

31 October 2025

Attention: Chief Executive Officer  
Mareeba Shire Council  
65 Rankin Street  
Mareeba QLD 4880  
Our reference: 048-2501

### **Operational Works Application - Amaroo Estate - Stage 15**

On behalf of BTM & S Stankovich, please find enclosed an Operational Works Application for Amaroo Estate - Stage 15 for your consideration and approval:

- DA Form 1. – Development Application Details
- FNQROC Development Manual Statement of Compliance.
- Design Submission Commentary
- Engineering drawings.

This operational works application is being submitted in parallel but separate to the Reconfiguring of a Lot application for stage 14B.

We have calculated the application assessment fee in the amount of \$4,815.00 (\$1,794 base fee plus \$159 per lot x 19 lots) based on Council's current schedule of fees and charges. The electrical engineering submission will be submitted under separate cover.

To assist with your approval of this application we are happy to attend a lodgement meeting to discuss the application details. Should you require any additional information, please do not hesitate to me on 0402 568 698 or the email address below.

Yours sincerely

A handwritten signature in blue ink that reads "Craig Caplick". The signature is written in a cursive, flowing style.

#### **Craig Caplick**

Principal Engineer | RPEng RPEQ 25102  
craig@consultneon.com.au | 0402 568 698

# DA Form 1



# DA Form 1 – Development application details

Approved form (version 1.4 effective 15 December 2023) made under section 282 of the Planning Act 2016.

This form **must** be used to make a development application **involving code assessment or impact assessment**, except when applying for development involving only building work.

For a development application involving **building work only**, use *DA Form 2 – Building work details*.

For a development application involving **building work associated with any other type of assessable development (i.e. material change of use, operational work or reconfiguring a lot)**, use this form (*DA Form 1*) and parts 4 to 6 of *DA Form 2 – Building work details*.

Unless stated otherwise, all parts of this form **must** be completed in full and all required supporting information **must** accompany the development application.

One or more additional pages may be attached as a schedule to this development application if there is insufficient space on the form to include all the necessary information.

This form and any other form relevant to the development application must be used to make a development application relating to strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994*, and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*. For the purpose of assessing a development application relating to strategic port land and Brisbane core port land, any reference to a planning scheme is taken to mean a land use plan for the strategic port land, Brisbane port land use plan for Brisbane core port land, or a land use plan for airport land.

**Note:** All terms used in this form have the meaning given under the Planning Act 2016, the Planning Regulation 2017, or the Development Assessment Rules (DA Rules).

## PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) (individual or company full name)	<b>BTM &amp; S Stankovich</b>
Contact name (only applicable for companies)	
Postal address (P.O. Box or street address)	<b>c-/ Neon Consulting – 11 Rosemont Court</b>
Suburb	<b>Mooroolbool</b>
State	<b>Queensland</b>
Postcode	<b>4870</b>
Country	<b>Australia</b>
Contact number	<b>0402 568 698</b>
Email address (non-mandatory)	<b>Craig@ConsultNeon.com.au</b>
Mobile number (non-mandatory)	
Fax number (non-mandatory)	
Applicant's reference number(s) (if applicable)	<b>048-2501</b>

2) Owner's consent	
2.1) Is written consent of the owner required for this development application?	
<input type="checkbox"/> Yes – the written consent of the owner(s) is attached to this development application	
<input checked="" type="checkbox"/> No – proceed to 3)	

## PART 2 – LOCATION DETAILS

### 3) Location of the premises (complete 3.1) or 3.2), and 3.3) as applicable)

**Note:** Provide details below and attach a site plan for any or all premises part of the development application. For further information, see [DA Forms Guide: Relevant plans](#).

#### 3.1) Street address and lot on plan

- Street address **AND** lot on plan (all lots must be listed), **OR**  
 Street address **AND** lot on plan for an adjoining or adjacent property of the premises (appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).

a)	Unit No.	Street No.	Street Name and Type	Suburb
			<b>Emerald End Road</b>	<b>Mareeba</b>
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)
	<b>4880</b>	<b>500</b>	<b>SP336235</b>	<b>Mareeba Shire Council</b>
b)	Unit No.	Street No.	Street Name and Type	Suburb
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)

#### 3.2) Coordinates of premises (appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay)

**Note:** Place each set of coordinates in a separate row.

- Coordinates of premises by longitude and latitude

Longitude(s)	Latitude(s)	Datum	Local Government Area(s) (if applicable)
		<input type="checkbox"/> WGS84 <input type="checkbox"/> GDA94 <input type="checkbox"/> Other: <input type="text"/>	

- Coordinates of premises by easting and northing

Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) (if applicable)
		<input type="checkbox"/> 54 <input type="checkbox"/> 55 <input type="checkbox"/> 56	<input type="checkbox"/> WGS84 <input type="checkbox"/> GDA94 <input type="checkbox"/> Other: <input type="text"/>	

#### 3.3) Additional premises

- Additional premises are relevant to this development application and the details of these premises have been attached in a schedule to this development application  
 Not required

#### 4) Identify any of the following that apply to the premises and provide any relevant details

- In or adjacent to a water body or watercourse or in or above an aquifer

Name of water body, watercourse or aquifer:

- On strategic port land under the *Transport Infrastructure Act 1994*

Lot on plan description of strategic port land:

Name of port authority for the lot:

- In a tidal area

Name of local government for the tidal area (if applicable):

Name of port authority for tidal area (if applicable):

- On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*

Name of airport:	
<input type="checkbox"/> Listed on the Environmental Management Register (EMR) under the <i>Environmental Protection Act 1994</i>	
EMR site identification:	
<input type="checkbox"/> Listed on the Contaminated Land Register (CLR) under the <i>Environmental Protection Act 1994</i>	
CLR site identification:	

**5) Are there any existing easements over the premises?**

*Note: Easement uses vary throughout Queensland and are to be identified correctly and accurately. For further information on easements and how they may affect the proposed development*

- Yes – All easement locations, types and dimensions are included in plans submitted with this development application
- No

## PART 3 – DEVELOPMENT DETAILS

### Section 1 – Aspects of development

**6.1) Provide details about the first development aspect**

a) What is the type of development? *(tick only one box)*

- Material change of use     Reconfiguring a lot     Operational work     Building work

b) What is the approval type? *(tick only one box)*

- Development permit     Preliminary approval     Preliminary approval that includes a variation approval

c) What is the level of assessment?

- Code assessment     Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):*

**Stage 15 – 19 lot subdivision**

e) Relevant plans

*Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see [DA Forms guide: Relevant plans](#).*

- Relevant plans of the proposed development are attached to the development application

**6.2) Provide details about the second development aspect**

a) What is the type of development? *(tick only one box)*

- Material change of use     Reconfiguring a lot     Operational work     Building work

b) What is the approval type? *(tick only one box)*

- Development permit     Preliminary approval     Preliminary approval that includes a variation approval

c) What is the level of assessment?

- Code assessment     Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):*

e) Relevant plans

*Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see [DA Forms Guide: Relevant plans](#).*

- Relevant plans of the proposed development are attached to the development application

**6.3) Additional aspects of development**

- Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application
- Not required

Section 2 – Further development details

7) Does the proposed development application involve any of the following?	
Material change of use	<input type="checkbox"/> Yes – complete division 1 if assessable against a local planning instrument
Reconfiguring a lot	<input type="checkbox"/> Yes – complete division 2
Operational work	<input checked="" type="checkbox"/> Yes – complete division 3
Building work	<input type="checkbox"/> Yes – complete DA Form 2 – Building work details

Division 1 – Material change of use

**Note:** This division is only required to be completed if any part of the development application involves a material change of use assessable against a local planning instrument.

8.1) Describe the proposed material change of use			
Provide a general description of the proposed use	Provide the planning scheme definition (include each definition in a new row)	Number of dwelling units (if applicable)	Gross floor area (m <sup>2</sup> ) (if applicable)

8.2) Does the proposed use involve the use of existing buildings on the premises?

Yes

No

Division 2 – Reconfiguring a lot

**Note:** This division is only required to be completed if any part of the development application involves reconfiguring a lot.

9.1) What is the total number of existing lots making up the premises?				

9.2) What is the nature of the lot reconfiguration? (tick all applicable boxes)				
<input type="checkbox"/> Subdivision (complete 10))	<input type="checkbox"/> Dividing land into parts by agreement (complete 11))			
<input type="checkbox"/> Boundary realignment (complete 12))	<input type="checkbox"/> Creating or changing an easement giving access to a lot from a constructed road (complete 13))			

10) Subdivision				
10.1) For this development, how many lots are being created and what is the intended use of those lots:				
Intended use of lots created	Residential	Commercial	Industrial	Other, please specify:
Number of lots created				

10.2) Will the subdivision be staged?	
<input type="checkbox"/> Yes – provide additional details below	
<input type="checkbox"/> No	
How many stages will the works include?	
What stage(s) will this development application apply to?	

11) Dividing land into parts by agreement – how many parts are being created and what is the intended use of the parts?				
Intended use of parts created	Residential	Commercial	Industrial	Other, please specify:

Number of parts created			

**12) Boundary realignment**

**12.1) What are the current and proposed areas for each lot comprising the premises?**

Current lot		Proposed lot	
Lot on plan description	Area (m <sup>2</sup> )	Lot on plan description	Area (m <sup>2</sup> )

**12.2) What is the reason for the boundary realignment?**

**13) What are the dimensions and nature of any existing easements being changed and/or any proposed easement? (attach schedule if there are more than two easements)**

Existing or proposed?	Width (m)	Length (m)	Purpose of the easement? (e.g. pedestrian access)	Identify the land/lot(s) benefitted by the easement

**Division 3 – Operational work**

*Note: This division is only required to be completed if any part of the development application involves operational work.*

**14.1) What is the nature of the operational work?**

<input checked="" type="checkbox"/> Road work	<input checked="" type="checkbox"/> Stormwater	<input checked="" type="checkbox"/> Water infrastructure
<input checked="" type="checkbox"/> Drainage work	<input checked="" type="checkbox"/> Earthworks	<input checked="" type="checkbox"/> Sewage infrastructure
<input type="checkbox"/> Landscaping	<input checked="" type="checkbox"/> Signage	<input checked="" type="checkbox"/> Clearing vegetation
<input type="checkbox"/> Other – please specify: _____		

**14.2) Is the operational work necessary to facilitate the creation of new lots? (e.g. subdivision)**

Yes – specify number of new lots: **14**

No

**14.3) What is the monetary value of the proposed operational work? (include GST, materials and labour)**

**\$600,000**

**PART 4 – ASSESSMENT MANAGER DETAILS**

**15) Identify the assessment manager(s) who will be assessing this development application**

**Mareeba Shire Council**

**16) Has the local government agreed to apply a superseded planning scheme for this development application?**

Yes – a copy of the decision notice is attached to this development application

The local government is taken to have agreed to the superseded planning scheme request – relevant documents attached

No

**PART 5 – REFERRAL DETAILS**

**17) Does this development application include any aspects that have any referral requirements?**

*Note: A development application will require referral if prescribed by the Planning Regulation 2017.*

No, there are no referral requirements relevant to any development aspects identified in this development application – proceed to Part 6

Matters requiring referral to the **Chief Executive of the Planning Act 2016:**

- Clearing native vegetation
- Contaminated land (*unexploded ordnance*)
- Environmentally relevant activities (ERA) (*only if the ERA has not been devolved to a local government*)
- Fisheries – aquaculture
- Fisheries – declared fish habitat area
- Fisheries – marine plants
- Fisheries – waterway barrier works
- Hazardous chemical facilities
- Heritage places – Queensland heritage place (*on or near a Queensland heritage place*)
- Infrastructure-related referrals – designated premises
- Infrastructure-related referrals – state transport infrastructure
- Infrastructure-related referrals – State transport corridor and future State transport corridor
- Infrastructure-related referrals – State-controlled transport tunnels and future state-controlled transport tunnels
- Infrastructure-related referrals – near a state-controlled road intersection
- Koala habitat in SEQ region – interfering with koala habitat in koala habitat areas outside koala priority areas
- Koala habitat in SEQ region – key resource areas
- Ports – Brisbane core port land – near a State transport corridor or future State transport corridor
- Ports – Brisbane core port land – environmentally relevant activity (ERA)
- Ports – Brisbane core port land – tidal works or work in a coastal management district
- Ports – Brisbane core port land – hazardous chemical facility
- Ports – Brisbane core port land – taking or interfering with water
- Ports – Brisbane core port land – referable dams
- Ports – Brisbane core port land – fisheries
- Ports – Land within Port of Brisbane’s port limits (*below high-water mark*)
- SEQ development area
- SEQ regional landscape and rural production area or SEQ rural living area – tourist activity or sport and recreation activity
- SEQ regional landscape and rural production area or SEQ rural living area – community activity
- SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
- SEQ regional landscape and rural production area or SEQ rural living area – urban activity
- SEQ regional landscape and rural production area or SEQ rural living area – combined use
- SEQ regional landscape and rural production area or SEQ rural living area – community activity
- SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
- SEQ regional landscape and rural production area or SEQ rural living area – urban activity
- SEQ regional landscape and rural production area or SEQ rural living area – combined use
- Tidal works or works in a coastal management district
- Reconfiguring a lot in a coastal management district or for a canal
- Erosion prone area in a coastal management district
- Urban design
- Water-related development – taking or interfering with water
- Water-related development – removing quarry material (*from a watercourse or lake*)
- Water-related development – referable dams
- Water-related development – levees (*category 3 levees only*)
- Wetland protection area

**Matters requiring referral to the local government:**

- Airport land
- Environmentally relevant activities (ERA) (*only if the ERA has been devolved to local government*)
- Heritage places – Local heritage places

**Matters requiring referral to the Chief Executive of the distribution entity or transmission entity:**

- Infrastructure-related referrals – Electricity infrastructure

Matters requiring referral to: <ul style="list-style-type: none"> <li>• The <b>Chief Executive of the holder of the licence</b>, if not an individual</li> <li>• The <b>holder of the licence</b>, if the holder of the licence is an individual</li> </ul> <input type="checkbox"/> Infrastructure-related referrals – Oil and gas infrastructure
Matters requiring referral to the <b>Brisbane City Council</b> : <input type="checkbox"/> Ports – Brisbane core port land
Matters requiring referral to the <b>Minister responsible for administering the <i>Transport Infrastructure Act 1994</i></b> : <input type="checkbox"/> Ports – Brisbane core port land ( <i>where inconsistent with the Brisbane port LUP for transport reasons</i> ) <input type="checkbox"/> Ports – Strategic port land
Matters requiring referral to the <b>relevant port operator</b> , if applicant is not port operator: <input type="checkbox"/> Ports – Land within Port of Brisbane’s port limits ( <i>below high-water mark</i> )
Matters requiring referral to the <b>Chief Executive of the relevant port authority</b> : <input type="checkbox"/> Ports – Land within limits of another port ( <i>below high-water mark</i> )
Matters requiring referral to the <b>Gold Coast Waterways Authority</b> : <input type="checkbox"/> Tidal works or work in a coastal management district ( <i>in Gold Coast waters</i> )
Matters requiring referral to the <b>Queensland Fire and Emergency Service</b> : <input type="checkbox"/> Tidal works or work in a coastal management district ( <i>involving a marina (more than six vessel berths)</i> )

<b>18) Has any referral agency provided a referral response for this development application?</b>		
<input type="checkbox"/> Yes – referral response(s) received and listed below are attached to this development application <input checked="" type="checkbox"/> No		
Referral requirement	Referral agency	Date of referral response
Identify and describe any changes made to the proposed development application that was the subject of the referral response and this development application, or include details in a schedule to this development application ( <i>if applicable</i> ).		

## PART 6 – INFORMATION REQUEST

<b>19) Information request under Part 3 of the DA Rules</b>
<input checked="" type="checkbox"/> I agree to receive an information request if determined necessary for this development application <input type="checkbox"/> I do not agree to accept an information request for this development application <b>Note:</b> <i>By not agreeing to accept an information request I, the applicant, acknowledge:</i> <ul style="list-style-type: none"> <li>• <i>that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties</i></li> <li>• <i>Part 3 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules.</i></li> </ul> <i>Further advice about information requests is contained in the <a href="#">DA Forms Guide</a>.</i>

## PART 7 – FURTHER DETAILS

<b>20) Are there any associated development applications or current approvals? (e.g. a preliminary approval)</b>			
<input type="checkbox"/> Yes – provide details below or include details in a schedule to this development application <input checked="" type="checkbox"/> No			
List of approval/development application references	Reference number	Date	Assessment manager

<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Development application	<i>RAL/22/0019</i>	<i>25 January 2023</i>	<i>Mareeba Shire Council</i>
<input type="checkbox"/> Approval <input type="checkbox"/> Development application			

21) Has the portable long service leave levy been paid? (only applicable to development applications involving building work or operational work)

- Yes – a copy of the receipted QLeave form is attached to this development application  
 No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid  
 Not applicable (e.g. building and construction work is less than \$150,000 excluding GST)

Amount paid	Date paid (dd/mm/yy)	QLeave levy number (A, B or E)
\$		

22) Is this development application in response to a show cause notice or required as a result of an enforcement notice?

- Yes – show cause or enforcement notice is attached  
 No

23) Further legislative requirements

**Environmentally relevant activities**

23.1) Is this development application also taken to be an application for an environmental authority for an **Environmentally Relevant Activity (ERA)** under section 115 of the *Environmental Protection Act 1994*?

- Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below  
 No

**Note:** Application for an environmental authority can be found by searching “ESR/2015/1791” as a search term at [www.qld.gov.au](http://www.qld.gov.au). An ERA requires an environmental authority to operate. See [www.business.qld.gov.au](http://www.business.qld.gov.au) for further information.

Proposed ERA number:		Proposed ERA threshold:	
Proposed ERA name:			

- Multiple ERAs are applicable to this development application and the details have been attached in a schedule to this development application.

**Hazardous chemical facilities**

23.2) Is this development application for a **hazardous chemical facility**?

- Yes – *Form 69: Notification of a facility exceeding 10% of schedule 15 threshold* is attached to this development application  
 No

**Note:** See [www.business.qld.gov.au](http://www.business.qld.gov.au) for further information about hazardous chemical notifications.

**Clearing native vegetation**

23.3) Does this development application involve **clearing native vegetation** that requires written confirmation that the chief executive of the *Vegetation Management Act 1999* is satisfied the clearing is for a relevant purpose under section 22A of the *Vegetation Management Act 1999*?

- Yes – this development application includes written confirmation from the chief executive of the *Vegetation Management Act 1999* (s22A determination)  
 No

**Note:** 1. Where a development application for operational work or material change of use requires a s22A determination and this is not included, the development application is prohibited development.

2. See <https://www.qld.gov.au/environment/land/vegetation/applying> for further information on how to obtain a s22A determination.

**Environmental offsets**

23.4) Is this development application taken to be a prescribed activity that may have a significant residual impact on a **prescribed environmental matter** under the *Environmental Offsets Act 2014*?

- Yes – I acknowledge that an environmental offset must be provided for any prescribed activity assessed as having a significant residual impact on a prescribed environmental matter
- No

**Note:** The environmental offset section of the Queensland Government's website can be accessed at [www.qld.gov.au](http://www.qld.gov.au) for further information on environmental offsets.

### **Koala habitat in SEQ Region**

23.5) Does this development application involve a material change of use, reconfiguring a lot or operational work which is assessable development under Schedule 10, Part 10 of the Planning Regulation 2017?

- Yes – the development application involves premises in the koala habitat area in the koala priority area
- Yes – the development application involves premises in the koala habitat area outside the koala priority area
- No

**Note:** If a koala habitat area determination has been obtained for this premises and is current over the land, it should be provided as part of this development application. See koala habitat area guidance materials at [www.des.qld.gov.au](http://www.des.qld.gov.au) for further information.

### **Water resources**

23.6) Does this development application involve **taking or interfering with underground water through an artesian or subartesian bore, taking or interfering with water in a watercourse, lake or spring, or taking overland flow water under the *Water Act 2000***?

- Yes – the relevant template is completed and attached to this development application and I acknowledge that a relevant authorisation or licence under the *Water Act 2000* may be required prior to commencing development
- No

**Note:** Contact the Department of Natural Resources, Mines and Energy at [www.dnrme.qld.gov.au](http://www.dnrme.qld.gov.au) for further information.

DA templates are available from <https://planning.dsdmip.qld.gov.au/>. If the development application involves:

- Taking or interfering with underground water through an artesian or subartesian bore: complete DA Form 1 Template 1
- Taking or interfering with water in a watercourse, lake or spring: complete DA Form 1 Template 2
- Taking overland flow water: complete DA Form 1 Template 3.

### **Waterway barrier works**

23.7) Does this application involve **waterway barrier works**?

- Yes – the relevant template is completed and attached to this development application
- No

DA templates are available from <https://planning.dsdmip.qld.gov.au/>. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

### **Marine activities**

23.8) Does this development application involve **aquaculture, works within a declared fish habitat area or removal, disturbance or destruction of marine plants**?

- Yes – an associated resource allocation authority is attached to this development application, if required under the *Fisheries Act 1994*
- No

**Note:** See guidance materials at [www.daf.qld.gov.au](http://www.daf.qld.gov.au) for further information.

### **Quarry materials from a watercourse or lake**

23.9) Does this development application involve the **removal of quarry materials from a watercourse or lake** under the *Water Act 2000*?

- Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
- No

**Note:** Contact the Department of Natural Resources, Mines and Energy at [www.dnrme.qld.gov.au](http://www.dnrme.qld.gov.au) and [www.business.qld.gov.au](http://www.business.qld.gov.au) for further information.

### **Quarry materials from land under tidal waters**

23.10) Does this development application involve the **removal of quarry materials from land under tidal water** under the *Coastal Protection and Management Act 1995*?

- Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
- No

**Note:** Contact the Department of Environment and Science at [www.des.qld.gov.au](http://www.des.qld.gov.au) for further information.

### **Referable dams**

23.11) Does this development application involve a **referable dam** required to be failure impact assessed under section 343 of the *Water Supply (Safety and Reliability) Act 2008* (the Water Supply Act)?

- Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the Water Supply Act is attached to this development application
- No

**Note:** See guidance materials at [www.dnrme.qld.gov.au](http://www.dnrme.qld.gov.au) for further information.

### **Tidal work or development within a coastal management district**

23.12) Does this development application involve **tidal work or development in a coastal management district**?

- Yes – the following is included with this development application:
- Evidence the proposal meets the code for assessable development that is prescribed tidal work (*only required if application involves prescribed tidal work*)
  - A certificate of title
- No

**Note:** See guidance materials at [www.des.qld.gov.au](http://www.des.qld.gov.au) for further information.

### **Queensland and local heritage places**

23.13) Does this development application propose development on or adjoining a place entered in the **Queensland heritage register** or on a place entered in a local government's **Local Heritage Register**?

