT WHERE NOTED OTHERWISE.

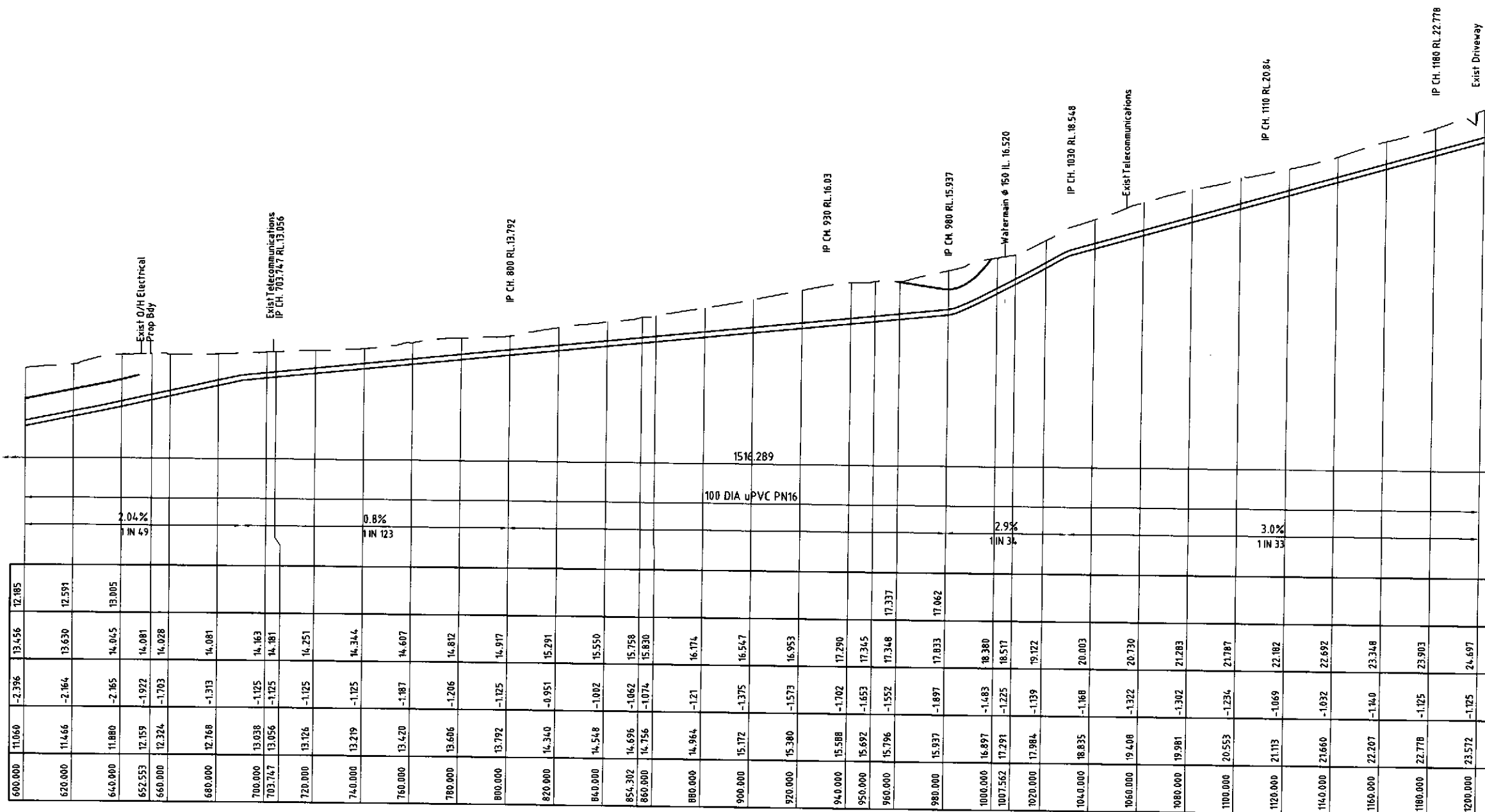
PIPE LENGTH

PIPE DIAMETER

Datum R.L. 6.000

FINISHED
SURFACE LEVELNATURAL SURFACE
LEVEL (INTERPOLATED)DEPTH FROM
F.S.L.