- Yes – details of the heritage place are provided in the table below
- No

**Note:** See guidance materials at [www.des.qld.gov.au](http://www.des.qld.gov.au) for information requirements regarding development of Queensland heritage places.

Name of the heritage place:		Place ID:	
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### **Brothels**

23.14) Does this development application involve a **material change of use for a brothel**?

- Yes – this development application demonstrates how the proposal meets the code for a development application for a brothel under Schedule 3 of the *Prostitution Regulation 2014*
- No

### **Decision under section 62 of the Transport Infrastructure Act 1994**

23.15) Does this development application involve new or changed access to a state-controlled road?

- Yes – this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)
- No

### **Walkable neighbourhoods assessment benchmarks under Schedule 12A of the Planning Regulation**

23.16) Does this development application involve reconfiguring a lot into 2 or more lots in certain residential zones (except rural residential zones), where at least one road is created or extended?

- Yes – Schedule 12A is applicable to the development application and the assessment benchmarks contained in schedule 12A have been considered
- No

**Note:** See guidance materials at [www.planning.dsdmip.qld.gov.au](http://www.planning.dsdmip.qld.gov.au) for further information.

## PART 8 – CHECKLIST AND APPLICANT DECLARATION

24) Development application checklist	
I have identified the assessment manager in question 15 and all relevant referral requirement(s) in question 17 <i>Note: See the Planning Regulation 2017 for referral requirements</i>	<input checked="" type="checkbox"/> Yes
If building work is associated with the proposed development, Parts 4 to 6 of <a href="#">DA Form 2 – Building work details</a> have been completed and attached to this development application	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
Supporting information addressing any applicable assessment benchmarks is with the development application <i>Note: This is a mandatory requirement and includes any relevant templates under question 23, a planning report and any technical reports required by the relevant categorising instruments (e.g. local government planning schemes, State Planning Policy, State Development Assessment Provisions). For further information, see <a href="#">DA Forms Guide: Planning Report Template</a>.</i>	<input checked="" type="checkbox"/> Yes
Relevant plans of the development are attached to this development application <i>Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see <a href="#">DA Forms Guide: Relevant plans</a>.</i>	<input checked="" type="checkbox"/> Yes
The portable long service leave levy for QLeave has been paid, or will be paid before a development permit is issued (see 21)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not applicable

25) Applicant declaration	
<input checked="" type="checkbox"/> By making this development application, I declare that all information in this development application is true and correct	
<input checked="" type="checkbox"/> Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the assessment manager and any referral agency for the development application where written information is required or permitted pursuant to sections 11 and 12 of the <i>Electronic Transactions Act 2001</i> <i>Note: It is unlawful to intentionally provide false or misleading information.</i>	
<p><b>Privacy</b> – Personal information collected in this form will be used by the assessment manager and/or chosen assessment manager, any relevant referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the development application. All information relating to this development application may be available for inspection and purchase, and/or published on the assessment manager’s and/or referral agency’s website.</p> <p>Personal information will not be disclosed for a purpose unrelated to the <i>Planning Act 2016</i>, Planning Regulation 2017 and the DA Rules except where:</p> <ul style="list-style-type: none"> <li>• such disclosure is in accordance with the provisions about public access to documents contained in the <i>Planning Act 2016</i> and the Planning Regulation 2017, and the access rules made under the <i>Planning Act 2016</i> and Planning Regulation 2017; or</li> <li>• required by other legislation (including the <i>Right to Information Act 2009</i>); or</li> <li>• otherwise required by law.</li> </ul> <p>This information may be stored in relevant databases. The information collected will be retained as required by the <i>Public Records Act 2002</i>.</p>	

## PART 9 – FOR COMPLETION OF THE ASSESSMENT MANAGER – FOR OFFICE USE ONLY

Date received:  Reference number(s):

Notification of engagement of alternative assessment manager	
Prescribed assessment manager	
Name of chosen assessment manager	
Date chosen assessment manager engaged	
Contact number of chosen assessment manager	
Relevant licence number(s) of chosen assessment manager	

QLeave notification and payment	
<i>Note: For completion by assessment manager if applicable</i>	
Description of the work	
QLeave project number	
Amount paid (\$)	Date paid (dd/mm/yy)
Date receipted form sighted by assessment manager	
Name of officer who sighted the form	

## Statement of Compliance



# FNQROC DEVELOPMENT MANUAL

Council *Mareeba Shire Council*  
(INSERT COUNCIL NAME)

## STATEMENT OF COMPLIANCE OPERATIONAL WORKS DESIGN

This form duly completed and signed by an authorised agent of the Designer shall be submitted with the Operational Works Application for Council Approval.

Name of Development *Amaroo Estate - Stage 15*

Location of Development *Emerald End Road (Lot 500 SP336235)*

Applicant *BTM & S Stankovich*

Designer *Neon Consulting*

It is hereby certified that the Calculations, Drawings, Specifications and related documents submitted herewith have been prepared, checked and amended in accordance with the requirements of the FNQROC Development Manual and that the completed works comply with the requirements therein, **except** as noted below.


<b>Compliance with the requirements of the Operational Works Design Guidelines</b>	<b>Non-Compliance refer to non-compliance report / drawing number</b>
Plan Presentation	<i>Generally complies</i>
Geotechnical requirements	<i>Generally complies</i>
Geometric Road Design	<i>Generally complies</i>
Pavements	<i>Generally complies</i>
Structures / Bridges	<i>n/a</i>
Subsurface Drainage	<i>Generally complies</i>
Stormwater Drainage	<i>Generally complies</i>
Site Re-grading	<i>Generally complies</i>
Erosion Control and Stormwater Management	<i>Generally complies</i>
Pest Plant Management	<i>Generally complies</i>
Cycleway / Pathways	<i>n/a</i>

Landscaping	<i>n/a</i>
Water Source and Disinfection/Treatment Infrastructure (if applicable)	<i>n/a</i>
Water Reticulation, Pump Stations and water storages	<i>Generally complies</i>
Sewer Reticulation and Pump Stations	<i>Generally complies</i>
Electrical Reticulation and Street Lighting	<i>n/a</i>
Public Transport	<i>n/a</i>
Associated Documentation/ Specification	<i>Generally complies</i>
Priced Schedule of Quantities	<i>n/a</i>
Referral Agency Conditions	<i>Generally complies</i>
Supporting Information (AP1.08)	<i>Generally complies</i>
Other	<i>n/a</i>

Conscientiously believing the above statements to be true and correct, signed on behalf of:

**Designer** *Consult Neon Pty Ltd* **RPEQ No** *25102*

**Name in Full** *Craig John Caplick*

**Signature**  **Date** *31 October 2025*

## Design Submission Commentary



## 1. Introduction

This submission details the design and documentation for the civil works for **Stage 15** of the **Amaroo Estate Subdivision** located at **Emerald End Road, Mareeba**. **Neon Consulting**, on behalf of **BTM & S Stankovich Pty Ltd**, has prepared plans for roadworks, earthworks, stormwater drainage, sewerage reticulation, and water services.

The design has been coordinated with previous stages, and all other consultants including electrical, NBN, and landscaping. This proposal is the logical next stage of development and is generally based on compliance with the Council's Decision Notice **RAL/22/0019**, dated **25/01/2023** for **previous stages 13A, 13B and 14A**. The lot layout aligns with the approved plan and a copy of the Decision Notice is provided in attached to this submission for reference.

## 2. Earthworks

Earthwork activities for **Stage 15** have been designed to tie into previous works while minimising cut and fill activities. The earthworks have been designed to provide fall on allotments to legal points of discharge, to ensure flood immunity, and to achieve gravity sewer controls.

Earthworks for this application are limited to general cut and fill across the lots.

All works will be carried out in accordance with FNQROC requirements and certified by a Civil RPEQ.

## 3. Roadworks and Access

The proposed roadworks extends and interconnects the Wandara Avenue carriageways, and provides a new cul-de-sac to provide access to the proposed allotments.

The Wandara Avenue carriageway has a 10m pavement width.

The cul-de-sac is provided with a 6.5m pavement width, and the cul-de-sac has a 10m radius with 15m radius kerb returns.

The roadworks presented in the civil works comply with the relevant standards.

Battle-axe allotment (Lot 258) is provided with a concrete access and crossover, as well as service conduits connecting the road corridor to the main allotment area. The concrete accesses are 3.0m wide as per FNQROC guidelines.

## 4. Pavements

The pavement depths defined within the civil documentation will be finalised during the construction phase after analysing the results of soaked subgrade CBR testing. The finalised design will meet the FNQROC's minimum ESA requirement of  $1 \times 10^5$  for an Access Street.

## 5. Stormwater Drainage

The stormwater drainage system has been designed in accordance with the Queensland Urban Drainage Manual (QUDM) and Australian Rainfall and Runoff (ARR) using the Rational Method. The system is comprised of two parts:

- **Minor System:** Designed for a **5-year ARI/18% AEP** event, using an underground pipe network.
- **Major System:** Designed for a **100-year ARI/1% AEP** event, accommodating flows with a combination of the underground pipes and secondary flow paths.

All design parameters were established using industry-standard methodologies:

- Pit locations and times of concentration are based on QUDM standards.
- Runoff coefficients were determined in accordance with QUDM.
- Intensity figures were sourced from the BOM Design Rainfall Data System and verified against the relevant FNQROC Design Manual IFD Chart.
- Pit capacities, including an appropriate blockage factor, are based on the FNQROC Design Manual Kerb Inlet Capacity Design Charts.

12D model software was used to determine roadway capacities and pit and manhole losses. Critical locations for overland flows have been manually checked and these calculations are detailed in the following attachment.

### Key Design Considerations

A key consideration of this design is the conveyance of flows from the Cul-de-sac road sag via a secondary flow path within the Lot 263 drainage easement ultimately draining to Cobra Creek. The combined pipe and channel has been designed to convey the major event and provide freeboard to the adjacent allotment pads. A severe case event (ie. total blockage of the underground pit system for the major event) has also been considered, with calculations showing that the water surface level for this event is contained within the drains extents.

- The Minor event flowrate is calculated at 429 l/s and is conveyed underground with no conveyance within the drain
- The major event flowrate is calculated at 1071 l/s. It is calculated that for this catchment flow that 634 l/s is capable of being conveyed underground at the sag, and 193 l/s is conveyed by the underground system in Wandara Ave. The drainage channel has been designed to convey flows in excess of 244 l/s.
- For the severe event (full upstream blockage) the total catchment 1%AEP flowrate of 1071 l/s has been checked to confirm it is contained within the channel.

For further details, please refer to **Appendix [D]** for the design calculations, stormwater catchment boundaries, HGL calculation sheets, and capacity checks.

## 6. Erosion and Sediment Control Strategy

An Erosion and Sediment Control Strategy has been provided within the civil works package design plans. This strategy aims to minimise erosion and sediment transportation from the site and will

serve as a guide for the contractor to produce detailed Erosion and Sediment Control Plan for the construction phase.

## **7. Water Reticulation**

The water reticulation is designed in accordance with the FNQROC Design Manual D6 and is based on the previously approved stages.

Each lot is serviced by the water network as detailed in the civil works package.

Each lot will be supplied with a water meter feed for future house construction in accordance with the relevant MSC standard drawing.

## **8. Sewerage Reticulation**

The sewerage reticulation design adheres to the FNQROC Design Manual D7 and is based on the previously approved stages and existing sewer network levels.

A house connection is provided to each lot at a sufficient depth to serve the lot pad.

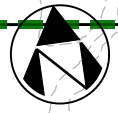
It is noted that the sewer main between manholes 1/F1 to 1/F2 passes over the stormwater pipe, this is an unavoidable constraint based on existing downstream sewer invert levels.

## **9. Electrical and NBN Utility Services**

The electrical and NBN designs are underway by **SPA Consulting Engineers**. Certification, in accordance with FNQROC standards, will be submitted under separate cover. The electrical and NBN design has been coordinated with all other consultant plans.

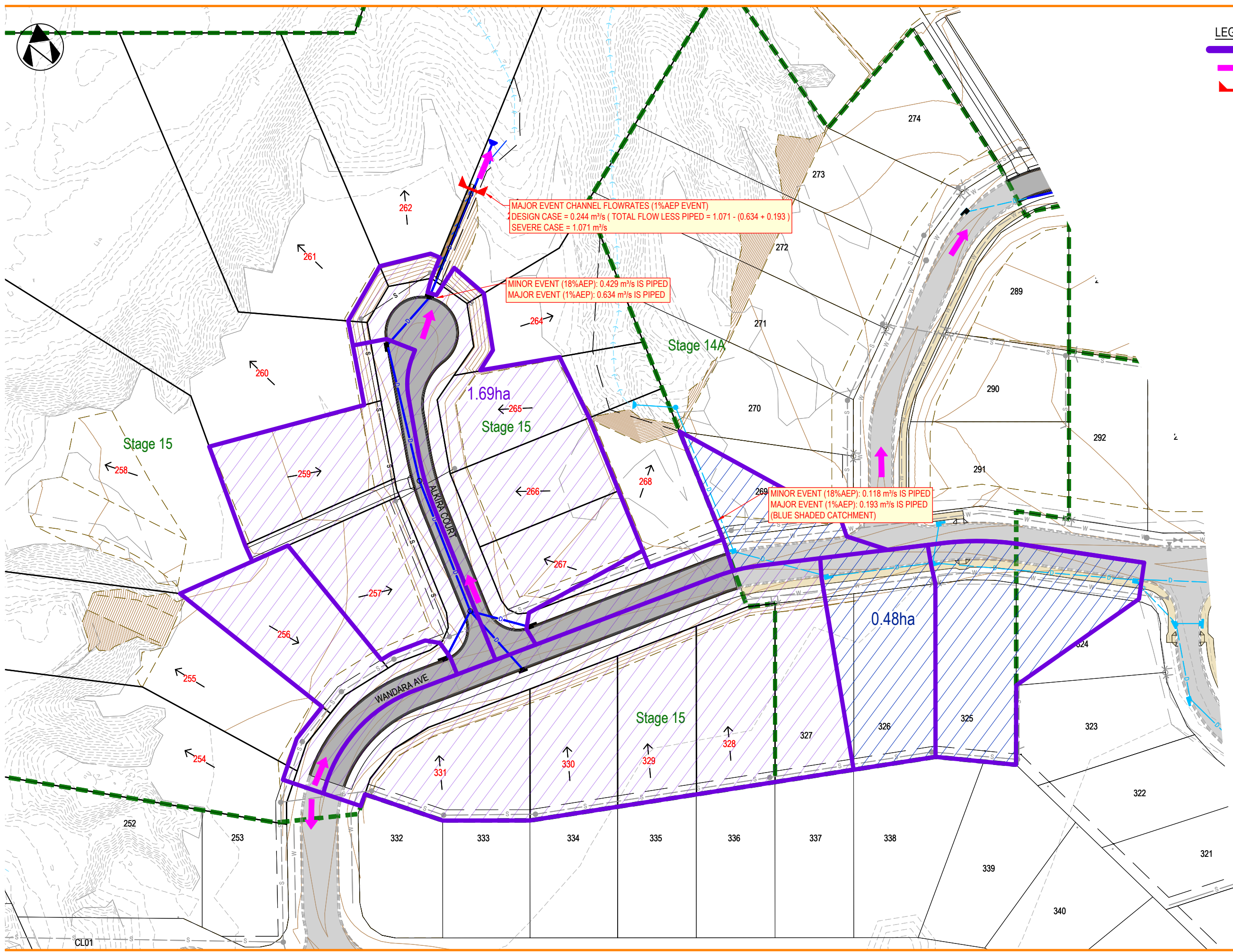
## Stormwater Calculations





**LEGEND**

- STORMWATER CATCHMENT
- OVERLAND FLOW DIRECTION
- OVERLAND FLOW CHECK



MAJOR EVENT CHANNEL FLOWRATES (1%AEP EVENT)  
 DESIGN CASE = 0.244 m<sup>3</sup>/s ( TOTAL FLOW LESS PIPED = 1.071 - (0.634 + 0.193) )  
 SEVERE CASE = 1.071 m<sup>3</sup>/s

MINOR EVENT (18%AEP): 0.429 m<sup>3</sup>/s IS PIPED  
 MAJOR EVENT (1%AEP): 0.634 m<sup>3</sup>/s IS PIPED

MINOR EVENT (18%AEP): 0.118 m<sup>3</sup>/s IS PIPED  
 MAJOR EVENT (1%AEP): 0.193 m<sup>3</sup>/s IS PIPED  
 (BLUE SHADED CATCHMENT)



BTM & S STANKOVICH PTY LTD

AMAROO ESTATE SUBDIVISION  
 STAGE 15  
 SITE BASED STORMWATER MANAGEMENT PLAN  
 CATCHMENT PLAN

Project : Mareeba - Amaroo

Location : within zone 55, at 333975 , 8121000

## Design Rainfall Data System (2016)

<http://www.bom.gov.au/water/designRainfalls/revise-ifd/>

### Location

**Label:** Mareeba - Amaroo

**Easting:** 333975

**Northing:** 8121000

**Zone:** 55



#### Coefficients for Very Frequent Events (Raw Data from Website)

Coefficient	12EY	6EY	4EY	3EY	2EY	1EY	0.5EY	0.2EY
C0	-0.184739	0.037819	0.309252	0.450932	0.608083	0.809005	1.034585	1.242194
C1	0.973072	0.959963	0.937256	0.896498	0.834414	0.73948	0.719137	0.677571
C2	-0.189579	-0.159874	-0.12099	-0.067339	0.010457	0.12002	0.145263	0.195458
C3	0.077878	0.063977	0.047446	2.45E-02	-0.008603	-0.05363	-0.064641	-0.085794
C4	-0.0213	-0.018255	-0.014855	-0.010192	-0.003472	0.005477	0.007593	0.011458
C5	0.002531	0.002219	0.001888	0.00144	0.000797	-4.56E-05	-0.000227	-0.000533
C6	-1.05E-04	-9.34E-05	-8.13E-05	-6.50E-05	-4.17E-05	-1.17E-05	-5.93E-06	2.53E-06

#### Coefficients for IFDs (Raw Data from Website)

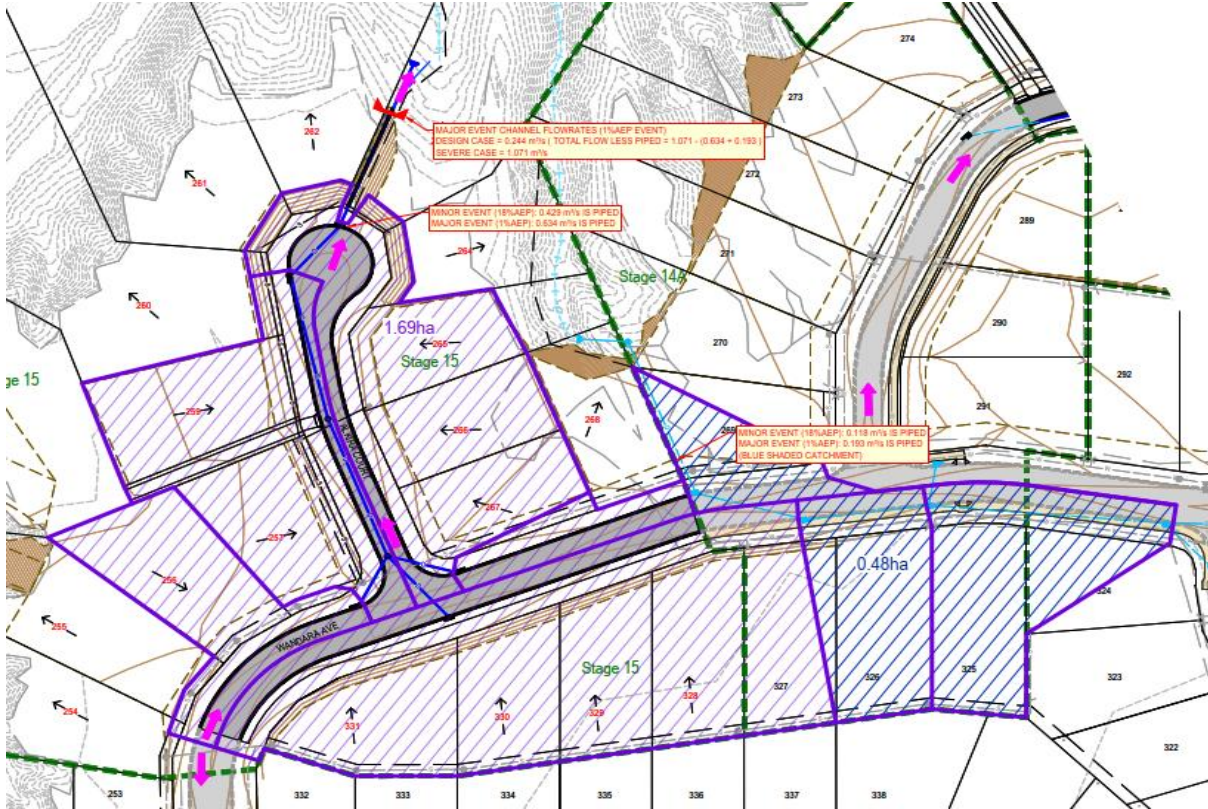
Coefficient	63.20%	50%	20%	10%	5%	2%	1%
C0	0.809005	0.930225	1.222391	1.371467	1.492374	1.625111	1.711091
C1	0.73948	0.719138	0.677571	0.659686	0.646517	0.638018	0.632623
C2	0.12002	0.145263	0.195457	0.216049	0.230535	0.23967	0.245034
C3	-0.05363	-0.064641	-0.085794	-0.093917	-0.099239	-0.102315	-0.103851
C4	0.005477	0.007593	0.011458	0.012787	0.01354	1.38E-02	0.013897
C5	-4.56E-05	-0.000227	-0.000533	-0.000616	-0.000645	-0.000629	-0.000599
C6	-1.17E-05	-5.93E-06	2.53E-06	3.83E-06	3.22E-06	8.69E-07	-1.56E-06

Requested coordinate: Latitude -16.98901028 Longitude 145.4405001

Nearest grid cell: Latitude 16.9875 (S) Longitude 145.4375 (E)

# Project : Mareeba - Amaroo

Location : Total catchment for Alkira Ct SAG (Catchment Calculation)



Area	2.17						Ha
ToC	16.00						mins
C	0.672	0.714	0.798	0.84	0.966	1	-
I (mm/hr)	71.6	89.8	110.8	126.2	162.9	177.6	mm/h
<b>AEP</b>	<b>63%</b>	<b>39%</b>	<b>18%</b>	<b>10%</b>	<b>2%</b>	<b>1%</b>	<b>%</b>
<b>Q</b>	<b>0.290</b>	<b>0.387</b>	<b>0.533</b>	<b>0.639</b>	<b>0.948</b>	<b>1.070</b>	<b>m3/s</b>

ARI                      1 Year      2 Year      5 Year      10 Year      50 Year      100 Year







## Previous Decision Notice





25 January 2023

BTM & S Stankovich Pty Ltd  
C/- Freshwater Planning Pty Ltd  
17 Barronview Drive  
FRESHWATER QLD 4870

Planning Officer: Carl Ewin  
Direct Phone: 4086 4656  
Our Reference: RAL/22/0019  
Your Reference: F22/23

Dear Applicants,

## Decision Notice

### *Planning Act 2016*

I refer to your application and advise that on 25 January 2023, Council decided to approve the application in full subject to conditions.

Details of the decision are as follows:

#### APPLICATION DETAILS

Application No:	RAL/22/0019
Street Address:	Emerald End Road, Mareeba
Real Property Description:	Lot 500 on SP336235
Planning Scheme:	Mareeba Shire Council Planning Scheme 2016

#### DECISION DETAILS

Type of Decision:	Approval
Type of Approval:	Development Permit for Reconfiguring a Lot - Subdivision (1 into 45 Lots) in 3 stages (Stages 13A, 13B and 14A)
Date of Decision:	25 January 2023

#### CURRENCY PERIOD OF APPROVAL

The currency period for this development approval is four (4) years starting the day that this development approval takes effect. (Refer to Section 85 "Lapsing of approval at end of currency period" of the *Planning Act 2016*.)

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**INFRASTRUCTURE**

Where conditions relate to the provision of infrastructure, these are non-trunk infrastructure conditions unless specifically nominated as a “*necessary infrastructure condition*” for the provision of trunk infrastructure as defined under Chapter 4 of the *Planning Act 2016*.

**ASSESSMENT MANAGER CONDITIONS****(A) ASSESSMENT MANAGER’S CONDITIONS (COUNCIL)****(a) Development assessable against the Planning Scheme**

1. Development must be carried out generally in accordance with the approved plans and the facts and circumstances of the use as submitted with the application, and subject to any alterations:
  - found necessary by the Council’s delegated officer at the time of examination of the engineering plans or during construction of the development because of particular engineering requirements; and
  - to ensure compliance with the following conditions of approval.
2. Timing of Effect
  - 2.1 The conditions of the development permit must be complied with to the satisfaction of Council’s delegated officer prior to the endorsement of the plan of survey for each stage of the development, or alternative documentation as approved by the Land Title Act, except where specified otherwise in these conditions of approval.
3. General
  - 3.1 The applicant/developer is responsible for the cost of necessary alterations to existing public utility mains, services or installations required by works in relation to the proposed development or any works required by condition(s) of this approval.
  - 3.2 All payments or bonds required to be made to the Council pursuant to any condition of this approval or the Adopted Infrastructure Charges Notice must be made prior to the endorsement of the plan of survey, or alternative documentation as approved by the Land Title Act and at the rate applicable at the time of payment.
  - 3.3 The developer must relocate (in accordance with FNQROC standards) any services such as water, sewer, drainage, telecommunications and electricity that are not wholly located within the lots that are being created/serviced where required by the relevant authority, unless approved by Council’s delegated officer.
  - 3.4 Where utilities (such as sewers on non-standard alignments) traverse lots to service another lot, easements must be created in favour of Council for access and maintenance purposes. The developer is to pay all costs (including Council’s legal expenses) to prepare and register the easement documents.

3.5 All works must be designed, constructed and carried out in accordance with FNQROC Development Manual requirements (as amended) and to the satisfaction of Council's delegated officer.

3.6 Charges

All outstanding rates, charges, and expenses pertaining to the land are to be paid in full.

3.7 Bushfire Management

A Bushfire hazard management plan for the subject land must be prepared by suitably qualified person to the satisfaction of Council's delegated officer.

The future use of each lot must comply with the requirements of the bushfire hazard management plan at all times.

3.8 The following road names are approved:

- Kutterul Close - new cul-de-sac off Moondani Avenue; and
- Allambee Close - new cul-de-sac off Karobean Drive.

4. Infrastructure Services and Standards

4.1 Access

Access to each allotment must be constructed (from the edge of the road pavement to the property boundary of each lot) in accordance with the FNQROC Development Manual, to the satisfaction of Council's delegated officer.

The provision of layback/roll-over kerbing along the frontage of each allotment will satisfy this condition.

4.2 Stormwater Drainage

- (a) The applicant/developer must take all necessary steps to ensure a non-worsening effect on surrounding land as a consequence of the development.
- (b) Prior to works commencing the applicant must submit a Stormwater Management Plan and Report prepared and certified by a suitably qualified design engineer (RPEQ) that meets or exceeds the standards of design and construction set out in the Queensland Urban Drainage Manual (QUDM) and the FNQROC Development Manual to the satisfaction of Council's delegated officer.
- (c) Prior to works commencing the applicant must submit a Stormwater Quality Management Plan and Report prepared and certified by a suitably qualified design engineer (RPEQ) that meets or exceeds the standards of design and construction set out in the Urban Stormwater Quality Planning Guideline and the Queensland Water Quality Guideline to the satisfaction of Council's delegated officer.

- (d) The Stormwater Quality Management Plan must include an Erosion and Sediment Control Plan that meets or exceeds the Soil Erosion and Sedimentation Control Guidelines (Institute of Engineers Australia) to the satisfaction of Council's delegated officer.
- (e) The applicant/developer must construct the stormwater drainage infrastructure in accordance with the approved Stormwater Management Plan and/or Stormwater Quality Management Plan and Report.
- (f) Temporary drainage is to be provided and maintained during the construction phase of the development, discharged to a lawful point and not onto the construction site.
- (g) All stormwater channels through private property must be registered, with the easement for drainage purposes in favour of Council. All documentation leading to the registration of the easement must be completed at no cost to Council.
- (h) All stormwater drainage collected from the site must be discharged to an approved legal point of discharge.
- (i) The applicant (at their cost) must video all stormwater lines and submit the video for inspection by Council's delegated officer prior to the development being taken "off maintenance" to ensure that no defects have occurred during the 12 month maintenance period.
- (j) All drainage easements must be constructed to prevent erosion. Construction may be in the form of a concrete invert, with outlet protection.

#### 4.3 Earthworks

All earthworks must be carried out in accordance with the requirements of the FNQROC Development Manual (as amended) to the satisfaction of Council's delegated officer.

#### 4.4 Roadworks/footpaths - Internal

- (a) Moondani Avenue, Kutterul Close and Allambee Close are to be constructed to Access Street standard in accordance with the FNQROC Development Manual (as amended) to the satisfaction of Council's delegated officer.
- (b) Karobean Drive must be constructed to a Collector Road standard (of the same width as the existing section of Karobean Drive) in accordance with the FNQROC Development Manual (as amended) to the satisfaction of Council's delegated officer.
- (c) Temporary turnaround areas, with a bitumen and/or gravel surface, must be provided at the western end of Karobean Drive and the eastern end of Allambee Close to allow traffic manoeuvring until future stages 15 and 14B are developed.

- (d) 2 metre wide concrete pedestrian footpaths must be installed on at least 1 side of **all** proposed internal roads, including Moondani Avenue and Karobean Drive. The horizontal alignment of all footpaths (with the exception of Karobean Drive) must comply with the FNQROC development Manual (specifically Standard Drawing S1004A) and **must not be constructed abutting the kerbing.**

The Karobean Drive footpath (only) is permitted to be constructed abutting the kerbing.

4.5 Roadworks - External (Karobean Drive/Emerald End Road Intersection)

The intersection of Karobean Drive and Emerald End Road must be constructed to FNQROC Development Manual standards (as amended) to the satisfaction of Council's delegated officer.

4.6 Footpaths - External (Emerald End Road)

**This condition is optional and may be carried out at the applicant/developer's discretion.**

- (a) Council will permit the construction of a 2 metre wide concrete pedestrian footpath within the Emerald End Road reserve to create a pedestrian link between the proposed Karobean Drive pedestrian footpath, the proposed Kutterul Close pedestrian footpath and the Dandaloo Close cul-de-sac head, and the new park/playground constructed adjacent Lot 2 on SP298298.
- (b) The footpath works must be sited as close as practically possible to the western side of the Emerald End Road reserve and must not include any vegetation plantings. The footpath must only meander where needed to avoid existing trees and a culvert crossing/bridge is required to be installed across the stormwater drain situated between drainage reserve Lot 49 on SP220745 and Emerald End Road.
- (c) The footpath may be done in 3 separate Stages or combination of the 3 Stages as follows:
- Linking the Karobean Drive and Kutterul Close footpaths; and/or
  - Linking the Kutterul Close footpath and Dandaloo Close cul-de-sac head; and/or
  - Linking the Dandaloo Close cul-de-sac head and the park/playground adjacent Lot 2 on SP298298. For this section, the footpath is only required to be constructed to the south-east corner of Lot 10 on SP211136 with Council to complete the link between the end of this footpath and the park/playground.
- (d) The cost of the abovementioned pedestrian footpath works will be credited towards the parks and open space component (only) of the infrastructure charges payable for Stages 13A, 13B and 14A. The parks and open space component accounts for 20% of the total infrastructure charges payable for each Stage.

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The cost of the pedestrian footpath works (to be credited) must be provided via an itemised quotation and must be agreed to by Council's delegated officer before works commence.

#### 4.7 Water Supply

- (a) A water service connection must be provided to each proposed lot in accordance with FNQROC Development Manual standards (as amended) to the satisfaction of Council's delegated officer
- (b) Where the existing reticulated water supply does not currently service the site or is not at an adequate capacity, the developer is required to extend or upgrade the reticulated water supply infrastructure to connect the site to Council's existing infrastructure at a point that has sufficient capacity to service the development in accordance with FNQROC Development Manual standards (as amended).

#### 4.8 Sewerage Connection

- (a) The developer must connect the proposed development to Council's reticulated sewerage system in accordance with FNQROC Development Manual standards (as amended) to the satisfaction of Council's delegated officer.
- (b) Where sewerage connections are not available to the site, or where existing connections are not satisfactory for the proposed development, the developer is required to extend or upgrade the reticulated sewerage infrastructure to connect the site to Council's existing infrastructure at a point that has sufficient capacity to service the development in accordance with FNQROC Development Manual standards (as amended).

#### 4.9 Electricity provision/supply

The applicant/developer must ensure that an appropriate level of electricity supply is provided to each allotment in accordance with FNQROC Development Manual standards (as amended) to the satisfaction of Council's delegated officer.

Written advice from an Electricity Service Provider is to be provided to Council indicating that an agreement has been made for the provision of **underground** power reticulation.

#### 4.10 Telecommunications

The applicant/developer must enter into an agreement with a telecommunication carrier to provide telecommunication services to each allotment and arrange provision of necessary conduits and enveloping pipes.

#### 4.11 Lighting

Street lighting must be provided to all roads in accordance with FNQROC Development requirements (as amended) and to the satisfaction of Council's delegated officer.

#### 4.12 Street Trees

One (1) street tree must be planted at centre of each lot's road frontage. Corner allotments must have a street tree planted on each frontage.

All street trees must be provided in accordance with the FNQROC Development Manual - Design Manual D9 Landscaping.

**Plans for the development works required under Conditions 4.1 - 4.12 must be submitted to Council for approval as part of a subsequent application for operational works.**

#### REFERRAL AGENCIES

Not Applicable.

#### APPROVED PLANS

The following plans are Approved plans for the development:

Plan/Document Number	Plan/Document Title	Prepared by	Dated
9013 Master Plan - Sheet 1 of 4	Development Plan Stage 13 - 16	Twine Surveys	01.12.2022
9013 Master Plan - Sheet 2 of 4	Stage 13A - Diagram A	Twine Surveys	01.12.2022
9013 Master Plan - Sheet 3 of 4	Stage 13B - Diagram B	Twine Surveys	01.12.2022
9013 Master Plan - Sheet 4 of 4	Stage 14A - Diagram C	Twine Surveys	01.12.2022

#### ADVISORY NOTES

The following notes are included for guidance and information purposes only and do not form part of the assessment manager conditions:

##### (A) ASSESSMENT MANAGER'S ADVICE

- (a) An Adopted Infrastructure Charges Notice has been issued with respect to the approved development. The Adopted Infrastructure Charges Notice details the type of infrastructure charge/s, the amount of the charge/s and when the charge/s are payable.
- (b) The Adopted Infrastructure Charges Notice does not include all charges or payments that are payable with respect to the approved development. A number of other charges or payments may be payable as conditions of approval. The applicable fee is set out in Council's Fees & Charges Schedule for each respective financial year.

(c) Easement Documents

Council has developed standard easement documentation to assist in the drafting of formal easement documents for Council easements. Please contact the Planning Section for more information regarding the drafting of easement documents for Council easements.

(d) Endorsement Fees

Council charges a fee for the endorsement of a Survey Plan, Community Management Statements, easement documents, and covenants. The fee is set out in Council's Fees & Charges Schedule applicable for each respective financial year.

(e) Compliance with applicable codes/policies

The development must be carried out to ensure compliance with the provisions of Council's Local Laws, Planning Scheme Policies, Planning Scheme and Planning Scheme Codes to the extent they have not been varied by a condition of this approval.

(f) Notation on Rates Record

A notation will be placed on Council's Rate record with respect to each lot regarding the following conditions:

- conditions regarding bushfire management
- any registered easements over the subject land

(g) Environmental Protection and Biodiversity Conservation Act 1999

The applicant is advised that referral may be required under the *Environmental Protection and Biodiversity Conservation Act 1999* if the proposed activities are likely to have a significant impact on a matter of national environmental significance. Further information on these matters can be obtained from [www.dcceew.gov.au](http://www.dcceew.gov.au).

(h) Cultural Heritage

In carrying out the activity the applicant must take all reasonable and practicable measures to ensure that no harm is done to Aboriginal cultural heritage (the "cultural heritage duty of care"). The applicant will comply with the cultural heritage duty of care if the applicant acts in accordance with gazetted cultural heritage duty of care guidelines. An assessment of the proposed activity against the duty of care guidelines will determine whether or to what extent Aboriginal cultural heritage may be harmed by the activity. Further information on cultural heritage, together with a copy of the duty of care guidelines and cultural heritage search forms, may be obtained from [www.dsdsatsip.qld.gov.au](http://www.dsdsatsip.qld.gov.au).

**FURTHER DEVELOPMENT PERMITS REQUIRED**

- Development Permit for Operational Work

**SUBMISSIONS**

Not Applicable.

**RIGHTS OF APPEAL**

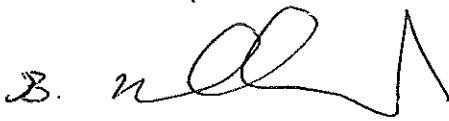
You are entitled to appeal against this decision. A copy of the relevant appeal provisions from the *Planning Act 2016* is attached.

During the appeal period, you as the applicant may suspend your appeal period and make written representations to council about the conditions contained within the development approval. If council agrees or agrees in part with the representations, a "negotiated decision notice" will be issued. Only one "negotiated decision notice" may be given. Taking this step will defer your appeal period, which will commence again from the start the day after you receive a "negotiated decision notice".

**OTHER DETAILS**

If you wish to obtain more information about Council's decision, electronic copies are available on line at [www.msc.qld.gov.au](http://www.msc.qld.gov.au), or at Council Offices.

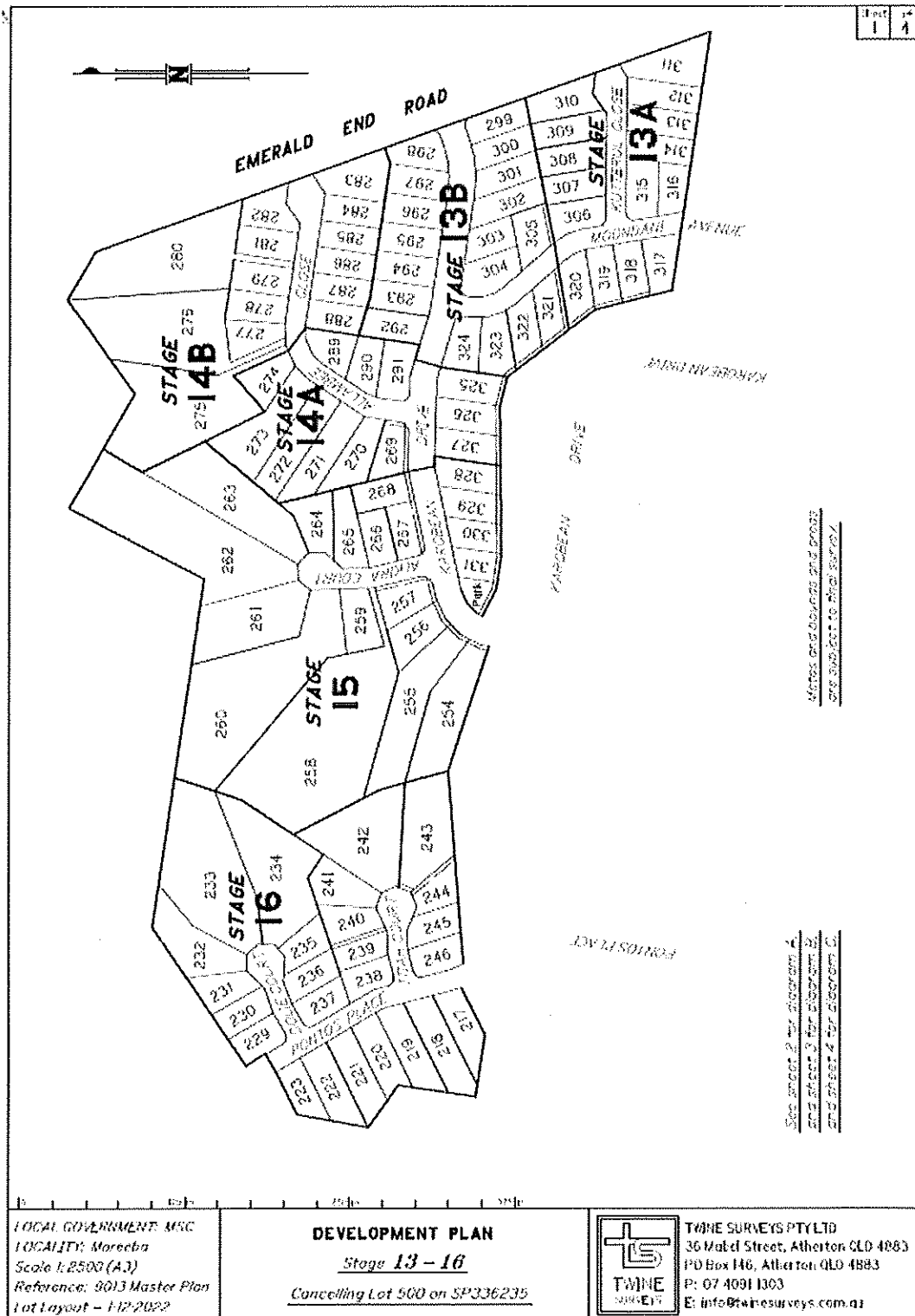
Yours faithfully

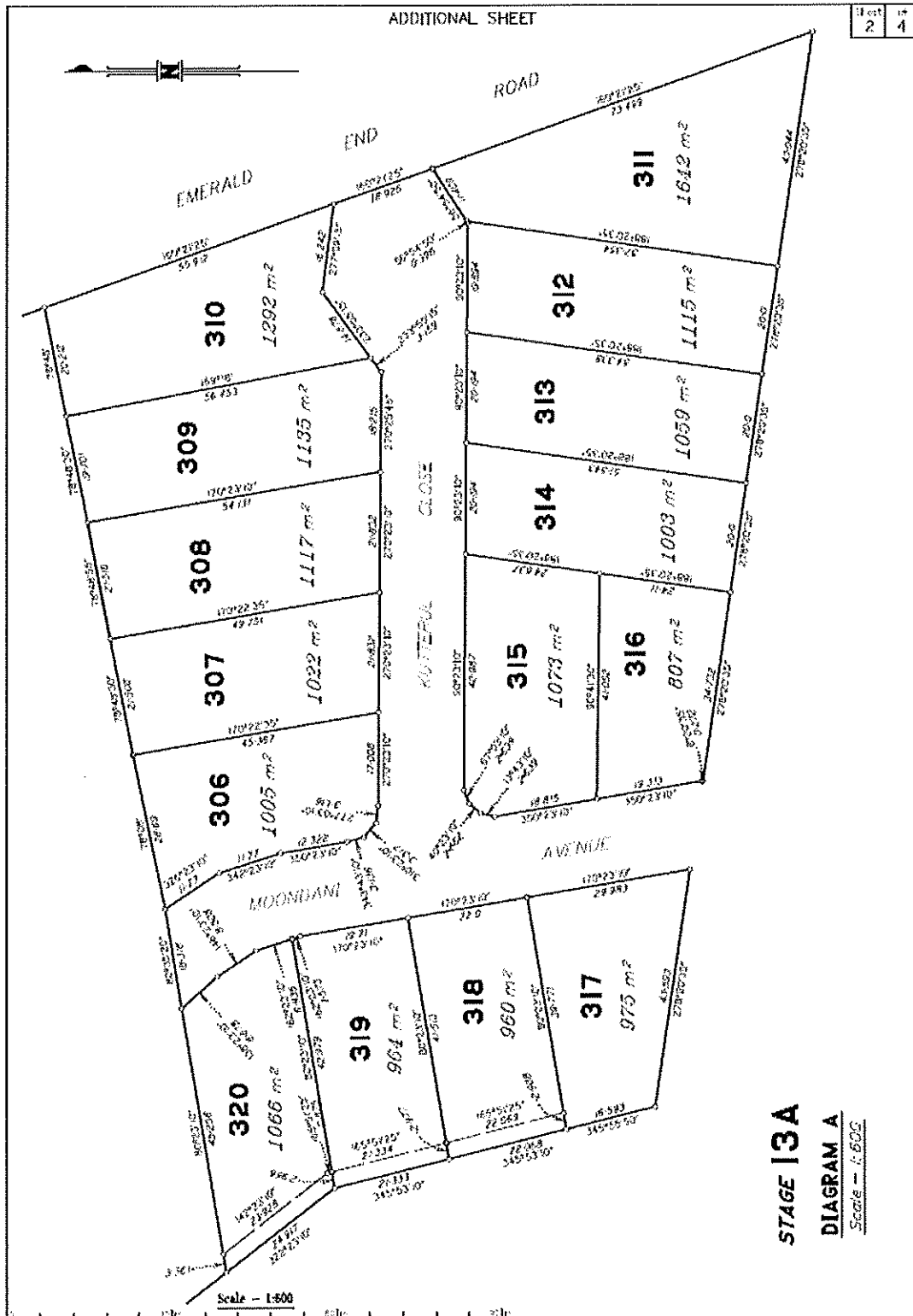


**BRIAN MILLARD**  
**SENIOR PLANNER**

Enc: Approved Plans/Documents  
Appeal Rights  
Adopted Infrastructure Charge Notice