INVERT LEVEL

DISTANCES
ALONG SEWER

0 1 2 3 4 5
SCALE OF METRES
SCALE 1:100 VERTICAL
0 10 20 30 40 50
SCALE OF METRES
SCALE 1:1000 HORIZONTAL

© Kellogg Brown & Root Pty Ltd XREFS:Address_block /NEW_A1_APAC_STD_xr_bk /LS sew base

BURNSIDE DEVELOPMENTS PTY LTD
99 ANNERLEY ROAD
WOOLLOONGABBA QLD 4102

A FIRST ISSUE

DESCRIPTION
REVISIONS

DATE

APPROVALS

	NAME	SIGNATURE
DRAFTING	J POMROY	
DESIGN	J POMROY	
DESIGN VERIFICATION	D NEUHOLD	
PROJECT APPROVAL	GC LOVELL	
CLIENT		

Kellogg Brown & Root Pty Ltd

KBR

Kellogg Brown & Root Pty Ltd ABN 91 007 640 317
555 Coronation Drive, Toowong,
Brisbane, Queensland, 4066
ph (07) 3721-6555 fax (07) 3721-6500

DRAWING SCALE
1:1000 (A1)ORIG. SIZE
A1PROJECT No.
BEV417

DRAFTER: AM FRANGIOSA

CAD FILE: BEV417-C-DWG-207.dwg

NOT FOR CONSTRUCTION

INDUSTRIAL ESTATE
CHRISTENSEN ROAD, YATALA
SEWER RISING MAIN
LONGITUDINAL SECTION - SHEET 2 OF 3

DRAWING No.