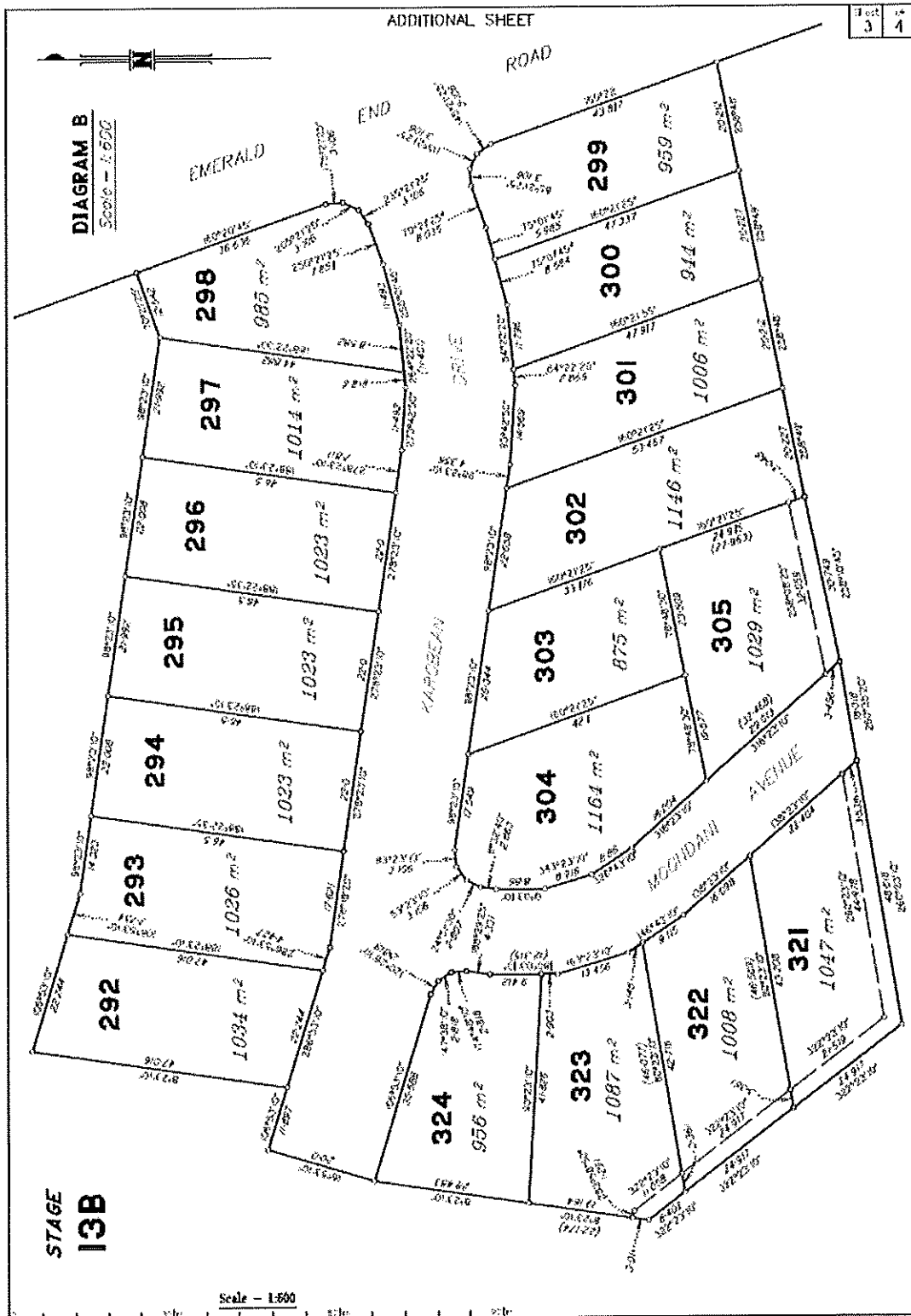
Approved Plans/Documents





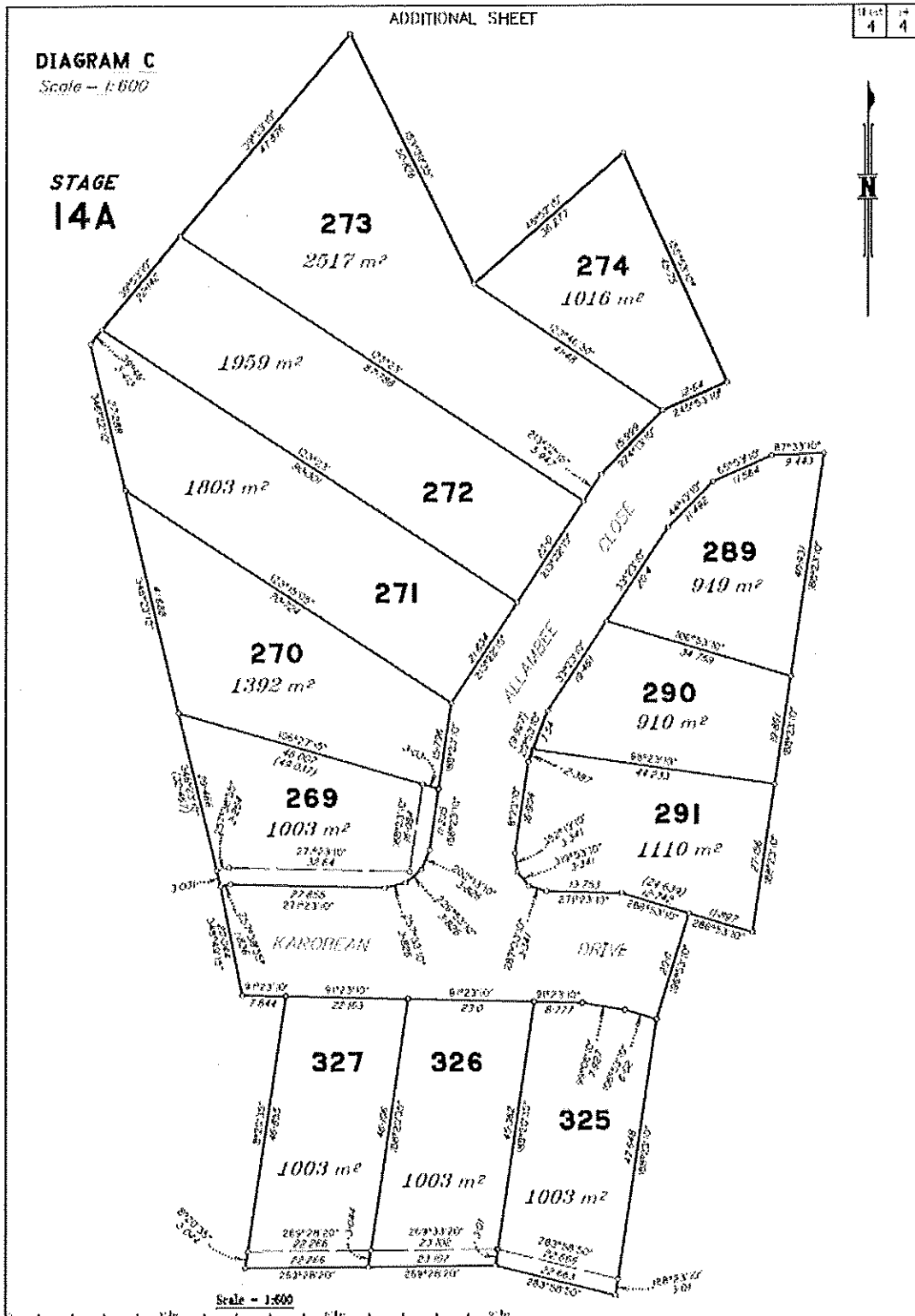
Consultant Set ID: 4645495  
Version: 1, Version Date: 22/05/2022

25/11/2023  
B. Hill



Drawn by: D. J. M. C. A.  
Version: 1, Version Date: 20/05/2022

25/1/2023  
B. Williams



Document Set ID: 4645495  
Version: 1, Version Date: 22/05/2026

25/1/2023  
B. [Signature]

## Appeal Rights

PLANNING ACT 2016 & THE PLANNING REGULATION 2017

### Chapter 6 Dispute resolution

#### Part 1 Appeal rights

##### 229 Appeals to tribunal or P&E Court

- (1) Schedule 1 of the *Planning Act 2016* states –
- (a) Matters that may be appealed to –
    - (i) either a tribunal or the P&E Court; or
    - (ii) only a tribunal; or
    - (iii) only the P&E Court; and
  - (b) The person-
    - (i) who may appeal a matter (**the appellant**); and
    - (ii) who is a respondent in an appeal of the matter; and
    - (iii) who is a co-respondent in an appeal of the matter; and
    - (iv) who may elect to be a co-respondent in an appeal of the matter.

(Refer to Schedule 1 of the Planning Act 2016)

- (2) An appellant may start an appeal within the appeal period.
- (3) The **appeal period** is –
- (a) for an appeal by a building advisory agency – 10 business days after a decision notice for the decision is given to the agency; or
  - (b) for an appeal against a deemed refusal – at any time after the deemed refusal happens; or
  - (c) for an appeal against a decision of the Minister, under chapter 7, part 4, to register premises or to renew the registration of premises – 20 business days after a notice is published under section 269(3)(a) or (4); or
  - (d) for an appeal against an infrastructure charges notice – 20 business days after the infrastructure charges notice is given to the person; or
  - (e) for an appeal about a deemed approval of a development application for which a decision notice has not been given – 30 business days after the applicant gives the deemed approval notice to the assessment manager; or
  - (f) for any other appeal – 20 business days after a notice of the decision for the matter, including an enforcement notice, is given to the person.

*Note –*

*See the P&E Court Act for the court's power to extend the appeal period.*

- (4) Each respondent and co-respondent for an appeal may be heard in the appeal.
- (5) If an appeal is only about a referral agency's response, the assessment manager may apply to the tribunal or P&E Court to withdraw from the appeal.

- 
- (6) To remove any doubt. It is declared that an appeal against an infrastructure charges notice must not be about-
    - (a) the adopted charge itself; or
    - (b) for a decision about an offset or refund-
      - (i) the establishment cost of trunk infrastructure identified in a LGIP; or
      - (ii) the cost of infrastructure decided using the method included in the local government's charges resolution.

### 230 Notice of appeal

- (1) An appellant starts an appeal by lodging, with the registrar of the tribunal or P&E Court, a notice of appeal that-
  - (a) is in the approved form; and
  - (b) succinctly states the grounds of the appeal.
- (2) The notice of appeal must be accompanied by the required fee.
- (3) The appellant or, for an appeal to a tribunal, the registrar must, within the service period, give a copy of the notice of appeal to –
  - (a) the respondent for the appeal ; and
  - (b) each co-respondent for the appeal; and
  - (c) for an appeal about a development application under schedule 1, table 1, item 1 – each principal submitter for the development application; and
  - (d) for an appeal about a change application under schedule 1, table 1, item 2 – each principal submitter for the change application; and
  - (e) each person who may elect to become a co-respondent for the appeal, other than an eligible submitter who is not a principal submitter in an appeal under paragraph (c) or (d); and
  - (f) for an appeal to the P&E Court – the chief executive; and
  - (g) for an appeal to a tribunal under another Act – any other person who the registrar considers appropriate.
- (4) The *service period* is –
  - (a) if a submitter or advice agency started the appeal in the P&E Court – 2 business days after the appeal has started; or
  - (b) otherwise – 10 business days after the appeal is started.
- (5) A notice of appeal given to a person who may elect to be a co-respondent must state the effect of subsection (6).
- (6) A person elects to be a co-respondent by filing a notice of election, in the approved form, within 10 business days after the notice of appeal is given to the person.

### 231 Other appeals

- (1) Subject to this chapter, schedule 1 and the P&E Court Act, unless the Supreme Court decides a decision or other matter under this Act is affected by jurisdictional error, the decision or matter is non-appealable.
- (2) The *Judicial Review Act 1991*, part 5 applies to the decision or matter to the extent it is affected by jurisdictional error.
- (3) A person who, but for subsection (1) could have made an application under the *Judicial Review Act 1991* in relation to the decision or matter, may apply under part 4 of that Act for a statement of reasons in relation to the decision or matter.
- (4) In this section –

*decision* includes-

- (a) conduct engaged in for the purpose of making a decision; and
- (b) other conduct that relates to the making of a decision; and
- (c) the making of a decision or failure to make a decision; and
- (d) a purported decision ; and
- (e) a deemed refusal.

*non-appealable*, for a decision or matter, means the decision or matter-

- (a) is final and conclusive; and
- (b) may not be challenged, appealed against, reviewed, quashed, set aside or called into question in any other way under the Judicial Review Act 1991 or otherwise, whether by the Supreme Court, another court, a tribunal or another entity; and
- (c) is not subject to any declaratory, injunctive or other order of the Supreme Court, another court, a tribunal or another entity on any ground.

### 232 Rules of the P&E Court

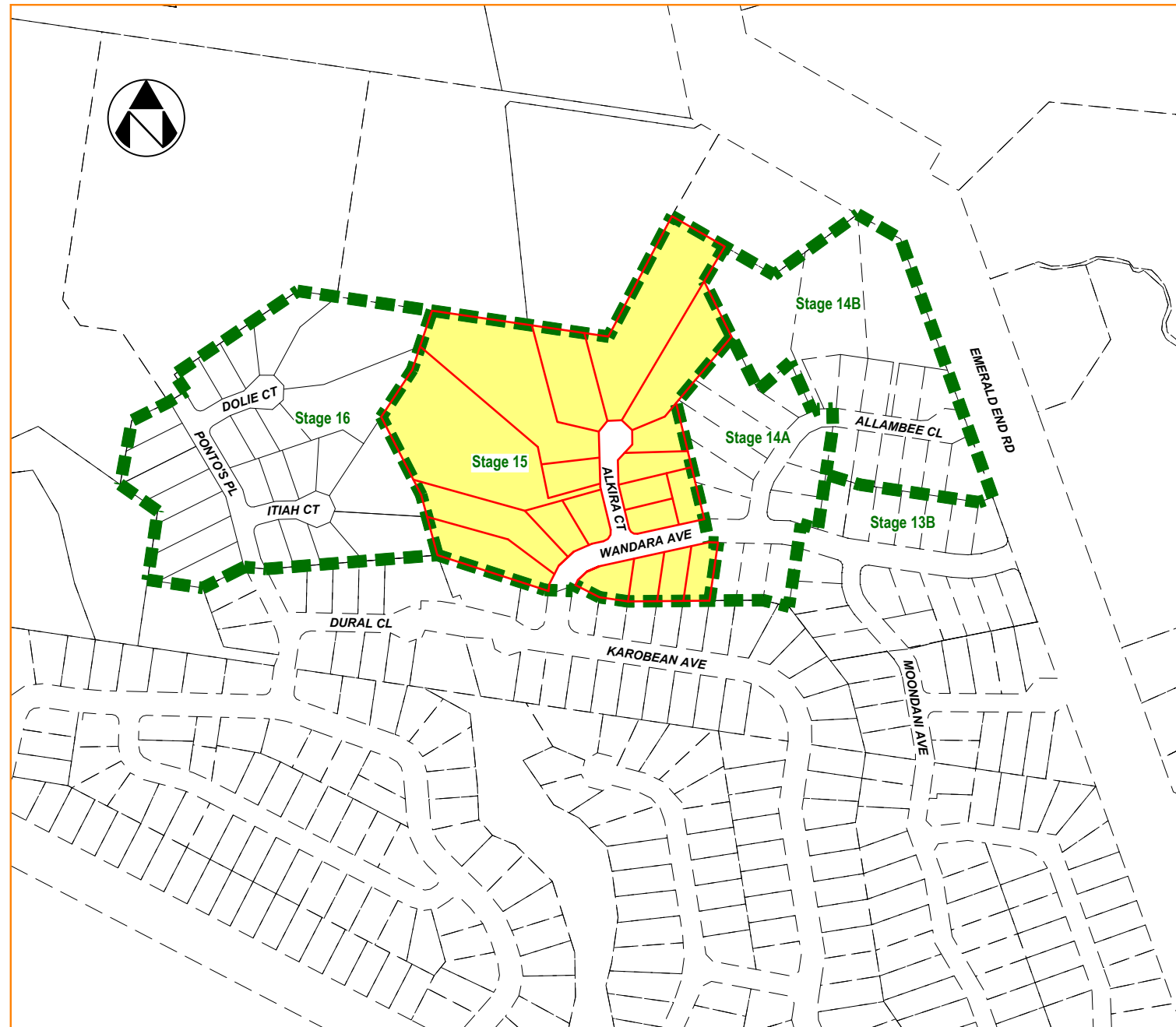
- (1) A person who is appealing to the P&E Court must comply with the rules of the court that apply to the appeal.
- (2) However, the P&E Court may hear and decide an appeal even if the person has not complied with the rules of the P&E Court.

## Civil Engineering Drawings



# AMAROO ESTATE SUBDIVISION, MAREEBA

## STAGE 15



**LOCALITY PLAN**  
N.T.S.

### DRAWING INDEX

DRAWING No.	DRAWING TITLE
048-2501-15-DRG-0101	LOCALITY PLAN
048-2501-15-DRG-0102	PROJECT NOTES
048-2501-15-DRG-0103	GENERAL ARRANGEMENT
048-2501-15-DRG-0201	EARTHWORKS PLAN
048-2501-15-DRG-0301	TYPICAL SECTIONS AND DETAILS - SHEET 1 OF 2
048-2501-15-DRG-0302	TYPICAL SECTIONS AND DETAILS - SHEET 2 OF 2
048-2501-15-DRG-0303	INTERSECTION DETAILS
048-2501-15-DRG-0304	INTERSECTION LINEMARKING DETAILS
048-2501-15-DRG-0401	STORMWATER DRAINAGE PLAN
048-2501-15-DRG-0402	STORMWATER DRAINAGE LONGITUDINAL SECTIONS
048-2501-15-DRG-0501	SEWERAGE PLAN
048-2501-15-DRG-0502	SEWERAGE OVERFLOW CHAMBER DETAILS
048-2501-15-DRG-0503	SEWERAGE LONGITUDINAL SECTIONS
048-2501-15-DRG-0601	WATER RETICULATION
048-2501-15-DRG-0801	MASTER SERVICES PLAN
048-2501-15-DRG-0701	SITE BASED STORMWATER MANAGEMENT PLAN, PHASE 1: TOPSOIL STRIPPING
048-2501-15-DRG-0702	SITE BASED STORMWATER MANAGEMENT PLAN, PHASE 2: EARTHWORKS
048-2501-15-DRG-0703	SITE BASED STORMWATER MANAGEMENT PLAN, PHASE 3: ROADWORKS
048-2501-15-DRG-0901	ROAD LONGITUDINAL SECTIONS - WANDARA AVENUE
048-2501-15-DRG-0902	ROAD LONGITUDINAL SECTIONS - ALKIRA COURT
048-2501-15-DRG-0903	ROAD CROSS SECTIONS - WANDARA AVENUE
048-2501-15-DRG-0904	ROAD CROSS SECTIONS - ALKIRA COURT

### FNQROC STANDARD DRAWINGS

DRAWING No.	DRAWING TITLE
S1000 - S1110	ROADWORKS AND DRAINAGE
S2000 - S2025	WATER
S3000 - S3015	SEWERAGE

### MAREEBA SHIRE COUNCIL STANDARD DRAWINGS

DRAWING No.	DRAWING TITLE
S2000	VALVE BOX INSTALLATION
S2005	HYDRANT BOX INSTALLATION
S2015	THRUST BLOCK DETAILS
S2020	MAIN CONNECTION DETAILS
S2060	DOMESTIC WATER SERVICE CONNECTION DETAILS

### INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALIA STANDARD DRAWINGS

DRAWING No.	DRAWING TITLE
D-0040	SEDIMENT CONTROL DEVICES - SEDIMENT FENCE, ENTRY/EXIT SEDIMENT TRAP
D-0041	SEDIMENT CONTROL DEVICES - KERB AND FIELD INLETS, CHECK DAMS & STRAW BALE BANKS

## GENERAL ARRANGEMENT

### GENERAL

- G1. ALL WORKS ARE TO BE IN ACCORDANCE WITH THE FNQROC DEVELOPMENT MANUAL SPECIFICATIONS S1 TO S8.
- G2. CONTRACTOR TO PROVIDE PUBLIC NOTIFICATION/SIGNS (REFER FNQROC DEVELOPMENT MANUAL CP1.11).
- G3. CLEARED VEGETATION SHALL BE MULCHED ON SITE BY THE CONTRACTOR.
- G4. FOR CONCRETE PATHWAY DETAILS REFER FNQROC STD DRG S1035.
- G5. FOR CONCRETE DRIVEWAY DETAILS REFER FNQROC STD DRG S1110.

### EXISTING SERVICES

- ES1. EXISTING SERVICES ARE PLOTTED FROM THE BEST INFORMATION AVAILABLE. NO RESPONSIBILITY IS TAKEN BY THE PRINCIPAL OR SUPERINTENDENT FOR THE ACCURACY AND COMPLETENESS OF THE INFORMATION SHOWN.
- ES2. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR IS TO ESTABLISH ON SITE THE EXACT POSITION OF ALL UNDERGROUND SERVICES IN THE PROPOSED WORKS AREA. METHODS FOR ACHIEVING THIS WILL INCLUDE BUT NOT BE LIMITED TO:-
- CAREFUL EXAMINATION OF THE CONTRACT DRAWINGS.
  - CONSULTATION WITH THE RELEVANT SERVICE AUTHORITIES.
  - COMPREHENSIVELY SCANNING THE AFFECTED AREAS WITH A CABLE DETECTOR AND MARKING ON THE GROUND THE POSITION OF ALL SERVICES.
  - HAND EXCAVATING TO EXPOSE ALL SUCH SERVICES WHICH MAY BE AFFECTED BY THE PROPOSED WORKS UNDER THE DIRECTION OF THE RELEVANT SERVICE AUTHORITY.
- ES3. THE CONTRACTOR IS TO BRING TO THE SUPERINTENDENT'S ATTENTION ANY DISCREPANCIES BETWEEN THE EXISTING SERVICES THUS IDENTIFIED AND DOCUMENTED SERVICES WHICH MIGHT AFFECT THE PROPOSED WORKS. APPROPRIATE MEASURES TO RESOLVE ANY CONFLICTS WILL BE DOCUMENTED BY THE SUPERINTENDENT.

### VEGETATION & CLEARING

- VC1. PRIOR TO THE REMOVAL OF ANY TREE. AN INSPECTION MUST BE CARRIED OUT OF ANY SIGNS OF PROTECTED WILDLIFE INCLUDING NESTS AND ANIMAL HABITATS. SHOULD ANY RECENT WILDLIFE ACTIVITY BE IDENTIFIED, REMOVAL OF THE TREE MUST NOT OCCUR UNTIL THE ANIMAL HAS VACATED THE AREA OF IMMEDIATE DANGER. IF THE ANIMAL DOES NOT MOVE FROM THE AREA OF DANGER, THE QUEENSLAND PARKS AND WILDLIFE MUST BE CONTACTED FOR ADVICE.
- VC2. COUNCIL MUST BE NOTIFIED TWO DAYS PRIOR TO THE PROPOSED DATE OF COMMENCEMENT OF ANY APPROVED VEGETATION CLEARING TO FACILITATE COMMUNITY AWARENESS OF SUCH WORKS.
- VC3. VEGETATION TO BE RETAINED MUST BE ADEQUATELY DEFINED BY FENCING, FLAGGING OR BARRIER MESH FOR PROTECTION PURPOSES PRIOR TO CONSTRUCTION COMMENCING ON SITE.
- VC4. A MINIMUM 2m WIDE BUFFER SHALL BE PROVIDED AROUND THE VEGETATION TO BE RETAINED. THIS BUFFER MUST CONSIST OF SUITABLE FENCING, FLAGGING OR BARRIER MESH TO ENSURE THAT MACHINERY, EQUIPMENT OR CONSTRUCTION MATERIALS ARE NOT STORED OR USED WITHIN THIS AREA. THIS BUFFER IS TO BE ESTABLISHED PRIOR TO THE COMMENCEMENT OF ANY WORKS ON SITE AND MUST BE MAINTAINED AT ALL TIMES FOR THE DURATION OF CONSTRUCTION.
- VC5. CLEARED VEGETATION TO BE MULCHED AND SPREAD OVER THE CLEARED AREA FOR EROSION AND SEDIMENT CONTROL OR LANDSCAPING PURPOSES.

## EARTHWORKS

- E1. ALL BATTERS TO ROAD FRONTAGES OF LOTS ARE 1 ON 4 OR FLATTER. ALL OTHER BATTERS ARE 1 ON 1 U.N.O.
- E2. UPON COMPLETION ALL BATTERS STEEPER THAN 1 IN 2 AND HIGHER THAN 1.5m SHALL REQUIRE CERTIFICATION BY A GEOTECHNICAL ENGINEER.
- E3. BATTERS TO BE ADJUSTED LOCALLY AROUND SEWER MANHOLES. REFER DRG-0302 FOR DETAILS.

## INTERSECTION DETAILS

- I1. ALL KERB SETOUT DETAILS REFER TO THE LIP OF KERB AND CHANNEL OR FACE OF KERB.

## STORMWATER DRAINAGE

- D1. FOR STANDARD STORMWATER DRAINAGE DETAILS REFER FNQROC STD. DRGS. S1045-S1100 INCLUSIVE.
- D2. SUBSURFACE DRAINS TO BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATION, FLUSHING POINTS IN ACCORDANCE WITH FNQROC STD DRG S1095.
- D3. PRIOR TO COMMENCEMENT OF PIPEWORK, THE CONTRACTOR IS TO CONFIRM THE INVERT LEVEL OF DOWNSTREAM DRAINAGE TO ENSURE THE STORMWATER SYSTEM CAN DRAIN SATISFACTORILY. REFER ANY DISCREPANCY TO THE SUPERINTENDENT.
- D4. CCTV INSPECTIONS ARE TO BE CONDUCTED FOR ALL NEW STORMWATER PIPES FOR COUNCIL ASSESSMENT.
- D5. ALL STORMWATER PIPES SHALL BE EITHER REINFORCED CONCRETE PIPE (RCP) OR POLYPROPYLENE (PP). RCP PIPES SHALL BE CLASS 2 FJ UNLESS NOTED OTHERWISE. PP PIPES SHALL BE BLACKMAX OR STORMPRO. REFER DRG-0302 FOR PP BEDDING DETAILS.

## SEWERAGE

- S1. ALL SEWER PIPES SHALL BE 150Ø uPVC CLASS 'S.N.8.' (U.N.O.).
- S2. FOR STANDARD DETAILS OF SEWER MAINS, ETC. REFER FNQROC STD. DRGS. S3000 TO S3015 INCLUSIVE.
- S3. ALL WORKS ARE TO BE IN ACCORDANCE WITH FNQROC DEVELOPMENT MANUAL SPECIFICATION S6.
- S4. CONNECTIONS TO EXISTING COUNCIL MAINS TO BE MADE BY COUNCIL.
- S5. CCTV INSPECTIONS ARE TO BE CONDUCTED FOR ALL NEW SEWERS FOR COUNCIL ASSESSMENT.
- S6. MANHOLES ADJACENT ROAD BOUNDARIES SHALL BE ON A 1.5m ALIGNMENT U.N.O. MANHOLES ADJACENT SIDE AND REAR BOUNDARIES SHALL BE ON A 0.8m ALIGNMENT U.N.O.
- S7. SEWER MANHOLES SHALL BE FINISHED 50mm MAX ABOVE FINISHED SURFACE LEVEL IN ALLOTMENTS AND FLUSH IN ROAD RESERVES.
- S8. HOUSE DRAINS ARE TO EXTEND 1.5m CLEAR OF ANY EARTHWORKS BATTER THAT IS STEEPER THAN 1 ON 2 AND OVER 1.5m HIGH. AN INSPECTION OPENING IS TO BE PROVIDED AT THE DOWNSTREAM END OF ANY EXTENDED HOUSE DRAIN.
- S9. ALL HOUSE CONNECTION BRANCHES ARE REQUIRED TO BE BROUGHT TO WITHIN A MAXIMUM OF 300mm OF THE FINISHED SURFACE LEVEL AND A GLUED CAP INSTALLED. THE RISER MUST BE CONNECTED TO A MARKER PEG WITH PLASTIC COATED WIRE. THE MARKER PEG IS TO BE OF HARDWOOD MATERIAL, PROTRUDING 20mm ABOVE THE GROUND AND SHALL BE INSTALLED IMMEDIATELY ADJACENT TO THE RISER IN ACCORDANCE WITH FNQROC DRAWING S3005.
- S13. ALL VERTICAL DROPS SHALL BE CONSTRUCTED USING FIBREGLASS HEAVY DUTY DEEP SEWER DROPS.

## WATER

- W1. ALL WATER MAINS ARE ON A 2.8m ALIGNMENT FROM BOUNDARY U.N.O.
- W2. FOR STANDARD DETAILS REFER FNQROC. STD. DRGS. S2000 TO S2035 INCLUSIVE, AND MSC STD DRGS S2000 TO S2060.
- W3. ALL WORKS ARE TO BE IN ACCORDANCE WITH FNQROC DEVELOPMENT MANUAL SPECIFICATION S5.
- W4. CONNECTIONS TO EXISTING COUNCIL MAINS TO BE MADE BY COUNCIL AND REQUIRE 30 DAYS NOTICE.
- W5. PROVIDE 80mm PVC-U CLASS 6 CONDUIT UNDER CONCRETE FOOTPATH FOR WATER SERVICES AS PER FNQROC STD DRG S2038. FINAL LOCATION OF CONDUITS TO BE CONFIRMED ONCE ERGON PILLAR BOX LOCATIONS ARE AVAILABLE.
- W6. TEARDROP MARKERS AND BLUE RETRO REFLECTIVE MARKERS TO BE IN ACCORDANCE WITH FNQROC STD DRG S2010 REVISION B.
- W7. PROVIDE A COMPRESSIBLE LAYER BETWEEN ALL EXISTING AND PROPOSED HYDRANT OR VALVE SURROUNDS WITHIN AREAS OF CONCRETE.

## EROSION AND SEDIMENT CONTROL STRATEGY

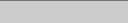














- SC1. SEQUENCING OF CONTROL MEASURES
- INSTALL STABLE POINT OF ENTRY
  - INSTALL SILT FENCES
  - PROTECT TOPSOIL STOCKPILES
  - CONSTRUCT TEMPORARY SEDIMENT BASINS
  - INSTALL STORMWATER PIPES
  - IMPLEMENT PROTECTION MEASURES TO STORMWATER PITS
  - REVEGETATE BARE AREAS UPON COMPLETION OF EARTHWORKS
  - THE SEDIMENT CONTROL STRUCTURES ARE TO BE CLEANED & MAINTAINED AFTER EVERY SIGNIFICANT RAIN EVENT. ERODED SOILS SHALL BE STOCKPILED AS DIRECTED.
- SC2. THE AMOUNT OF DISTURBANCE TO EXISTING VEGETATION BE KEPT TO A MINIMUM.
- SC3. EXACT LOCATION OF SEDIMENT CONTROL STRUCTURES TO BE DETERMINED ON SITE BY COUNCIL & SUPERINTENDENT.
- SC4. STOCKPILE LOCATIONS TO BE AGREED WITH COUNCIL & THE SUPERINTENDENT. STOCKPILES TO BE PROTECTED VIA DIVERSION DRAIN ON THE UPSLOPE & SILT FENCE ON THE DOWNSLOPE.
- SC5. RETURNS IN SILT FENCE TO BE AT 20m INTERVALS WHEN INSTALLED ALONG THE CONTOUR. SPACING IS TO DECREASE TO 5-10m DEPENDING ON SLOPE IF THE SILT FENCE IS INSTALLED AT AN ANGLE TO THE CONTOUR. THE RETURN SHALL CONSIST OF EITHER:
- V-SHAPED SECTION EXTENDING AT LEAST 1.5m UP THE SLOPE; OR
  - SANDBAG OR ROCK/AGGREGATE CHECK DAM A MINIMUM OF 1/3 AND MAXIMUM OF 1/2 FENCE HEIGHT, AND EXTENDING AT LEAST 1.5m UP THE SLOPE.
- SC6. STORMWATER PIPES TO HAVE PIT PROTECTION MEASURES AS DETAILED IN FNQROC DEVELOPMENT MANUAL.
- SC7. ALL SEDIMENT CONTROL MEASURES TO BE IN ACCORDANCE WITH THE CONTRACTORS ESC PLAN.
- SC8. THE FOLLOWING REVEGETATION MEASURES ARE TO BE UNDERTAKEN IMMEDIATELY UPON COMPLETION OF EARTHWORKS.
- CUT & FILL BATTERS STEEPER THAN 1 IN 4 TO BE HYDROMULCHED.
  - VERGES & ALLOTMENTS TO BE GRASS SEEDED.
  - PLACE TURF STRIPS BEHIND ALL KERB LINES.
- SC9. REVEGETATION IS TO BE WATERED & MAINTAINED UNTIL GROWTH IS ESTABLISHED.
- SC10. CONTRACTOR MUST IMPLEMENT A SUITABLE DUST MANAGEMENT STRATEGY TO MINIMISE DUST NUISANCE ON ADJACENT PROPERTIES. DETAILS OF THE DUST MANAGEMENT STRATEGY TO BE INCORPORATED INTO EROSION AND SEDIMENT CONTROL STRATEGY.
- SC11. SEDIMENT BASIN
- INLET PROTECTION TO MINIMISE SCOUR & EVENLY DISTRIBUTE FLOW THROUGH BASIN.
  - A MARKER PEG SHOULD BE INSTALLED TO SHOW THE STORAGE DEPTH. SEDIMENT SHALL BE REMOVED FROM BASIN WHEN 30% STORAGE DEPTH IS ENCROACHED & APPROPRIATELY DISPOSED ON SITE BY RESPREADING IN AREAS OF NON-EROSIVE FLOWS.
- SC12. WATER QUALITY MONITORING SHOULD BE UNDERTAKEN DURING SIGNIFICANT RAINFALL EVENTS (I.E. > 10mm).
- SC13. DESIGN CRITERIA FOR CONTRACTOR'S EROSION & SEDIMENT CONTROL PLAN TO BE IN ACCORDANCE WITH SECTION CP1.05 OF THE FNQROC DEVELOPMENT MANUAL.

## SURVEY AND SETOUT

- SS1. SURVEY, DATUM, LEVELS & SERVICES HAVE BEEN DERIVED FROM STAGE 14 CAD AND DATA FILES.
- SS2. DIGITAL CAD FILES OF THE CIVIL WORKS WILL BE PROVIDED FOR SETOUT PURPOSES.

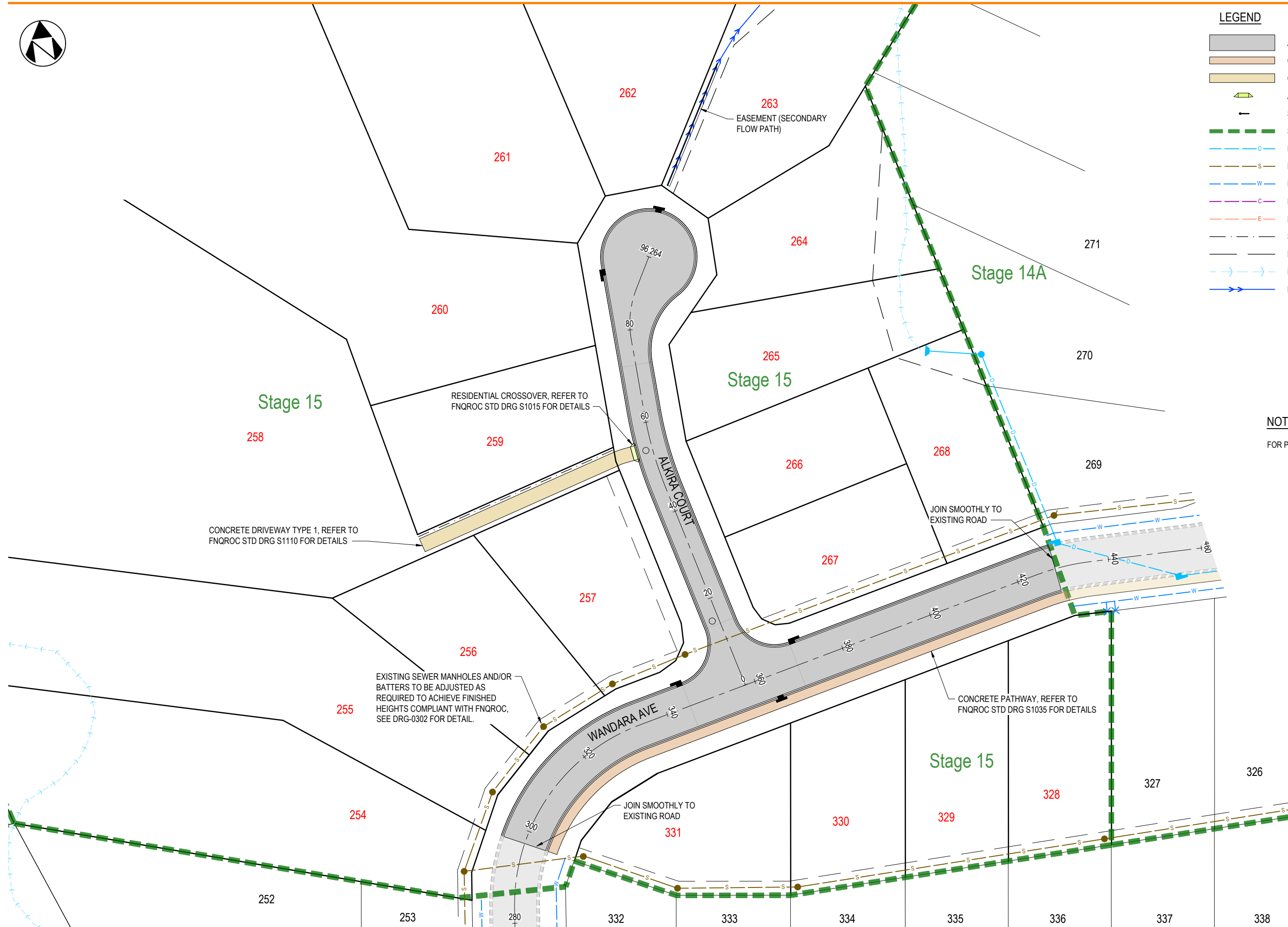


**LEGEND**

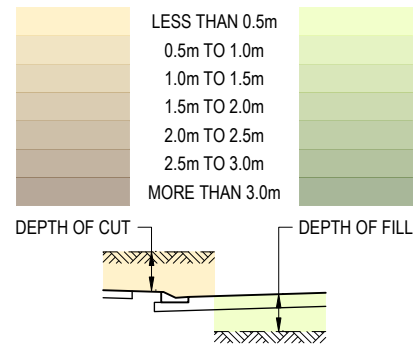
-  ASPHALT SEALED PAVEMENT
-  CONCRETE PATHWAY
-  CONCRETE DRIVEWAY
-  ACCESS CROSSOVER
-  STREET/PATHWAY SIGN
-  STAGE BOUNDARY
-  EXISTING STORMWATER
-  EXISTING SEWER
-  EXISTING WATER
-  EXISTING COMMS
-  EXISTING ELECTRICAL
-  SERVICES CONDUIT
-  EASEMENT BOUNDARY
-  EXISTING OPEN DRAIN/CREEK/GULLY
-  PROPOSED DRAIN

**NOTE**

FOR PROJECT NOTES REFER TO DRG-0102.



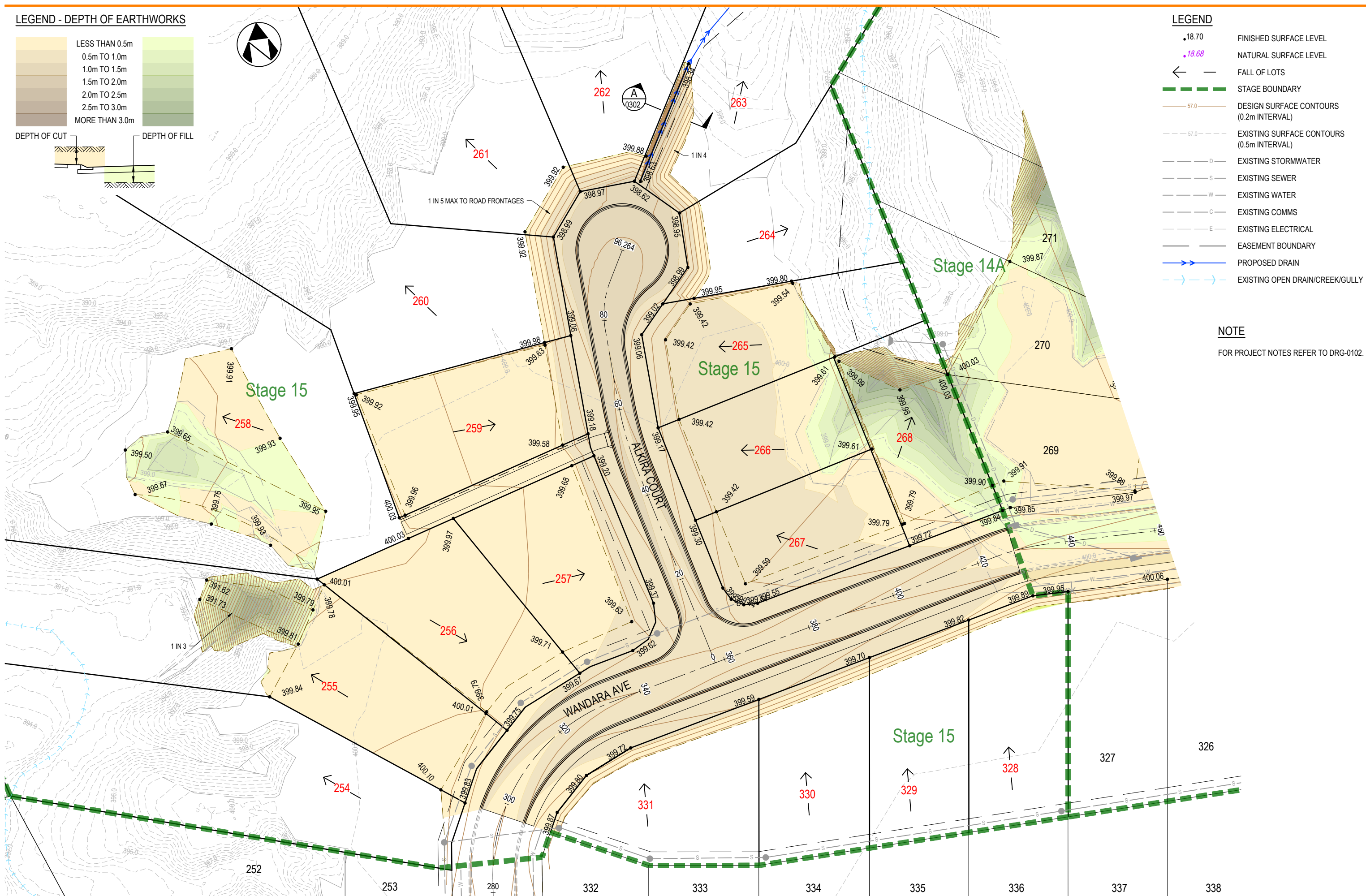
**LEGEND - DEPTH OF EARTHWORKS**



**LEGEND**

- 18.70 FINISHED SURFACE LEVEL
- 18.68 NATURAL SURFACE LEVEL
- FALL OF LOTS
- - - STAGE BOUNDARY
- 57.0 DESIGN SURFACE CONTOURS (0.2m INTERVAL)
- - - 57.0 EXISTING SURFACE CONTOURS (0.5m INTERVAL)
- D EXISTING STORMWATER
- S EXISTING SEWER
- W EXISTING WATER
- C EXISTING COMMS
- E EXISTING ELECTRICAL
- EASEMENT BOUNDARY
- PROPOSED DRAIN
- - - EXISTING OPEN DRAIN/CREEK/GULLY

**NOTE**  
FOR PROJECT NOTES REFER TO DRG-0102.



BTM & S STANKOVICH PTY LTD

AMAROO ESTATE SUBDIVISION  
STAGE 15  
EARTHWORKS PLAN

**CONTROL LINE WANDARA AVE SETOUT**

CHAINAGE	COORDINATES		BEARING DEG MIN SEC	RADIUS OF CURVATURE	TANGENT LENGTH	ARC LENGTH
	EASTING	NORTHING				
283.082	333707.335	8120859.819	7° 14' 32"	41.000		
IP 308.281	333710.984	8120888.526	-	41.000	28.939	50.399
333.481	333739.255	8120894.705	77° 40' 21"	STRAIGHT		
424.047	333827.733	8120914.041	77° 40' 21"	51.000		
IP 430.151	333833.725	8120915.350	-	51.000	6.133	12.207
436.254	333839.855	8120915.202	91° 23' 10"	STRAIGHT		

**CONTROL LINE ALKIRA COURT SETOUT**

CHAINAGE	COORDINATES		BEARING DEG MIN SEC	RADIUS OF CURVATURE	TANGENT LENGTH	ARC LENGTH
	EASTING	NORTHING				
0.000	333763.039	8120899.902	346° 23' 10"	STRAIGHT		
45.386	333752.356	8120944.013	346° 23' 10"	80.000		
IP 53.763	333750.377	8120952.185	-	80.000	8.408	16.755
62.141	333750.140	8120960.590	358° 23' 10"	STRAIGHT		
77.950	333749.695	8120976.393	358° 23' 10"	20.000		
IP 83.414	333749.537	8120981.995	-	20.000	5.604	10.928
88.878	333752.313	8120986.863	29° 41' 33"	STRAIGHT		
96.264	333755.972	8120993.279	29° 41' 33"	STRAIGHT		

**TABLE OF WIDTHS**

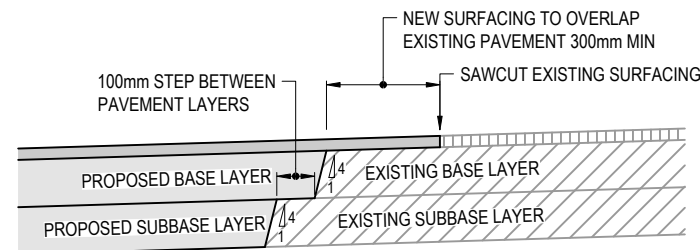
ROAD	CARRIAGEWAY WIDTH (m)	VERGE WIDTH (m)		RESERVE WIDTH (m)
		LHS	RHS	
WANDARA AVE	10.00	5.00	5.00	20.00
ALKIRA CT	6.50	4.50	4.50	15.50

**PROVISIONAL PAVEMENT DETAILS**

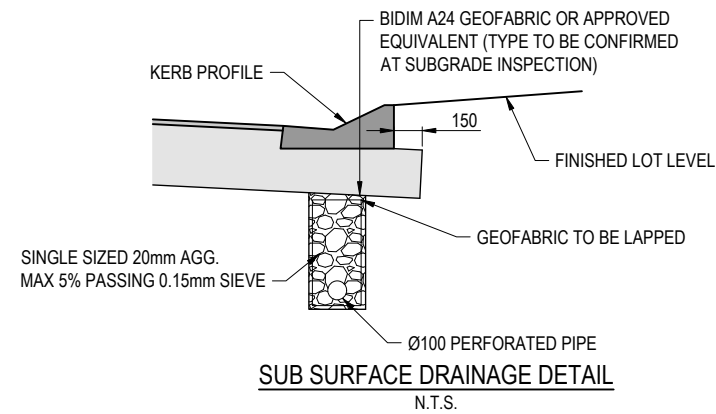
LOCATION	SURFACING	BASE COURSE	SUBBASE COURSE
WANDARA AVE	30mm ASPHALT	100mm THICK CBR 60 MIN	100mm THICK CBR 45 MIN
ALKIRA CT	30mm ASPHALT	100mm THICK CBR 60 MIN	100mm THICK CBR 45 MIN

**NOTES**  
 PROVISIONAL PAVEMENT DESIGN IS BASED ON AN ASSUMED SUBGRADE SOAKED CBR OF 10. THE CONTRACTOR IS TO CONFIRM SUBGRADE CBR DURING CONSTRUCTION AND THE PAVEMENT DESIGN MAY BE AMENDED ACCORDINGLY BY THE COUNCIL.