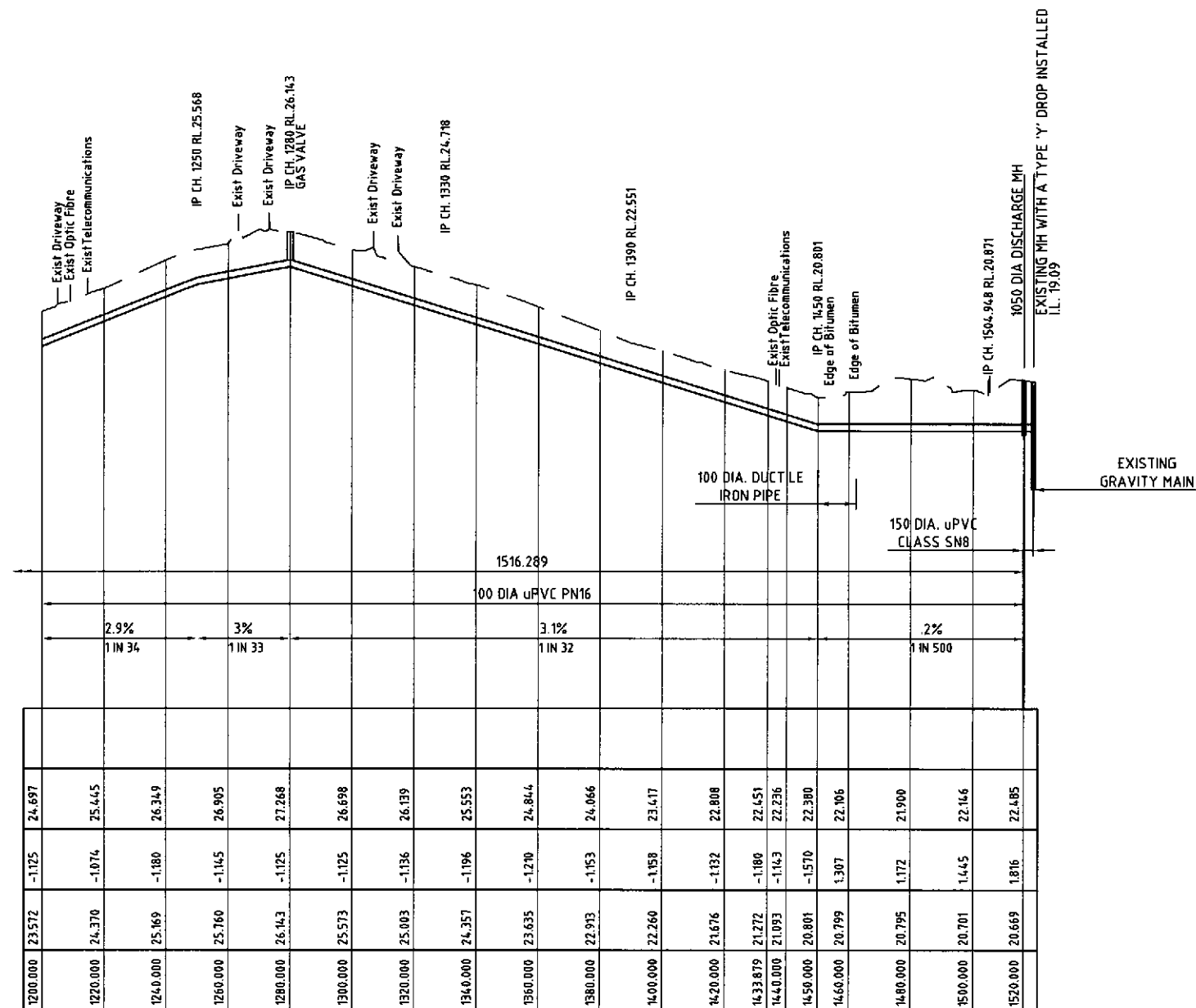
BEV417-C-DWG-207

REVISION

A

NOTE:

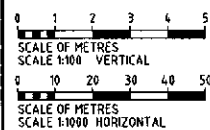
1. MINIMUM GRADE 1:500
2. MINIMUM COVER 900mm TO TOP OF PIPE.
3. PIPE TO CONSIST OF 100 DIA. uPVC PN16, EXCEPT WHERE NOTED OTHERWISE.



PIPE DIAMETER

Datum R.L. 12.000

FINISHED SURFACE LEVEL	24.697	25.445	26.349	26.905	27.268	26.698	26.139	25.553	24.844	24.066	23.417	22.808	22.451	22.236	22.380	22.106	21.900	22.146	22.485
NATURAL SURFACE LEVEL (INTERPOLATED)	-1.125	-1.074	-1.180	-1.145	-1.125	-1.125	-1.136	-1.196	-1.210	-1.153	-1.158	-1.132	-1.180	-1.143	-1.170	-1.307	-1.172	-1.445	-1.816
DEPTH FROM F.S.L	23.572	24.370	25.169	25.760	26.143	25.573	25.003	24.357	23.635	22.913	22.260	21.676	21.272	21.093	20.801	20.799	20.795	20.701	20.669
INVERT LEVEL	1200.000	1220.000	1240.000	1260.000	1280.000	1300.000	1320.000	1340.000	1360.000	1380.000	1400.000	1420.000	1433.879	1440.000	1450.000	1460.000	1480.000	1500.000	1520.000
DISTANCES ALONG SEWER																			



© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/LS sev base

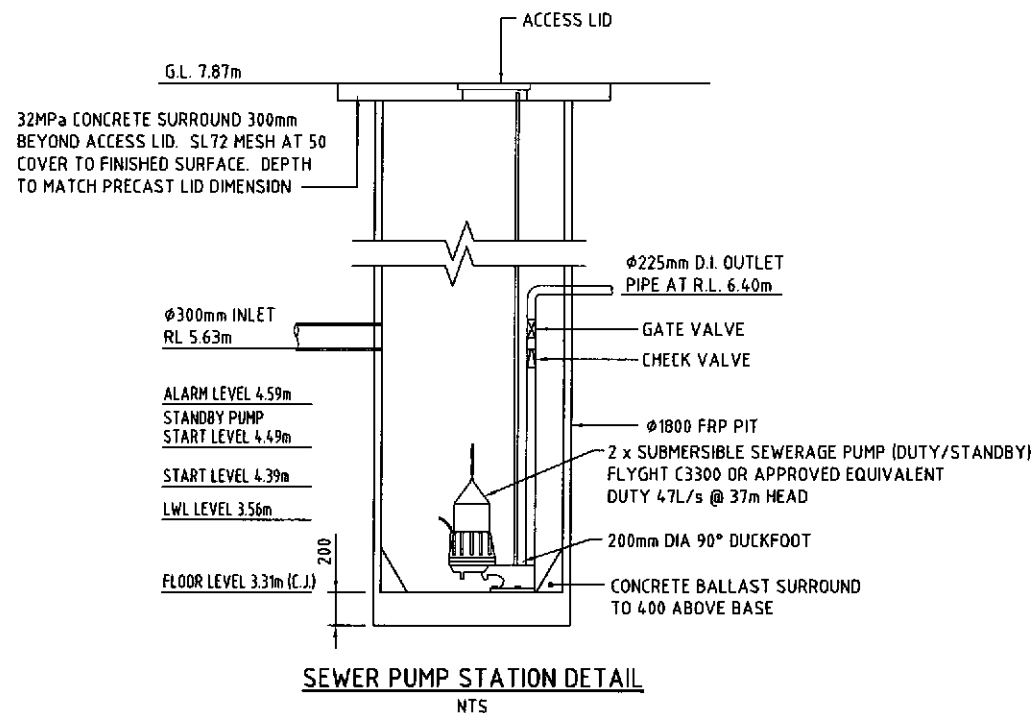
BURNSIDE DEVELOPMENTS PTY LTD
99 ANNERLEY ROAD
WOOLLOONGABBA QLD 4102

REV	DESCRIPTION	DATE
A	FIRST ISSUE	

NAME	SIGNATURE
DRAFTING J POMROY	
DESIGN J POMROY	
DESIGN VERIFICATION D NEUHOLD	
PROJECT APPROVAL GC LOVELL	
CLIENT	

Kellogg Brown & Root Pty Ltd		
KBR		
Kellogg Brown & Root Pty Ltd ABN 91 007 662 317 555 Coronation Drive, Tawonga, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6590		
DRAWING SCALE	ORIG. SIZE	PROJECT No.
1:1000 (A1)	A1	BEV417
DRAFTER: AM FRANGIOSA		CAD FILE: BEV417-C-DWG-208.dwg