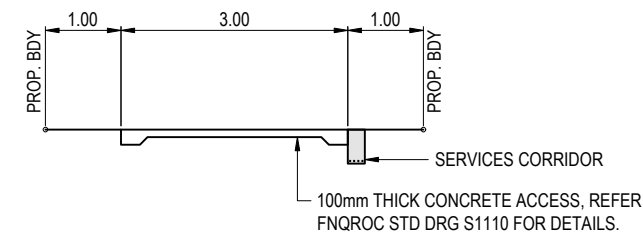
ASPHALT SURFACING TO BE INCREASED TO 50mm AT CUL-DE-SAC. REFER DRG. DRG-0303 FOR LOCATION.



**TYPICAL JOIN TO EXISTING ROAD**  
N.T.S.

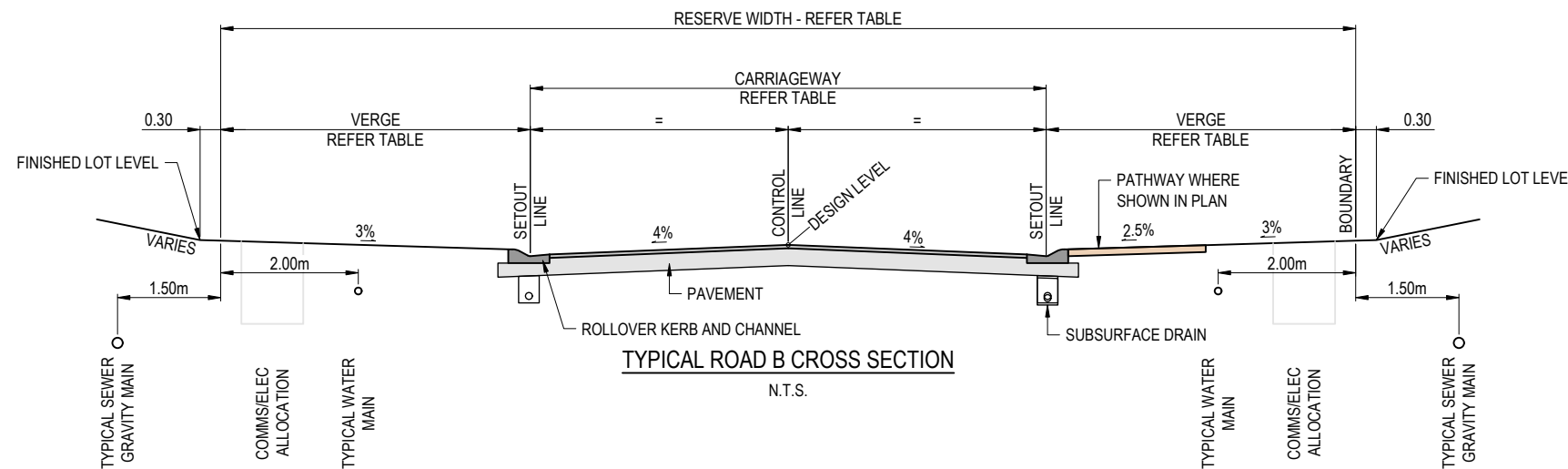


**SUB SURFACE DRAINAGE DETAIL**  
N.T.S.

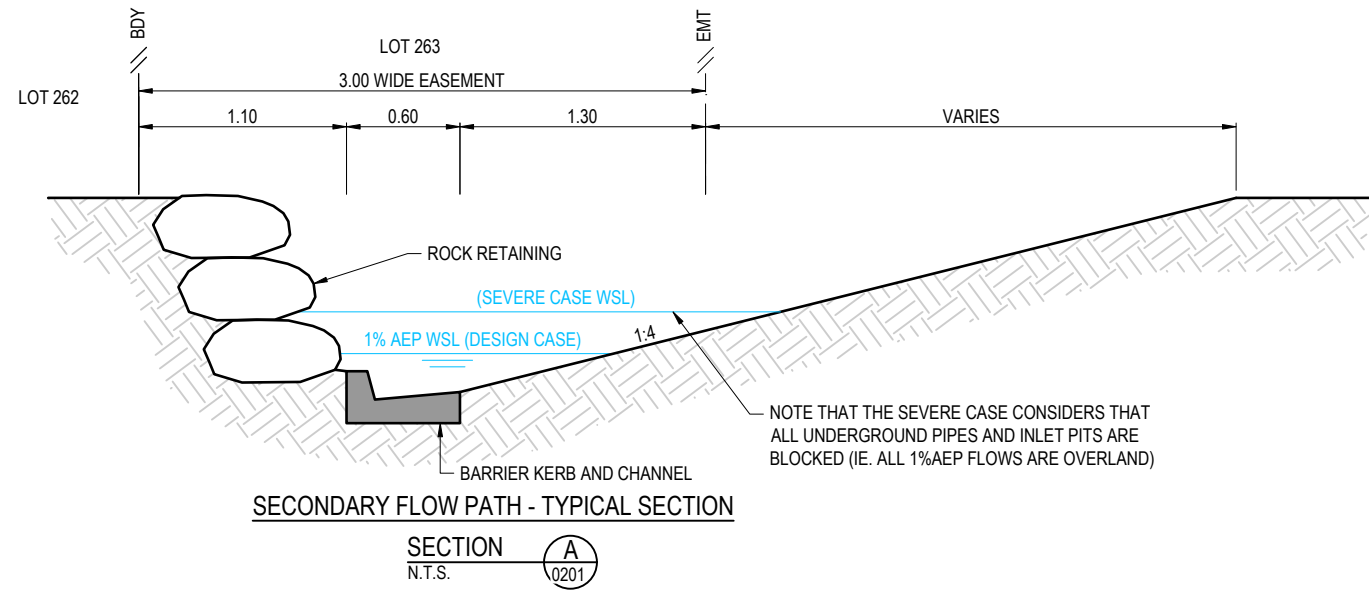


**TYPICAL ACCESS CROSS SECTION**  
N.T.S.

- PROVIDE THE FOLLOWING 4 CONDUITS PER LOT:
- 40mm DIA. uPVC CONDUIT FOR ERGON (ORANGE)
  - 50mm DIA. uPVC FOR TELSTRA (WHITE)
  - 20mm DIA. HDPE FOR WATER SERVICE

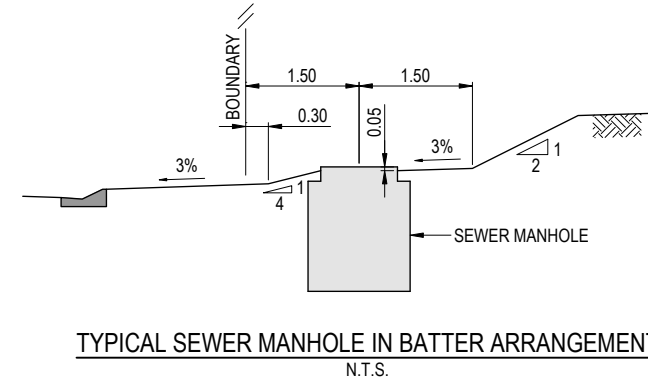
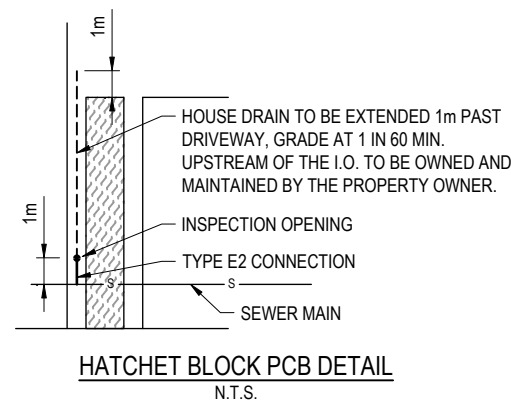
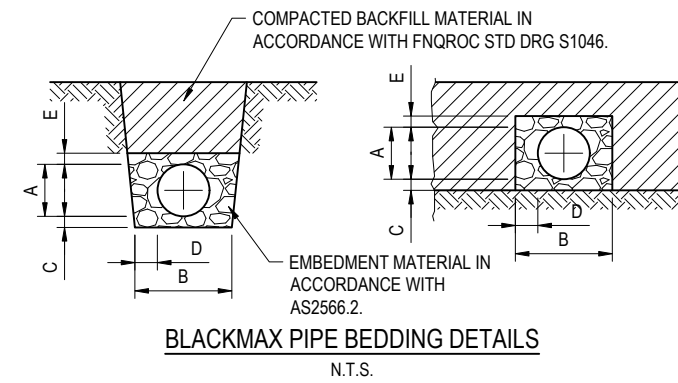


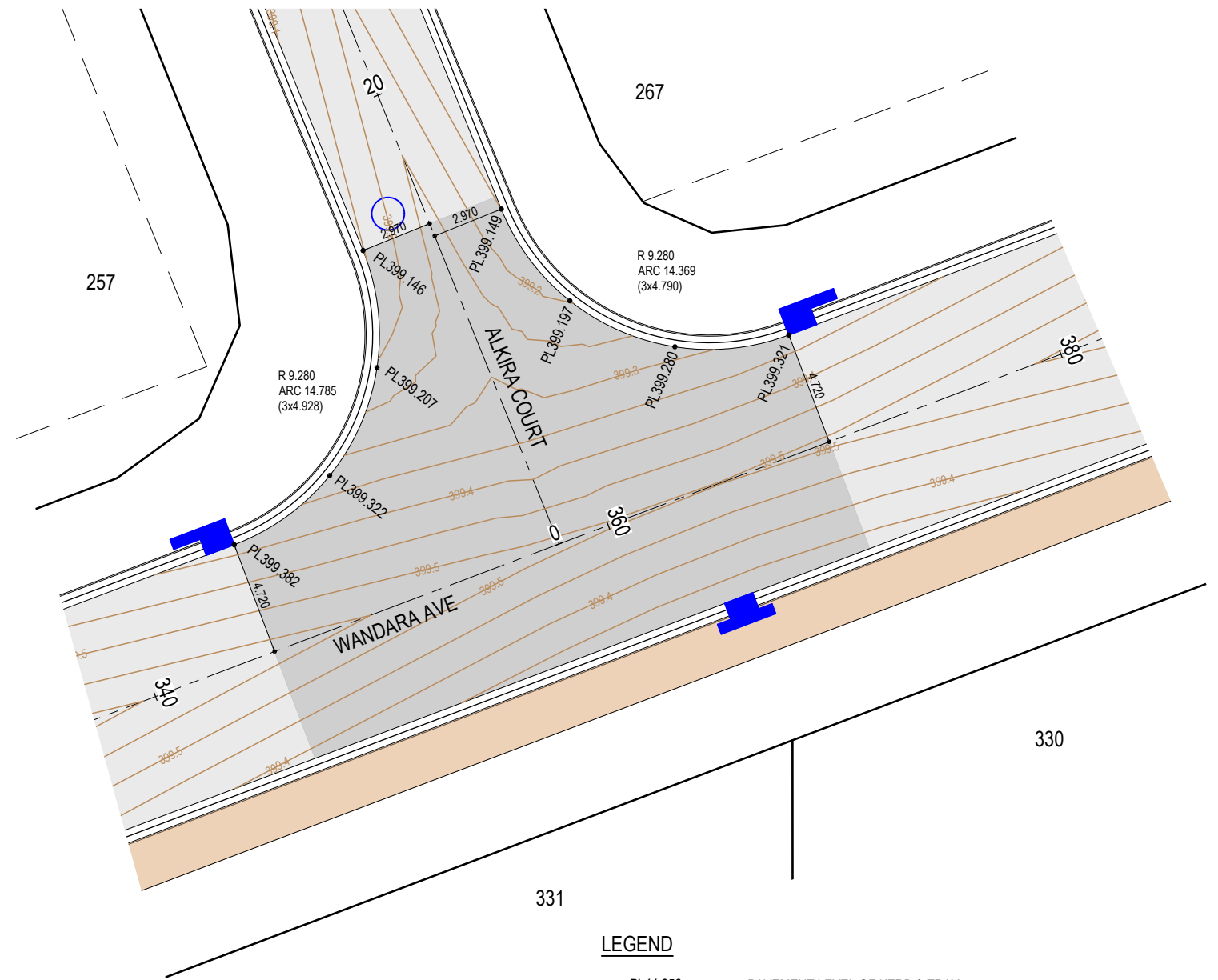
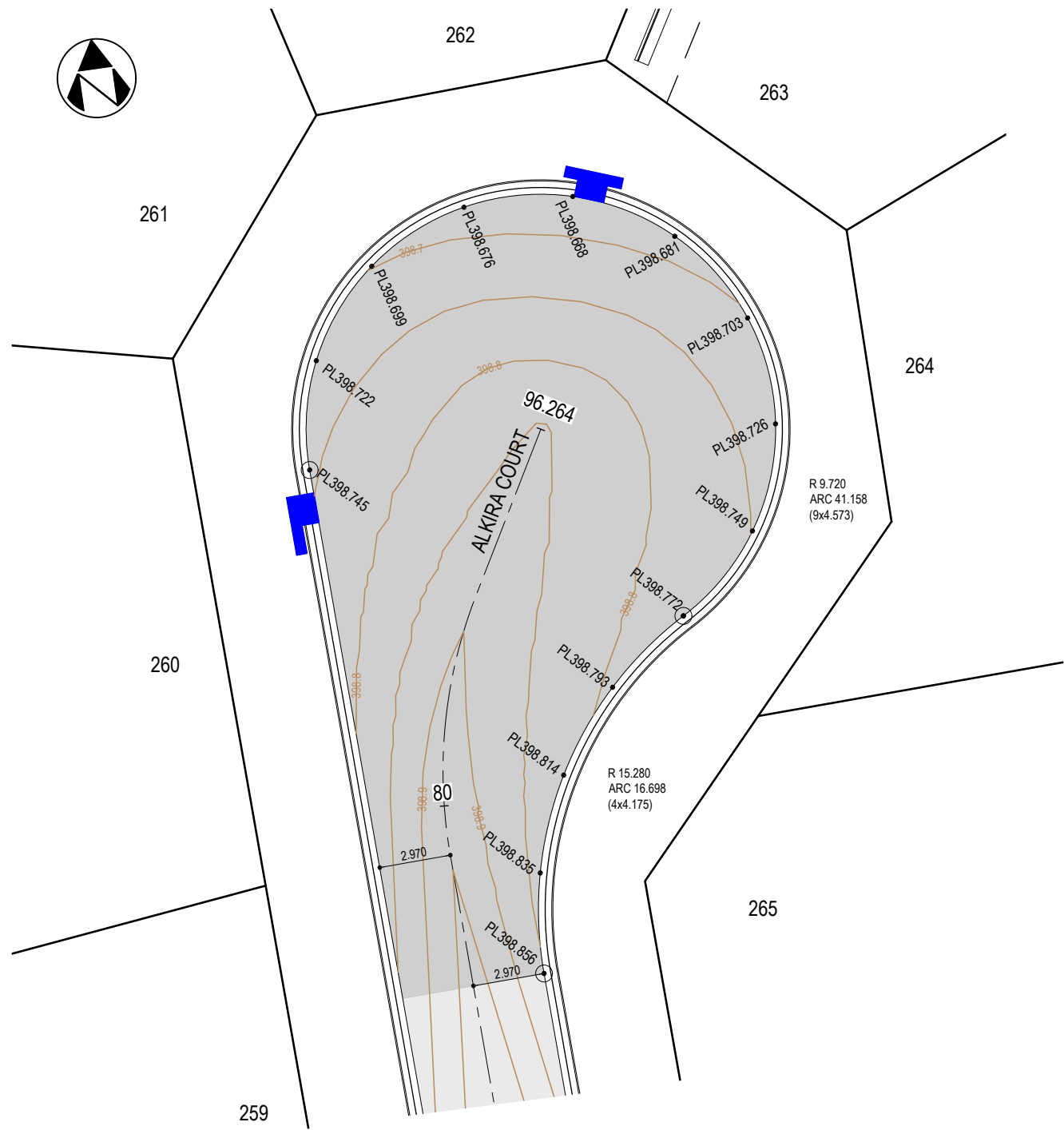
**TYPICAL ROAD B CROSS SECTION**  
N.T.S.



POLYPROPYLENE PIPE BEDDING DIMENSIONS

DN	DIMENSIONS (mm)				
	A	B	C	D	E
225	259	560	100	150	150
300	344	645	100	150	150
375	428	830	100	200	150
450	514	915	100	200	150
525	600	1200	150	300	150
600	682	1285	150	300	150
750	835	1435	150	300	150
900	999	1700	150	300	200





**LEGEND**

- PL44.956 PAVEMENT LEVEL OF KERB & TRAY
- SETOUT POINT
- ⊙ TANGENT POINT
- LKC LAYBACK KERB AND CHANNEL
- 57.0 — DESIGN SURFACE CONTOURS (0.1m INTERVAL)
- CONCRETE PATHWAY (2m WIDE U.N.O.)
- EXTENT OF 50mm ASPHALT THICKNESS

SETOUT TABLE		
PT NO	X	Y
1	334037.569	8120993.368
2	334031.101	8121008.667
3	334016.475	8121002.482

**NOTE**

FOR PROJECT NOTES REFER TO DRG-0102.