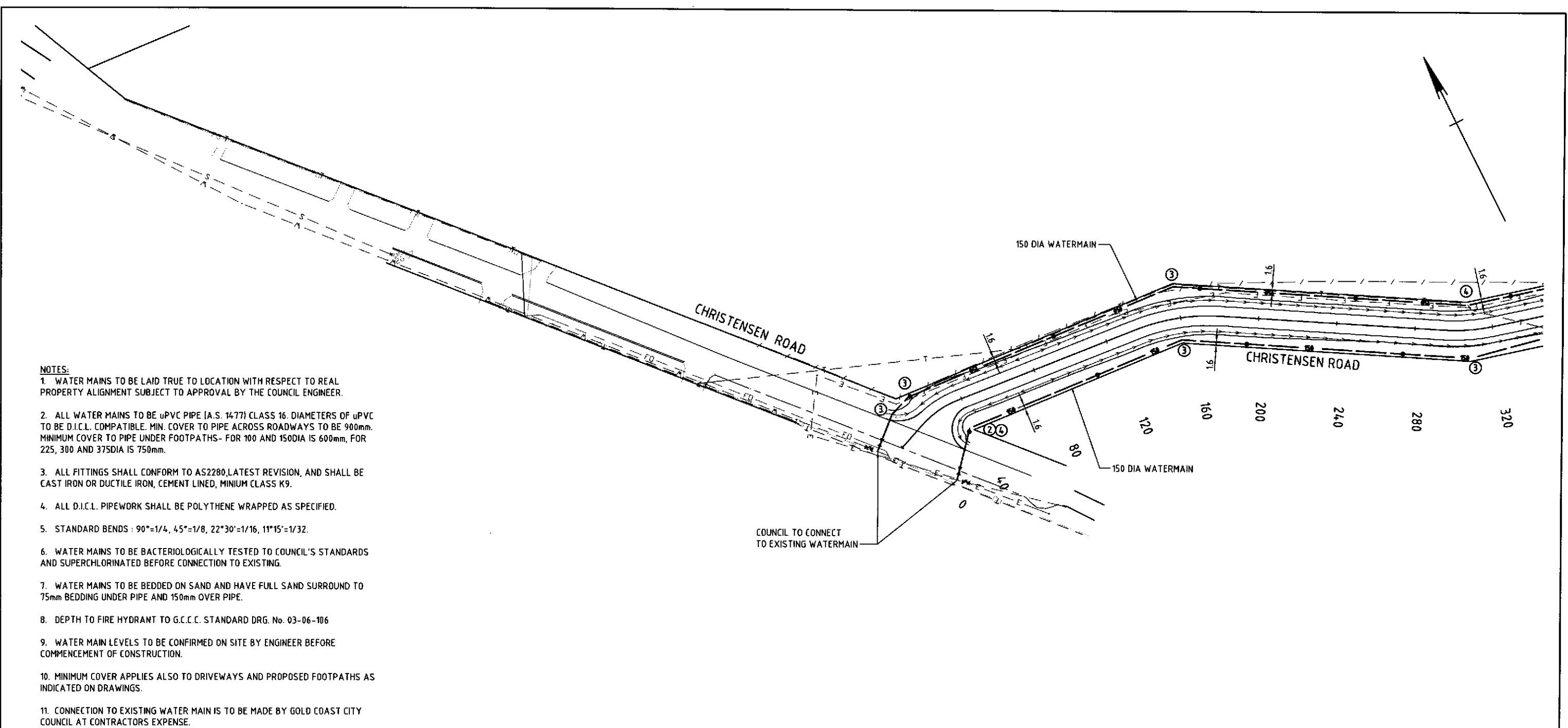
TITLE	
INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA SEWER RISING MAIN LONGITUDINAL SECTION - SHEET 3 OF 3	
DRAWING No.	REVISION
BEV417-C-DWG-208	A



NOTES:

1. PUMP STATION ELECTRICAL AND CONTROL SYSTEMS TO INCLUDE RTU AND BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH G.C.C.C. STD ELECTRICAL SPEC SS12, SECTION 4.0.
2. ALL MATERIALS IN ACCORDANCE WITH G.C.C.C. STANDARD SPECIFICATION SS1, SECTION 30.0 AND STD DWG'S 03-07-501 TO 505.
3. ALL ELECTRICAL WORK IN ACCORDANCE WITH G.C.C.C. STD ELECTRICAL SPEC. SS12.