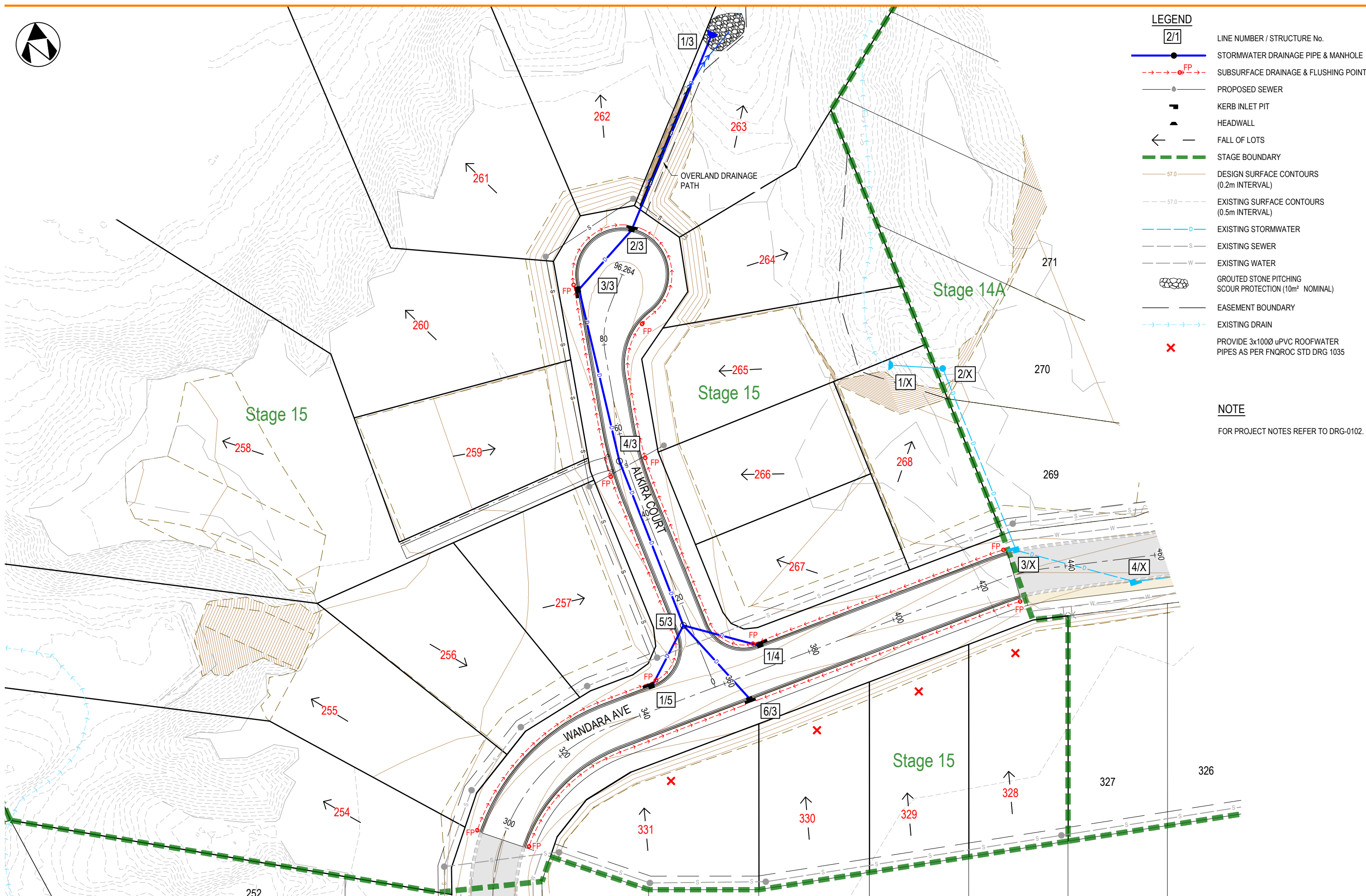


**LEGEND**

- 2/1 LINE NUMBER / STRUCTURE No.
- STORMWATER DRAINAGE PIPE & MANHOLE
- SUBSURFACE DRAINAGE & FLUSHING POINT
- PROPOSED SEWER
- KERB INLET PIT
- HEADWALL
- FALL OF LOTS
- STAGE BOUNDARY
- DESIGN SURFACE CONTOURS (0.2m INTERVAL)
- EXISTING SURFACE CONTOURS (0.5m INTERVAL)
- EXISTING STORMWATER
- EXISTING SEWER
- EXISTING WATER
- GROUTED STONE PITCHING SCOUR PROTECTION (10m<sup>2</sup> NOMINAL)
- EASEMENT BOUNDARY
- EXISTING DRAIN
- PROVIDE 3x100Ø uPVC ROOFWATER PIPES AS PER FNQROC STD DRG 1035

**NOTE**

FOR PROJECT NOTES REFER TO DRG-0102.



BTM & S STANKOVICH PTY LTD

AMAROO ESTATE SUBDIVISION  
STAGE 15  
STORMWATER DRAINAGE PLAN

STRUCTURE NAME	6/3	5/3	4/3	3/3	2/3	1/3
STRUCTURE DESCRIPTION	SAG KERB INLET PIT; LINTEL TYPE S	MANHOLE	MANHOLE	ON-GRADE KERB INLET PIT; LINTEL TYPE S	SAG KERB INLET PIT; LINTEL TYPE S	HEADWALL
	CH12.90 WATERCLR 0.28 CH16.80 SEWERCLR 1.36		NATURAL SURFACE DESIGN SURFACE CH59.07 SEWERCLR 0.41		CH120.30 WATERCLR 1.09 CH123.39 SEWERCLR 0.24	
PIPE SIZE (mm)	375	450	450	450	450	450
PIPE CLASS	BlackMAX	BlackMAX	BlackMAX	BlackMAX	BlackMAX	BlackMAX
PIPE GRADE (%)	0.49%	0.30%	0.30%	4.01%	0.30%	0.30%
PIPE SLOPE (1 in X)	1 in 203.1	1 in 333.3	1 in 333.3	1 in 25.0	1 in 333.3	1 in 333.3
DATUM RL	391.0					
FINISHED SURFACE LEVEL	399.293	399.202	399.008	398.732	398.649	396.554
DEPTH TO INVERT	1.626	1.642 1.717	1.640 1.660	1.502 1.522	2.140 2.160	0.204 0.204
INVERT LEVEL OF DRAIN	397.667	397.560 397.485	397.368 397.348	397.231 397.211	396.509 396.489	396.350 396.350
CHAINAGE	0.000	21.77m	39.05m	60.812 39.06m	99.869 17.50m	117.372 46.46m
SETOUT COORDINATES	E 333770.120 N 8120996.332	E 333758.035 N 8120914.436	E 333749.326 N 8120952.498	E 333746.020 N 8120991.415	E 333759.431 N 8121002.662	E 333783.142 N 8121042.614
HGL IN PIPE / WSE IN STRUCTURE	398.917 398.465	398.320 398.320	398.128 398.128	397.952 397.970	397.434 397.434	396.776 396.776
FULL PIPE VELOCITY (m/s)	1.62	1.47	1.46	1.87	2.70	2.70
PART FULL VELOCITY (m/s)	1.62	1.47	1.46	4.41	2.70	2.70
PIPE FLOW (m³/s)	0.179	0.233	0.232	0.298	0.429	0.429
CAPACITY AT GRADE (m³/s)	0.160	0.203	0.203	0.742	0.203	0.203

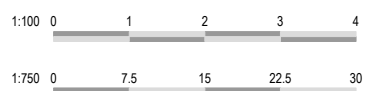
STRUCTURE NAME	1/4	5/3	1/5	5/3
STRUCTURE DESCRIPTION	ON-GRADE KERB INLET PIT; LINTEL TYPE S	MANHOLE	ON-GRADE KERB INLET PIT; LINTEL TYPE S	MANHOLE
	CH3.45 WATERCLR 0.59 CH9.68 SEWERCLR 1.38		CH2.99 WATERCLR 0.68 CH3.43 WATERCLR 0.74 CH6.44 SEWERCLR 1.45	
PIPE SIZE (mm)	375	375	375	375
PIPE CLASS	BlackMAX	BlackMAX	BlackMAX	BlackMAX
PIPE GRADE (%)	1.00%	1.00%	1.00%	1.00%
PIPE SLOPE (1 in X)	1 in 100.0	1 in 100.0	1 in 100.0	1 in 100.0
DATUM RL	391.0			
FINISHED SURFACE LEVEL	399.303	399.202	399.365	399.202
DEPTH TO INVERT	1.567	1.642 1.717	1.652	1.642 1.717
INVERT LEVEL OF DRAIN	397.736	397.560 397.485	397.713	397.560 397.485
CHAINAGE	0.000	17.64m	0.000	15.34m
SETOUT COORDINATES	E 333774.235 N 8120907.467	E 333758.035 N 8120914.436	E 333749.093 N 8120901.973	E 333758.035 N 8120914.436
HGL IN PIPE / WSE IN STRUCTURE	398.331 398.321	398.320 398.320	398.377 398.325	398.320 398.320
FULL PIPE VELOCITY (m/s)	0.15	0.35	0.35	0.35
PART FULL VELOCITY (m/s)	1.19	1.54	1.54	1.54
PIPE FLOW (m³/s)	0.016	0.039	0.039	0.039
CAPACITY AT GRADE (m³/s)	0.228	0.228	0.228	0.228

LINE

3

4

5



BTM & S STANKOVICH PTY LTD

AMAROO ESTATE SUBDIVISION  
STAGE 15  
STORMWATER DRAINAGE LONGITUDINAL SECTIONS

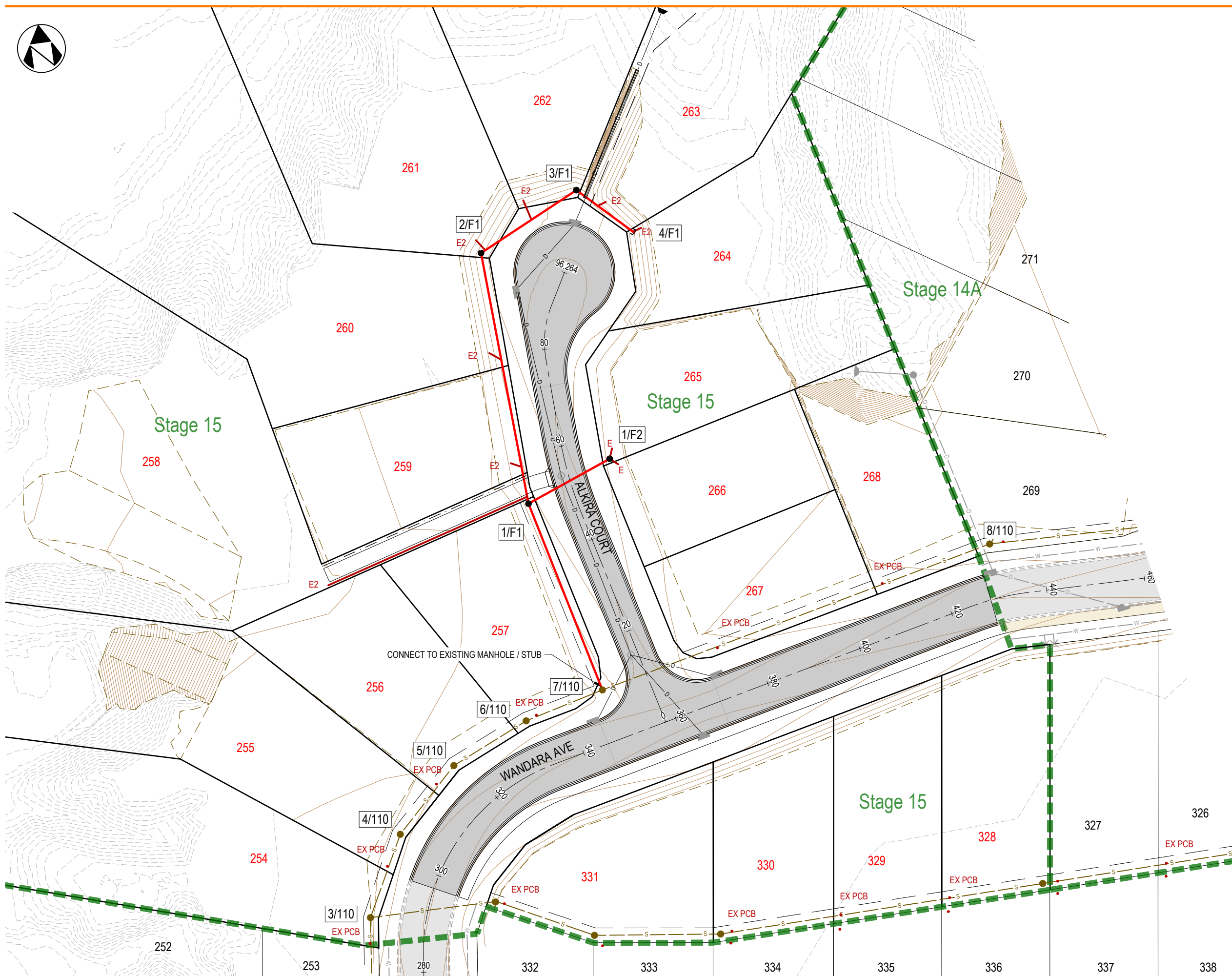


**LEGEND**

- 2/1 STRUCTURE No. / LINE NUMBER
- SEWER MAIN, MANHOLE AND ENDCAP
- HOUSE CONNECTION BRANCH / TYPE
- STAGE BOUNDARY
- DESIGN SURFACE CONTOURS (0.2m INTERVAL)
- EXISTING SURFACE CONTOURS (0.5m INTERVAL)
- EXISTING STORMWATER
- EXISTING SEWER
- EXISTING WATER
- EASEMENT BOUNDARY
- XXXX SEWER PCB NOTATION

**NOTE**

FOR PROJECT NOTES REFER TO DRG-0102.



BTM & S STANKOVICH PTY LTD

AMAROO ESTATE SUBDIVISION  
STAGE 15  
SEWERAGE PLAN

A 30.10.25 INITIAL ISSUE

Drawn	Design	Check'd	Appr'd	RPEQ: 25105
PAM	PAM	CJC	CJC	C.J.CAPLICK

A3 Full Size (Scale as shown)  
30.10.25

048-2501-15-DRG-0501

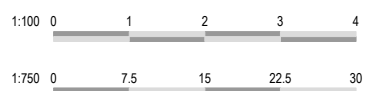
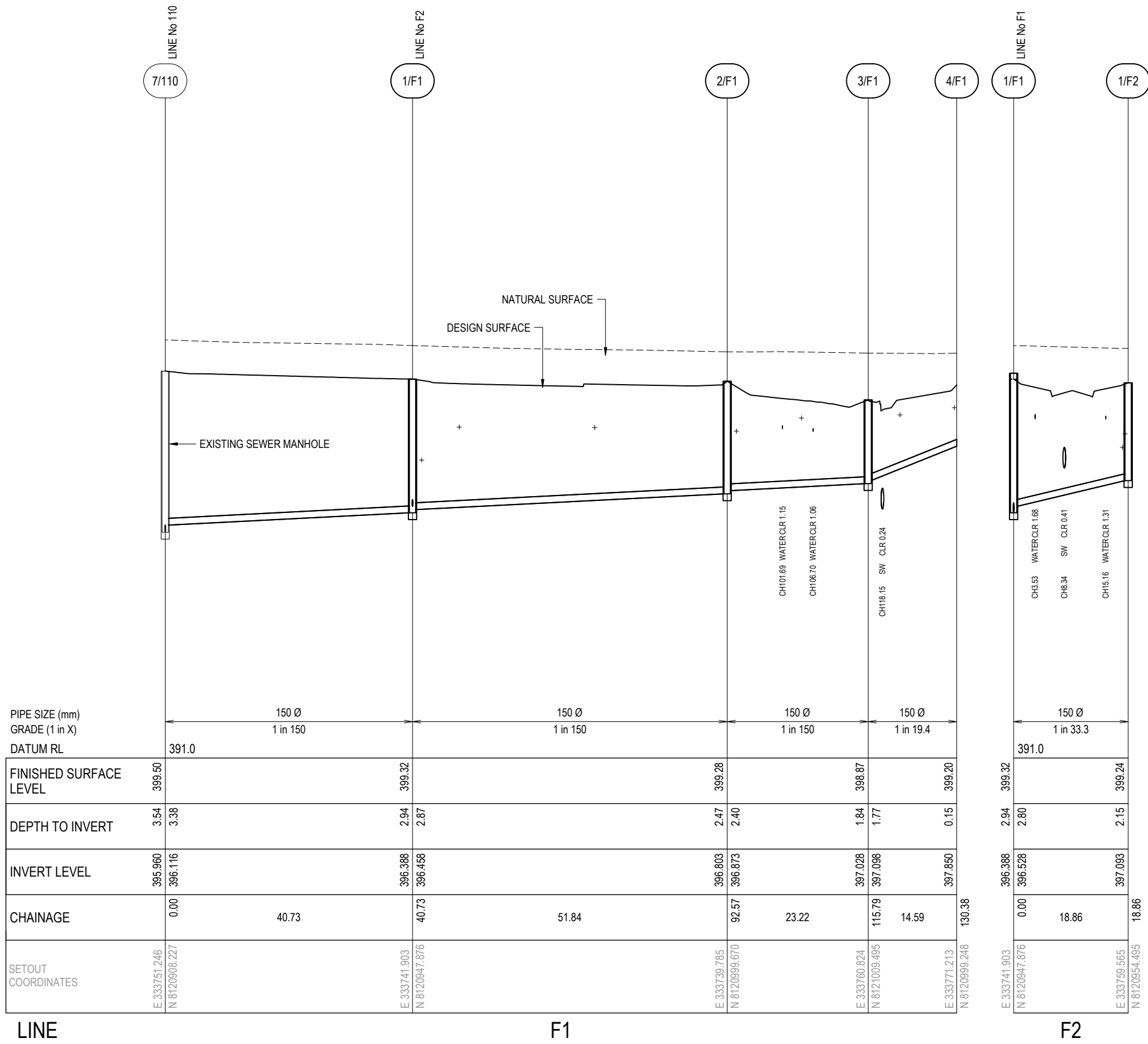
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**LEGEND**

+ HOUSE CONNECTION BRANCH

**NOTES**

1. ALL MANHOLE DIAMETERS, DROP TYPES AND COVERS TO BE IN ACCORDANCE WITH FNQROC STD DRG S3000.
2. FINISHED SURFACE AT ENDCAPS IS TO BE NO GREATER THAN 1.5m ABOVE INVERT.





### WATER SUPPLY PIPE AND FITTINGS LIST

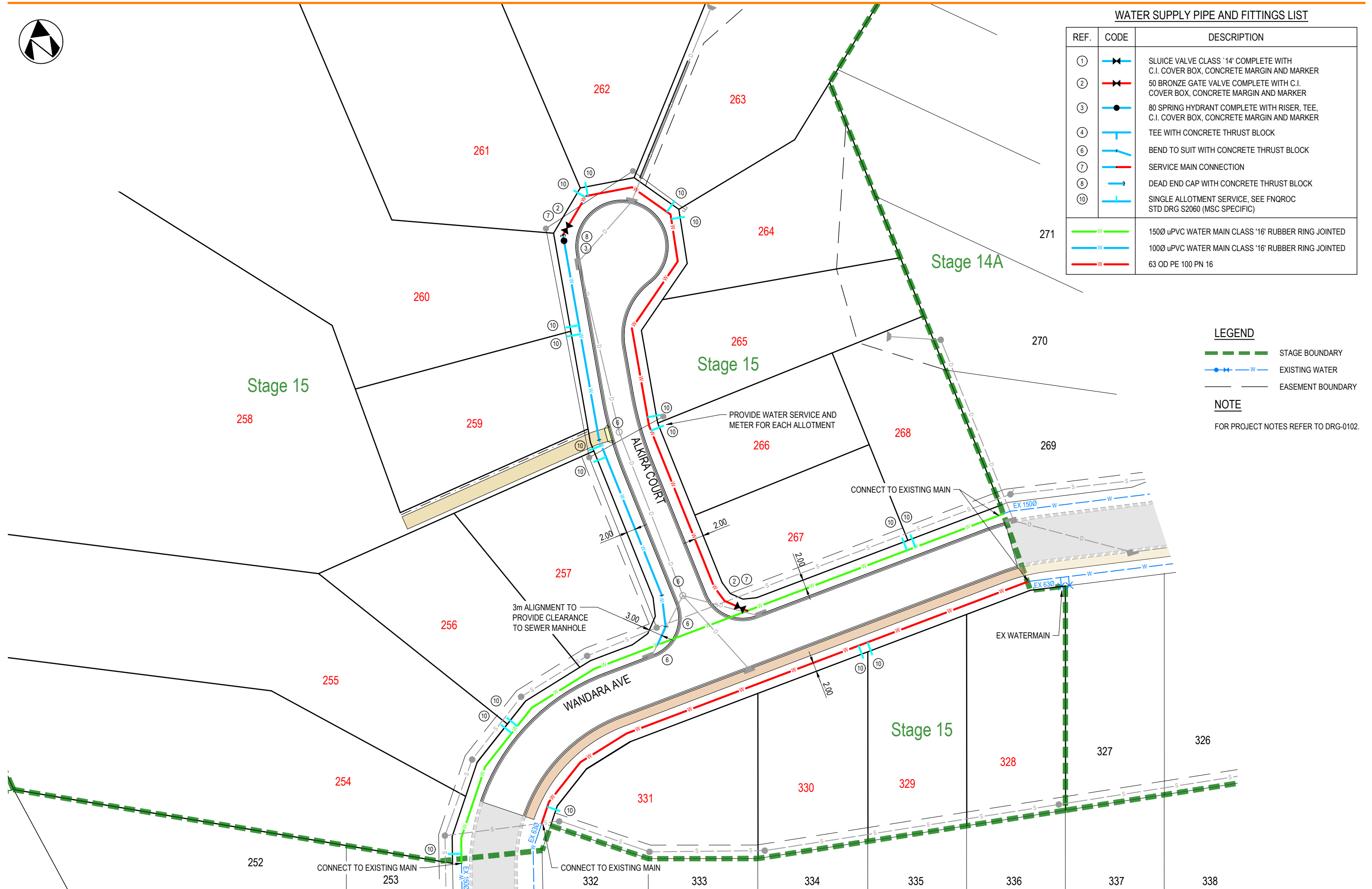
REF.	CODE	DESCRIPTION
①		SLUICE VALVE CLASS '14' COMPLETE WITH C.I. COVER BOX, CONCRETE MARGIN AND MARKER
②		50 BRONZE GATE VALVE COMPLETE WITH C.I. COVER BOX, CONCRETE MARGIN AND MARKER
③		80 SPRING HYDRANT COMPLETE WITH RISER, TEE, C.I. COVER BOX, CONCRETE MARGIN AND MARKER
④		TEE WITH CONCRETE THRUST BLOCK
⑥		BEND TO SUIT WITH CONCRETE THRUST BLOCK
⑦		SERVICE MAIN CONNECTION
⑧		DEAD END CAP WITH CONCRETE THRUST BLOCK
⑩		SINGLE ALLOTMENT SERVICE, SEE FNQROC STD DRG S2060 (MSC SPECIFIC)
		1500 uPVC WATER MAIN CLASS '16' RUBBER RING JOINTED
		1000 uPVC WATER MAIN CLASS '16' RUBBER RING JOINTED
		63 OD PE 100 PN 16

### LEGEND

- STAGE BOUNDARY
- EXISTING WATER
- EASEMENT BOUNDARY

### NOTE

FOR PROJECT NOTES REFER TO DRG-0102.









**NEON**  
CONSULTING

BTM & S STANKOVICH PTY LTD

AMAROO ESTATE SUBDIVISION  
STAGE 15  
WATER RETICULATION

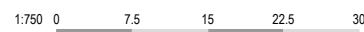
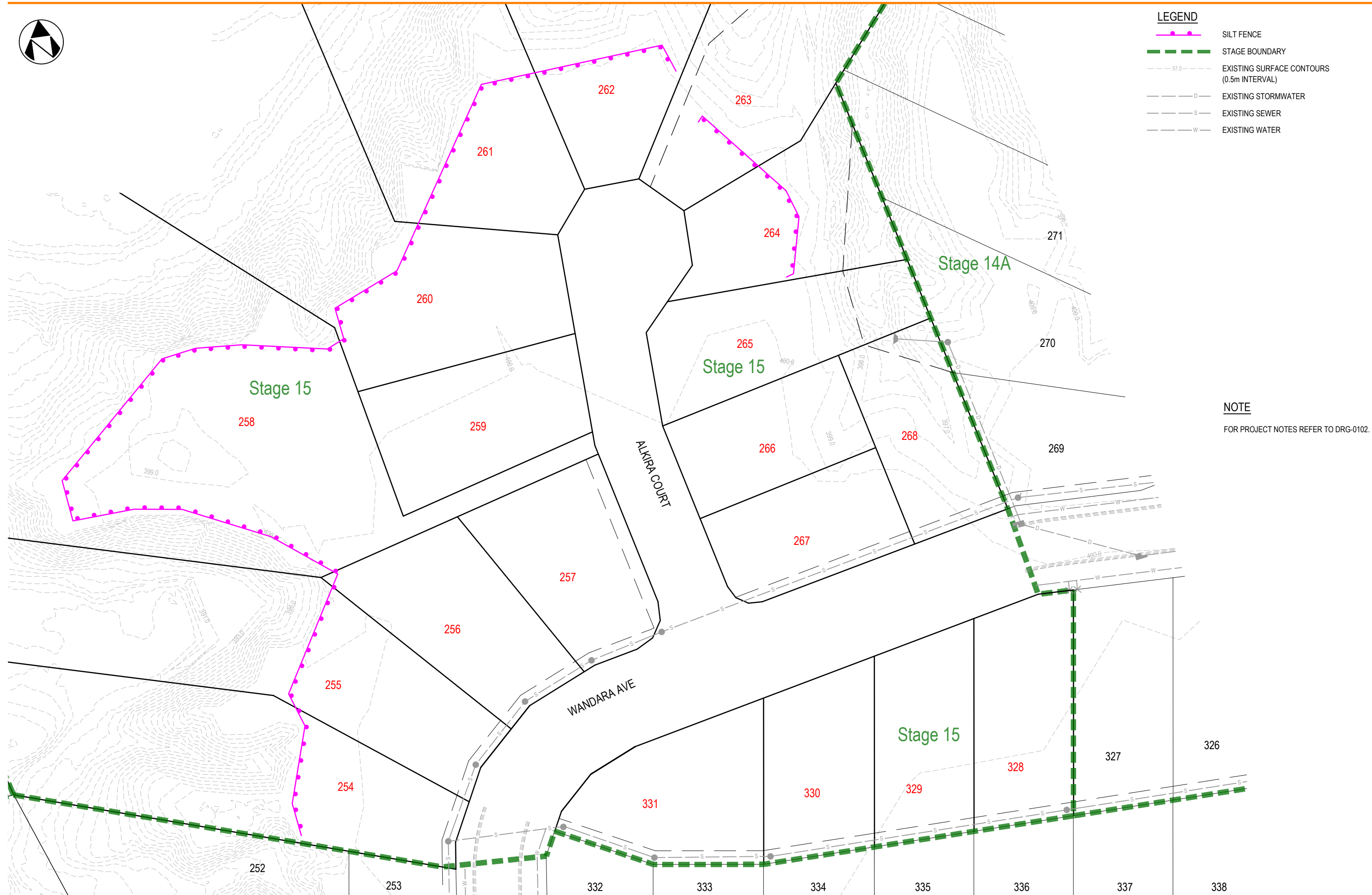


**LEGEND**

-  SILT FENCE
-  STAGE BOUNDARY
-  EXISTING SURFACE CONTOURS (0.5m INTERVAL)
-  EXISTING STORMWATER
-  EXISTING SEWER
-  EXISTING WATER

**NOTE**

FOR PROJECT NOTES REFER TO DRG-0102.



BTM & S STANKOVICH PTY LTD

AMAROO ESTATE SUBDIVISION  
 STAGE 15  
 SITE BASED STORMWATER MANAGEMENT PLAN  
 PHASE 1: TOPSOIL STRIPPING

A 30.10.25 INITIAL ISSUE

Rev. Date. Revision Notes  
 Document Set ID: 4645495  
 Version: 1, Version Date: 22/05/2026

Drawn	Design	Checked	Approved	RPE/C: 25105
PAM	PAM	CJC	CJC	C.J.CAPLICK













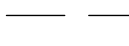
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048-2501-15-DRG-0701

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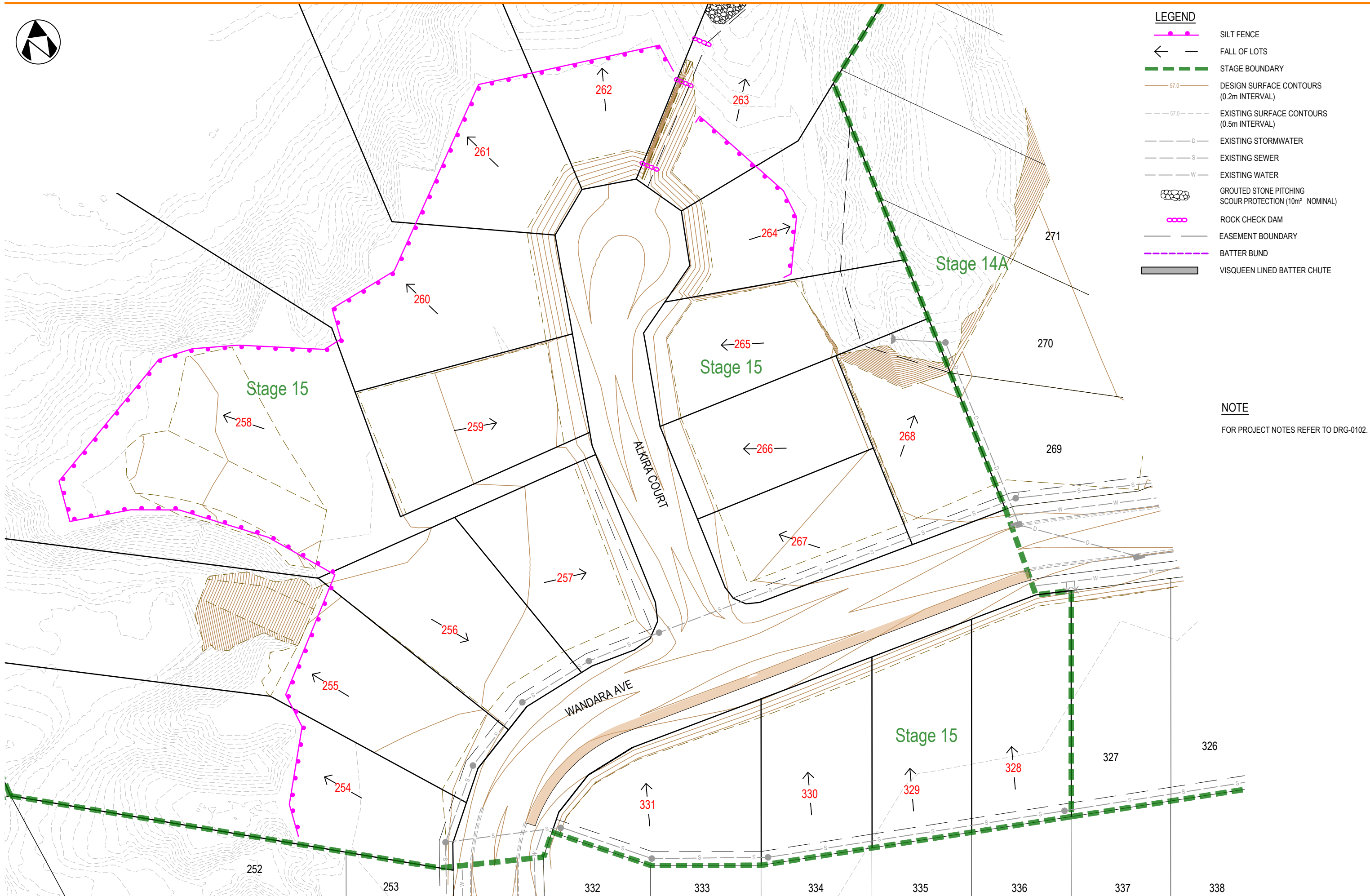


**LEGEND**

-  SILT FENCE
-  FALL OF LOTS
-  STAGE BOUNDARY
-  DESIGN SURFACE CONTOURS (0.2m INTERVAL)
-  EXISTING SURFACE CONTOURS (0.5m INTERVAL)
-  EXISTING STORMWATER
-  EXISTING SEWER
-  EXISTING WATER
-  GROUTED STONE PITCHING SCOUR PROTECTION (10m<sup>2</sup> NOMINAL)
-  ROCK CHECK DAM
-  EASEMENT BOUNDARY
-  BATTER BUND
-  VISQUEEN LINED BATTER CHUTE

**NOTE**

FOR PROJECT NOTES REFER TO DRG-0102.



BTM & S STANKOVICH PTY LTD

AMAROO ESTATE SUBDIVISION  
 STAGE 15  
 SITE BASED STORMWATER MANAGEMENT PLAN  
 PHASE 2: EARTHWORKS

A 30.10.25 INITIAL ISSUE

Drawn	Design	Checked	Approved	RPEQ: 25105
PAM	PAM	CJC	CJC	C.J.CAPLICK


















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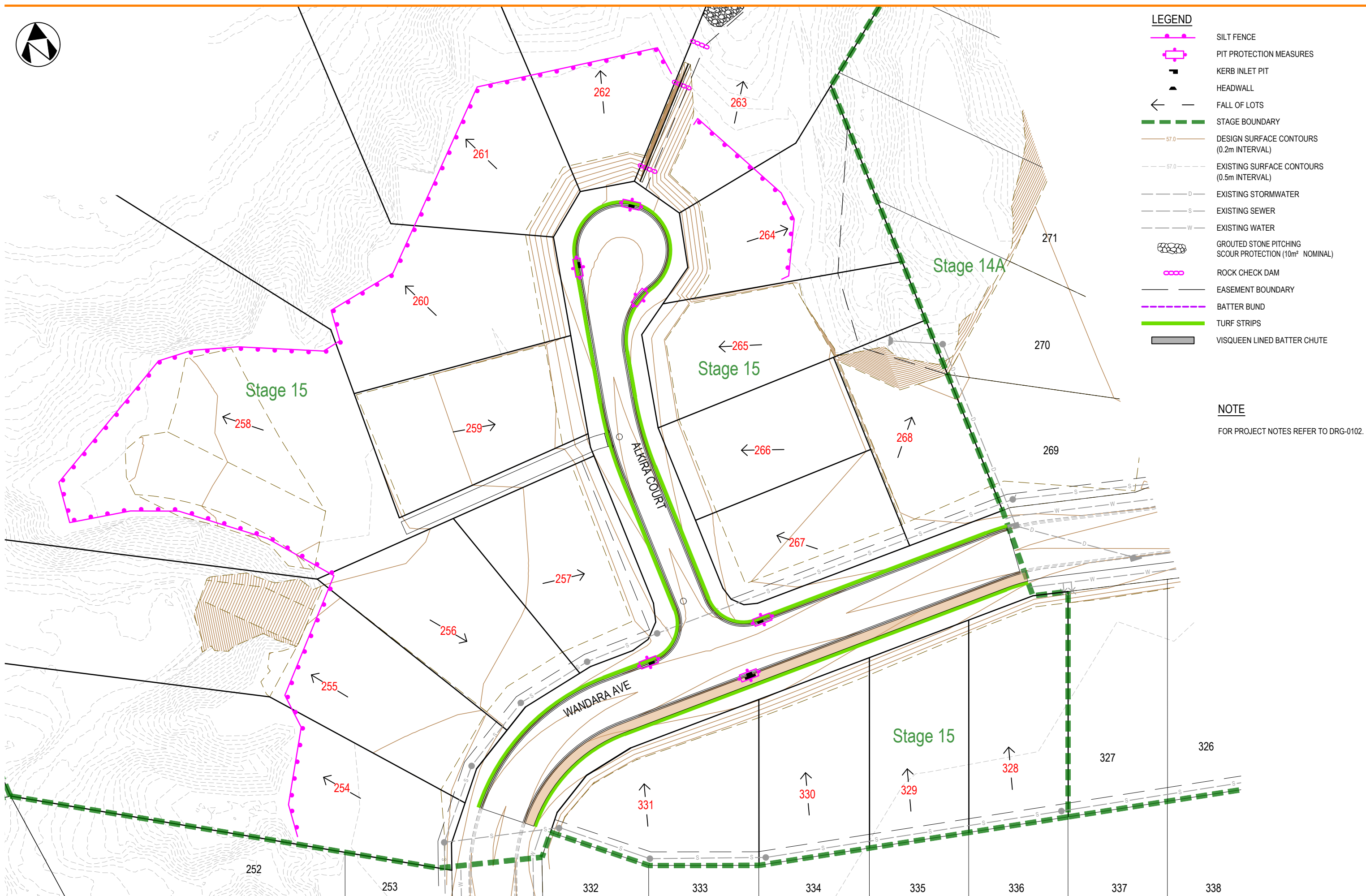


**LEGEND**

-  SILT FENCE
-  PIT PROTECTION MEASURES
-  KERB INLET PIT
-  HEADWALL
-  FALL OF LOTS
-  STAGE BOUNDARY
-  DESIGN SURFACE CONTOURS (0.2m INTERVAL)
-  EXISTING SURFACE CONTOURS (0.5m INTERVAL)
-  EXISTING STORMWATER
-  EXISTING SEWER
-  EXISTING WATER
-  GROUTED STONE PITCHING SCOUR PROTECTION (10m<sup>2</sup> NOMINAL)
-  ROCK CHECK DAM
-  EASEMENT BOUNDARY
-  BATTER BUND
-  TURF STRIPS
-  VISQUEEN LINED BATTER CHUTE

**NOTE**

FOR PROJECT NOTES REFER TO DRG-0102.

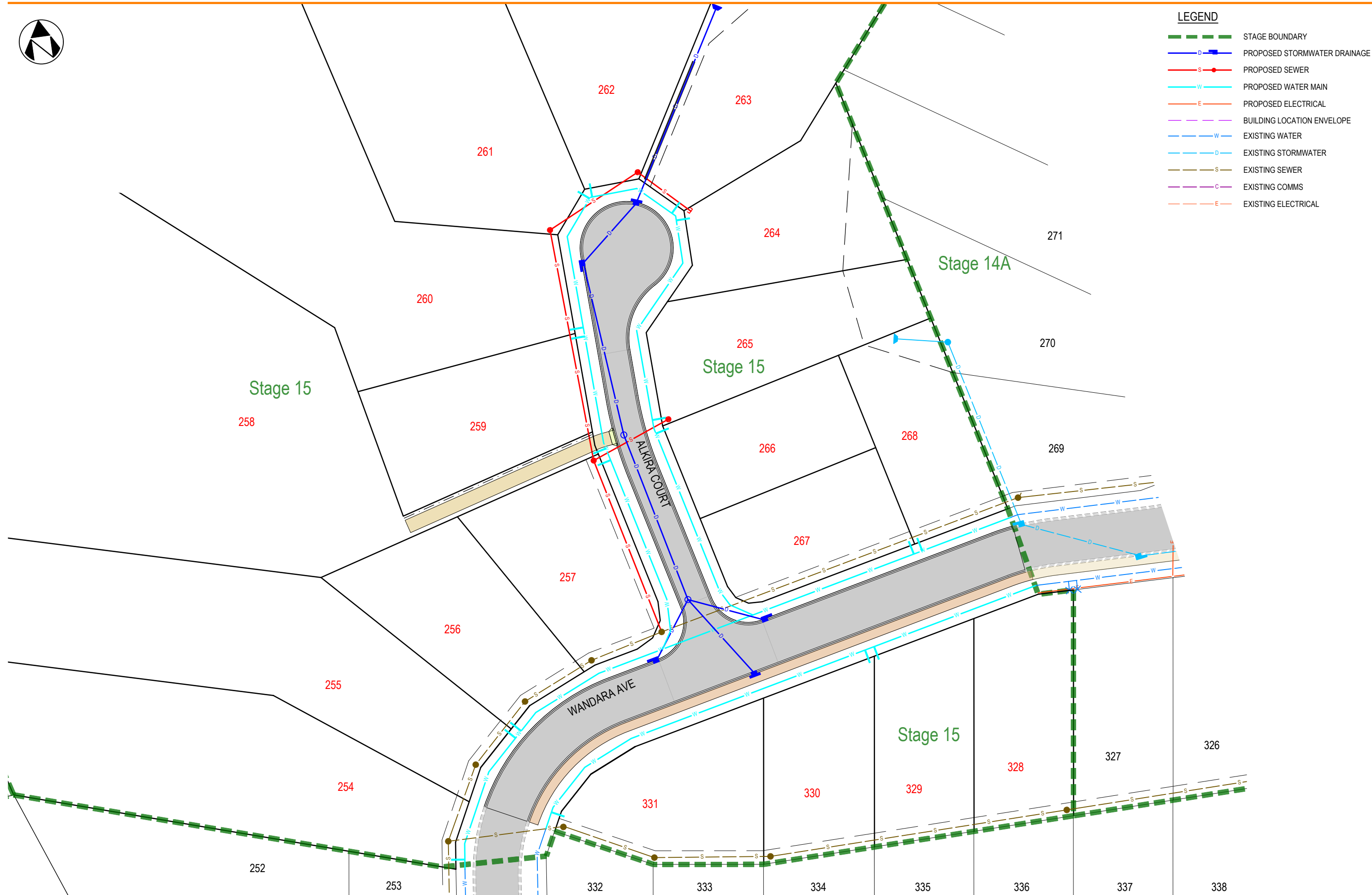


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AMAROO ESTATE SUBDIVISION  
 STAGE 15  
 SITE BASED STORMWATER MANAGEMENT PLAN  
 PHASE 3: ROADWORKS



LEGEND	
	STAGE BOUNDARY
	PROPOSED STORMWATER DRAINAGE
	PROPOSED SEWER
	PROPOSED WATER MAIN
	PROPOSED ELECTRICAL
	BUILDING LOCATION ENVELOPE
	EXISTING WATER
	EXISTING STORMWATER
	EXISTING SEWER
	EXISTING COMMS
	EXISTING ELECTRICAL

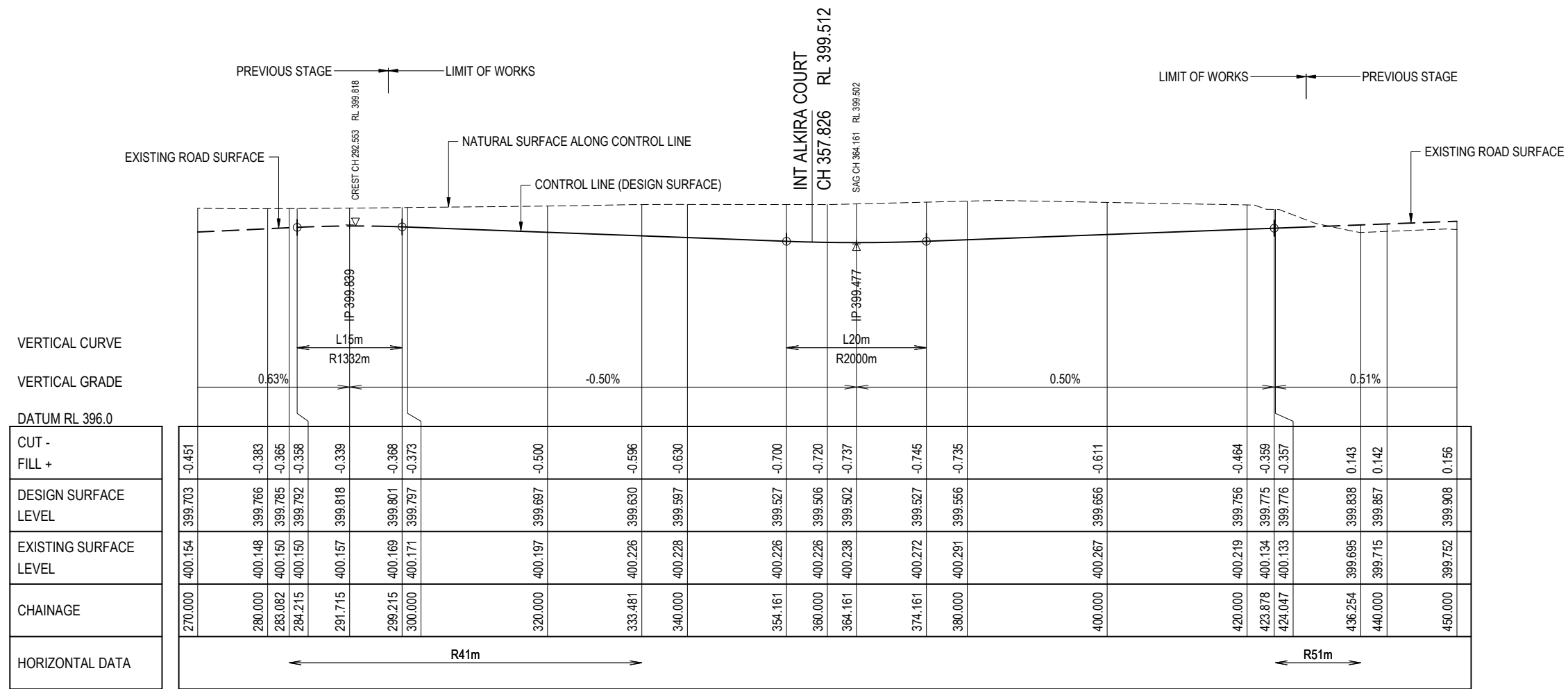


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BTM & S STANKOVICH PTY LTD

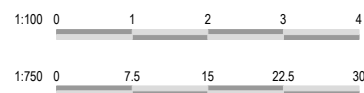
AMAROO ESTATE SUBDIVISION  
STAGE 15  
MASTER SERVICES PLAN



VERTICAL CURVE  
 VERTICAL GRADE  
 DATUM RL 396.0

CUT - FILL +	-0.451	-0.383	-0.365	-0.358	-0.339	-0.368	-0.373	-0.500	-0.596	-0.630	-0.700	-0.720	-0.737	-0.745	-0.735	-0.611	-0.464	-0.359	-0.357	0.143	0.142	0.156
DESIGN SURFACE LEVEL	399.703	399.766	399.785	399.792	399.818	399.801	399.797	399.697	399.630	399.597	399.527	399.506	399.502	399.527	399.556	399.656	399.756	399.775	399.776	399.838	399.857	399.908
EXISTING SURFACE LEVEL	400.154	400.148	400.150	400.150	400.157	400.169	400.171	400.197	400.226	400.228	400.226	400.226	400.238	400.272	400.291	400.267	400.219	400.134	400.133	399.695	399.715	399.752
CHAINAGE	270.000	280.000	283.082	284.215	291.715	299.215	300.000	320.000	333.481	340.000	354.161	360.000	364.161	374.161	380.000	400.000	420.000	423.878	424.047	436.254	440.000	450.000
HORIZONTAL DATA	← R41m →										← R51m →											

LONGITUDINAL SECTION WANDARA AVE  
 SCALE 1:750H  
 1:100V



BTM & S STANKOVICH PTY LTD

AMAROO ESTATE SUBDIVISION  
 STAGE 15  
 ROAD LONGITUDINAL SECTIONS  
 WANDARA AVENUE