NOT FOR CONSTRUCTION



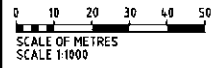
- NOTES:**
1. WATER MAINS TO BE LAID TRUE TO LOCATION WITH RESPECT TO REAL PROPERTY ALIGNMENT SUBJECT TO APPROVAL BY THE COUNCIL ENGINEER.
 2. ALL WATER MAINS TO BE uPVC PIPE (A.S. 1477) CLASS 16. DIAMETERS OF uPVC TO BE D.I.C.L. COMPATIBLE. MIN. COVER TO PIPE ACROSS ROADWAYS TO BE 900mm. MINIMUM COVER TO PIPE UNDER FOOTPATHS- FOR 100 AND 150DIA IS 600mm, FOR 225, 300 AND 375DIA IS 750mm.
 3. ALL FITTINGS SHALL CONFORM TO AS2280, LATEST REVISION, AND SHALL BE CAST IRON OR DUCTILE IRON, CEMENT LINED, MINIMUM CLASS K9.
 4. ALL D.I.C.L. PIPEWORK SHALL BE POLYTHENE WRAPPED AS SPECIFIED.
 5. STANDARD BENDS : 90°=1/4, 45°=1/8, 22°30'=1/16, 11°15'=1/32.
 6. WATER MAINS TO BE BACTERIOLOGICALLY TESTED TO COUNCIL'S STANDARDS AND SUPERCHLORINATED BEFORE CONNECTION TO EXISTING.
 7. WATER MAINS TO BE BEDDED ON SAND AND HAVE FULL SAND SURROUND TO 75mm BEDDING UNDER PIPE AND 150mm OVER PIPE.
 8. DEPTH TO FIRE HYDRANT TO G.C.C.C. STANDARD DRG. No. 03-06-106
 9. WATER MAIN LEVELS TO BE CONFIRMED ON SITE BY ENGINEER BEFORE COMMENCEMENT OF CONSTRUCTION.
 10. MINIMUM COVER APPLIES ALSO TO DRIVEWAYS AND PROPOSED FOOTPATHS AS INDICATED ON DRAWINGS.
 11. CONNECTION TO EXISTING WATER MAIN IS TO BE MADE BY GOLD COAST CITY COUNCIL AT CONTRACTORS EXPENSE.
 12. ALL BENDS AND FITTINGS TO BE LOCATED IN THE FOOTPATH.
 13. REFER TO TABLE FOR BEND AND FITTING TYPES.
 14. FOR THRUST BLOCK SIZES SEE G.C.C.C. STANDARD DRG. No. 03-06-103
 15. ALL WATER SERVICE CONNECTIONS SHALL BE CONSTRUCTED IN IN ACCORDANCE WITH G.C.C.C. STANDARD DRG. No. 03-06-104
 16. HYDRANTS AND VALVES TO BE INSTALLED IN ACCORDANCE WITH G.C.C.C. STANDARD DRG. No's. 03-06-105 & 03-06-106
 17. ROAD CROSSINGS TO BE DCIL.

TABLE OF FITTINGS

NO.	FITTING
1	90° BEND
2	45° BEND
3	22.5° BEND
4	11.25° BEND
5	DEFLECT MAIN
6	150x150 TEE
7	225x150 TEE
8	300x150 TEE
9	375x300 TEE
10	END CAP
11	REDUCER
12	SKEW

LEGEND

150 Ø PVC CL16 WATERMAIN	150	---
FIRE HYDRANTS	150	●
SLUICE VALVE	150	+
DEAD END CAP	150	---
REDUCER	150	---
ELECTRICAL RETICULATION	150	---
EXISTING 150Ø WATERMAIN	150	W



© Kellogg Brown & Root Pty Ltd XREFS:Address_block/NEW_A1_APAC_STD_xr_bh /Control Lines /Design Road /Survey Base

BURNSIDE DEVELOPMENTS PTY LTD 99 ANNERLEY ROAD WOOLLOONGABBA QLD 4102		100mm ON ORIGINAL DRAWING		NAME		SIGNATURE		Kellogg Brown & Root Pty Ltd KBR Kellogg Brown & Root Pty Ltd ABN 91 007 668 317 555 Coronation Drive, Toowong, Brisbane, Queensland, 4066 ph (07) 3721-6555 fax (07) 3721-6580		INDUSTRIAL ESTATE CHRISTENSEN ROAD, YATALA WATER RETICULATION LAYOUT PLAN SHEET 1 OF 2	
		DRAFTING	J POMROY								
		DESIGN	J POMROY								
		DESIGN VERIFICATION	D NEUHOLD								
A FIRST ISSUE		DATE		PROJECT APPROVAL		GC LOVELL		DRAWING SCALE		ORIG. SIZE	
REV		DESCRIPTION		CLIENT		APPROVALS		1:1000 (A1)		A1	
REFERENCE DRAWINGS		NOTES		REVISIONS		DRAFTER: AM FRANGIOSA		PROJECT No. BEV417		DRAWING No. BEV417-C-DWG-209	
								CAD FILE: BEV417-C-DWG-209.dwg		REVISION A	

NOT FOR CONSTRUCTION

